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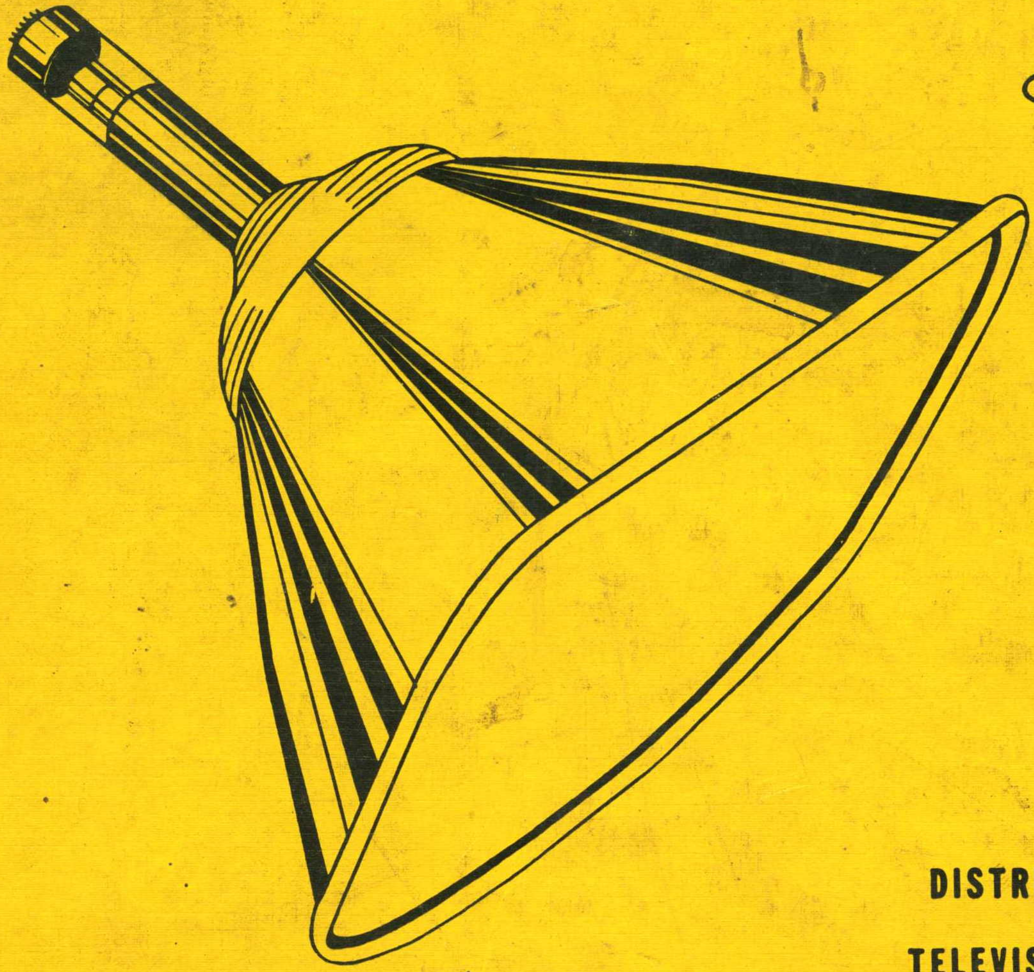

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Radio's
MASTER
18th EDITION
1953-4

RADIOTRONIC DISTRIBUTORS, INC.

208 NORTH COLLEGE ST. CHARLOTTE, N. C.
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RADIO'S MASTER

EIGHTEENTH EDITION

OFFICIAL

PARTS and EQUIPMENT MANUAL

of the

RADIO, TELEVISION & ELECTRONIC INDUSTRY

What to Buy and Where to Buy It

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EIGHTEENTH EDITION

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SEVENTEENTH EDITION

NUMERICAL INDEX OF MANUFACTURERS' DISPLAY PAGES

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E-28, 29 .... V-M Corporation
E-30 .... Thorens Company
E-31 .... Gray Research & Development Co.
E-32 to 35 .... General Industries Co.
E-36 .... Alliance Manufacturing Co.
E-37 to 40 .... Garrard Sales Corporation
E-41 .... Finn-Jaske Co.
E-42 .... Recordisc Corporation
E-43 .... Jensen Industries, Inc.
E-44, 45 .... Recoton Corporation
E-46, 47 .... Audio Devices, Inc.
E-48, 49 .... M. A. Miller Mfg. Co.
E-50, 51 .... Duotone Company, Inc.
E-52 to 59 .... Permo, Inc.
E-60, 61 .... Reeves Soundcraft Corp.
E-62 to 64 .... Walco Products, Inc.
E-65 .... Minnesota Mining & Mfg. Co.
E-66 .... Orradio Industries, Inc.

SECTION F

CABLE & MICROPHONE CONNECTORS, FITTINGS—PLUGS—SOCKETS—RECEPTACLES—TERMINALS, TERMINAL STRIPS

F-1 to 11 .... American Phenolic Corp.
F-12, 13 .... Harvey Hubbell, Inc.
F-14 to 23 .... Howard B. Jones Div. Cinch Mfg. Co.
F-24 to 29 .... Cinch-Jones Sales Div. Cinch Mfg. Co.
F-30 to 39 .... Cannon Electric Company
F-40 to 43 .... Eby Sales Company
F-44, 45 .... Dage Electric Co., Inc.
F-46, 47 .... Waltham Horological Corp.
F-48 to 50 .... U. S. Engineering Co.
F-51 to 53 .... Elco Corporation
F-54, 55 .... Vector Electronic Company

SECTION G

TESTING, MEASURING, INDICATING INSTRUMENTS—ANALYZERS—PANEL METERS—TEST EQUIPMENT

G-1 to 9 .... Radio Corporation of America
G-10 .... Delta Electrical Specialty Co.
G-11 to 18 .... Measurements Corporation
G-19 to 21 .... Chicago Industrial Instrument Co.
G-22, 23 .... General Electric Co.
G-24 to 31 .... Triplett Electrical Instrument Co.
G-32 .... Electro-Mechanical Instrument Co.
G-33 to 45 .... Simpson Electric Company
G-46 to 49 .... Marion Electrical Instrument Co.
G-50, 51 .... Sterling Manufacturing Co.
G-52 to 55 .... Burlington Instrument Co.

Section & Page *Name of Manufacturer*

G-56, 57 .... Shurite Meters
G-58 to 61 .... Weston Electrical Instrument Co.
G-62, 63 .... Hoyt Electrical Instr. Works, Inc.
G-64, 65 .... Phaostron Company
G-66 to 80 .... Hickok Electrical Instrument Co.
G-81 .... Waveforms, Inc.
G-82 to 85 .... Electronic Instrument Co., Inc.
G-86 to 93 .... Precision Apparatus Co., Inc.
G-94 to 97 .... Jackson Electrical Instrument Co.
G-98 to 101 .... Radio City Products Co., Inc.
G-102 to 106 .... J-B-T Instruments, Inc.
G-107 .... Sylvania Electric Products, Inc.
C-108 to 110 .... Electronic Measurements Corp.
G-111 .... Precise Measurements Corp.
G-112, 113 .... Superior Instruments Co.
G-114 .... Kay Electric Co.
G-115 to 117 .... Precise Development Corp.
G-118, 119 .... Waterman Products Co., Inc.
G-120 to 124 .... Freed Transformer Co., Inc.
G-125 to 129 .... Boonton Radio Corporation
G-130 to 135 .... Browning Laboratories, Inc.
G-136, 137 .... Industrial Instruments, Inc.
G-138 .... Supreme, Inc.

SECTION H

PILOT AND DIAL LIGHTS—ASSEMBLIES

H-1 to 10 .... Dialight Corporation
H-12, 13 .... Drake Manufacturing Co.

INSTRUMENT FUSES

H-14, 15 .... Bussmann Manufacturing Co.
H-16 to 19 .... Littelfuse, Inc.
H-20, 21 .... General Fuse Co.
H-22 .... El-Menco Products Co.

RECTIFIERS: DRY DISC, SELENIUM, INSTRUMENT—GERMANIUM AND SELENIUM DIODES

(See Section A for additional Diodes)

H-23 .... Schauer Mfg. Corp.
H-24 .... Bradley Laboratories, Inc.
H-25 .... Conant Laboratories
H-26, 27 .... Sarkes Tarzian, Inc.
H-28 .... Electronic Devices, Inc.
H-29 to 31 .... Radio Receptor Co., Inc.
H-32, 33 .... Federal Telephone & Radio Corp.
H-34, 35 .... International Rectifier Corp.
H-36 .... General Electric Co.

SECTION J

COMMUNICATION RECEIVERS—TRANSMITTERS—AMATEUR EQUIPMENT AND ACCESSORIES—VARIABLE CAPACITORS—COILS—INSULATORS—METAL RACKS, CABINETS, PANELS, ETC.

J-1 to 16 .... National Company, Inc.
J-17 .... Gonset Company
J-18 to 25 .... Hallicrafters Co.
J-26, 27 .... Eldico of N. Y., Inc.
J-28, 29 .... Harvey-Wells Electronics, Inc.
J-30, 31 .... Robert Dollar Co.
J-32 .... Lysco Mfg. Co., Inc.
J-33 .... Morrow Radio Mfg. Co.
J-34 to 36 .... Allen D. Cardwell Mfg. Corp.
J-37 to 43 .... James Millen Mfg. Co., Inc.
J-44 to 46 .... Jennings Radio Mfg. Co.
J-47 to 55 .... Bud Radio, Inc.
J-56 to 61 .... Hammarlund Mfg. Co., Inc

(FOR DETAILED GENERAL INDEX, REFER TO PRECEDING PAGES 7 THROUGH 20)

NUMERICAL INDEX OF MANUFACTURERS' DISPLAY PAGES (Cont.)

Section & Page	*Name of Manufacturer*
J-62 to 65	J. W. Miller Co.
J-66 to 69	Barker & Williamson, Inc.
J-70 to 89	E. F. Johnson Co.
J-90 to 95	Insuline Corp. of America
J-96	Stanwyck Winding Co.
J-97	Radio Apparatus Corp.
J-98 to 105	Par-Metal Products Co.
J-106 to 111	Premier Metal Products Co.
J-112 to 114	Middletown Mfg. Co., Inc.

SECTION K

BOOKS—MANUALS—RADIO DATA SERVICES

K-1 to 4	John F. Rider Publisher, Inc.
K-5	American Radio Relay League
K-6, 7	Howard W. Sams & Co., Inc.
K-8, 9	Radio Corporation of America
K-10	Editors & Engineers, Ltd.
K-11	MacMillan Company
K-12	Prentice-Hall, Inc.
K-13	Gernsback Publications, Inc.
K-14	Audio Engineering

SECTION L

SWITCHES—JACKS—PLUGS

L-1	General Electric Company
L-2 to 5	P. R. Mallory & Co., Inc.
L-6 to 13	Carling Electric, Inc.
L-14 to 16	J-B-T Instruments, Inc.
L-17 to 19	Centralab Div. Globe-Union, Inc.
L-20, 21	Tech Laboratories, Inc.
L-22, 23	Cutler-Hammer, Inc.
L-24 to 26	Switchcraft, Inc.
L-27 to 29	General Control Company
L-30, 31	Carter Parts Co.

RELAYS

L-32 to 35	Potter & Brumfield
L-36 to 38	Advance Electric & Relay Co.
L-39 to 41	Specialties Mfg. Co.
L-42	Standard Electrical Products Co.
L-43	Amperite Company, Inc.
L-44, 45	Guardian Electric Mfg. Co.

PHOTO ELECTRIC UNITS

L-46, 47	Worner Electronic Devices

TELEGRAPH KEYS & PRACTICE SETS

L-48	Vibroplex Co., Inc.

SECTION M

DRY BATTERIES

M-1	Radio Corporation of America
M-2 to 5	Burgess Battery Company
M-6 to 9	National Carbon Company
M-10, 11	General Dry Batteries, Inc.
M-12, 13	Olin Industries, Inc.
M-14 to 16	Ray-O-Vac Company

BATTERY ELIMINATORS & CHARGERS—POWER CONVERSION EQUIPMENT—GENERATORS, INVERTERS, VIBRATORS, PACKS—VOLTAGE TRANSFORMERS & CONTROLS

M-17	Schauer Mfg. Corp.
M-18, 19	Mueller Electric Co.
M-20	Electro Products Labs., Inc.
M-21	Electronic Devices, Inc.
M-22 to 29	American Television & Radio Co.
M-30 to 33	P. R. Mallory & Co., Inc.
M-34 to 36	Cornell-Dubilier Electric Corp.
M-37 to 39	Sola Electric Company
M-40 to 43	Superior Electric Co.
M-44	Raytheon Mfg. Co.
M-45	Spellman Television Co.
M-46 to 49	Radiart Corporation
M-50	James Vibrapowr Co.
M-51 to 55	Carter Motor Company
M-56, 57	Perma-Power Company
M-58	Gothard Manufacturing Co.

SECTION N

TRANSFORMERS, ALL TYPES—REACTORS—CHOKES—COILS—INDUCTORS

(See Section J for additional Coils)

N-1 to 16	Chicago Standard Transformer Corp.
N-17 to 29	Triad Transformer Mfg. Co.
N-30 to 33	Altec Lansing Corp., Peerless Div.
N-34	General Electric Company
N-35 to 53	United Transformer Co.
N-54 to 59	Chicago Standard Transformer Corp.
N-60, 61	Kenyon Transformer Co., Inc.
N-62 to 81	Freed Transformer Co., Inc.
N-82, 83	Thordarson-Meissner Mfg. Div.
N-84 to 96	Merit Transformer Corp.
N-97	Microtran Co.
N-98 to 101	SNC Manufacturing Company
N-102	Electronic Transformer Co.
N-103	Utah Radio Products, Inc.
N-104 to 106	Standard Electrical Products Co.
N-107 to 109	Ferranti Electric, Inc.
N-110	Audio Development Co.

SECTION P

FIXED CAPACITORS, ALL TYPES—NOISE & INTERFERENCE FILTERS—CAPACITOR TEST INSTRUMENTS

(See Section J for Variable Capacitors)

P-1 to 11	P. R. Mallory & Co., Inc.
P-12 to 31	Aerovox Corporation
P-32 to 52	Cornell-Dubilier Electric Corp.
P-53	Chicago Condenser Corp.
P-54 to 57	General Electric Company
P-58 to 61	Industrial Condenser Corp.
P-62 to 71	Arco Electronics, Inc.
P-72 to 87	Sprague Products Company
P-88	Planet Manufacturing Corp.
P-89 to 93	Centralab Div. Globe-Union, Inc.
P-94 to 119	Pyramid Electric Co.
P-120 to 131	Sangamo Electric Company
P-132 to 137	Erie Resistor Corporation
P-138 to 141	Illinois Condenser Corp.
P-142, 143	Plastic Capacitors, Inc.
P-144 to 147	Condenser Products Co., Inc.
P-148 to 154	Astron Corporation

SECTION R

RESISTORS—VOLUME CONTROLS—BALLASTS—DECADES, BRIDGES—NOISE FILTERS & SUPPRESSORS RHEOSTATS, POTENTIOMETERS, ATTENUATORS

R-1 to 6	P. R. Mallory & Co., Inc.
R-7	Sprague Products Co.
R-8 to 13	Clarostat Mfg. Co., Inc.
R-14 to 27	International Resistance Co.
R-28 to 30	Ward Leonard Electric Co.
R-31 to 33	Centralab Div. Glove-Union, Inc.
R-34, 35	Lectrohm, Inc.
R-36 to 39	Shallcross Mfg. Co.
R-40 to 43	Ohmite Manufacturing Co.
R-44 to 47	Aerovox Corporation
R-48	Tru-Ohm Products
R-49 to 51	Continental Carbon, Inc.
R-52 to 55	Dale Products, Inc.
R-56	Amperite Company, Inc.

(FOR DETAILED GENERAL INDEX, REFER TO PRECEDING PAGES 7 THROUGH 20)

SECTION S

WIRE AND CABLE, ALL TYPES

Section & Page	*Name of Manufacturer*
S-1 to 16	Alpha Wire Corporation
S-17 to 25	Belden Manufacturing Co.
S-26 to 45	Birnbach Radio Co., Inc.
S-46 to 48	William Brand & Co., Inc.
S-49 to 55	Consolidated Wire & Associated Cos.
S-56 to 59	Cornish Wire Co., Inc.
S-60	Copperweld Steel Co.
S-61	Federal Telephone & Radio Corp.
S-62, 63	Imperial Radar & Wire Corp.
S-64 to 67	National Wire & Cable Corp.
S-68, 69	Columbia Wire & Supply Co.
S-70, 71	Plastoid Corporation

ANTENNAS & SYSTEMS FOR TV-FM-AM-AUTO—ANTENNA INSTALLATION ACCESSORIES

(See Section T for additional TV Accesories)

S-72 to 75	Radiart Corporation
S-76 to 82	La Pointe Electronics, Inc.
S-83	Radio Corporation of America
S-84 to 87	Telrex, Inc.
S-88	Radion Sales Corp.
S-89	Tricraft Products
S-90, 91	Spirling Products Co., Inc.
S-92, 93	Brach Manufacturing Corp.
S-94 to 98	Ward Products Corp.
S-99 to 101	J.F.D. Mfg. Co., Inc.
S-102 to 106	Insuline Corporation of America
S-107 to 109	Radelco Mfg. Co.
S-110 to 112	Cornell-Dubilier Electric Corp.
S-113	Trio Manufacturing Co.
S-114, 115	Master Mobile Mounts, Inc.
S-116	Webster Manufacturing Co.
S-117	Columbia Products Co.
S-118, 119	Hy-Lite Antennae, Inc.
S-120, 121	Radio Merchandise Sales, Inc.
S-122	Jerrold Electronics Corp.
S-123	Crown Controls, Inc.
S-124 to 127	Tele-Matic Industries, Inc.
S-128 to 130	Phoenix Electronics, Inc.
S-131	Telesine Antenna Corp.
S-132	Hi-Lo TV Antenna Corp.
S-133	Davis Electronics
S-134	Baker Manufacturing Co.
S-135	Jontz Manufacturing Co.
S-136, 137	Premax Products
S-138, 139	Technical Appliance Corp.
S-140	Gonset Company
S-141	Julius Blum & Co., Inc.

SECTION T

RECEIVER KITS—TELEVISION KITS—TV ACCESSORIES, TUNERS, BOOSTERS, CABINETS

(See Section S for Antennas and additional Antenna Installation Accessories)

Section & Page	*Name of Manufacturer*
T-1 to 4	Tech-Master Products Co.
T-5	Grossman Radio & Electric Co.
T-6, 7	Eagle Electronics, Inc.
T-8	Conrac, Inc.
T-9	Radio Kits, Inc.
T-10, 11	River Edge Industries
T-12	Universal Woodcrafters, Inc.
T-13	Argos Products Co.
T-14, 15	P. R. Mallory & Co., Inc.
T-16	Allen D. Cardwell Mfg. Co.
T-17	Blonder-Tongue Labs., Inc.
T-18	Electro-Voice, Inc.
T-19	Regency Div. I.D.E.A., Inc.
T-20	Sarkes Tarzian, Inc.
T-21	Oak Electronics Co.
T-22	Alliance Mfg. Co.
T-23	Ram Electronic Sales Co.
T-24, 25	Radio Corporation of America
T-26	Kenwood Engineering Co.
T-27	Vidaire Electronics Mfg. Co.
T-28 to 31	South River Metal Products Co., Inc.
T-32, 33	Penn Television Products Co.
T-34	Crest Laboratories, Inc.
T-35 to 37	Mosley Electronics, Inc.
T-38	Bud Radio, Inc.
T-39 to 43	Television Hardware Mfg. Co.
T-44	Porcelain Products, Inc.
T-45	Esco-Lite

CRYSTALS & CRYSTAL SETS

T-46, 47	Bliley Electric Co.
T-48, 49	Petersen Radio Co., Inc.
T-50	James Knights Co.
T-51	Monitor Products Co.
T-52	Philmore Mfg. Co., Inc.

SECTION U

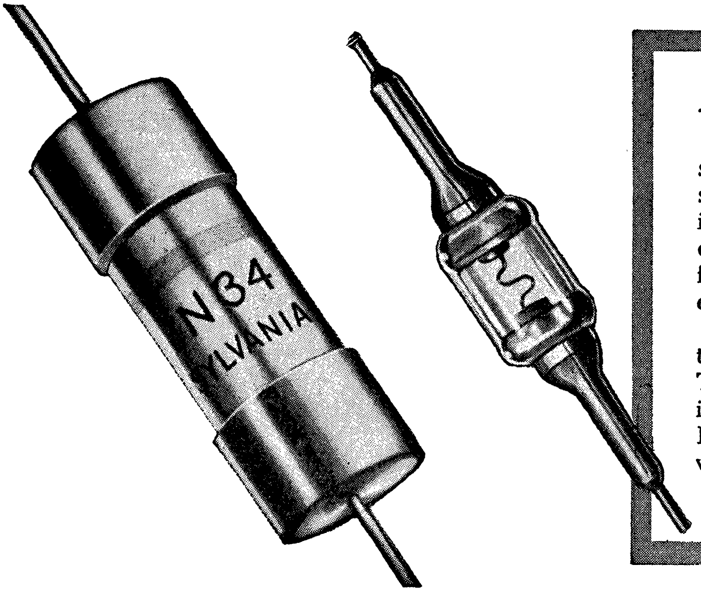
TOOLS: SOLDERING IRONS, PLIERS, WRENCHES, SCREWDRIVERS, NUTDRIVERS, PUNCHES, CUTTING TOOLS, NEUTRALIZING & ALIGNMENT TOOLS—CHEMICALS, OILS, PAINTS, ETC.—HARDWARE, SERVICE AIDS OF EVERY DESCRIPTION

U-1	American Electrical Heater Co.
U-2, 3	Hexacon Electric Co.
U-4, 5	General Electric Company
U-6	Kwikheat Mfg. Co.
U-7 to 9	Drake Electric Works, Inc.
U-10	Ungar Electric Tools, Inc.
U-11	Weller Electric Co.
U-12, 13	Vulcan Electric Co.
U-14	Electric Soldering Iron Co., Inc.
U-15	Wen Products, Inc.
U-16, 17	Multicore Sales Corp.
U-18	Kester Solder Co.
U-19	Lectrohm, Inc.
U-20 to 23	Xcelite, Inc.
U-24 to 27	Kraeuter & Co., Inc.
U-28, 29	Utica Drop Forge & Tool Corp.
U-30 to 32	Vaco Products Company
U-33	Mathias Klein & Sons
U-34, 35	Greenlee Tool Co.
U-36, 37	Equipto Div. Aurora Equipt. Co.
U-38	Akro-Mils, Inc.
U-39	Snap-on Drawer Co.
U-40	Moody Machine Products Co., Inc.
U-41 to 63	General Cement Mfg. Co.
U-64 to 75	Herman H. Smith, Inc.
U-76 to 79	Waldom Electronics, Inc.
U-80 to 99	Walsco Electronics Corp.
U-100 to 118	Insuline Corporation of America
U-119	Bud Radio, Inc.
U-120 to 123	Gee-Lar Mfg. Co.
U-124, 125	United Technical Laboratories
U-126	Keystone Electronics Corp.
U-127	Visulite Company
U-128, 129	Jan Hardware Mfg. Co.
U-130, 131	Chas. O. Larson Co.
U-132	Quietrole Company
U-133	Illinois Research Labs.
U-134, 135	Rogan Brothers
U-136, 137	Harry Davies Molding Co.
U-138	Pierceway Div. Clifton Conduit Co.
U-139	Van Cleef Bros., Inc.

(FOR DETAILED GENERAL INDEX, REFER TO PRECEDING PAGES 7 THROUGH 20)

FOR GREATER CIRCUIT EFFICIENCY

insist on Sylvania Crystal Diodes and Electronic Tubes



WITH Sylvania tubes and crystal diodes, you can be sure of electrical stability, ruggedness, and longer life. Unsurpassed in quality, the Sylvania line is also a complete line. In germanium diodes alone, Sylvania now offers 20 different types to cover a wide range of electric circuits and applications.

Below are suggested resale prices of the most popular Sylvania Electronic Tubes and Crystal Diodes. For further information, address: Sylvania Electric Products Inc., Dept. 3E-47, 1740 Broadway, New York 19, N. Y.

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
FLASH TUBE		
R-4330	100 watt second Electroflash Tube	$14.40
R-4340	500 watt second Electroflash Tube	37.50
GAS PRESSURE MEASURING TUBES		
R1111	Pirani Tube	6.30
R1111M	Matched Pairs (R1111)	15.15
GERMANIUM CRYSTAL DIODES		
1N34	General Purpose Diode (Ceramic)	.90
1N34A	General Purpose Diode (Glass)	1.20
1135	Twin Matched Diode	2.20
1N38	100-V Back Voltage (Ceramic)	1.75
1N38A	100-V Back Voltage (Glass)	2.55
1N39	200-V Back Voltage	5.05
1N40	Varistor—Plug In	12.25
1N41	Varistor—Lug Type	12.95
1N42	Varistor—Matched 1N38's	21.55
1N54	High Resistance Diode (Ceramic)	1.05
1N54A	High Resistance Diode (Glass)	1.45
1N55	150-Volt Diode (Ceramic)	2.90
1N55A	150-Volt Diode (Glass)	4.70
1N56	High Conduction Diode (Ceramic)	1.05
1N56A	High Conduction Diode (Glass)	1.45
1N58	100-Volt Diode (Ceramic)	1.45
1N58A	100-Volt Diode (Glass)	1.80
1N60	Video Detector	.75
1N71	Varistor—Low Impedance—Plug In	7.20
1N105	Video Detector Crystal	.75
TR & ATR TUBES		
1B24A	9300 mc Tunable TR	41.00
1B35A	9315 mc Broad Band ATR	10.05
1B4D	1000 mc TR	5.00
1B63A	12% 9000 mc Broad Band ATR	64.70
KLYSTRONS		
6BL6	Velocity Modulation Reflex Oscillator	90.15
6BM6	Velocity Modulation Reflex Oscillator	79.05
5836	(SD1103) Velocity Modulation Reflex Oscillator	128.80
5837	(SD1104) Velocity Modulation Reflex Oscillator	128.80
6BM6A	Broad Band Pulse Type	115.90
ROCKET TUBES		
2C36	Pulse-Molulated and C. W. Oscillator	46.75
2C37	C. W. Oscillator, Amplifier and Multiplier	46.75
5764	Pulse-Modulated Oscillator	71.90
5765	Broad Band C. W. Oscillator Int. Feedback	71.90
5767	C. W. Oscillator	71.90
5768	C. W. Amplifier	71.90
6018	(SB-846F) Pulse Modulated and C. W. Oscillator	71.90
RT434	Planar Triode	35.95
GLOW MODULATOR TUBES		
R1130B	.055" Crater—(1B59)	16.55
R1131C	.93" Crater	16.55
HYDROGEN THYRATRONS		
4C35	8KV, 90 amp peak	33.05
5C22	15KV, 325 amp peak	61.45
HT-415	Non-Jitter 5C22	101.15
HT-457	4C-35 with Jitter	21.55
HT-458	5C-22 with Jitter	28.75

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
SELENIUM RECTIFIERS		
NA-5	65 ma Rectifier	$ .80
NB-5	75 ma Rectifier	.93
NC-5	100 ma Rectifier	1.14
ND-5	150 ma Rectifier	1.35
NE-5	200 ma Rectifier	1.62
NF-5	250 ma Rectifier	1.80
NH-5	400 ma Rectifier	2.07
NJ-5	450 ma Rectifier	2.58
NK-5	350 ma Rectifier	2.07
NL-5	400 ma Rectifier	2.55
NM-5	450 ma Rectifier	2.58
MICROWAVE CRYSTAL DIODES		
1N21	3000 mc Mixer	3.65
1N21A	3000 mc Mixer	3.95
1N21B	3000 mc Mixer	4.30
1N21BM	3000 mc Mixer—Matched Pair	14.40
1N21C	3000 mc Mixer	25.90
1N23	10,000 mc Mixer	4.30
1N23A	10,000 mc Mixer	4.70
1N23B	10,000 mc Mixer	4.30
1N23BM	10,000 mc Mixer—Matched Pair	12.95
1N25	1000 mc High Burnout Mixer	5.75
1N26	24,000 mc Mixer	10.80
1N31	10,000 mc Video Detector	7.20
1N32	3000 mc Video Detector	28.75
1N76	Microwave Video Detector	5.05
1N78	16,000 mc Mixer	10.80
1N82	UHF Mixer 700 mc	1.40
STROBOTRONS		
1D21/SN4	240 PPS V Neon Duo Grid	5.65
SA-309	Small Polychromatic Strobotron	3.40
R4350	Polychromatic Strobotron	12.50
MISCELLANEOUS		
OA5	Trigger Tube (Cold Cathode)	5.05
X-6090	Ionization Tube	2.30
1237	Full Wave Argon Rectifier	7.85
SD759A	Ramberg Accelerometer Tube	96.60

SYLVANIA

ELECTRONIC DEVICES; RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC TEST EQUIPMENT; FLUORESCENT LAMPS, FIXTURES, SIGN TUBING, WIRING DEVICES; LIGHT BULBS; PHOTOLAMPS; TELEVISION SETS

RECEIVING TYPES

Electronic TUBES

PRICES EFFECTIVE JUNE 15, 1953

Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price
OOA	$3.55	1LH4	$2.65	5Z3	$1.75	6BQ7	$3.05	6R7GT	$2.65	7B6	$2.00
O1A	1.50	1LN5	2.65	*5Z4	2.65	6BX7GT	3.40	6S4	1.75	7B7	2.00
OA4G	1.25	1N5G	2.40	5Z4GT	2.00	6BY5G	2.90	*6S7	2.65	7B8	2.05
*OY4	4.80	1N5GT	2.15	6	2.00	6BZ7	3.35	6S7G	3.35	7C4	3.20
*OZ4	1.65	1N6G	2.00	6AS	3.35	6C4	1.70	6S8GT	2.65	7C5	2.00
*OZ4A	1.20	1P5G	2.40	6A4/LA	3.20	*6C5	1.75	*6SA7	1.80	7C6	1.85
OZ4G	1.65	1P5GT	2.75	6A5G	3.90	6C5G	1.65	6SA7GT	1.85	7C7	2.05
1A1/5E1	1.65	1Q5G	2.40	6A6	2.65	6C5GT	1.65	*6SB7Y	2.90	7C8	2.65
1A3	2.20	1Q5GT	2.65	6A7	2.30	6C6	2.20	*6SC7	2.15	7ES	2.65
1A4P	4.05	1Q6	2.20	6A7S	3.55	6C7	3.55	6SC7GT	2.00	7E6	2.90
1A4T	2.40	1R1G	1.65	*6A8	2.30	6C8G	3.35	6SD7GT	2.90	7E7	3.20
1A5G	2.40	1R4	2.65	6A8G	2.20	6CB6	2.10	*6SF5	1.75	7F7	2.45
1A5GT	1.85	1R5	2.10	6A8GT	2.30	6CD6G	4.80	6SF5GT	1.80	7F8	3.00
1A6	3.60	1S4	2.45	6AB4	1.80	6CL6	3.10	*6SF7	2.90	7G7/1232	2.75
1A7G	2.40	1S5	1.80	6AB5/6N5	2.65	6D5G	2.40	*6SG7	2.10	7G8	3.90
1A7GT	2.30	1SA6GT	2.40	*6AB7/1853	3.20	6D6	2.20	*6SH7	2.90	7H7	2.20
1AB5	3.20	1SB6GT	2.40	6AC5G	2.00	6D7	3.55	6SH7GT	2.00	7J7	3.25
1AX2	2.55	1T1G	1.65	6AC5GT	3.00	6D8G	3.35	*6SJ7	1.75	7K7	2.75
1B1	1.65	1T4	2.10	*6AC7/1852	3.10	6E5	2.55	6SJ7GT	1.65	7L7	2.65
1B3GT	2.55	1T5GT	2.60	6AD6G	2.40	6E6	2.90	*6SK7	1.75	7N7	2.20
1B4P	3.90	1U4	2.10	6AD7G	3.35	6E7	3.55	6SK7GT	1.85	7Q7	2.40
1B5/25S	3.35	1U5	1.80	6AE5G	2.40	*6F5	2.10	6SL7GT	2.45	7R7	3.25
1B7G	2.90	1V	2.30	6AE5GT	2.00	6F5G	1.65	6SN7GTA	2.20	7S7	3.25
1B7GT	3.35	1V2	1.55	6AE6G	2.00	6F5GT	1.65	*6SQ7	1.60	7T7	2.65
1C1	1.65	1V5	2.20	6AE7GT	2.00	*6F6	2.15	6SQ7GT	1.60	7V7	3.35
1C5G	2.40	1W5	2.20	6AF4	4.25	6F6G	1.80	*6SR7	1.80	7W7	3.35
1C5GT	2.30	1X1	1.65	6AF5G	2.00	6F6GT	1.85	6SR7GT	1.80	7X7/XXFM	2.65
1C6	3.35	1X2A	2.50	6AF6G	2.75	6F7	3.35	*6SS7	2.90	7Y4	1.80
1C7G	3.35	1Y1	1.65	6AG5	2.20	6F7S	3.55	*6ST7	2.65	7Z4	1.80
1C8	2.40	1Z1	1.65	*6AG7	3.40	6F8G	3.35	*6SV7	3.20	8	2.00
1D1	1.65	2	2.00	6AH4GT	2.35	6G6G	2.75	6SV8GT	2.00	9	2.00
1D5G	2.00	2A3	3.35	6AH6	3.90	6H4GT	2.90	*6SZ7	2.20	10	3.90
1D5GP	4.05	2A4G	4.80	6AH7GT	2.40	*6H6	1.75	6T4	3.70	10Y	3.90
1D5GT	2.00	2A5	2.30	6AJ4	4.80	6H6G	1.65	6T5	3.55	12A	2.40
1D7G	3.60	2A6	2.75	6AJ5	3.50	6H6GT	1.85	6T7G	3.35	12A5	3.55
1D8GT	4.05	2A7	2.65	6AK5	4.35	6J4	8.05	6T8	2.90	*12A6	2.95
1E1	1.65	2A7S	3.55	6AK6	2.50	*6J5	1.50	6U4GT	2.65	12A6GT	2.90
1E4G	2.00	2B7	3.40	6AL5	1.75	6J5G	1.50	6U5/6G5	2.30	12A7	3.20
1E5G	4.80	2B7S	3.55	6AL7GT	3.75	6J5GT	1.65	6U6GT	2.20	12A8G	2.00
1E5GP	3.90	2E5	2.65	6AM4	4.80	6J6	2.50	6U7G	2.20	12A8GT	2.20
1E5GT	4.80	2G5	2.40	6AQ5	2.00	*6J7	2.25	6U8	3.10	12AH7GT	2.65
1E7GT	4.05	*2S/4S	3.55	6AQ6	1.90	6J7G	2.20	6V3	3.55	12AL5	1.75
1F1	1.65	2W3	2.00	6AQ7GT	2.65	6J7GT	2.20	*6V6	4.75	12AT6	1.50
1F4	2.75	2W3GT	2.00	6AR5	1.65	6J8G	3.20	6V6G	2.00	12AT7	2.85
1F5G	2.75	2Z2	3.55	6AS5	2.10	6K5G	1.65	6V6GT	2.00	12AU6	1.80
1F6	4.05	3	2.00	6AT6	1.50	6K5GT	2.40	*6V7	3.55	12AU7	2.40
1F7G	3.90	3A4	2.50	6AU5GT	2.70	6K6G	2.40	6V7G	2.00	12AV6	1.50
1F7GH	3.55	3A8GT	4.80	6AU6	1.80	6K6GT	1.65	6W4GT	1.80	12AV7	2.90
1F7GV	3.55	3B5GT	2.40	6AV5GT	2.90	*6K7	2.00	6W5G	2.90	12AW6	2.65
1G1	1.65	3B7	2.65	6AV6	1.50	6K7G	2.20	6W6GT	2.20	12AX4GT	2.50
1G4G	2.00	3C6/XXB	3.20	6AX4GT	2.40	6K7GT	2.20	6W7G	2.65	12AX7	2.45
1G4GT	2.55	3D6	2.65	6AX5GT	1.65	*6K8	2.70	6X4	1.55	12AZ7	2.50
1G5G	3.15	3E6	2.65	6B4G	3.20	6K8G	2.90	*6X5	2.65	12B8GT	4.80
1G6G	2.40	3LF4	2.80	6B5	3.90	6K8GT	2.40	6X5G	1.65	12BA6	1.90
1G6GT	2.75	3Q4	2.25	6B6G	2.00	6L5G	2.75	6X5GT	1.55	12BA7	2.50
1H4G	2.30	3Q5G	2.40	6B7	3.20	*6L6	3.75	6X8	2.75	12BD6	2.00
1H5G	2.00	3Q5GT	2.50	6B7S	3.55	6L6G	3.20	6Y5	4.80	12BE6	1.90
1H5GT	1.85	3S4	2.10	*6B8	3.35	6L6GA	3.15	6Y5V	3.55	12BF6	1.55
1H6G	3.20	3V4	2.10	6B8G	3.35	*6L7	2.55	6Y6G	2.50	12BH6	2.00
1H6GT	3.35	4	2.00	6B8GT	2.00	6L7G	3.30	6Y7G	2.40	12BH7	2.50
1J1	1.65	4A1	3.55	6BA6	1.90	6N6G	3.90	6Z5	3.55	12BN6	2.90
1J5G	2.65	4A6G	2.90	6BA7	2.50	*6N7	2.55	6Z7G	3.90	12BY7	2.65
1J6G	2.90	5	2.00	6BC5	2.00	6N7G	2.40	6ZY5G	2.20	12BZ7	2.50
1J6GT	3.35	5AZ4	1.55	6BD6	2.00	6N7GT	2.50	7	2.00	*12C8	3.35
1K1	1.65	*5T4	4.80	6BE6	1.90	6P5G	2.00	7A4/XXL	2.00	12F5GT	1.90
1L4	2.10	5U4G	1.60	6BF5	2.10	6P5GT	2.40	7A5	2.35	*12H6	1.80
1L6	2.75	5V4G	2.65	6BF6	1.70	6P7G	3.55	7A6	2.10	*12J5	1.50
1LA4	2.65	*5W4	1.65	6BG6G	4.80	*6Q6	2.90	7A7	2.00	12J5GT	1.55
1LA6	2.65	5W4G	1.35	6BH6	2.10	6Q6G	2.90	7A8	1.90	12J7G	2.00
1LB4	2.65	5W4GT	1.75	6BJ6	2.10	*6Q7	2.20	7AD7	4.60	12J7GT	2.20
1LC5	2.65	5X4G	1.80	6BK5	2.55	6Q7G	1.80	7AF7	1.80	12K7G	2.00
1LC6	2.65	5Y3G	1.35	6BK7	3.20	6Q7GT	1.85	7AG7	2.45	12K7GT	2.20
1LD5	2.65	5Y3GT	1.35	6BL7GT	3.20	6R6G	4.80	7AH7	2.45	*12K8	2.70
1LE3	2.65	5Y4G	1.55	6BN6	2.90	*6R7	2.65	7B4	1.80	12K8GT	2.65
1LG5	2.65	5Y4GT	1.15	6BQ6GT	3.35	6R7G	1.65	7B5	1.85	12Q7G	2.00

*Metal types

G.E. ELECTRONIC TUBES—RECEIVING TYPES (Cont.)

Type	List Price	Type	List Price	Type	List Price	Type	List Price
12Q7GT	$1.80	14R7	$3.35	31	$2.65	50C5	$2.00
12S8GT	2.65	14S7	3.25	32	3.70	50C6G	3.00
*12SA7	1.80	14W7	3.35	32L7GT	3.20	50L6GT	1.75
12SA7GT	1.85	14X7	2.65	33	3.35	50X6	2.20
*12SC7	2.30	14Y4	2.40	34	3.55	50Y6G	1.80
*12SF5	1.90	15	3.20	35/51	2.35	50Y6GT	1.90
12SF5GT	2.00	18	2.90	35A5	2.05	50Y7GT	2.10
*12SF7	2.90	19	3.20	35B5	1.95	50Z7G	2.00
*12SG7	2.10	19BG6G	6.00	35C5	2.00	52	4.80
*12SH7	2.90	19J6	3.20	35L6G	2.00	53	2.65
12SH7GT	2.00	19T8	2.90	35L6GT	1.75	55	2.20
*12SJ7	1.75	20	4.80	35S/51S	3.55	55S	3.55
12SJ7GT	1.65	22	3.55	35W4	1.30	56	1.90
*12SK7	1.75	24A	2.35	35Y4	1.80	56AS	3.55
12SK7GT	1.85	24S	3.55	35Z3	1.80	56S	3.55
12SL7GT	2.50	*25A6	3.20	35Z4GT	1.50	57	2.10
12SN7GT	2.25	25A6G	2.65	35Z5G	2.00	57AS	3.55
*12SQ7	1.60	25A6GT	2.90	35Z5GT	1.30	57S	3.55
12SQ7GT	1.60	25AC5G	4.80	35Z6G	2.65	58	2.10
*12SR7	2.10	25AC5GT	2.90	36	2.65	58AS	3.55
12SR7GT	2.20	25AV5GT	2.90	37	1.85	58S	3.55
12V6GT	2.00	25B8GT	4.95	38	2.30	59	3.55
12Z3	2.60	25BQ6GT	3.40	39/44	2.75	70A7GT	3.55
14	2.90	25C6G	3.20	40	2.40	70L7GT	3.90
14A4	2.65	25D8GT	4.80	40Z5	1.65	71A	2.40
14A5	3.90	*25L6	3.20	41	2.00	75	2.00
14A7/12B7	2.20	25L6G	2.00	42	2.00	75S	3.55
14AF7/XXD	2.40	25L6GT	1.75	43	2.05	76	1.70
14B6	2.20	25N6G	4.80	45	2.20	77	2.20
14B8	2.20	25W4GT	1.95	45Z3	1.80	78	2.20
14C5	2.65	25W6GT	2.25	45Z5GT	1.80	79	2.65
14C7	2.40	25Y5	2.90	46	3.00	80	1.45
14E6	2.90	25Z5	1.65	46A1	2.00	81	4.80
14E7	3.20	*25Z6	2.20	46B1	2.00	82	2.75
14F7	2.45	25Z6G	1.50	47	3.00	83	2.75
14F8	3.00	25Z6GT	1.65	48	4.80	83V	3.20
14H7	2.40	26	2.10	49	2.75	84/6Z4	1.80
14J7	3.25	27	1.80	50	6.00	85	2.20
14N7	2.65	27S	3.55	50A5	2.20	85AS	3.55
14Q7	2.40	30	2.25	50B5	1.95	89	2.20

Type	List Price
99V	$3.55
99X	3.55
100-70	2.00
100-77	2.00
100-79	2.00
117L7/M7GT	3.90
117N7GT	4.05
117P7GT	4.05
117Z3	1.60
117Z4GT	2.90
117Z6GT	2.65
FM-1000	3.20

GERMANIUM PRODUCTS

1N48	$1.40
†1N48	4.45
1N51	.85
1N52	2.85
†1N52	7.35
1N63	6.35
†1N63	14.35
1N64	.95
1N65	1.40
1N69	2.05
1N70	5.25
1N72	2.00
1N73	47.55
1N74	36.50
1N75	5.55
†1N75	12.65
1N81	4.35
1N91	3.20
1N92	6.40
1N93	8.00

Type	List Price
1N94	$8.80
G6	3.75
G7A	2.00
G7B	2.00
G7C	2.00
G7D	4.00
G7E	4.00
G7F	2.00
G7G	2.00
G10	9.00
G10A	3.25
G10B	4.85
G10C	6.50
G11	29.00
G11A	29.00

SELENIUM RECTIFIERS

6RS5GH1A	$1.60
6RS5GH2	1.60

SPECIAL TYPES

With Industrial Applications	Sugg. User
6AS7G	$6.75
6K4	2.85
7F8/TV	4.00
12AY7	3.00
25A7GT	5.50
25B8GT	4.95
28D7	2.75

*Metal types †Matched pair

TELEVISION PICTURE TUBES

TYPE	LIST PRICE	ENVELOPE	FACEPLATE
*5TP4	$60.00	Round, Glass	Clear
‡7JP4	26.00	Round, Glass	Clear
8AP4-A	24.20	Round, Metal	Filter
10BP4-A	27.50	Round, Glass	Filter
10FP4	34.85	Round, Glass	Clear, Aluminized
10FP4-A	34.85	Round, Glass	Filter, Aluminized
12KP4-A	39.40	Round, Glass	Filter, Aluminized
12LP4-A	32.40	Round, Glass	Filter
12UP4-B	40.35	Round, Metal	Filter, Etched
14CP4	34.85	Rectangular, Glass	Filter
16AP4-A	45.75	Round, Metal	Filter
16GP4	45.75	Round, Metal	Filter
16GP4-B	45.75	Round, Metal	Filter, Etched
16KP4/16RP4	37.60	Rectangular, Glass	Filter
16KP4-A	43.00	Rectangular, Glass	Filter, Aluminized
16LP4-A	40.00	Round, Glass	Filter
16WP4-A	40.00	Round, Glass	Filter
17BP4-A	36.25	Rectangular, Glass	Filter
17BP4-B	43.50	Rectangular, Glass	Filter, Aluminized
17CP4	34.85	Rectangular, Metal	Filter, Etched
†17FP4-A	38.50	Rectangular, Glass	Filter
†17GP4	46.00	Rectangular, Metal	Filter, Etched
17QP4	36.25	Rectangular, Glass	Filter, Cylindrical Face
†17RP4/17HP4	37.50	Rectangular, Glass	Filter
†17VP4/17LP4	37.50	Rectangular, Glass	Filter, Cylindrical Face
19AP4-A	58.75	Round, Metal	Filter
19AP4-B	58.75	Round, Metal	Filter, Etched
20CP4	50.40	Rectangular, Glass	Filter
20CP4-A	51.25	Rectangular, Glass	Filter
20DP4-A	51.50	Rectangular, Glass	Filter
†20HP4-A/20LP4	53.00	Rectangular, Glass	Filter
21AP4	55.00	Rectangular, Metal	Filter, Etched
21EP4-A	55.00	Rectangular, Glass	Filter, Cylindrical Face
21EP4-B	64.25	Rectangular, Glass	Filter, Aluminized Cylindrical Face
†21FP4-A	57.25	Rectangular, Glass	Filter, Cylindrical Face
†21MP4	57.00	Rectangular, Metal	Filter, Etched
†21YP4	56.25	Rectangular, Glass	Filter
21ZP4-A	53.75	Rectangular, Glass	Filter
21ZP4-B	62.25	Rectangular, Glass	Filter, Aluminized
24AP4	110.00	Round, Metal	Filter
24TP4	105.00	Rectangular, Glass	Filter, Aluminized
27EP4	146.75	Rectangular, Glass	Filter, Aluminized

*Projection Type †Electrostatic Focus ‡Electrostatic Focus and Deflection

All unmarked types Electromagnetic Focus

LIST PRICES INCLUDE FEDERAL EXCISE TAX

Prices and other data subject to change without notice.

Electronic **TUBES**

INDUSTRIAL AND TRANSMITTING TYPES

BALLAST TUBES

Type No.	Sugg. User Price
GL-5620/FB-50	$14.50
GL-5621/B-6	13.50
GL-5622/B-25	12.50
GL-5623/B-47	13.50
GL-5624/B-46	13.50

GLOW TUBES

Type No.	Sugg. User Price
GL-OA2	$ 2.90
GL-OA3	2.65
GL-OB2	3.20
GL-OB3	1.20
GL-OC3	2.65
GL-OD3	2.65
GL-874	3.10
GL-5651	2.30

THYRATRONS

Type No.	Sugg. User Price
GL-C1J	$ 8.69
GL-2D21	2.00
GL-3C23	12.50
FG-27-A	26.00
FG-81-A	16.00
FG-97	25.00
FG-98-A	27.00
FG-105	48.00
FG-154	47.50
FG-172	65.00
GL-393-A	13.25
GL-414	120.00
GL-502-A	1.85
GL-627	22.00
GL-672-A	35.00
GL-678	47.00
GL-884	1.85
GL-885	2.00
GL-2050	1.85
GL-5544	27.00
GL-5545	35.00
GL-5557/FG-17	8.50
GL-5559/FG-57	19.50
GL-5560/FG-95	28.00
GL-5632	12.15
GL-5662	3.20
GL-5663	1.90
GL-5720/FG-33	23.00
GL-5727	3.00
GL-5728/FG-67	26.00
GL-5830/FG-41	200.00
GL-5855	77.00
GL-6011	13.00
GL-6044	56.00
GL-6130	18.00

IGNITRONS

Type No.	Sugg. User Price
GL-5550/GL-415	$50.00
GL-5551/FG-271	80.50
GL-5552/FG-235-A	121.00
GL-5553/FG-258-A	265.00
GL-5554/FG-259-B	190.00
GL-5555/FG-238-B	370.00
GL-5564/GL-507	870.00
GL-5630	1,000.00
GL-5779	80.00
GL-5822	143.00
GL-6228/GL-506	3300.00

CATHODE-RAY TUBES

Type No.	Sugg. User Price
GL-2AP1-A	$10.55
GL-2BP1	9.60
GL-3AP1-A	14.25
GL-3BP1-A	16.50
GL-3KP1	14.50
GL-3MP1	14.75
GL-3UP1	27.00
GL-5BP1-A	22.50
GL-5CP1-A	23.25
GL-5CP7-A	27.25
GL-5FP7-A	30.00
GL-5FP14	30.25
GL-5QP4	49.50
GL-5UP1	17.75
GL-7BP7-A	48.50
GL-7UP7	49.50
GL-10KP7	50.00
GL-12DP7A	72.50
GL-12SP7	47.40
GL-12SP7B	68.00
GL-17ADP7	160.00
GL-914-A	93.50

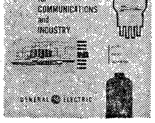
PLIOTRONS

Type No.	Sugg. User Price
GL-2C39-A	$34.00
GL-2C40	24.00
GL-2C42	21.50
GL-2C43	21.50
GL-2C46	22.00
GL-2E24	4.65
GL-2E26	3.85
GL-2E30	2.45
3X2500A3	198.00
GL-4C21	15.75
GL-4D21/4-125A	30.25
GL-4X150A	48.00
GL-4-250A/5D22	41.25
4-1000A	132.00
GL-5C24	45.00
GL-7C29	130.00
GL-7D21	320.00

PLIOTRONS (Cont'd)

Type No.	Sugg. User Price
GL-8D21	$1,300.00
GL-9C24	570.00
12AY7	3.00
GL-35T	10.50
GL-100TH	18.25
GL-146	27.00
GL-152	30.00
GL-159	160.00
GL-169	135.00
GL-203-A	13.75
GL-207	240.00
GL-211	13.75
GL-242-C	15.50
FP-265	40.00
FP-285	22.00
GL-473	165.00
GL-592	30.25
GL-800	11.50
GL-801-A	4.85
GL-802	4.75
GL-803	24.25
GL-805	13.50
GL-806	34.25
GL-807	2.50
GL-809	4.00
GL-810	16.25
GL-811-A	5.00
GL-812-A	5.00
GL-813	18.00
GL-814	14.25
GL-815	8.20
GL-826	12.50
GL-828	13.75
GL-829-B	16.25
GL-830-B	11.50
GL-832-A	12.90
GL-833-A	49.50
GL-835	19.50
GL-837	5.80
GL-838	13.75
GL-842	4.05
GL-843	2.60
GL-845	13.75
GL-849	138.00
GL-851	340.00
GL-862-A	1,322.00
GL-880	510.00
GL-889-A	210.00
*GL-889R-A	295.00
GL-891	237.00
*GL-891-R	385.00
GL-892	237.00
*GL-892-R	385.00
GL-893-A	664.00

*These prices include tube and radiator.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For complete Prices, Descriptions and Ratings.

Electronic TUBES

INDUSTRIAL AND TRANSMITTING TYPES

PLIOTRONS (Cont'd)

Type No.	Sugg. User Price
*GL-893A-R	$1,212.00
GL-895	950.00
*GL-895-R	1,300.00
GL-898-A	1,322.00
GL-954	5.65
GL-955	3.60
GL-956	7.00
GL-957	3.75
GL-1000-T	137.50
GL-1612	2.70
GL-1613	2.45
GL-1614	2.00
GL-1619	2.50
GL-1620	6.25
GL-1621	1.95
GL-1622	2.50
GL-1623	4.05
GL-1624	4.00
GL-1625	2.65
GL-1629	1.40
GL-1633	1.95
GL-5513	275.00
GL-5516	7.95
GL-5518	525.00
GL-5549	370.00
GL-5556/PJ-8	13.50
GL-5588	120.00
GL-5610	2.25
GL-5654	4.25
GL-5670	5.25
GL-5674	100.00
GL-5680	214.00
GL-5681	1780.00
GL-5686	3.75
GL-5687	6.00
GL-5691	8.55
GL-5692	8.55
GL-5693	6.95
GL-5718	8.50
GL-5719	8.50
GL-5725	4.25
GL-5739/FP-62	49.50
GL-5740/FP-54	88.00
GL-5742/PJ-7	14.50
GL-5743/PJ-21	14.00
GL-5749	2.00
GL-5750	2.50
GL-5751	3.50
GL-5763	1.75
GL-5797	13.50
GL-5798	17.45
GL-5814	3.50
GL-5824	3.35
GL-5840	10.75
GL-5844	2.25
GL-5879	1.75
GL-5894A	19.00
GL-5899	10.75
GL-5902	11.00
GL-5963	1.40
GL-6005	3.75
GL-6017	340.00
GL-6019	620.00
GL-6039	620.00
GL-6072	5.50
GL-6111	11.50
GL-6112	11.50
GL-6134	6.00
GL-6135	2.75

PLIOTRONS (Cont'd)

Type No.	Sugg. User Price
GL-6136	$ 3.25
GL-6137	2.50
GL-6146	4.90
GL-6159	4.90
GL-6166	780.00
GL-6183	680.00
GL-6201	5.50
GL-8000	14.50
GL-8002	160.00
GL-8002-R	190.00
GL-8005	8.40
GL-8025-A	11.30
GL-9001	3.40
GL-9002	2.50
GL-9003	3.40

KENOTRONS

KC-1	$350.00
GL-2B22	21.00
GL-2B23	23.50
2X2-A	4.35
KC-3	350.00
GL-3B24-W	11.75
5R4-GY	2.20
GL-217-C	21.17
GL-218	225.00
FP-400	27.00
GL-411	250.00
GL-836	9.00
GL-1616	8.65
GL-5625/KC-4	225.00
GL-5726	1.75
GL-5741/FP-85-A	85.00
GL-5896	7.25
GL-5973	310.00
GL-6087	5.25
GL-6202	3.17
GL-6203	3.97
GL-6215	3.00
GL-8013-A	10.30
GL-8020	24.00

TELEVISION CAMERA TUBES

GL-1850-A	$ 540.00
GL-5820	1,200.00
GL-5826	1,300.00

PHANOTRONS

GL-4B32	12.00
FG-166	160.00
GL-266-B	218.50
FG-280	62.00
GL-575-A	21.00
GL-673	21.00
GL-816	1.65
GL-857-B	218.50
GL-866-A	2.10
GL-869-B	138.00
GL-870-A	1,475.00
GL-872-A/872	8.20
GL-5558/FG-32	14.00
GL-5561/FG-104	38.00
GL-8008	8.20

MICROWAVE RADAR DEVICES

GL-1B24-A	$43.00
GL-1B35-A	11.10
GL-1B37	15.00
GL-1B37A	15.00

MICROWAVE (Cont'd)

Type No.	Sugg. User Price
GL-1B38	$50.00
GL-1B44	38.00
GL-1B56	38.00
GL-1B63-A	56.00
GL-1Q26	85.00
GL-1Q26-A	93.00
GL-5921	40.00
GL-5922	40.00

PHOTOTUBES

GL-1P21	$50.00
GL-1P29/FJ-401	2.95
GL-1P37	2.85
GL-1P39	1.75
GL-1P40	1.95
PJ-22	2.50
GL-441	4.50
GL-868/PJ-23	2.50
GL-917	3.50
GL-918	3.10
GL-919	3.50
GL-920	4.15
GL-921	2.05
GL-922	1.95
GL-923	2.05
GL-927	2.50
GL-929	1.50
GL-930	1.65
GL-931-A	8.60
GL-935	7.80
GL-5581	2.25

PHASITRONS

GL-2H21	$100.00
GL-5593	87.50

HIGH-ALTITUDE DEVICES

GL-1L21	$14.00
GL-1L22	29.00
GL-1L23	29.00
GL-1L24	49.50
GL-1L25	15.75
GL-1L31	15.75
GL-1L32	14.00
GL-1L33	34.00
GL-1L36	14.00
GL-1L38	25.00
GL-5626/FA-15	22.50
GL-5627/FA-6	27.00

VACUUM GAGES

GL-5628/FA-13	$26.00
GL-5629/FA-14	21.00

KON-NEC-TOR MERCURY SWITCHES

1-1KR1	$ 3.05
1-2KR1	2.85
1-15KR1	1.70
2-25KR1	2.00
2-33KR1	1.50
2-36KR1	2.50
2-52KR1	.35
4-19KR1	3.25
4-21KR1	2.40
4-24KR1	4.50
4-40KR1	2.75
7-19KR1	3.75
7-21KR1	2.90
7-24KR1	5.00

RCA ELECTRON TUBES REPLACEMENT DIRECTORY

for INDUSTRY and COMMUNICATIONS

Direct Replacement Types

RCA types shown below are direct replacements under all circumstances for corresponding types to be replaced. Tube types covered include: Vacuum Power Tubes, Rectifier Tubes, Thyratrons, Ignitrons, Voltage Regulators, Phototubes, Cathode-Ray Tubes, and Special Types.

Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type
OA3/VR75	OA3	FG-104	5561	WT-261	6H6	UE-905	805
OC3/VR105	OC3	VR105-30	OC3	WE-261A	835	905	905-A
OD3/VR150	OD3	HF120	211	WT-262	866-A	906-P1	3AP1-A
CE-1(A-D)	868, 918	VR150-30	OD3	WT-263	6Z4	908	908-A
1P32	927	WT-210-0001	2D21	WT-269	OC3	914	914-A
2AP1	2AP1-A	WT-210-0003	884	WT-270	80	931	931-A
2B4	885	WT-210-0004	2050	WT-270X	5Z3	UE-938	838
2X2/879	2X2-A	WT-210-0006	6H6	FG-271	5551	UE-949	849
3AP1	3AP1-A	WT-210-0008	866-A	WT-272	5557	UE-966A	866-A
3BP1	3BP1-A	WT-210-0009	84/6Z4	WE-274B	5R4-GY	UE-967	5557
4D21	4-125A/4D21	WT-210-0011	OC3	WT-294	0D3	UE-972A	872-A
4-250A	4-250A/5D22	WT-210-0012	80	WE-295A	203-A	UE-975A	575-A
5BP1	5BP1-A	WT-210-0013	5Z3	WT-301	83	1642	2C21/1642
5CP1	5CP1-A	WT-210-0015	5557	UE-303A	203-A	1802-P1	5BP1-A
5CP7	5CP7-A	WT-210-0018	OD3	WE-304B	834	1803-P4	12AP4
5D22	4-250A/5D22	WT-210-0019	83	F-307A	207	1804-P4	9AP4
5FP7	5FP7-A	WT-210-0021	6X5	WT-308	6X5-GT	1811-P1	7CP1
5HP1-A	5BP1-A‡	WT-210-0025	117Z6-GT	CE-309	5557	1849	1850-A
7BP7	7BP7-A	WT-210-0027	872-A	CE-311	3C23	1850	1850-A
PJ-8	5556	WT-210-0028	3Q5-GT	UE-311	211	2051	2050
G9	868	WT-210-0029	6C5	UE-311C	835	2525A5	5BP1-A
BW-11	834	WT-210-0031	902-A	UE-317C	217-C	5728/FG-67	1904
CE-11V(A-D)	917	WT-210-0037	117L7/M7-GT	WE-322A	803	8001	4E27/8001
RK-11	1623	WT-210-0038	172	WE-350A	807	8016	1B3-GT
12DP7	12DP7-A	WT-210-0040	6X4	375-A	575-A	WTT-100	6X4
FG-17	5557	WT-210-0042	5Y3-GT	WT-377	117Z6-GT	WTT-102	5Y3-GT
CE-20	927	WT-210-0044	575-A	WT-389	3Q5-GT	WTT-103	6H6
RK-20A	804	WT-210-0045	892	WT-390	6C5	WTT-104	575-A
CE-21(A-D)	920	WT-210-0048	5U4-G	FJ-401	1P29	WTT-105	892
CE-23(A-D)	923	WT-210-0052	2AP1-A	WE-403A	6AK5	WTT-111	5559
PJ-23	868	WT-210-0053	3AP1-A	GL-415	5550	WTT-112	5560
CE-25(A-D)	927	WT-210-0056	5559	GL-451	8020	WTT-113	676
RK-25	802	WT-210-0057	5560	WT-606	2D21	WTT-114	0Z4
RK-25B	802	WT-210-0058	676	WL-630	2050	WTT-115	117N7-GT
CE-28(A-D)	928	WT-210-0060	OZ4	WL-631	5559	WTT-117	5557
RK-28	803	WT-210-0061	117N7-GT	KU-634	677	WTT-118	105
RK-28A	803	WT-210-0062	5557	WL-651/656	5552	WTT-119	172
CE-29(A-D)	929, 1P39	WT-210-0069	5557	WL-652/657	5551	WTT-122	6SJ7
CE-30(A-D)	930, 1P40	WT-210-0070	5550	WL-653B	5555	WTT-123	6V6
CE-30V	925	WT-210-0071	5551	WL-655/658	5553	WTT-124	7K7
RK-30	800	WT-210-0072	5552	672	672-A	WTT-125	6N7-GT
FG-32	5558	WT-210-0073	5553	WL-679	5554	WTT-126	50B5
RK-33	2C21/1642	WT-210-0074	105	WL-681/686	5550	WTT-127	833-A
CE-34	934	WT-210-0078	172	NL-715	5557	WTT-128	6K8-GT
RK-39	807	WT-210-0079	105	WL-735	868	WTT-129	6J5-GT
CE-41	921	WT-210-0081	6SJ7	801	801-A	WTT-130	6G6-G
CE-42	922	WT-210-0082	6V6	811	811-A	WTT-131	6C6
RK-44	837	WT-210-0083	7K7	812	812-A	WTT-132	OA4-G
RK-47	814	WT-210-0084	6N7-GT	829	829-B	WTT-135	5U4-G
UH-50	834	WT-210-0085	50B5	829-A	829-B	WTT-136	2AP1-A
R51A	927	WT-210-0086	833-A	832	832-A	WTT-137	3AP1-A
CE-55	924	WT-210-0087	6K8-GT	833	833-A	WTT-149	172
FG-57	5559	WT-210-0088	6J5-GT	C-833	833-A		
RK-57	805	WT-210-0089	6G6-G	857	857-B		
RK-58	838	WT-210-0090	6C6	862	862-A		
CE-59	5581	WT-210-0091	OA4-G	866	866-A		
R59A	868, 918	211-D	211	866-A/866	866-A		
R60A	920	FG-235A	5552	869-A	869-B		
HY-61/807	807	FG-238B	5555	872	872-A		
R61A	930	242A	211	872-A/872	872-A		
CE-64	5583	242B	211	F-872B	872-A		
FG-67/5728	1904	WT-245	884	879	2X2-A		
VR75-30	OA3	WT-246	2050	889	889-A		
FG-95	5560	FG-258A	5553	893	893-A		
CE-98	5582	FG-259B	5554	902	902-A		

See next page for a complete listing and suggested user's prices of more than 340 RCA Non-Receiving Tube Types.

‡ Except in high-altitude service.

NOTE: For additional replacement data on RCA Tubes for Industry and Communications, refer to the 20-page RCA Interchangeability Directory (Form ID-1020) which lists 1600 tube type numbers used by 24 manufacturers.

For complete technical information on RCA Tubes, see your RCA Distributor or write: Commercial Engineering, RCA Tube Department, Harrison, New Jersey.

RCA ELECTRON TUBES

for INDUSTRY and COMMUNICATIONS

Type	Sugg'd User Price
OA2	$2.90
OA3	2.65
OA4-G	2.90
OB2	3.20
OC3	2.65
OD3	2.65
1C21	2.85
1P21	50.00
1P22	14.75
1P28	15.50
1P29	2.95
1P37	2.85
1P39	1.75
1P40	1.95
1P41	2.80
1P42	5.70
2A4-G	3.20
2AP1-A	10.55
2BP1	9.60
2BP11	11.00
2C21/1642*	1.90
2C22*	1.60
2C40*	24.00
2C43	21.50
2D21	2.00
2D21W‡	3.15
2E24	4.65
2E26	3.85
2F21	105.00
2J50	192.00
2K26	78.50
2V3-G*	5.25
2X2-A	4.35
3A4	1.20
3A5	1.95
3AP1-A	15.75
3B25	6.90
3B28	8.55
3BP1-A	16.50
3C23	12.50
3C33	21.25
3C45	17.80
3D22	15.00
3E22	8.30
3E29	20.25
3FP7-A	23.00
3JP1	19.00
3JP7	23.00
3KP1	14.50
3KP11	16.50
3MP1	14.75
3RP1	14.50
4-65A	20.00
4-125A/4D21	30.25
4-250A/5D22	41.25
4-1000A	132.00
4C33	182.75
4E27/8001	24.50
4E27A/5-125B	35.75
4X150A	48.00
4X500A	121.00
5ABP1	31.00
5ABP7	35.00
5ABP11	35.25
5BP1-A	22.50
5CP1-A	23.25
5CP7-A	27.25
5CP11-A	27.50
5CP12	27.00
5FP4-A	41.75
5FP7-A	30.25
5FP14	$30.25
5R4-GY*	1.85
5UP1	17.75
5UP7	20.25
5UP11	22.00
5WP11	70.00
5WP15	70.00
5ZP16	71.25
6AB7-Y‡	1.85
6AC7-W‡*	3.75
6AC7-Y‡*	1.40
6AG7-Y*	1.75
6AK5-W‡*	3.38
6AL5-W‡*	2.80
6AS6*	3.65
6F4*	6.40
6J4*	8.05
6L4*	6.60
6L6-Y‡	2.90
6SA7-Y‡*	1.10
6SJ7-Y*	1.00
6SK7-W‡*	3.44
6SK7-Y‡*	1.06
6SN7-GTY*	1.40
6V6-GTY‡*	1.08
6V6-Y‡*	4.25
7BP7-A	48.50
7C24	169.00
7CP1	30.75
7CP4	33.00
7JP1	23.50
7MP7	39.50
7MP14	39.50
7NP4	600.00
7QP4	39.50
7TP4	52.00
7VP1	25.00
7WP4	630.00
8D21	1300.00
9C21	922.00
9C22	1300.00
9C25	1080.00
10KP7	50.00
10SP4	54.00
10-Y	3.90
12A6*	2.90
12AY7*	3.00
12DP7-A	72.50
12DP7B	72.50
12K8-Y‡*	1.75
12L8-GT	2.35
12SA7-Y‡*	1.25
12SG7-Y‡*	3.40
12SP7	47.40
12SW7*	1.20
12SX7-GT*	1.55
12SY7*	1.45
16ADP7	55.00
26A6*	3.10
26A7-GT*	6.55
26C6*	2.10
26D6*	2.85
105	49.50
172	74.00
203-A	13.75
204-A	130.00
207	240.00
211	13.75
217-C	21.17
502-A	1.85
559	5.35
575-A	$21.00
579-B	15.00
627	22.00
629	13.00
672-A	35.00
673	21.00
676	55.00
677	55.00
800	11.50
801-A	4.85
802	4.75
803	24.25
804	17.50
805	13.50
806	34.25
807	2.50
808	10.75
809	4.00
810	16.25
811-A	5.00
812-A	5.00
813	18.00
814	14.25
815	8.20
816	1.65
826	12.50
827-R	172.50
828	13.75
829-B	16.25
830-B	11.50
832-A	12.90
833-A	49.50
834	14.50
835	19.50
836	9.00
837	5.80
838	13.75
841*	4.35
842	4.05
843	2.60
845	13.75
846	250.00
849	138.00
851	340.00
857-B	218.50
860	34.50
861	178.25
862-A	1322.00
864	5.00
865	11.50
866-A	2.10
868	2.50
869-B	138.00
872-A	8.20
874	3.10
878	12.75
880	540.00
884	1.85
885	2.00
886	4.60
889-A	210.00
889R-A	295.00
891	237.00
891-R	385.00
892	237.00
892-R	385.00
893-A	664.00
893A-R	1212.00
898-A	1322.00
902-A	12.50
905-A	65.25
908-A	$16.50
912	155.00
913	15.50
914-A	93.50
917	3.50
918	3.10
919	3.50
920	4.15
921	2.05
922	1.95
923	2.05
924	3.30
925	2.40
926	2.90
927	2.50
928	2.85
929	1.50
930	1.65
931-A	8.60
934	3.40
935	7.80
954*	5.65
955*	3.60
956*	7.00
957*	3.75
958-A*	6.50
959*	6.25
991	.75
1608	7.90
1609	10.25
1610	2.50
1612	2.70
1613	2.45
1614	2.00
1616	8.65
1619	2.50
1620	6.25
1621	1.95
1622	2.50
1623	4.05
1624	4.00
1625	2.65
1626	1.85
1629	1.40
1631*	3.10
1632*	3.25
1633*	1.95
1634*	1.40
1635	2.00
1644*	3.10
1654	4.55
1699	‡‡
1816P4-A	47.00
1850-A	540.00
1945	135.00
1946	10.90
1947	9.80
1949	11.30
1950	7.80
2050	1.85
5527	49.90
5550	50.00
5551	80.50
5552	121.00
5553	265.00
5554	190.00
5555	370.00
5556	13.50
5557	8.50
5558	15.50
5559	22.00
5560	28.00
5561	$40.00
5563	47.00
5581	2.25
5582	2.65
5583	3.05
5584	3.95
5588	120.00
5592	1229.00
5618	3.60
5651	2.30
5652	6.55
5653	2.40
5654	4.90
5671	1250.00
5675	15.20
5690	11.25
5691	9.50
5692	9.75
5693	7.75
5696	1.90
5713	176.00
5718	9.35
5719	9.35
5726	2.00
5728/FG-67	23.00
5734	18.00
5751	3.80
5762/7C24	169.00
5763	1.75
5770	995.00
5771	543.00
5786	78.00
5794	16.75
5814	3.80
5819	55.00
5820	1200.00
5822	143.00
5823	1.32
5825	13.00
5826	1300.00
5840	12.40
5876	15.20
5879	1.75
5890	26.00
5893	19.40
5915	1.20
5946	115.00
5963	1.40
5964	1.50
6012	4.50
6026	2.95
6073	8.00
6074	8.90
6080*	6.00
6082	5.30
6146	4.90
6159	4.90
6161	115.00
6166	780.00
6173	15.80
6181	750.00
6198	360.00
6199	55.00
6211	2.95
6217	70.00
8000	14.50
8003	14.00
8005	8.40
8008	8.20
8012-A	15.50
8013-A	10.30
8020	24.00
8025-A	11.30
9001*	3.40
9002*	2.50
9003*	3.40
9004*	2.30
9005*	3.45
9006*	1.60

*Subject to Federal Excise Tax. Suggested User prices listed in this schedule include Federal Excise Tax.
‡Supplied only against orders giving government contract number. ‡‡Quotation on request.
Prices in effect May 1, 1953.

RCA ELECTRON TUBES

RECEIVING • TELEVISION • SPECIAL

SUGGESTED LIST PRICES • JUNE 1, 1953

Type	Sug'd List Price	Type	Sug'd List Price	Type	Sug'd List Price	Type	Sug'd List Price	Type	Sug'd List Price	Type	Sug'd List Price
OY4	$4.80	5Y3G	$1.35	6CF6	$2.50	6T8	2.90	12BE6	$1.90	32	$3.70
OZ4	1.65	5Y3GT	1.20	6CL6	3.15	6U5	2.00	12BF6	1.70	32L7GT	3.20
OZ4G	1.65	5Y4G	1.55	6D6	2.20	6U7G	2.20	12BH7	2.60	35A5	2.05
1A3	2.30	5Z3	1.75	6E5	2.25	6U8	2.90	12C8	3.35	35B5	2.00
1A5GT	1.85	5Z4	2.80	6F5	1.75	6V6	3.40	12F5GT	1.90	35C5	2.00
1A7GT	2.20	6A3	3.35	6F5GT	1.70	6V6GT	2.00	12H6	1.80	35L6GT	1.75
1AC5	2.55	6A6	2.75	6F6	2.15	6W4GT	1.90	12J5GT	1.55	35W4	1.30
1AD5	2.55	6A7	2.30	6F6G	1.80	6W6GT	2.20	12J7GT	2.20	35Y4	1.80
1B3GT	2.55	6A8	2.25	6F6GT	1.65	6X4	1.55	12K7GT	2.10	35Z3	1.80
1C5GT	2.30	6A8G	2.35	6F7	3.35	6X5	2.75	12K8	2.70	35Z4GT	1.45
1D5GP	4.05	6A8GT	2.30	6F8G	3.35	6X5GT	1.55	12Q7GT	1.85	35Z5GT	1.25
1D8GT	4.05	6AB4	2.00	6G6G	2.75	6X8	2.75	12S8GT	2.65	36	2.75
1E7GT	4.05	6AB5/6N5	2.75	6H6	1.75	6Y6G	2.50	12SA7	1.80	37	1.85
1E8	2.30	6AB7	3.25	6H6GT	1.85	6ZY5G	2.30	12SA7GT	1.80	41	1.90
1F6	4.05	6AC5GT	3.00	6J5	1.55	7A4	2.00	12SC7	2.30	42	1.90
1F7G	4.05	6AC7	3.05	6J5GT	1.65	7A5	2.35	12SF5	1.90	43	2.05
1G4GT	2.55	6AD7G	3.35	6J6	2.50	7A6	2.10	12SF7	2.10	45	2.10
1G5G	3.15	6AF4	4.60	6J7	2.25	7A7	2.00	12SG7	2.15	45Z5GT	1.80
1G6GT	2.75	6AF6G	2.75	6J7G	2.25	7A8	1.90	12SH7	2.35	47	2.90
1H4G	2.30	6AG5	2.20	6J7GT	2.20	7AD7	4.60	12SJ7	1.75	49	2.75
1H5GT	1.75	6AG7	3.40	6J8G	3.20	7AF7	1.80	12SJ7GT	1.65	50	5.15
1H6G	3.35	6AH4GT	2.35	6K5GT	2.40	7AG7	2.45	12SK7	1.75	50A5	2.20
1J6GT	3.35	6AH6	3.90	6K6GT	1.70	7AH7	2.45	12SK7GT	1.80	50B5	2.00
1L4	2.10	6AK5	4.35	6K7	1.90	7B4	1.80	12SL7GT	2.50	50C5	2.00
1L6	2.75	6AK6	2.50	6K7G	2.15	7B5	1.85	12SN7GT	2.30	50C6G	2.90
1LA4	2.65	6AL5	1.80	6K7GT	2.15	7B6	2.00	12SQ7	1.60	50L6GT	1.75
1LA6	2.65	6AL7GT	2.90	6K8	2.70	7B7	2.00	12SQ7GT	1.60	50X6	2.20
1LB4	2.65	6AQ5	2.00	6L6	3.95	7B8	2.05	12SR7	2.10	50Y6GT	1.85
1LC5	2.65	6AQ6	1.90	6L6G	3.00	7C5	2.00	12V6GT	2.00	50Y7GT	2.10
1LC6	2.65	6AQ7GT	2.65	6L7	2.55	7C6	1.85	14A4	2.65	53	2.75
1LD5	2.65	6AR5	1.65	6N6G	3.90	7C7	2.05	14A5	3.90	55	2.30
1LE3	2.65	6AS5	2.10	6N7	2.55	7E6	2.90	14A7	2.20	56	1.85
1LG5	2.65	6AS7G	7.10	6N7GT	2.50	7E7	3.20	14AF7	2.40	57	2.10
1LH4	2.65	6AT6	1.60	6P5GT	2.40	7F7	2.45	14B6	2.20	58	2.10
1LN5	2.65	6AU5GT	2.70	6Q7	2.10	7F8	2.90	14B8	2.20	59	3.70
1N5GT	2.10	6AU6	1.80	6Q7G	1.85	7G7	2.75	14C5	2.75	70L7GT	3.90
1P5GT	2.65	6AV5GT	2.65	6Q7GT	1.85	7H7	2.20	14C7	2.40	71A	2.35
1Q5GT	2.65	6AV6	1.60	6R7	2.65	7J7	3.25	14E6	2.90	75	1.75
1R5	2.10	6AX4GT	2.40	6R7GT	2.65	7K7	2.75	14E7	3.20	76	1.70
1S4	2.45	6AX5GT	2.40	6S4	1.75	7L7	2.75	14F7	2.45	77	2.15
1S5	1.90	6B4G	3.20	6S7	2.80	7N7	2.20	14F8	3.20	78	2.15
1T4	2.10	6B5	3.35	6S7G	3.35	7Q7	2.40	14H7	2.40	79	2.75
1T5GT	2.60	6B6G	2.10	6S8GT	2.65	7R7	3.35	14J7	3.25	80	1.30
1T6	2.55	6B7	3.35	6SA7	1.80	7S7	3.25	14N7	2.65	81	4.65
1U4	2.10	6B8	3.35	6SA7GT	1.80	7V7	3.35	14Q7	2.40	83	2.75
1U5	1.90	6BA6	1.90	6SB7Y	2.55	7W7	3.35	14R7	3.35	83V	3.20
1V	2.30	6BA7	2.50	6SC7	2.10	7X7	2.65	19BG6G	6.00	84/6Z4	1.80
1V2	1.55	6BC5	2.00	6SF5	1.75	7Y4	1.80	19J6	2.65	85	2.30
1X2A	2.65	6BD6	2.00	6SF5GT	1.80	7Z4	1.80	19T8	2.90	89	2.30
2A3	3.35	6BE6	1.90	6SF7	2.00	12A7	3.35	19X8	3.10	117L7/M7GT	3.90
2A5	2.30	6BF5	2.35	6SG7	2.05	12A8GT	2.15	22	3.20	117N7GT	4.05
2A6	2.65	6BF6	1.70	6SH7	2.30	12AH7GT	2.75	24A	2.35	117P7GT	4.05
2E5	2.75	6BG6G	4.80	6SJ7	1.75	12AL5	1.80	25A6	3.40	117Z3	1.60
3A8GT	4.80	6BH6	2.10	6SJ7GT	1.65	12AQ5	1.95	25AC5GT	2.90	117Z4GT	2.90
3LF4	2.80	6BJ6	2.10	6SK7	1.75	12AT6	1.60	25BQ6GT	3.50	117Z6GT	2.65
3Q4	2.25	6BL7GT	2.90	6SK7GT	1.80	12AT7	2.90	25L6	3.40	XXD use 14AF7	
3Q5GT	2.50	6BQ6GT	3.45	6SL7GT	2.45	12AU6	1.80	25L6GT	1.75	XXFM use 7X7	
3S4	2.05	6BQ7-A	3.20	6SN7GT	2.20	12AU7	2.40	25W4GT	2.00	XXL use 7A4	
3V4	2.05	6C4	1.70	6SQ7	1.60	12AV6	1.60	25Z5	1.65		
5AZ4	1.55	6C5	1.75	6SQ7GT	1.60	12AW6	2.65	25Z6	2.30		
5T4	4.40	6C5GT	1.65	6SR7	1.80	12AX4GT	2.50	25Z6GT	1.55		
5U4G	1.55	6C6	2.20	6SS7	2.15	12AX7	2.50	26	2.05		
5V4G	2.45	6C8G	3.35	6ST7	2.70	12BA6	1.90	27	1.75		
5W4GT	1.75	6CB6	2.10	6SZ7	2.20	12BA7	2.50	30	2.25		
5X4G	1.80	6CD6G	6.60	6T7G	3.35	12BD6	2.00	31	2.75		

Suggested list prices include Federal Excise Tax where applicable.

All prices subject to change without notice.

RCA KINESCOPES

DEALER PRICE SCHEDULE

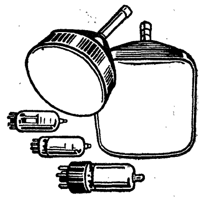
JUNE 1, 1953

Type	Suggested List Price	Suggested Dealer Price†	DESCRIPTION				
			Shape	Material	Face	Focus	Deflection
3KP4	$23.50	$17.50	Round	Glass	Clear	Electrostatic	Electrostatic
5TP4	60.00	45.00	Round	Glass	Clear	Electrostatic	Magnetic
7DP4	31.50	26.20	Round	Glass	Clear	Electrostatic	Magnetic
7JP4	26.00	19.50	Round	Glass	Clear	Electrostatic	Electrostatic
10BP4-A	28.00	21.00	Round	Glass	Filter	Magnetic	Magnetic
10FP4-A	35.00	26.00	Round	Glass	Filter	Magnetic	Magnetic
12KP4-A	39.50	29.50	Round	Glass	Filter	Magnetic	Magnetic
12LP4-A	32.00	24.00	Round	Glass	Filter	Magnetic	Magnetic
14CP4	35.00	26.00	Rectangular	Glass	Filter	Magnetic	Magnetic
14EP4	35.00	26.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16AP4-A	46.00	34.50	Round	Metal	Filter	Magnetic	Magnetic
16DP4-A	39.00	29.25	Round	Glass	Filter	Magnetic	Magnetic
16GP4	46.00	34.50	Round	Metal	Filter	Magnetic	Magnetic
16GP4-B	46.00	34.50	Round	Metal	Fil.-Fr.	Magnetic	Magnetic
16KP4	37.00	28.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16LP4-A	40.00	30.00	Round	Glass	Filter	Magnetic	Magnetic
16RP4	37.00	28.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16TP4	37.00	28.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16WP4-A	40.00	30.00	Round	Glass	Filter	Magnetic	Magnetic
17BP4-A	36.00	27.00	Rectangular	Glass	Filter	Magnetic	Magnetic
17CP4	35.00	26.00	Rectangular	Metal	Fil.-Fr.	Magnetic	Magnetic
17GP4	46.00	34.50	Rectangular	Metal	Fil.-Fr.	Electrostatic	Magnetic
17HP4	38.25	28.75	Rectangular	Glass	Filter	Electrostatic*	Magnetic
17JP4	36.00	27.00	Rectangular	Glass	Filter	Magnetic	Magnetic
17LP4	38.25	28.75	Rectangular	Glass	Filter	Electrostatic*	Magnetic
17QP4	36.00	27.00	Rectangular	Glass	Filter	Magnetic	Magnetic
17TP4	36.50	27.50	Rectangular	Metal	Fil.-Fr.	Electrostatic*	Magnetic
19AP4-A	59.00	44.00	Round	Metal	Filter	Magnetic	Magnetic
19AP4-B	59.00	44.00	Round	Metal	Fil.-Fr.	Magnetic	Magnetic
20CP4	51.50	38.50	Rectangular	Glass	Filter	Magnetic	Magnetic
20MP4	54.00	40.50	Rectangular	Glass	Filter	Electrostatic*	Magnetic
21AP4	55.00	41.50	Rectangular	Metal	Fil.-Fr.	Magnetic	Magnetic
21EP4	55.00	41.50	Rectangular	Glass	Filter	Magnetic	Magnetic
21EP4A	55.00	41.50	Rectangular	Glass	Filter	Magnetic	Magnetic
21MP4	57.00	43.00	Rectangular	Metal	Fil.-Fr.	Electrostatic*	Magnetic
27MP4	143.00	107.00	Rectangular	Metal	Fil.-Fr.	Magnetic	Magnetic

†See your RCA distributor for kinescope return allowance information.
Suggested List and Dealer Prices include Federal Excise Tax. Prices shown do not exceed ceilings calculated under applicable government price regulations. **All prices subject to change without notice.**

For the latest Service Aids — for the Best Tubes . . .

ALWAYS KEEP IN TOUCH WITH YOUR RCA DISTRIBUTOR



TUNG-SOL
ELECTRON TUBES

REVISED APRIL 27, 1953

This Price List Is Supplied For Your Convenience By Tung-Sol Electric Inc.

All prices are subject to change without notice. The listing of price for any tubes does not necessarily indicate availability.

Type	Sugg'd Retail Price
0Y4	$4.80
0Z4	1.65
0Z4G	1.65
01A	1.25
1A3	2.30
1A4P	4.05
1A5GT	1.85
1A6	3.35
1A7GT	2.20
1B3GT	2.55
1B4P (1B4/951)	4.05
1B5/25S	3.50
1B7GT	3.35
1C5GT	2.30
1C6	3.35
1C7G	3.35
1C8	2.65
1D5GP	4.05
1D7G	3.35
1D8GT	4.05
1E5GP	4.05
1E7GT	4.05
1F4	2.75
1F5G	2.75
1F6	4.05
1F7G	4.05
1G4GT	2.55
1G5G	3.15
1G6GT	2.75
1H4G	2.30
1H5GT	1.75
1H6G	3.35
1J5G	2.65
1J6G	3.20
1J6GT	3.35
1L4	2.10
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LG5	2.65
1LH4	2.65
1LN5	2.65
1N5GT	2.10
1N6G	1.80
1P5GT	2.65
1Q5GT	2.65
1Q6	2.65
1R5	2.10
1S4	2.45
1S5	1.90
1T4	2.10
1T5GT	2.60
1U4	2.10
1U5	1.90
1V	2.30
1V2	1.55
1V5	2.65
1X2A	2.65
1W5	2.65
2A3	3.35
2A4G	3.20

Type	Sugg'd Retail Price
2A5	$2.30
2A6	2.65
2A7	2.75
2B7	3.40
2E5	2.75
3A8GT	4.80
3B7/1291	4.65
3C6/XXB	3.20
3D6/1299	3.20
3E6	4.05
3LF4	2.80
3Q4	2.25
3Q5GT	2.50
3S4	2.05
3V4	2.05
5AX4GT	1.25
5AZ4	1.55
5T4	4.40
5U4G	1.55
5V4G	2.45
5W4	1.65
5W4GT	1.75
5X4G	1.80
5Y3G	1.35
5Y3GT	1.20
5Y4G	1.55
5Z3	1.75
5Z4	2.80
6A3	3.35
6A4 (LA)	3.20
6A5G	4.05
6A6	2.75
6A7	2.30
6A8	2.25
6A8G	2.35
6A8GT	2.30
6AB4	2.00
6AG5/6N6	2.75
6AB7/1853	3.25
6AC5GT	3.00
6AC7/1852	3.05
6AD7G	3.35
6AF4	4.60
6AF6G	2.75
6AG5	2.20
6AG7	3.40
6AH4GT	2.35
6AH6	3.90
6AK5	4.15
6AK6	2.50
6AL5	1.80
6AL7GT	2.90
6AQ5	2.00
6AQ6	1.90
6AQ7GT	2.65
6AR5	1.65
6AS5	2.10
6AT6	1.60
6AU5GT	2.75
6AU6	1.80
6AV5GT	2.65
6AV6	1.60
6AX4GT	2.40
6AX5GT	1.70
6B4G	3.20

Type	Sugg'd Retail Price
6B5	$3.35
6B6G	2.10
6B7	3.35
6B8	3.35
6B8G	3.35
6BA6	1.90
6BA7	2 50
6BC5	2.00
6BD5GT	3.35
6BD6	2.00
6BE6	1.90
6BF5	2.35
6BF6	1.70
6BG6G	4.80
6BH6	2.10
6BJ6	2.10
6BK7	3.05
6BL7GT	2.90
6BN6	3.20
6BQ6GT	3.45
6BQ7	3.20
6BY5G	2.65
6BZ7	3.35
6C4	1.70
6C5	1.75
6C5GT	1.65
6C6	2.20
6C8G	3.35
6CB6	2.10
6CD6G	6.60
6D6	2.20
6D8G	3.35
6E5	2.25
6F5	1.75
6F5GT	1.70
6F6	2.15
6F6G	1.80
6F6GT	1.65
6F7	3.35
6F8G	3.35
6G6G	2.75
6H4GT	2.65
6H6	1.75
6H6GT	1.85
6J5	1.55
6J5GT	1.65
6J6	2.50
6J7	2.25
6J7GT	2.20
6J8G	3.20
6K5GT	2.40
6K6GT	1.70
6K7	1.90
6K7G	2.15
6K7GT	2.15
6K8	2.70
6K8G	3.30
6K8GT	2.50
6L5G	2.75
6L6	3.95
6L6G	3.00
6L6GA	3.00
6L7	2.55
6L7G	3.30
6N6G	3.90

Type	Sugg'd Retail Price
6N7	$2.55
6N7GT	2.50
6P5GT	2.40
6Q7	2.10
6Q7GT	1.85
6R7	2.65
6R7GT	2.65
6R8	3.20
6S4	1.75
6S7	2.80
6S7G	3.35
6S8GT	2.65
6SA7	1.80
6SA7GT	1.80
6SB7Y	2.55
6SC7	2.10
6SC7GT	2.00
6SD7GT	2.90
6SF5	1.75
6SF5GT	1.80
6SF7	2.00
6SF7GT	1.80
6SG7	2.05
6SG7GT	2.20
6SH7	2.30
6SH7GT	2.20
6SJ7	1.75
6SJ7GT	1.65
6SK7	1.75
6SK7GT	1.80
6SL7GT	2.45
6SN7GT	2.20
6SQ7	1.60
6SQ7GT	1.60
6SR7	1.80
6SS7	2.15
6ST7	2.65
6SV7	3.55
6SZ7	2.20
6T7G (6Q6G)	3.35
6T8	2.90
6U4GT	2.65
6U5/6G5	2.00
6U6GT	2.20
6U7G	2.20
6U8	2.90
6V3	3.55
6V6	3.40
6V6GT	2.00
6V7	3.20
6V7G	1.80
6W4GT	1.90
6W6GT	2.20
6W7G	2.75
6X4	1.55
6X5	2.75
6X5GT	1.55
6X8	2.75
6Y6G	2.50
6Z7G	4.05
6ZY5G	2.30
7A4/XXL	2.00
7A5	2.35
7A6	2.10
7A7	2.00

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

(Continued next page)

TUNG-SOL ELECTRON TUBES (con.)

Type	Sugg'd Retail Price
7A8	$1.90
7AD7	4.60
7AF7	1.80
7AG7	2.45
7AH7	2.45
7B4	1.80
7B5	1.85
7B6	2.00
7B7	2.00
7B8	2.05
7C4/1203	3.50
7C5	2.00
7C6	1.85
7C7	2.05
7E5/1201	2.65
7E6	2.90
7E7	3.20
7F7	2.45
7F8	3.00
7G7/1232	2.75
7H7	2.20
7J7	3.25
7K7	2.75
7L7	2.75
7N7	2.20
7Q7	2.40
7R7	3.35
7S7	3.25
7V7	3.35
7W7	3.35
7X6	2.20
7X7 (XXFM)	2.65
7Y4	1.80
7Z4	1.80
10	3.90
12A6	2.90
12A6GT	2.90
12A7	3.35
12A8GT	2.20
12AH6GT	2.20
12AH7GT	2.75
12AL5	1.80
12AQ5	2.00
12AT6	1.60
12AT7	2.90
12AU6	1.80
12AU7	2.40
12AV6	1.60
12AV7	2.90
12AW6	2.65
12AX4GT	2.50
12AX7	2.50
12AY7	6.00
12BA6	1.90
12BA7	2.50
12BD6	2.00
12BE6	1.90
12BF6	1.70
12BH7	2.60
12BY7	2.65
12E5GT	2.20
12F5GT	1.90
12H6	1.80
12J5GT	1.55
12J7GT	2.20

Type	Sugg'd Retail Price
12K7GT	$2.10
12K8	2.70
12K8GT	2.70
12Q7GT	1.85
12S8GT	2.65
12SA7	1.80
12SA7GT	1.80
12SC7	2.30
12SF5	1.90
12SF5GT	1.90
12SF7	2.10
12SF7GT	1.90
12SG7	2.15
12SH7	2.35
12SJ7	1.75
12SJ7GT	1.65
12SK7	1.75
12SK7GT	1.75
12SL7GT	2.50
12SN7GT	2.30
12SQ7	1.60
12SQ7GT	1.60
12SR7	2.10
12SR7GT	2.20
12V6GT	2.00
12X4	1.55
12Z3	2.60
14A4	2.65
14A5	3.90
14A7/12B7	2.20
14AF7 (XXD)	2.40
14B6	2.20
14B8	2.20
14C5	2.75
14C7	2.40
14E6	2.90
14E7	3.20
14F7	2.45
14F8	3.20
14H7	2.40
14J7	3.25
14N7	2.65
14Q7	2.40
14R7	3.35
14S7	3.25
14W7	3.35
14X7	2.65
14Y4	2.40
15	3.20
19	3.35
19BG6G	6.00
19C8	3.20
19J6	2.65
19T8	2.90
22	3.20
24A	2.35
25A6	3.40
25A6G	2.75
25AC5GT	2.90
25BQ6GT	3.50
25C6G	3.00
25L6	3.40
25L6GT	1.75
25W4GT	2.00
25Y5	3.00

Type	Sugg'd Retail Price
25Z5	$1.65
25Z6	2.30
25Z6GT	1.55
26	2.05
27	1.75
30	2.25
31	2.75
32	3.70
32L7GT	3.20
33	3.35
34	3.50
35/51	2.35
35A5	2.05
35B5	2.00
35C5	2.00
35L6GT	1.75
35W4	1.30
35Y4	1.80
35Z3	1.80
35Z4GT	1.50
35Z5GT	1.25
35Z6G	1.80
36	2.75
37	1.85
38	2.30
39/44	2.75
41	1.90
42	1.90
43	2.05
45	2.10
45Z3	1.80
45Z5GT (40Z5GT)	1.80
46	2.90
47	2.90
48	3.90
49	2.75
50	5.15
50A5	2.20
50B5	2.00
50C5	2.00
50C6G	2.90
50L6GT	1.75
50X6	2.20
50Y6GT	1.85
50Y7GT	2.10
53	2.75
55	2.30
56	1.85
57	2.10
58	2.10
59	3.70
70L7GT	3.90
71A	2.35
75	1.75
76	1.70
77	2.15
78	2.15
79	2.75
80	1.30
81	4.65
82	2.75
83	2.75
83V	3.20
84/6Z4	1.80
85	2.30

Type	Sugg'd Retail Price
89	$2.30
117L7/M7GT	3.90
117N7GT	4.05
117P7GT	4.05
117Z3	1.60
117Z4GT	2.90
117Z6GT	2.65
485	2.65
FM1000	3.20
XXD/14AF7	2.40
XXFM/7X7	2.65
XXL/7A4	2.00

CATHODE RAY PICTURE TUBES

7JP4	$26.00
10BP4A	28.00
12LP4A	32.00
14BP4	34.75
16AP4A	46.00
16GP4B	46.00
16RP4	37.00
17BP4A	36.00
17CP4	35.00
17HP4	37.00
17LP4	37.00
19AP4B	59.00
20CP4A	51.50
20DP4A	51.50
20HP4	53.50

SPECIAL PURPOSE TUBES

1603	$7.40
2E22*	6.00
3A4	1.20
5A6	5.50
6AJ5	3.50
6AK5W	3.90
6AR6	5.75
6AS7G	4.53
6SC7GTY	3.25
6SU7GTY*	4.25
6X4W	2.25
25A7GT	4.00
26Z5W	4.00
954	5.65
956	6.30
1603	7.40
1629*	1.40
5654	4.75
5687*	6.00
5726	2.25
5749	2.75
5751	3.75
5814	3.75
5881*	3.50

(*) Non-taxable type

TUNG-SOL RADIO DIAL LAMPS

Tung-Sol Lamp No.	Bulb Type	Base	Bead Color	Volts	Amperes	List Price
40	T-3¼	Miniature Screw	Brown	6-8	.15	$0.12
41	T-3¼	Miniature Screw	White	2.5	.50	.12
42	T-3¼	Miniature Screw	Green	3.2	.50	.13
43	T-3¼	Miniature Bayonet	White	2.5	.50	.12
44	T-3¼	Miniature Bayonet	Blue	6-8	.25	.12
45	T-3¼	Miniature Bayonet	Green	3.2	.50	.13
46	T-3¼	Miniature Screw	Blue	6-8	.25	.12
47	T-3¼	Miniature Bayonet	Brown	6-8	.15	.12
48	T-3¼	Miniature Screw	Pink	2.0	.06	.16
49	T-3¼	Miniature Bayonet	Pink	2.0	.06	.16
50	G-3½	Miniature Screw	White	6-8	.20	.12
*51	G-3½	Miniature Bayonet	White	6-8	.20	.11
*55	G-4½	Miniature Bayonet	White	6-8	.40	.11
291	T-3¼	Miniature Bayonet	White	2.9	.17	.17
292	T-3¼	Miniature Screw	White	2.9	.17	.17
416	G-4½	Miniature Bayonet	Black	3.2	.60	.55
1490	T-3¼	Miniature Bayonet	White	3.2	.16	.12

*Taxable at 2.3% of list. All other taxable at 6.3% of list.

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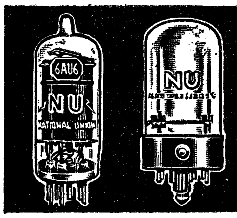

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PRICE LIST EFFECTIVE MAY 15, 1953

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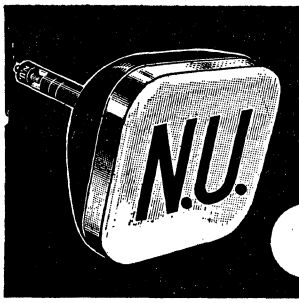
RADIO & TV RECEIVING TUBES

TYPE	LIST	TYPE	LIST	TYPE	LIST	TYPE	LIST	TYPE	LIST	TYPE	LIST	TYPE	LIST	TYPE	LIST
0A2	$2.90	1S4	$2.45	6AF6G	$2.75	6F5	$1.75	6SQ7	$1.60	7X7	$2.65	12SQ7	$1.60	35C5	$2.00
0A3	2.65	1S5	1.90	6AG5	2.20	6F5GT	1.70	6SQ7GT	1.60	7Y4	1.80	12SQ7GT	1.60	35L6GT	1.75
0A4G	2.90	1S6	2.65	6AG7	3.40	6F6	2.15	6SR7	1.80	7Z4	1.80	12SR7	2.10	35W4	1.30
0B2	3.20	1T4	2.10	6AH4GT	2.20	6F6G	1.80	6SR7GT	2.00	10Y	3.90	12SR7GT	2.20	35Y4	1.80
0B3	3.35	1T5GT	2.60	6AH6	3.90	6F6GT	1.65	6SS7	2.15	12A	2.20	12V6GT	1.90	35Z3	1.80
0C3	2.65	1T6	2.55	6AJ4	6.00	6F7	3.35	6SS7GT	2.00	12A4	2.00	12Z3	2.60	35Z4GT	1.50
0D3	2.65	1U4	2.10	6AK5	4.35	6F8G	3.35	6ST7	2.70	12A5	3.20	14A4	2.65	35Z5GT	1.25
0Y4	4.80	1U5	1.90	6AK6	2.50	6G6G	2.75	6SV7	3.35	12A6	2.90	14A5	3.90	35Z6G	1.80
0Z4	1.65	1U6	2.20	6AL5	1.80	6H6	1.75	6T8	2.90	12A6GT	2.90	14A7/12B7		36	2.75
0Z4G	1.65	1V	2.30	6AL7GT	2.65	6H6GT	1.85	6U5/6G5	2.00	12A7	3.35		2.20	37	1.85
1A3	2.30	1V2	1.55	6AM4	6.00	6J5	1.55	6U6GT	2.20	12A8G	2.20	14AF7/XXD		38	2.30
1A4P	4.05	1V5	2.65	6AQ5	2.00	6J5GT	1.65	6U7G	2.20	12A8GT	2.15		2.40	39/44	2.75
1A5GT	1.85	1W5	2.65	6AQ6	1.90	6J6	2.50	6U8	2.90	12AH6GT	2.20	14B6	2.20	40	2.20
1A6	3.35	1X2B	2.65	6AQ7GT	2.40	6J7	2.25	6V3	3.60	12AH7GT	2.75	14B8	2.20	41	1.90
1A7GT	2.20	2A3	3.35	6AR5	1.65	6J7G	2.25	6V3A	3.60	12AL5	1.80	14C5	2.75	42	1.90
1AB5	3.50	2A4G	3.20	6AS5	2.10	6J7GT	2.20	6V6	3.40	12AT6	1.60	14C7	2.40	43	2.05
1AC5	2.55	2A5	2.30	6AT6	1.60	6J8G	3.20	6V6GT	2.00	12AT7	2.90	14E6	2.35	45	2.10
1AD5	2.55	2A6	2.65	6AU5GT	2.70	6K5GT	2.40	6V7G	1.80	12AU6	1.80	14E7	2.75	45Z3	1.80
1AX2	2.65	2A7	2.75	6AU6	1.80	6K6GT	1.70	6V8	3.55	12AU7	2.40	14F7	2.20	45Z5GT	1.80
1B3GT	2.55	2B7	3.40	6AV5GT	2.65	6K7	1.90	6W4GT	1.90	12AV6	1.60	14F8	3.00	46	2.90
1B4P	4.05	2E5	2.65	6AV6	1.60	6K7G	2.15	6W6GT	2.20	12AV7	2.90	14H7	2.40	47	2.90
1B5/25S	3.35	2X2A	4.35	6AX4GT	2.40	6K7GT	2.15	6W7G	2.75	12AW6	2.65	14J7	2.75	49	2.75
1B7GT	3.35	3A8GT	4.80	6AX5GT	1.65	6K8	2.70	6X4	1.55	12AX4GT	2.50	14N7	2.65	50	5.15
1C5GT	2.30	3B7	2.65	6AX6G	2.40	6K8G	3.30	6X5	2.75	12AX7	2.50	14Q7	2.20	50A5	2.20
1C6	3.35	3C6	3.20	6B4G	3.20	6K8GT	2.50	6X5GT	1.55	12AY7	6.00	14R7	2.75	50B5	2.00
1C7G	3.35	3D6	2.65	6B5	3.20	6L5G	2.75	6X8	2.75	12AZ7	2.65	14S7	2.65	50C5	2.00
1C8	2.65	3E5	2.20	6B6G	2.10	6L6	3.95	6Y6G	2.50	12B4	2.00	14W7	2.65	50C6G	2.90
1D5GP	4.05	3E6	2.65	6B7	3.35	6L6G	3.10	6Z7G	4.05	12BA6	1.90	14X7	2.65	50L6GT	1.75
1D7G	3.35	3LF4	2.65	6B8	3.35	6L6GA	3.20	6ZY5G	2.30	12BA7	2.50	14Y4	2.40	50X6	2.20
1D8GT	4.05	3Q4	2.25	6B8G	3.35	6L7	2.55	7A4	2.00	12BD6	2.00	19	3.35	50Y6GT	1.85
1E5GP	4.05	3Q5GT	2.50	6BA6	1.90	6L7G	3.30	7A5	2.35	12BE6	1.90	19BG6G	6.00	50Y7GT	2.10
1E7G	3.20	3S4	2.05	6BA7	2.50	6N6G	3.90	7A6	1.90	12BF6	1.65	19C8	3.20	53	2.75
1E7GT	3.90	3V4	2.05	6BC5	2.00	6N7	2.55	7A7	1.90	12BH6	2.00	19J6	2.65	55	2.30
1E8	2.30	5AX4GT	1.25	6BC7	2.65	6N7GT	2.50	7A8	1.80	12BH7	2.60	19T8	2.90	56	1.85
1F4	2.75	5AZ4	1.35	6BD5GT	3.35	6P5GT	2.40	7AD7	3.35	12BY7	2.65	19V8	3.55	57	2.10
1F5G	2.75	5T4	4.40	6BD6	2.00	6Q7	2.10	7AF7	1.80	12BZ7	2.40	19X8	3.10	58	2.10
1F6	4.05	5U4G	1.55	6BE6	1.90	6Q7G	1.85	7AG7	2.20	12C8	3.35	20	3.90	59	3.70
1F7G	4.05	5V4G	2.45	6BF5	2.35	6Q7GT	1.85	7AH7	2.20	12F5GT	1.90	22	3.20	70L7GT	3.90
1G4GT	2.55	5W4	1.65	6BF6	1.70	6R7	2.65	7B4	1.80	12H6	1.80	24A	2.35	71A	2.35
1G5G	3.15	5W4GT	1.75	6BG6G	4.80	6R7GT	2.65	7B5	1.80	12J5	1.50	25A6	3.40	75	1.75
1G6GT	2.75	5X4G	1.80	6BH6	2.10	6R8	3.20	7B6	1.80	12J5GT	1.55	25A6G	2.75	76	1.70
1H5GT	1.75	5X3	2.20	6BJ6	2.10	6S4	1.75	7B7	1.90	12J7GT	2.20	25AC5GT	2.90	77	2.15
1H6G	3.35	5Y3G	1.35	6BK5	2.45	6S7	2.80	7B8	1.90	12K7G	2.00	25AV5GT	2.65	78	2.15
1H6GT	3.35	5Y3GT	1.20	6BK7	3.20	6S7G	3.35	7C4	3.35	12K7GT	2.10	25BQ6GT	3.50	79	2.75
1J6G	3.20	5Y4G	1.55	6BK7A	3.20	6S8GT	2.65	7C5	1.90	12K8	2.70	25C6G	3.00	80	1.30
1J6GT	3.20	5Y4GT	1.05	6BL7GT	2.90	6SA7	1.80	7C6	1.80	12K8GT	2.65	25L6	3.40	81	4.65
1L4	2.10	5Z3	1.75	6BN6	2.90	6SA7GT	1.80	7C7	1.90	12Q7GT	1.85	25L6GT	1.75	82	2.75
1L6	2.75	5Z4	2.80	6BQ6GT	3.45	6SB7Y	2.55	7E5	2.65	12S8GT	2.65	25W4GT	2.00	83	2.75
1LA4	2.65	6A3	3.35	6BQ7	3.20	6SC7	2.10	7E6	2.35	12SA7	1.80	25W6GT	2.25	83V	3.20
1LA6	2.65	6A4/LA	3.20	6BQ7A	3.05	6SD7GT	2.90	7E7	2.75	12SA7GT	1.85	25Y5	3.00	84/6Z4	1.80
1LB4	2.65	6A5G	4.05	6BX7GT	3.40	6SF5	1.75	7F7	2.20	12SC7	2.30	25Z5	1.65	85	2.30
1LC5	2.65	6A6	2.75	6BY5G	2.65	6SF5GT	1.80	7F8	3.00	12SF5	1.90	25Z6	2.30	89	2.30
1LC6	2.65	6A7	2.30	6BZ7	3.35	6SF7	2.00	7G7	2.75	12SF5GT	2.00	25Z6GT	1.55	99V	3.20
1LD5	2.65	6A8	2.25	6C4	1.70	6SG7	2.05	7H7	2.20	12SF7	2.10	26	2.05	117L7GT/	3.90
1LE3	2.65	6A8G	2.35	6C5	1.75	6SG7GT	2.20	7J7	2.75	12SF7GT	2.00	27	1.75	117M7GT	
1LG5	2.65	6A8GT	2.30	6C5GT	1.65	6SH7	2.30	7K7	2.75	12SG7	2.15	30	2.25	117N7GT	4.05
1LH4	2.65	6AB4	2.00	6C6	2.20	6SH7GT	2.20	7L7	2.75	12SG7GT	2.20	31	2.75	117P7GT	4.05
1LN5	2.65	6AB5	2.75	6C8G	3.35	6SJ7	1.75	7N7	2.20	12SH7	2.35	32	3.70	117Z3	1.60
1N5GT	2.10	6AB7	3.25	6CB6	2.10	6SJ7GT	1.65	7Q7	2.10	12SJ7	1.75	32L7GT	3.20	117Z4GT	2.90
1P5GT	2.65	6AC5GT	3.00	6CD6G	6.60	6SK7	1.75	7R7	2.35	12SJ7GT	1.65	33	3.35	117Z6GT	2.50
1Q5GT	2.65	6AC7	3.05	6CL6	3.05	6SK7GT	1.75	7S7	2.65	12SK7	1.75	34	3.50	1273	2.40
1Q6	2.20	6AD7G	3.35	6D6	2.20	6SL7GT	2.45	7V7	2.65	12SK7GT	1.85	35/51	2.35	1280	2.40
1R4	2.65	6AE6G	1.80	6D8G	3.35	6SN7GT	2.20	7W7	2.65	12SL7GT	2.50	35A5	1.90	5642	2.20
1R5	2.10	6AF4	3.90	6E5	2.25	6SN7GTA	2.20	7X6	2.20	12SN7GT	2.30	35B5	2.00	FM1000	3.20

NATIONAL UNION RADIO CORP.

MAIN OFFICE
HATBORO, PA.



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PICTURE TUBES

TRANSISTORS and DIODES

TELEVISION PICTURE and OSCILLOSCOPE TUBES

Type	Description	List Price
7JP4	Electrostatic deflection	$26.00
8BP4	Electrostatic deflection	30.50
10BP4A	Electromagnetic focus — gray-face	28.00
12LP4A	Electromagnetic focus — gray-face	32.00
14C/BP4	Rectangular, magnetic focus, gray-face	34.75
16DP4A	Electromagnetic focus—gray-face	38.25
16JP4A	Electromagnetic focus—gray-face	38.25
16K/RP4	Rectangular, magnetic focus — gray-face	37.00
16TP4	Rectangular, magnetic focus — gray-face	37.00
17BP4A	Rectangular, magnetic focus — gray-face	36.00
17FP4	H-v. electrostatic focus—gray-face	37.00
17FP4A	H-v. electrostatic focus—gray-face	37.00
17L/VP4	L-v. electrostatic focus, cylind. face	37.00
17QP4	Magnetic focus — cylindrical face	36.00
17R/HP4	L-v. electrostatic focus, gray-face	37.00
20C/DP4	Magnetic focus — gray-face	51.50
20C/DP4A	Magnetic focus — gray-face	51.50
20FP4	H-v. electrostatic focus—gray-face	51.50
20HP4	L-v. electrostatic focus—gray-face	53.50
20HP4A	L-v. electrostatic focus—gray-face	53.50
21EP4A	Magnetic focus — cylindrical face	54.00

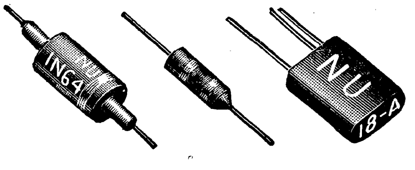
Type	Description	List Price
21FP4A	L-v. electrostatic focus, cylind. face	$56.25
21WP4	Magnetic focus — gray-face	51.25
21XP4	L-v. electrostatic focus — gray-face	53.50
21YP4	L-v. electrostatic focus — gray-face	55.00
21ZP4	Magnetic focus — gray-face	51.35
21ZP4A	Magnetic focus — gray-face	51.35
24C/VP4	Magnetic focus — gray-face	87.50

OSCILLOSCOPE C. R. TUBES

Type	Description	Users' Price
3BP1A	Electrostatic deflection	$16.75
3JP1	Electrostatic deflection	18.00
3JP2	Electrostatic deflection	23.00
3JP7	Electrostatic deflection	23.00
5CP1A	Electrostatic deflection	23.25
5FP7A	Magnetic deflection	30.25
10KP7	Magnetic deflection	61.75
12SP7	Magnetic deflection	47.75

TRANSISTORS and CRYSTAL DIODES

Type	Description	List Price
	TRANSISTORS	
T18A	Amplifier Point Contact	$25.00
T18B	Switching Point Contact	25.00
T21A	Amplifier (PNP Junction)	61.25
	UNION DIODES	
1N106	Small area contact	8.35
1N107	Small area contact	8.35
1N108	Small area contact	8.35
	POINT-CONTACT DIODES	
1N34A	Computer	2.00
1N38A	Computer	4.25
1N48	General purpose	1.40
1N51	General purpose	0.85



Actual size illustrations.

Left to right, point-contact diode, "Union" diode, transistor.

Type	Description	List Price
1N54A	General purpose	$2.40
1N55A	General purpose	7.35
1N58A	General purpose	3.00
1N63	General purpose	6.35
1N64	Video detector	.95
1N65	General purpose	1.40
1N69	J.A.N. general purpose	2.05
1N70	J.A.N. general purpose	5.25
1N72	U.H.F. mixer	2.00
1N75	General purpose	5.55
1N81	J.A.N. general purpose	4.35
N.U.34	General purpose	1.50
N.U.38	General purpose	2.90
N.U.39	General purpose	8.45
N.U.58	General purpose	2.40

TRANSMITTING and SPECIAL PURPOSE TUBES

Type	Description	Users' Price
0Z4A	F-w. gas rectifier	$ 1.20
2C53	High-mu triode amp.	15.00
2D21	Tetrode thyratron	2.00
2E24	V-h-f beam power amp.	4.65
2E26	V-h-f beam power amp.	3.85
3A4	Filamentary power pent.	1.20
5R4GY	F-w. vacuum rectifier	1.50
5R4WGY	Ruggedized f-w. vac. rectifier	6.80
6AJ5	Pentode amplifier	3.50
6AS7G	Power amp. double triode	6.75
6BL5GT/2160	Space charge power amp.	18.00
6D4	Triode thyratron	2.85
6J4	Triode, grounded grid	8.05
6L6GAY	Beam power amp.	3.10

Type	Description	Users' Price
6SA7GTY	Pentagrid converter	$ 1.22
6SK7GTY	Pentode r-f. amp.	1.22
6V6GTY	Beam power amp.	1.20
28D7	Beam power amp.	1.80
100TH	High-mu power amp. triode	16.65
371B	H-w. vacuum rectifier	14.50
811A	High-mu power amp. triode	5.00
812A	Med.-mu power amp. triode	5.00
813	Beam power amp.	18.00
884	Triode thyratron	1.85
885	Triode thyratron	2.00
955	U-h-f. triode, acorn	3.60

Type	Description	Users' Price
1621	Power amp. pentode	$ 1.95
1622	Beam power amp.	2.10
1633	Triode amp.	1.95
2050	Tetrode thyratron	1.85
2051	Tetrode thyratron	1.90
5851	Sub. min. beam power amplifier	6.95
JAN5851	Sub. min. beam power amplifier	17.65
5857	Secondary emission amp.	65.00
6184/6AZ6	Sub. min. u-h-f double diode	18.00
9001	V-h-f. pentode amp.	3.10
9002	V-h-f. triode amp.	2.50
9003	V-h-f. pentode amp.	3.10
9006	V-h-f. diode	1.60

NATIONAL UNION RADIO CORP. MAIN OFFICE HATBORO, PA.

RAYTHEON RADIO and TV RECEIVING TUBES

SUGGESTED LIST PRICES *Effective February 10, 1953*

Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	Type	Price
OY4	$4.80	3B7/1291	$2.65	6BD5GT	$3.35	6R7GT	$2.65	7C7	$1.90	12SK7	$1.75	35Z5GT	$1.25
OZ4	1.65	3C6/XXB	3.20	6BD6	2.00	6R8	3.20	7E5	2.65	12SK7GT	1.75	35Z6G	2.65
OZ4G	1.65	3D6/1299	2.70	6BE6	1.90	6S4	1.75	7E6	2.35	12SL7GT	2.50	36	2.75
1A3	2.30	3E6	2.70	6BF5	2.35	6S7	2.80	7E7	2.75	12SN7GT	2.30	37	1.85
1A4P	4.05	3LF4	2.65	6BF6	1.70	6S7G	3.35	7F7	2.20	12SQ7	1.60	38	2.30
1A5GT	1.85	3Q4	2.25	6BG6G	4.80	6S8GT	2.65	7F8	3.00	12SQ7GT	1.60	39/44	2.75
1A6	3.35	3Q5GT	2.50	6BH6	2.10	6SA7	1.80	7G7/1232	2.75	12SR7	2.10	41	1.95
1A7GT	2.20	3S4	2.10	6BJ6	2.10	6SA7GT	1.80	7H7	2.20	12V6GT	2.00	42	1.95
1AX2	2.65	3V4	2.10	6BK5	2.45	6SB7Y	2.55	7J7	2.75	12Z3	2.60	43	2.05
1B3GT/8016	2.55	5AZ4	1.35	6BK7	3.20	6SC7	2.10	7K7	2.75	14A4	2.65	45	2.10
1B4P	4.05	5T4	4.40	6BL7GT	2.90	6SD7GT	2.90	7L7	2.75	14A5	3.90	45Z3	1.80
1B5/25S	3.50	5U4G	1.55	6BN6	2.90	6SF5	1.75	7N7	2.20	14A7/12B7	2.20	45Z5GT	1.80
1B7GT	3.35	5V4G	2.45	6BQ6GT	3.45	6SF5GT	1.80	7Q7	2.10	14AF7/XXD	2.40	46	2.90
1C5GT	2.30	5W4GT	1.75	6BQ7A	3.20	6SF7	2.00	7R7	2.35	14B6	2.20	47	2.90
1C6	3.35	5X4G	1.80	6BY5G	2.90	6SG7	2.05	7S7	2.65	14B8	2.20	49	2.75
1C7G	3.35	5Y3G	1.35	6BZ7	3.35	6SH7	2.30	7V7	2.65	14C5	2.75	50	5.15
1D5GP	4.05	5Y3GT	1.20	6C4	1.70	6SH7GT	2.30	7W7	2.65	14C7	2.40	50A5	2.20
1D7G	3.50	5Y4G	1.55	6C5	1.75	6SJ7	1.75	7X6	2.20	14E6	2.35	50B5	2.00
1D8GT	4.05	5Y4GT	1.50	6C5GT	1.65	6SJ7GT	1.65	7X7/XXFM	2.65	14E7	2.75	50C5	2.00
1E5GP	4.05	5Z3	1.75	6C6	2.20	6SK7	1.75	7Y4	1.80	14F7	2.20	50C6G	2.90
1E7G-1E7GT	4.05	5Z4	2.80	6C8G	3.35	6SK7GT	1.75	7Z4	1.80	14F8	3.00	50L6GT	1.75
1F4	2.75	6A3	3.35	6CB6	2.10	6SL7GT	2.45	10Y	3.90	14H7	2.40	50X6	2.20
1F5G	2.75	6A5G	4.05	6CD6G	6.60	6SN7GT	2.20	12A6	2.90	14J7	2.75	50Y6GT	1.90
1F6	4.05	6A6	2.75	6CL6	2.90	6SQ7	1.60	12A6GT	2.90	14N7	2.65	50Y7GT	2.10
1F7G	4.05	6A7	2.30	6D6	2.20	6SQ7GT	1.60	12A7	3.35	14Q7	2.20	52	3.90
1G4GT	2.55	6A8	2.25	6D8G	3.35	6SR7	1.80	12A8GT	2.15	14R7	2.75	53	2.75
1G5G	3.15	6A8G	2.30	6E5	2.25	6SR7GT	1.80	12AH7GT	2.75	14S7	2.65	55	2.30
1G6GT	2.75	6A8GT	2.30	6F5	1.75	6SS7	2.10	12AL5	1.80	14W7	2.65	56	1.90
1H4G	2.30	6AB4	2.00	6F5GT	1.70	6ST7	2.70	12AT6	1.60	14X7	2.65	57	2.10
1H5GT	1.75	6AB5/6N5	3.25	6F6	2.15	6SV7	3.55	12AT7	2.90	14Y4	2.40	58	2.10
1H6G	3.35	6AB7/1853	3.25	6F6G	1.80	6T4	3.50	12AU6	1.80	19	3.35	59	3.70
1J6G	3.20	6AC5GT	3.00	6F6GT	1.65	6T7G/6Q6G	3.35	12AU7	2.40	19BG6G	6.00	70L7GT	3.90
1J6GT	3.35	6AC7/1852	3.05	6F7	3.35	6T8	2.90	12AV6	1.60	19C8	3.20	71A	2.35
1L4	2.10	6AD7G	3.35	6F8G	3.35	6U5/6G5	2.10	12AV7	2.90	19J6	2.65	75	1.75
1L6	2.75	6AF4	4.60	6G6G	2.75	6U6GT	2.20	12AW6	2.65	19T8	2.90	76	1.70
1LA4	2.65	6AF6G	2.75	6H6	1.75	6U7G	2.20	12AX4GT	2.50	22	3.20	77	2.20
1LA6	2.65	6AG5	2.20	6H6GT	1.85	6U8	2.90	12AX7	2.50	24A	2.35	78	2.15
1LB4	2.65	6AG7	3.40	6J5	1.55	6V3A	3.55	12AY7	6.00	25A6	3.40	79	2.75
1LC5	2.65	6AH4GT	2.35	6J5GT	1.65	6V6	3.40	12AZ7	2.50	25A6G	2.75	80	1.30
1LC6	2.65	6AH6	3.90	6J6	2.50	6V6GT	2.00	12BA6	1.90	25A7GT	6.60	81	4.65
1LD5	2.65	6AH6V	3.90	6J7	2.25	6V8	3.50	12BA7	2.50	25AC5GT	2.90	82	2.75
1LE3	2.65	6AK5	4.15	6J7G	2.25	6W4GT	1.90	12BD6	2.00	25AV5GT	2.65	83	2.75
1LG5	2.65	6AK6	2.50	6J7GT	2.20	6W6GT	2.20	12BE6	1.90	25BQ6GT	3.40	83V	3.20
1LH4	2.65	6AL5	1.80	6J8G	3.20	6W7G	2.75	12BF6	1.70	25C6G	3.00	84/6Z4	1.80
1LN5	2.65	6AL7GT	2.65	6K5GT	2.40	6X4	1.55	12BH7	2.50	25L6	3.40	85	2.30
1N5GT	2.10	6AQ5	2.00	6K6GT	1.70	6X5GT	1.55	12BY7	2.65	25L6GT	1.75	89Y	2.30
1P5GT	2.75	6AQ6	1.90	6K7	1.90	6X8	2.75	12BZ7	2.50	25W4GT	2.00	V99	3.20
1Q5GT	2.65	6AQ7GT	2.65	6K7G	2.15	6Y6G	2.50	12C8	3.35	25Y5	3.00	X99	3.20
1R4/1294	2.75	6AR5	1.65	6K7GT	2.20	6Z7G	4.05	12F5GT	1.90	25Z5	1.65	117L/M7GT	3.90
1R5	2.10	6AS5	2.10	6K8	2.70	6ZY5G	2.30	12H6	1.80	25Z6GT	1.55	117N7GT	4.05
1S4	2.45	6AT6	1.60	6K8G	3.25	7A4/XXL	2.00	12J5GT	1.55	26	2.10	117P7GT	4.05
1S5	1.90	6AU5GT	2.75	6K8GT	2.50	7A5	2.35	12J7GT	2.20	27	1.75	117Z3	1.60
1T4	2.10	6AU6	1.80	6L5G	2.75	7A6	1.90	12K7GT	2.20	30	2.25	117Z4GT	2.90
1T5GT	2.60	6AV5GT	2.65	6L6	3.95	7A7	1.90	12K8	2.75	31	2.75	117Z6GT	2.65
1U4	2.10	6AV6	1.60	6L6G	3.00	7A8	1.80	12K8GT	2.70	32	3.70	CK705	1.85
1U5	1.90	6AX4GT	2.40	6L6GA	3.00	7AD7	3.50	12Q7GT	1.85	32L7GT	3.20	CK706	1.25
1V	2.30	6AX5GT	1.70	6L7	2.55	7AF7	1.80	12S8GT	2.65	33	3.35	CK710	2.35
1V2	1.55	6B4G	3.20	6L7G	3.30	7AG7	2.20	12SA7	1.80	34	3.50	FM1000	3.20
1X2A	2.65	6B5	3.35	6N6G	3.90	7AH7	2.20	12SA7GT	1.80	35/51	2.35	5642	2.60
2A3	3.35	6B6G	2.10	6N7	2.55	7B4	1.80	12SC7	2.30	35A5	1.90	XXB (use 3C6)	
2A4G	3.20	6B7	3.35	6N7GT	2.50	7B5	1.80	12SF5	1.90	35B5	2.00	XXD (use 14AF7)	
2A5	2.30	6B8	3.35	6P5GT	2.40	7B6	1.80	12SF5GT	2.00	35C5	2.00	XXFM (use 7X7)	
2A6	2.65	6B8G	3.35	6Q7	2.10	7B7	1.90	12SF7	2.10	35L6GT	1.75	XXL (use 7A4)	
2A7	2.75	6BA6	1.90	6Q7G	1.85	7B8	1.90	12SG7	2.15	35W4	1.30		
2B7	3.40	6BA7	2.50	6Q7GT	1.85	7C4	3.50	12SH7	2.35	35Y4	1.80		
2E5	2.65	6BC5	2.00	6R7	2.65	7C5	1.90	12SJ7	1.75	35Z3	1.80		
3A8GT	4.80	6BC7	2.20	6R7G	2.65	7C6	1.80	12SJ7GT	1.65	35Z4GT	1.50		

Tube prices listed above are for your convenience and do not necessarily indicate type availability.

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.

RAYTHEON ELECTRONIC TUBES

TELEVISION PICTURE TUBES

SUGGESTED LIST PRICES — EFFECTIVE JULY 1, 1953

TYPE	ENVELOPE	FACE	TYPE OF FOCUS	TYPE OF DEFLECTION	EXTERNAL CONDUCTIVE COATING	ION TRAP	SUGGESTED LIST PRICE
3KP4	Glass	Clear	Elect.	Elect.	No	None	25.00
7JP4	Glass	Clear	Elect.	Elect.	No	None	$26.00
8BP4	Glass	Clear	Elect.	Elect.	No	None	30.50
10BP4A	Glass	Filter	Mag.	Mag.	Yes	Double	28.00
10FP4	Glass	Clear	Mag.	Mag.	Yes	None	35.00
10FP4A	Glass	Filter	Mag.	Mag.	Yes	None	35.00
10HP4	Glass	Clear	Elect.	Elect.	No	None	55.00
12KP4A	Glass	Filter	Mag.	Mag.	Yes	None	39.50
12LP4A	Glass	Filter	Mag.	Mag.	Yes	Double	32.00
14BP4	Glass	Filter	Mag.	Mag.	Yes	Double	35.00
*14CP4	Glass	Filter	Mag.	Mag.	Yes	Single	35.00
16AP4A	Metal	Filter	Mag.	Mag.	....	Double	46.00
16DP4A	Glass	Filter	Mag.	Mag.	No	Double	40.00
16GP4	Metal	Filter	Mag.	Mag.	....	Single	46.00
16GP4B	Metal	Filter	Mag.	Mag.	....	Single	46.00
*16KP4	Glass	Filter	Mag.	Mag.	Yes	Single	37.00
*16KP4A	Glass	Filter	Mag.	Mag.	Yes	Single	46.00
16LP4A	Glass	Filter	Mag.	Mag.	Yes	Double	40.00
*16RP4	Glass	Filter	Mag.	Mag.	Yes	Double	37.00
*16TP4	Glass	Filter	Mag.	Mag.	Yes	Single	37.00
16ZP4	Glass	Filter	Mag.	Mag.	Yes	Double	40.00
*17AP4	Glass	Filter	Mag.	Mag.	Yes	Single	35.00
*17BP4A	Glass	Filter	Mag.	Mag.	Yes	Single	36.00
*17CP4	Metal	Filter	Mag.	Mag.	....	Single	35.00
*17GP4	Metal	Filter	Elect.	Mag.	....	Single	46.00
*17HP4	Glass	Filter	Elect.	Mag.	Yes	Single	37.00
*17JP4	Glass	Filter	Mag.	Mag.	Yes	Single	36.00
*17LP4	Glass	Filter	Elect.	Mag.	Yes	Single	37.00
19AP4A	Metal	Filter	Mag.	Mag.	....	Single	59.00
19AP4B	Metal	Filter	Mag.	Mag.	....	Single	59.00
*20CP4	Glass	Filter	Mag.	Mag.	No	Single	51.50
*20CP4A	Glass	Filter	Mag.	Mag.	Yes	Single	51.50
*20DP4A	Glass	Filter	Mag.	Mag.	Yes	Single	51.50
*21AP4	Metal	Filter	Mag.	Mag.	....	Single	55.00
†*21EP4A	Glass	Filter	Mag.	Mag.	Yes	Single	55.00
†*21FP4A	Glass	Filter	Elect.	Mag.	Yes	Single	57.00
*21MP4	Metal	Filter	Elect.	Mag.	....	Single	57.00
*21YP4	Glass	Filter	Elect.	Mag.	Yes	Single	55.00
*24DP4	Glass	Filter	Elect.	Mag.	Yes	Single	82.75
*27EP4	Glass	Filter	Mag.	Mag.	No	Single	140.75

*Rectangular face
†Cylindrical face to reduce reflections

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.

RAYTHEON SUBMINIATURE TUBES

SUGGESTED USER PRICES EFFECTIVE JANUARY 15, 1953
REVISED — JUNE 1, 1953

Type	Typical Application	Suggested User Price
1AD4	R-F Amplifier	$ 4.00
1AG5	Det.-Amplifier	3.80
2E31	R-F Amplifier	2.12
2E32	R-F Amplifier	2.12
2E35	Power Amp.	4.20
2E36	Power Amp.	4.20
2G21	Converter	2.20
2G22	Converter	2.20
CK501AX	Voltage Amp.	5.10
CK502AX	Power Amp.	4.20
CK503AX	Power Amp.	2.05
CK505AX	Voltage Amp.	3.80
CK506AX	Power Amp.	1.50
CK510AX	Voltage Amp.	2.55
CK511X	Voltage Amp.	4.75
CK512AX	Voltage Amp.	1.50
CK518AX	Power Amp.	2.15
CK522AX	Power Amp.	1.50
CK525AX	Power Amp.	3.00
CK526AX	Power Amp.	3.80
CK527AX	Power Amp.	5.10
CK528AX	Power Amp.	3.15
CK529AX	Power Amp.	3.95
CK531DX	Power Amp.	5.10
CK532DX	Power Amp.	5.10
CK533AX	Power Amp.	3.00
CK534AX	Voltage Amp.	3.00
CK535AX	Power Amp.	4.30
CK536AX	Power Amp.	3.15
CK537AX	Power Amp.	5.20
CK538DX	Voltage Amp.	4.10
CK539DX	Power Amp.	5.10
CK541DX	Power Amp.	5.10
CK542DX	Power Amp.	5.10
CK542DXS	Power Amp.	5.30
CK544DX	Power Amp.	5.10
CK546DX	Power Amp.	5.10
CK547DX	Power Amp.	5.10
CK548DX	Power Amp.	5.10
CK549DX	Voltage Amp.	4.10
CK574AX	R-F Amplifier	1.60
CK1034	GM Counter	7.50
CK1035	GM Counter	7.50
CK1036	HW Rectifier	$ 7.50
CK1037	Voltage Reg.	7.50
CK1038	Voltage Reg.	7.50
CK1039	Voltage Reg.	7.50
CK5672	Power Amp.	1.60
CK5676	UHF Osc.	1.90
CK5677	UHF Osc.	3.70
CK5678	R-F Amplifier	1.60
CK5697	Electrometer	3.75
CK5702	R-F Amplifier	4.90
CK5702WA	R-F Amplifier	7.90
CK5703	UHF Osc.	1.95
CK5703WA	UHF Osc.	6.00
CK5704	Detector	2.85
CK5744	Amp.-HF Osc.	2.50
CK5744WA	Amp.-HF Osc.	6.45
CK5783	Volt. Reference	7.50
CK5784	Mixer-Gated Amp.	7.50
CK5784WA	Mixer-Gated Amp.	9.00
CK5785	HW Rectifier	2.35
CK5787	Volt. Regulator	7.50
CK5829	Detector	4.50
CK5851	R-F Pwr. Amp.	8.70
CK5854	Power Amp.	2.05
CK5875	Radiosonde	2.10
CK5884	Electrometer	15.00
CK5886	Electrometer	4.50
CK5889	Electrometer	11.30
CK5967	R-F Amplifier	15.00
CK5969	R-F Pwr. Amp.	15.00
CK5971	Amp.-Osc.	5.25
CK5972	R-F Amplifier	5.25
CK5975	Amp.-Osc.	3.75
CK5995	HW Rectifier	7.50
CK6029	UHF Osc.	4.50
CK6050	UHF Osc.	3.70
CK6088	Power Amp.	1.50
CK6110	FW Rectifier	11.30
CK6111	Voltage Amp.	11.30
CK6112	Voltage Amp.	11.30
CK6147	R-F Pwr. Amp.	9.60
CK6152	Amp.-Osc.	6.80
CK6213	Voltage Ref.	7.50

RAYTHEON RUGGED TUBES

Type	Typical Application	Suggested User Price
RK3B24W	HW Rectifier	$11.75
5R4WGY	FW Rectifier	7.25
6AK5W	R-F Amplifier	3.25
6AL5W	Detector	1.70
6AS6W	Mixer-Gated Amp.	4.75
6C4W	Osc.-Amplifier	8.05
6J5WGT	Voltage Amplifier	4.85
6J6W	UHF Oscillator	$ 3.05
6SA7WGT	Converter	8.00
6SJ7WGT	RF-AF Amplifier	8.05
6SN7WGT	Voltage Amplifier	2.45
6X4W	FW Rectifier	1.80
6X5WGT	FW Rectifier	1.89
12J5WGT	Voltage Amplifier	4.85

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RAYTHEON ELECTRONIC TUBES

RAYTHEON RADIATION COUNTER (GEIGER-MUELLER) TUBES

Type	Operating Voltage Range	Suggested User Price
1B90	Thres. — 50	$14.25
CK1018	850 - 950	14.25
CK1019	875 - 975	14.25
CK1020	850 - 950	12.00
CK1021	850 - 950	11.50
CK1023	850 - 950	11.50
CK1026	850 - 950	$ 3.15
CK1029	850 - 950	15.00
CK1032	1050 - 1200	3.15
CK1034	700	7.50
CK1035	700	7.50

RAYTHEON CATHODE TYPE SUBMINIATURE TUBES

Type	Typical Application	Suggested User Price
CK5702WA	R-F Amplifier	$ 7.90
CK5703WA	UHF Osc.	6.00
CK5744WA	Amp.-HF Osc.	6.45
CK5784WA	Mixer-Gated Amp.	9.00
CK6110	FW Rectifier	$11.30
CK6111	Voltage Amp.	11.30
CK6112	Voltage Amp.	11.30
CK6152	Amp.-Osc.	6.80

RAYTHEON RELIABLE MINIATURE TUBES

Type	Typical Application	Suggested User Price
CK5654	R-F Amplifier	$ 4.75
CK5670	Voltage Amp.	7.00
CK5686	RF-AF Power Amp.	5.25
CK5725	Mixer-Gated Amp.	5.50
CK5726	Detector	2.25
CK5749	R-F Amplifier	$ 2.75
CK5750	Converter	3.25
CK5751	Voltage Amp.	3.76
CK5814	Voltage Amp.	3.75

RAYTHEON GERMANIUM CRYSTAL DIODES

Type	Typical Application	Suggested User Price
IN66	Gen. Purpose Diode	$ .95
IN67	50V DC Restorer	2.40
IN68	100V DC Restorer	2.35
CK705	Gen. Purpose Diode	.85
CK706	Video Detector	.57
CK707	50V DC Restorer	2.00
CK708	100V DC Restorer	2.00
CK709	4 Matched Diodes	$ 4.50
CK710	UHF Converter	1.15
CK711	4 Matched Diodes	16.50
CK712	200 Volt Diode	18.10
CK713	Computer Diode	.95
CK715	Freq. Multiplier	.80

RAYTHEON TRANSISTORS

Type	Construction	Suggested User Price
CK716	Point Contact	$18.00
CK721	Junction	12.50
CK722	Junction	$ 4.50

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RAYTHEON ELECTRONIC TUBES

RAYTHEON RECTIFIER TUBES

Type	Construction	Suggested User Price
BH	Full Wave — Gas	$ 4.50
OZ4A/CK1003	Full Wave — Gas	1.30
2X2A	Half Wave — High Vacuum	4.35
RK3B24W	Half Wave — High Vacuum	11.75
RK3B26	Clipper Diode — High Vacuum	18.00
RK3B29	Half Wave — High Vacuum	18.00
RK4B31	Clipper Diode — High Vacuum	50.35
5R4GY	Full Wave — High Vacuum	1.85
5R4WGY	Full Wave — High Vacuum	7.25
6X4W	Full Wave — High Vacuum	1.80
6X5WGT	Full Wave — High Vacuum	1.89
RK72	Half Wave — High Vacuum	11.75
RK73	Half Wave — High Vacuum	12.50
RX120	Half Wave — Mercury, Argon	21.65
RX120A	Half Wave — Mercury	24.30
RX212	Half Wave — Mercury	32.95
RX215	Full Wave — Mercury	24.30

Type	Construction	Suggested User Price
RK816	Half Wave — Mercury	$ 1.65
RK866A	Half Wave — Mercury	2.10
RK872A	Half Wave — Mercury	8.20
CK1005	Full Wave — Gas	1.90
CK1006	Full Wave — Gas	5.85
CK1007	Full Wave — Gas	1.10
CK1012	Full Wave — Gas	3.10
CK1024	Full Wave — Gas	3.60
CK1028	Half Wave — Gas	22.50
CK1036	Half Wave — Gas	7.50
1641/RK60	Full Wave — High Vacuum	3.00
CK5517	Half Wave — Gas	3.40
CK5642	Half Wave — High Vacuum	2.65
CK5785	Half Wave — High Vacuum	2.35
CK5995	Half Wave — Gas	7.50
CK6110	Full Wave — High Vacuum	11.30
CK6174	Half Wave — Gas	3.40

RAYTHEON VOLTAGE REGULATOR — VOLTAGE REFERENCE TUBES

Type	Typical Application	Suggested User Price
OA2	Voltage Regulator	$ 2.90
OA3/VR75	Voltage Regulator	2.65
OB2	Voltage Regulator	3.20
OB3/VR90	Voltage Regulator	2.65
OC3/VR105	Voltage Regulator	2.65
OD3/VR150	Voltage Regulator	2.65
CK1017	Voltage Regulator	11.30
CK1022	Voltage Regulator	15.00

Type	Typical Application	Suggested User Price
CK1037	Voltage Regulator	$ 7.50
CK1038	Voltage Regulator	7.50
CK1039	Voltage Regulator	7.50
CK6213	Voltage Reference	7.50
CK5651	Voltage Reference	2.40
CK5783	Voltage Reference	7.50
CK5787	Voltage Regulator	7.50
CK5962	Voltage Regulator	11.30

RAYTHEON THYRATRON TUBES

Type	Typical Application	Suggested User Price
OA4G	Relay Service	$ 2.90
2C33/RX233A	Trigger Service	5.00
4C35	Pulsing or Switching Service	28.75
RK61	Model Aircraft Control	3.30
884	Sweep Oscillator	1.85

Type	Typical Application	Suggested User Price
885	Sweep Oscillator	$ 2.00
CK1089	Relay or Indicator Service	5.30
2050	Relay Service	1.85
2051	Relay Service	1.90

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.

RAYTHEON ELECTRONIC TUBES

RAYTHEON SPECIAL PURPOSE TUBES

Type	Typical Application	Suggested User Price
1AE4	R-F Amplifier	$ 1.55
2C50	Power Amplifier	11.30
2C52	Voltage Amp.	11.30
3A4	RF-AF Pwr. Amp.	1.20
3A5	AF-RF Amp. Osc.	1.95
3B4	R-F Amp. Osc.	3.60
6AJ5	RF-AF Amplifier	3.90
6AN5	RF-AF Pwr. Amp.	3.65
6AR6	Power Amp.	4.90
6AS6	Mixer-Gated Amp.	3.25
6AS7G	DC Amplifier	6.75
6J4	UHF Amplifier	8.05
7AK7	Mixer-Gated Amp.	7.00
CK118	Overload Protect.	3.70

Type	Typical Application	Suggested User Price
310A	RF-AF Amplifier	$12.45
954	UHF Amplifier	5.65
955	UHF Oscillator	3.60
956	UHF Amplifier	7.00
957	UHF Oscillator	3.75
CK5608A	Control Equip.	3.15
CK5656	R-F Power Amp.	20.55
CK5694	Power Amplifier	3.75
CK5910	Radiosonde	.95
9001	UHF Amplifier	3.40
9002	UHF Oscillator	2.50
9003	UHF Amplifier	3.40
9005	Detector	3.45
9006	Detector	1.60

RAYTHEON TRANSMITTING TUBES

Type	Typical Application	Suggested User Price
2C34/RK34	H-F Oscillator-Amp.	$ 3.50
2E24	VHF Oscil.-Amp.	4.65
2E26	VHF Oscil.-Amp.	3.85
2E30	RF-AF Amplifier	2.60
RK4D22	R-F Oscillator-Amp.	22.40
RK4D32	R-F Oscillator-Amp.	22.40
5D23/RK65	R-F Amplifier	42.15
RK715C	Pulse Modulator	63.00
RK807	R-F Oscil.-Amp.	2.50
RK811A	RF-AF Amplifier	5.00

Type	Typical Application	Suggested User Price
RK812A	RF-AF Amplifier	$ 5.00
RK813	R-F Oscil.-Amp.	18.00
RK814	R-F Oscil.-Amp.	14.25
RK829B	R-F Oscil.-Amp.	16.25
RK832A	R-F Oscil.-Amp.	12.90
RK837	R-F Oscil.-Amp.	5.80
RK1625	R-F Oscil.-Amp.	2.65
CK5763	R-F Oscil.-Amp.	1.75
CK6146	RF-AF Amp.	4.15

RAYTHEON REFLEX KLYSTRONS

Type	Range (Mc)	Suggested User Price
RK2K25	9370	$ 65.00
RK2K26	6660	78.50
RK2K28	3315-3680	67.85
RK2K33	22,000 - 25,000	384.00
QK140	29,700 - 33,520	384.00
QK226	37,100 - 42,600	384.00
QK227	41,700 - 50,000	384.00
QK289	27,270 - 30,000	384.00
QK290	29,700 - 33,520	384.00
QK291	33,520 - 36,250	384.00

Type	Range (Mc)	Suggested User Price
QK292	35,100 - 39,700	$384.00
QK293	37,100 - 42,600	384.00
QK294	41,700 - 50,000	384.00
QK295	Two tubes necessary to cover 50,000 to 60,000 Mc.	513.00
QK306	18,000 - 22,000	384.00
RK5721	4290 - 8340	307.70
RK5976	6750	78.55
RK6043	3200	67.85

RAYTHEON TR TUBES

Type	Typical Application	Suggested User Price
RK721B	2800 - 3330	$25.80

RAYTHEON CAVITY MAGNETRON TUBES

Type	Range (Mc)	Suggested User Price
RK2J25	3019 - 3047	$300.00
RK2J42	9345 - 9405	186.00
RK2J55	9345 - 9405	186.00
RK2J70	3030 - 3110	170.00

Type	Range (Mc)	Suggested User Price
RK2J71	3190 - 3201	$320.00
QK312	2425 - 2475	320.00
RK5609	2425 - 2475	109.00

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE

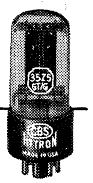
LIST PRICES OF CBS-HYTRON TUBES

(EFFECTIVE JANUARY 23, 1953)

MANUFACTURERS OF RECEIVING TUBES SINCE 1921

CBS-HYTRON

A Division of Columbia Broadcasting System, Inc.
Main Office: Danvers, Massachusetts



Originator of
Studio-Matched
Rectangular Tubes

Originator of
the famous Bantam GT

TYPE	LIST
0Z4	$1.65
0Z4G	1.65
1AP4	4.05
1A5GT	1.85
1A6	3.50
1A7GT	2.20
★ 1AX2	2.55
★ 1B3GT	2.55
1B4P	4 05
1B5/25S	3.50
1C5GT	2.30
1C6	3.35
1C7G	3.35
1D5GP	4.05
1D7G	3.50
1D8GT	4.05
1F4	2.75
1F5G	2.75
1F6	4.05
1F7G	4.05
1G4GT	2.55
1G6GT	2.75
1H4G	2.30
1H5GT	1.75
1H6GT	3.35
1J6GT	3.35
1L4	2.10
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LG5	2.65
1LH4	2.65
1LN5	2.65
1N5GT	2.10
1P5GT	2.75
1Q5GT	2.65
1R4	2.75
1R5	2.10
1S4	2.45
1S5	1.90
1T4	2.10
1T5GT	2.60
1U4	2.10
1U5	1.90
1V	2.30
★ 1V2	1.55
★ 1X2A	2.55
2A3	3.35
2A4G*	3.20
2A5	2.30
2A6	2.65
2A7	2.75
3A8GT	4.80
3LF4	2.80
3Q4	2.25
3Q5GT	2.50
3S4	2.10
3V4	2.10
5AW4	2.65
5AZ4	1.55
★ 5U4G	1.55
★ 5V4G	2.45
5W4	1.65
5W4GT	1.75
5X4G	1.80
5Y3G	1.35
5Y3GT	1.20
5Y4G	1.55
5Z3	1.75
5Z4	2.80
6A3	3.35
6A6	2.75
6A7	2.30
6A8	2.25
6A8G	2.30
6A8GT	2.30
★ 6AB4	2.00
6AB7	3.25
6AC5GT	3.00
★ 6AC7	$3.05
6AD7G	3.35
6AF4	4.60
★ 6AG5	2.20
6AG7	3.40
★ 6AH4GT	2.35
★ 6AH6	3.90
★ 6AK5	4.15
6AK6	2.50
★ 6AL5	1.80
6AL7GT*	2.90
★ 6AQ5	2.00
6AQ6	1.90
6AQ7GT	2.65
6AR5	1.65
6AS5	2.10
★ 6AT6	1.60
★ 6AU5GT	2.75
★ 6AU6	1.80
★ 6AV5GT	2.65
★ 6AV6	1.60
6AW6	2.65
★ 6AX4GT	2.40
★ 6AX5GT	1.70
6B4G	3.20
6B5	3.35
6B6G	2.10
6B7	3.35
6B8G	3.35
★ 6BA6	1.90
6BA7	2.50
★ 6BC5	2.00
6BD6	2.00
★ 6BE6	1.90
6BF5	2.35
6BF6	1.70
★ 6BG6G	4.80
6BH6	2.10
6BJ6	2.10
6BK5	2.55
6BK7	3.20
63L7GT	2.90
★ 6BN6	2.90
★ 6BQ6GT	3.45
★ 6BQ7	3.05
6BX7GT	3.40
6BY5G	2.90
★ 6BZ7	3.35
★ 6C4	1.70
6C5	1.75
6C5GT	1.65
6C6	2.20
6C8G	3.35
★ 6CB6	2.10
★ 6CD6G	4.80
6CL6	3.00
6D6	2.20
6D8G	3.35
6E5*	2.25
6F5	1.75
6F5GT	1.70
6F6	2.15
6F6G	1.80
6F6GT	1.65
6F8G	3.35
6G6G	2.75
★ 6H6	1.75
6H6GT	1.85
★ 6J5	1.55
6J5GT	1.65
★ 6J6	2.50
6J7	2.25
6J7G	2.25
6J7GT	2.20
6J8G	3.20
6K5GT	2.40
★ 6K6GT	1.70
6K7	1.90
6K7G	2.15
6K7GT	2.20
6K8	2.70
6K8GT	2.50
6L5G	2.75
6L6	3.95
6L6G	$3.00
6L6GA	3.00
6L7	2.55
6L7G	3.30
6N6G	3.90
6N7	2.55
6N7GT	2.50
6P5GT	2.40
6Q7	2.10
6Q7G	1.85
6Q7GT	1.85
6R7	2.65
6R7GT	2.65
★ 6S4	1.75
6S7G	3.35
6S8GT	2.65
6SA7	1.80
6SA7GT	1.80
6SB7Y	2.55
6SC7	2.10
6SD7GT	2.90
6SF5	1.75
6SF5GT	1.80
6SF7	2.00
6SG7	2.05
★ 6SH7	2.30
6SJ7	1.75
6SJ7GT	1.65
★ 6SK7	1.75
6SK7GT	1.75
★ 6SL7GT	2.45
★ 6SN7GT	2.20
★ 6SQ7	1.60
6SQ7GT	1.60
6SR7	1.80
6SR7GT	2.00
6SS7	2.15
6SV7	3.55
6T4	3.70
6T7G	3.35
★ 6T8	2.90
6U4GT — Use 6AX4GT	2.40
6U5*	2.10
6U7G	2.20
6U8	2.90
★ 6V3	3.55
6V6	3.40
★ 6V6GT	2.00
★ 6W4GT	1.90
★ 6W6GT	2.20
6X4	1.55
6X5GT	1.55
6X8	2.75
6Y6G	2.50
6ZY5G	2.30
7A4(XXL)	2.00
7A5	2.35
7A6	2.10
7A7	2.00
7A8	1.90
7AD7	4.60
7AF7	1.80
7AG7	2.45
7AH7	2.45
7B4	1.80
7B5	1.85
7B6	2.00
7B7	2.00
7B8	2.05
7C5	2.00
7C6	1.85
7C7	2.05
7E5/1201	2.65
7E6	2.90
7E7	3.20
★ 7F7	2.45
★ 7F8	3.00
7G7/1232	2.75
7H7	2.20
7J7	3.25
7K7	2.75
7L7	2.75
★ 7N7	2.20
★ 7Q7	$2.40
7R7	3.35
7S7	3.25
7V7	3.35
7W7	3.35
7X7 (XXFM)	2.65
7Y4	1.80
7Z4	1.80
★ 12A4	2.40
12A7	3.35
12A8GT	2.20
12AH7GT	2.75
12AL5	1.80
12AQ5	2.00
12AT6	1.60
★ 12AT7	2.90
12AU6	1.80
★ 12AU7	2.40
12AV6	1.60
★ 12AV7	2.90
12AW6	2.65
★ 12AX4GT	2.50
12AX7	2.50
★ 12AZ7	2.50
★ 12B4	2.40
12BA6	1.90
12BA7	2.50
12BD6	2.00
12BE6	1.90
★ 12BH7	2.50
★ 12BY7	2.65
★ 12BZ7	2.50
12J5GT	1.55
12J7GT	2.20
12K7GT	2.20
12K8	2.70
12K8GT	2.65
12Q7GT	1.85
12SA7	1.80
12SA7GT	1.80
12SF5	1.90
12SF5GT	2.00
12SF7	2.10
12SF7GT	2.00
12SG7	2.15
12SH7	2.35
12SJ7	1.75
12SJ7GT	1.65
12SK7	1.80
12SK7GT	1.80
12SL7GT	2.50
★ 12SN7GT	2.30
12SQ7	1.60
12SQ7GT	1.60
12V6GT	2.00
12X4	1.55
12Z3	2.60
14A4	2.65
14A7/12B7	2.20
14AF7 (XXD)	2.40
14B6	2.20
14B8	2.20
14C5	2.75
14C7	2.40
14E6	2.90
14E7	3.20
14F7	2.45
14F8	3.00
14H7	2.40
14J7	3.25
14N7	2.65
14Q7	2.40
14R7	3.35
14S7	3.25
14W7	3.35
14Y4	2.40
19	3.35
★ 19BG6G	6.00
19J6	2.65
19T8	2.90
24A	2.35
25AC5GT	2.90
★ 25AV5GT	2.65
★ 25BQ6GT	3.40
25L6GT	$1.75
★ 25W4GT	2.00
25Y5	3.00
25Z5	1.65
25Z6	2.30
★ 25Z6GT	1.55
26	2.10
27	1.75
30	2.25
32	3.70
32L7GT	3.20
33	3.35
34	3.50
35/51	2.35
35A5	2.05
35B5	2.00
35C5	2.00
35L6GT	1.75
35W4	1.30
35Y4	1.80
35Z3	1.80
35Z4GT	1.50
35Z5GT	1.25
36	2.75
37	1.85
38	2.30
39/44	2.75
41	1.95
42	1.95
43	2.05
45	2.15
45Z3	1.90
45Z5GT	1.80
46	2.90
47	2.90
50A5	2.20
50B5	2.00
50C5	2.00
50L6GT	1.75
50X6	2.20
50Y6GT	1.90
50Y7GT	2.10
53	2.75
56	1.90
57	2.10
58	2.10
70L7GT	3.90
71A	2.35
75	1.75
76	1.70
77	2.20
78	2.15
80	1.30
81	4.65
83	2.75
83V	3.20
84/6Z4	1.80
85	2.30
117L/M7GT	3.90
117N7GT	4.05
117P7GT	4.05
117Z3	1.60
117Z4GT	2.90
117Z6GT	2.65
1273	2.65
1280	2.65
★ 5642	2.60

SPECIAL PURPOSE TUBES

TYPE	LIST
0A2*	$2.90
0A3*	2.65
0B2*	3.20
0B3*	3.35
0C3*	2.65
0D3*	2.65

TYPE	LIST
3A5*	$1.95
5R4GY	1.85
★ 6AS7G	7.10
6V6GTY	1.08
6216	3.50
9001*	3.40
9002*	2.50

TV PICTURE TUBES

TYPE	Suggested Retail
7JP4	$28.00
10BP4A	28.00
12LP4A	32.50
14BP4	34.75
14CP4	34.75
16AEP4	41.50
16AP4A	46.00
16GP4	46.00
16KP4	37.00
16RP4	37.00
16TP4	37.00
17BP4A	36.00
17CP4	35.00
17FP4	37.00
† 17HP4 (17RP4)	38.25
17JP4	36.00
† 17LP4 (17VP4)	38.25
17QP4	36.00
17YP4	36.00
19AP4A	59.00
20CP4	51.50
20CP4A	51.50
20DP4A	51.50
† 20HP4A (20LP4)	54.00
21AP4	55.00
21EP4A	55.00
21FP4	57.00
† 21FP4A (21LP4)	57.00
21MP4	57.00
21WP4	52.00
21XP4	54.00
21YP4	55.00
21ZP4A	53.00
24TP4	89.75
27EP4	122.00
27RP4	122.00

GERMANIUM DIODES#

TYPE	LIST
General Purpose Types	
1N48	$1.10
1N51	.85
Television Types	
1N64	1.10
Jan Types	
1N69	.95
1N70	2.40
1N81	1.95
UHF Types	
1N72	1.60
1N133	1.60

#Other types available; please inquire.

TRANSISTORS

TYPE	LIST
PT-2A	$14.40
PT-2S	14.40
2N36	12.25
2N37	9.70
2N38	7.20

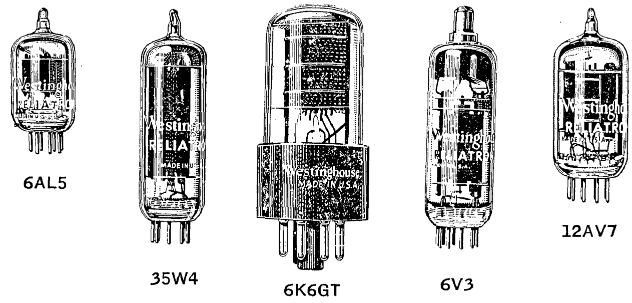
★ Popular TV Receiving Types
* Non-taxable
†For 17RP4, order 17HP4
†For 17VP4, order 17LP4
†For 20LP4, order 20HP4A
†For 21LP4, order 21FP4A

All Prices Subject to Change Without Notice

Westinghouse RELIATRON TM

RECEIVING TUBES

Type Number	User Price
OZ4	$1.65
OZ4-G	1.65
1A3	2.30
1A5-GT	1.85
1A7-GT	2.20
1AB5	3.50
1B3-GT	2.55
1C5-GT	2.30
1D8-GT	4.05
1G4-GT	2.55
1G6-GT	2.75
1H5-GT	1.75
1L4	2.10
1L6	2.75
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LH4	2.65
1LN5	2.65
1N5-GT	2.10
1P5-GT	2.75
1Q5-GT	2.65
1R5	2.10
1S4	2.45
1S5	1.90
1T4	2.10
1T5-GT	2.60
1U4	2.10
1U5	1.90
1-V	2.30
1V2	1.55
1X2-B	2.65
2A3	3.35
2A5	2.30
2X2-A	4.35
3E6	4.05
3LF4	2.80
3Q4	2.25
3Q5-GT	2.50
3S4	2.05
3V4	2.05
5AZ4	1.55
5R4-GY	1.85
5T4	4.80
5U4-G	1.55
5V4-G	2.45
5W4-GT	1.75
5X4-G	1.80
5Y3-G	1.35
5Y3-GT	1.20
5Y4-G	1.55
5Z3	1.75
5Z4	2.80
6A3	3.35
6A6	2.75
6A7	2.30
6A8	2.25
6A8-G	2.35
6A8-GT	2.30
6AB4	2.00
6AB5/6N5(n)	2.75
6AB7	3.25
6AC5-GT	3.00
6AC7	3.05
6AF4	4.60
6AF6-G(n)	2.75
6AG5	2.25
6AG7	3.40
6AH6	3.90
6AK5	4.35
6AK6	2.50
6AL5	1.80
6AL7-GT(n)	2.90
6AQ5	2.00
6AQ6	1.90
6AQ7-GT	2.65
6AR5	1.65
6AS5	2.10
6AS7-G	7.10
6AT6	1.60
6AU5-GT	2.75
6AU6	1.80
6AV5-GT	2.65
6AV6	1.60
6AX4-GT	2.40
6AX5-GT	1.65



Reliatron Tube performance is assured by an exacting program of quality control. Every step in the manufacture of Reliatron Tubes from raw materials to finished product — must meet standards which are the toughest in the industry.

Complete data on these tubes is available on request. Write: Westinghouse Electronic Tube Division, Dept. RM 500, Elmira, New York.

Type Number	User Price
6B4-G	$3.20
6B6-G	2.10
6B7	3.35
6B8	3.35
6BA6	1.90
6BA7	2.50
6BC5	2.00
6BD6	2.00
6BE6	1.90
6BF5	2.35
6BF6	1.70
6BG6-G	4.80
6BH6	2.10
6BJ6	2.10
6BK5	2.45
6BK7	3.20
6BL7-GT	2.90
6BN6	2.90
6BQ6-GT	3.45
6BQ7	3.05
6BQ7-A	3.20
6BY5-G	2.90
6C4	1.70
6C5	1.75
6C5-GT	1.65
6C6	2.20
6C8-G	3.35
6CB6	2.10
6CD6-G	6.60
6D6	2.20
6D8-G	3.35
6E5(n)	2.25
6F5	1.75
6F5-GT	1.70
6F6	2.15
6F6-G	1.80
6F6-GT	1.65
6F7	3.35
6F8-G	3.35
6G6-G	2.75
6H6	1.75
6H6-GT	1.85
6J5	1.55
6J5-GT	1.65
6J6	2.50
6J7	2.25
6J7-G	2.25
6J7-GT	2.20
6J8-G	3.20
6K5-GT	2.40
6K6-GT	1.70
6K7	1.95
6K7-G	2.20
6K7-GT	2.20
6K8	2.70

Type Number	User Price
6K8-G	$3.30
6K8-GT	2.50
6L5-G	2.75
6L6	3.95
6L6-G	3.00
6L6-GA	3.00
6L7	2.55
6N7	2.55
6N7-GT	2.50
6P5-GT	2.40
6Q7	2.10
6Q7-G	1.85
6Q7-GT	1.85
6R7	2.65
6R7-GT	2.65
6S4	1.75
6S7	2.80
6S8-GT	2.65
6SA7	1.80
6SA7-GT	1.80
6SB7-Y	2.55
6SC7	2.10
6SD7-GT	2.90
6SF5	1.75
6SF5-GT	1.80
6SF7	2.00
6SG7	2.05
6SH7	2.30
6SJ7	1.75
6SJ7-GT	1.65
6SK7	1.75
6SK7-GT	1.80
6SL7-GT	2.45
6SN7-GT	2.20
6SN7-GTA	2.20
6SQ7	1.60
6SQ7-GT	1.60
6SR7	1.80
6SR7-GT	2.00
6SS7	2.15
6SV7	3.55
6T8	2.90
6U5(n)	2.00
6U7-G	2.20
6U8	3.10
6V3	3.55
6V6	3.40
6V6-GT	2.00
6W4-GT	1.90
6W6-GT	2.20
6X4	1.55
6X5	2.75
6X5-GT	1.55
6X8	2.75
6Y6-G	2.50

Type Number	User Price
6ZY5-G	$2.30
7A4/XXL	2.00
7A5	2.35
7A6	2.10
7A7	2.00
7A8	1.90
7AF7	1.80
7AG7	2.45
7B4	1.80
7B5	1.85
7B6	2.00
7B7	2.00
7B8	2.05
7C5	2.00
7C6	1.85
7C7	2.05
7E6	2.90
7E7	3.20
7F7	2.45
7F8	2.90
7H7	2.20
7J7	3.25
7L7	2.75
7N7	2.20
7Q7	2.40
7R7	3.35
7S7	3.25
7V7	3.35
7W7	3.35
7X7/XXFM	2.65
7Y4	1.80
7Z4	1.80
12A7	3.35
12A8-GT	2.20
12AH7-GT	2.75
12AL5	1.80
12AT6	1.60
12AT7	2.90
12AU6	1.80
12AU7	2.40
12AV6	1.60
12AV7	2.90
12AW6	2.65
12AX7	2.50
12AY7	6.00
12BA6	1.90
12BA7	2.50
12BD6	2.00
12BE6	1.90
12BH7	2.50
12BY7	2.65
12H6	1.80
12J5	1.50
12J5-GT	1.55
12J7-GT	2.20

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Type Number	User Price
12K7-GT	$2.10
12K8	2.75
12Q7-GT	1.85
12SA7	1.80
12SA7-GT	1.80
12SC7	2.30
12SF5	1.90
12SF7	2.10
12SG7	2.15
12SH7	2.35
12SJ7	1.75
12SJ7-GT	1.65
12SK7	1.75
12SK7-GT	1.80
12SL7-GT	2.50
12SN7-GTA	2.30
12SQ7	1.60
12SQ7-GT	1.60
12SR7	2.10
12Z3	2.60
14A7	2.20
14B6	2.20
14C7	2.40
14F7	2.45
14F8	3.20
14H7	2.40
14Q7	2.40
14R7	3.35
19BG6-G	6.00
19J6	2.65
19T8	2.90
24A	2.35
25AV5-GT	2.90
25BQ6-GT	3.40
25L6-GT	1.75
25W4-GT	2.00
25Z5	1.65
25Z6	2.30
25Z6-GT	1.55
26	2.10
27	1.80
30	2.25
32L7-GT	3.20
35A5	2.05
35B5	2.00
35C5	2.00
35L6-GT	1.75
35W4	1.30
35Y4	1.80
35Z3	1.80
35Z4-GT	1.50
35Z5-GT	1.25
36	2.75
41	2.00
42	2.00
43	2.05
45	2.10
45Z5-GT	1.80
47	2.90
50A5	2.20
50B5	2.00
50C5	2.00
50C6-G	2.90
50L6-GT	1.75
50X6	2.20
50Y6-GT	1.85
50Y7-GT	2.10
53	2.75
56	1.85
57	2.10
58	2.10
70L7-GT	3.90
71A	2.40
75	1.80
76	1.70
77	2.15
78	2.15
80	1.30
83	2.75
84	1.80
85	2.30
117L7/M7-GT	3.90
117N7-GT	4.05
117P7-GT	4.05
117Z3	1.60
117Z6-GT	2.65

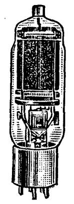
(n) Indicates types not subject to Federal Excise Tax.

Westinghouse RELIATRON™

POWER TUBES

High-Vacuum Amplifiers, Modulators, Oscillators

Type Number	User Price
WL-4D21/4-125A	$30.25
WL-4X150A	48.00
WL-4X500A	121.00
WL-4-1000A	132.00
WL-5D22/4-250A	41.25
WL-207	240.00
WL-450TH	77.00
WL-473	165.00
RJ-571	15.75
WL-801A	4.85
WL-802	4.75
WL-803	24.25
WL-805	13.50
WL-806	34.25
WL-807	2.50
WL-808	10.75
WL-809	4.00
WL-810	16.25
WL-811A	5.00
WL-812A	5.00
WL-813	18.00
WL-814	14.25
WL-815	8.20
WL-826	12.50
WL-828	13.75
WL-829B	16.25
WL-832A	12.90
WL-833A	49.50
WL-837	5.80
WL-838	13.75
WL-845	13.75
WL-849	$ 138.00
WL-862A	1,322.00
WL-880	540.00
WL-889A	210.00
WL-889RA	295.00
WL-891	223.00
WL-891R	362.00
WL-892	223.00
WL-892R	362.00
WL-893A	630.00
WL-893AR	1,150.00
WL-895	950.00
WL-895R	1,300.00
WL-1000T	137.50
WL-1623	4.05
WL-5604	540.00
WL-5619	390.00
WL-5671	1,250.00
WL-5691	8.55
WL-5692	8.55
WL-5693	6.95
WL-5736	160.00
WL-5833	1,885.00
WL-5891	1,350.00
WL-5936	1,100.00
WL-5986	1,150.00
WL-8000	14.50
WL-8003	14.00
WL-8005	8.40
WL-8025A	11.30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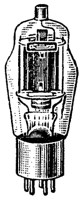
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High-Vacuum Rectifiers

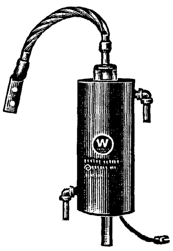
Type Number	User Price
WL-456	$100.00
WL-481A	4.50
WL-579B	15.00
WL-616	225.00
WL-836	9.00
WL-5934	15.00
WL-5974	220.00
WL-6102	37.00
WL-6103	43.50
WL-8020	24.00

Gas and Mercury-Vapor Rectifiers

Type Number	User Price
WL-3B22/1C	$ 7.52
WL-4B24/3C	8.90
WL-670A/6C	16.63
WL-575A	21.00
WL-816	1.65
WL-857B	209.00
WL-866A	2.10
WL-869B	132.00
WL-872A	8.20
WL-5558/32	15.50
WL-5561/104	40.00
WL-8008	8.20

IGNITRONS

Type	Size	Recommended Applications	User Price
WL-5550/681	A	Welder Control	$ 50.00
WL-5551/652	B	Welder Control	80.50
WL-5552/651	C	Welder Control	121.00
WL-5553/655	D	Welder Control	265.00
WL-5554/679		Welder Control Power Rectification	190.00
WL-5555/653	B	Welder Control Power Rectification	370.00
WL-5822		Welder Control	143.00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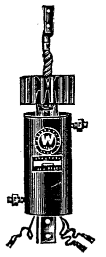
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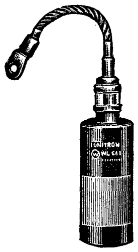

WL-5550/681

THYRATRONS

Type Number	User Price
WL-2D21	$ 2.00
WL-3C23	12.50
WL-33	See WL-5720/33
WL-41	See WL-5830/41
WL-81A	18.00
WL-105	49.50
WL-172	74.00
WL-414	120.00
WL-502A	1.85
KU-610	22.00
WL-624	48.00
KU-627	22.00
KU-628	34.00
WL-629	13.00
WL-632B	29.00
WL-672A	35.00
KU-676	$ 55.00
WL-677	55.00
WL-678	47.00
WL-884	1.85
WL-885	2.00
WL-2050	1.85
WL-5557/17	8.50
WL-5559/57	22.00
WL-5664	9.43
WL-5665	56.67
WL-5683	9.43
WL-5684	15.04
WL-5685	31.90
WL-5720/33	23.00
WL-5796	13.75
WL-5830/41	200.00

PHOTO TUBES

Type Number	User Price
WL-1P29	$2.95
WL-SR50△	7.35
WL-SK60△	7.35
WL-868	2.50
WL-917	3.50
WL-918	3.10
WL-919	3.50
WL-920	4.15
WL-921	2.05
WL-922	1.95
WL-923	$2.05
WL-924	3.30
WL-925	2.40
WL-926	2.90
WL-927	2.50
WL-928	2.85
WL-929	1.50
WL-930	1.65
WL-931A	8.60
WL-5581	2.25

△For replacement only.

Westinghouse RELIATRON TM PICTURE TUBES

Type	Face Plate		Envelope			Focus	
	Spherical Cylindrical	Filter: Fil Frosted: Fr	Shape	Metal or Glass	External Cond. Coat.	Electrostatic Magnetic	User Price
10BP4-A	spherical	Fil	round	glass	yes	Mag	$28.00
10FP4-A	spherical	Fil, Met.*	round	glass	yes	Mag	35.00
12KP4-A	spherical	Fil, Met.*	round	glass	yes	Mag	39.50
12LP4-A	spherical	Fil	round	glass	yes	Mag	32.00
14CP4	spherical	Fil	rectangular	glass	yes	Mag	35.00
16AP4-A	spherical	Fil	round	metal	—	Mag	46.00
16GP4-B	spherical	Fil, Fr	round	metal	—	Mag	46.00
16KP4/16RP4	spherical	Fil	rectangular	glass	yes	Mag	37.00
16LP4-A	spherical	Fil	round	glass	yes	Mag	40.00
16TP4	spherical	Fil	rectangular	glass	yes	Mag	37.00
16WP4-A	spherical	Fil	round	glass	yes	Mag	40.00
17BP4-A	spherical	Fil	rectangular	glass	yes	Mag	36.00
17CP4	spherical	Fil, Fr	rectangular	metal	—	Mag	35.00
17GP4	spherical	Fil, Fr	rectangular	metal	—	Hi. V. Es	46.00
17HP4/17RP4	spherical	Fil	rectangular	glass	yes	Low V. Es	38.25
17JP4	spherical	Fil	rectangular	glass	yes	Mag	36.00
17LP4	cylindrical	Fil	rectangular	glass	yes	Low V. Es	38.25
17QP4	cylindrical	Fil	rectangular	glass	yes	Mag	36.00
17TP4	spherical	Fil	rectangular	metal	—	Low V. Es	36.50
17YP4	cylindrical	Fil	rectangular	glass	—	Mag	36.00
19AP4-B	spherical	Fil, Fr	round	metal	—	Mag	59.00
20CP4	spherical	Fil	rectangular	glass	none	Mag	51.50
21AP4	spherical	Fil, Fr	rectangular	metal	—	Mag	55.00
21EP4-A	cylindrical	Fil, Fr	rectangular	glass	none	Mag	55.00
21FP4-A	cylindrical	Fil	rectangular	glass	yes	Low V. Es	57.00
21MP4	spherical	Fil, Fr	rectangular	metal	—	Low V. Es	57.00
21YP4	spherical	Fil	rectangular	glass	yes	Low V. Es	55.00
21ZP4-A	spherical	Fil	rectangular	glass	yes	Mag	53.25
24AP4	spherical	Fil, Met.*	round	metal	—	Mag	117.00

*Metal-backed fluorescent screen

Reliatron Picture Tubes are available in both glass and metal construction, with either magnetic or electrostatic focusing. Every tube is produced under rigid Westinghouse quality control standards and is guaranteed for a full year. Write or phone the Westinghouse tube representative nearest you.

MICROWAVE TUBES

Westinghouse Microwave Reference Cavities, Spark Gaps and Microwave Switching tubes are available for a broad variety of microwave equipment. T-R's have a long life, shorter recovery time and broad band characteristics. Write for complete specifications.

Prices subject to change without notice

REFERENCE CAVITIES

Type	Resonant Frequency Megacycles	Loaded Q	Insertion Loss at Resonant Frequency	User Price
WL-1Q22	9250±0.3	1900-2400	4-6 db	$125.00
WL-1Q23	9280±0.3	1900-2400	4-6 db	125.00
WL-6089	9280±0.3	1900-2400	4-6 db	125.00
WL-5846*	9280±0.3	1900-2400	4-6 db	130.00
WL-1Q24	9310±0.3	1900-2400	4-6 db	125.00
WL-1Q25	9375±0.6	1900-2400	4-6 db	125.00

*Interchangeable with IQ23 except for attenuator card slot.

ATR & Pre-TR

Type	Class	Frequency (Megacycles)	User Price
WL-1B35	ATR	9000-9600	$11.25
WL-1B37	ATR	8500-9000	15.00
WL-5939WA	Pre-TR (Gas Switching)	1280-1290	48.00

SERIES SPARK GAPS

Type	Breakdown Voltage (KV per Tube)	Nominal Peak Modulator Power for 2 Tubes (Megawatts)	User Price
WL-1B41	8.7-10.2	2	$53.00
WL-1B45	13.1-15.1	4	53.00
WL-1B49	11.2-12.7	3	53.00

MISCELLANEOUS

VOLTAGE REGULATORS (Cold Cathode Type)

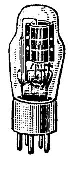
Type	DC Anode Supply Volts (min.)	DC Operating Current (ma.)	DC Operating Volts	Regulation Volts 5-40 (ma.)	User Price
WL-OA3	105	5-40	75	5	$2.65
WL-OC3	133	5-40	105	2	2.65
WL-OD3	185	5-40	150	4	2.65

IONIZATION GAUGE

Type	Filament V. A.	Ion Coll. V.	Grid Volts	Sensitivity	User Price
WL-5966	6.0 2.5	—30	150	1 μamp. 10^{-5} mm Hg.	$25.00

PROTECTOR TUBE

Type	Volts, RMS		Current, Am		User Price
	Breakdown	Max. Operating	Max. 2 Sec.	Max. 10 min.	
WL-KX642	300-500	230	50	7	$12.60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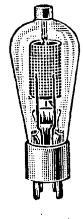
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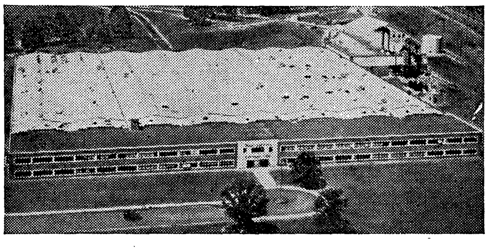
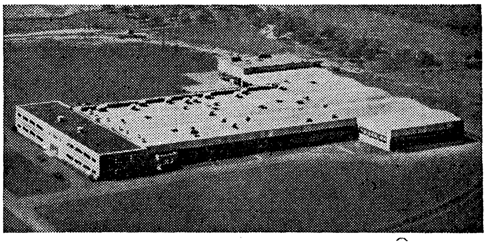
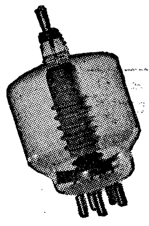
Westinghouse RELIATRON TUBES are engineered and manufactured in these two modern, new plants of the Westinghouse Tube Division.


Westinghouse at Elmira, N. Y. 360,000 square foot picture tube plant and division headquarters.


Westinghouse at Bath, N. Y. 220,000 square feet of ultra modern receiving tube facilities.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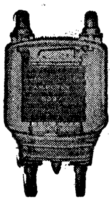
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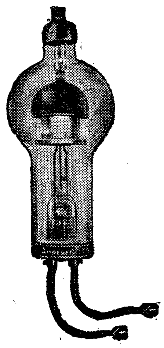
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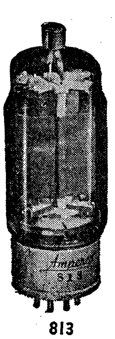
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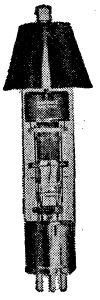
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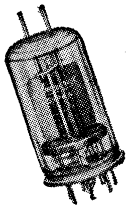
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AMPEREX

ELECTRONIC TUBES

COMMUNICATION — RECTIFICATION — INDUSTRIAL — ELECTRO-MEDICAL — RADIATION DETECTION — SPECIAL PURPOSE

VC25
VC50
VC100

TYPE	PRICE
BINARY ADDER	
6047**	
GEIGER COUNTERS	
75N	$10.00
75NB3	10.00
90NB	20.00
100C	35.00
100CB	37.50
100N	35.00
100NB	37.50
120C	75.00
120CB	77.50
120N	75.00
120NB	77.50
150N	50.00
150NB	52.50
153C	65.00
200C	45.00
200CB	47.50
200N	45.00
200NB	47.50
230N	30.00
240C	35.00
240N	35.00
HYDROGEN THYRATRONS	
4C35	$28.75
5C22	53.45
6268/AX-9911†	28.75
6279/AX-9912†	53.45
INERT GAS THYRATRON	
2D21	$2.00
IGNITRONS	
5551/652	$80.50
5552/651	121.00
5553/655	265.00
5554/679	190.00
5555/653B	370.00
MAGNETRONS	
2J48	$250.00
2J55	186.00

TYPE	PRICE
2J56	$186.00
4J47	500.00
4J52	650.00
4J57	500.00
4J58	500.00
4J59	500.00
725A	250.00
MERCURY RECTIFIERS	
249B	$9.00
249C	9.00
255B	145.00
266B	210.00
315A	38.60
575A	21.00
673	22.50
857B	209.00
866A	2.25
866AX	2.50
869B	132.00
872A	8.20
8008	8.25
MERCURY THYRATRONS	
FG17/1701/967/5557	$8.50
FG105/AX105	49.50
678	47.00
5559	16.00
5869/AGR-9950	22.50
5870/AGR-9951	90.00
PENTODES	
332A	$60.00
828	13.75
6083/AX-9909	13.50
SECONDARY EMISSION PENTODE	
EFP60	$8.75
SUBMINIATURE PENTODES	
6007/5913	$1.50
6008/5911	1.50

TYPE	PRICE
TETRODES	
AX4-125A/6155	$23.00
4X150A	48.00
AX4-250A/6156	35.00
807	2.40
813	18.00
5895/AX-9905	6.00
6075/AX-9907	225.00
6076/AX-9907R	275.00
6079/AX-9908	68.00
TRIODES	
3X2500A3	$198.00
3X2500F3	198.00
EC55/5861	25.00
HF60	17.50
HF-100	17.50
111H	20.00
ZB120	20.00
HF125	25.00
HF130	20.00
HF140	20.00
HF150	22.50
HF175	22.50
HF200	30.00
HF201A/468	28.50
203A	13.75
203H	25.00
204A	130.00
207	240.00
211	13.75
211C	20.00
211D	20.00
211H	22.50
212E	104.00
212F	104.00
220C	365.00
228A	325.00
232C	560.00
241B	115.00
242C	15.00
HF250	35.00
250TH	33.00
250TL	33.00
251A	300.00

TYPE	PRICE
279A	$355.00
284D	17.50
HF300	35.00
308B	115.00
311CH	19.00
342A	582.00
343A	350.00
343AA*	435.00
450TH	77.00
450TL	77.00
473	165.00
498	500.00
501R	125.00
502	125.00
502R	145.00
504R	175.00
508/6246	500.00
750TL	137.50
805	13.50
810	16.25
833A	49.50
834	14.50
838	13.75
845	13.75
849	138.00
849A	135.00
849H	135.00
851	300.00
858	500.00
859	500.00
880	510.00
889A	210.00
889RA*	295.00
891	223.00
891R*	362.00
892	223.00
892R*	362.00
893A	630.00
893AR*	1150.00
HF-3000	500.00
ZB3200	350.00
5604*	540.00
5619	390.00
5658	510.00
5666	230.00
5667*	310.00
5736	$160.00

TYPE	PRICE
5771	510.00
5866/AX-9900	20.00
5867/AX-9901	30.00
5868/AX-9902	50.00
5923/AX-9904	150.00
5924/AX-9904R	210.00
6077/AX-9906	2000.00
6078/AX-9906R	2400.00
8002	160.00
8002R	190.00
TWIN TETRODES	
5894/AX-9903	$19.00
6252/AX-9910**	
832A	12.90
VACUUM CONDENSERS	
VC6/20	$22.50
VC6/32	24.50
VC12/20	22.50
VC12/32	24.50
VC25/20	22.50
VC25/32	24.50
VC50/20	26.50
VC50/32	28.50
VC100/20	30.00
VC100A/20	37.50
VC100/32	33.00
VC100A/32	40.00
VC250/20	70.00
VACUUM DIODES	
222A	$300.00
237A	435.00
VOLTAGE REGULATORS	
85A1/OE3	$3.00
85A2/OG3	3.00
XENON THYRATRONS	
3B28	$8.50
4B32	12.00
5685/C6J	31.90

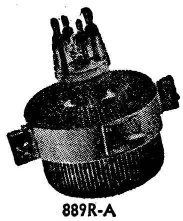
891R
892R

† The Amperex types 6268/AX-9911 and 6279/AX-9912 are improved versions but completely interchangeable in every respect with the standard types 4C35 and 5C22 respectively. They have a minimum guaranteed life of 1000 hours due to the self-contained, self-regulating source of hydrogen.

RENEWAL PRICES* ON RADIATOR TYPE FORCED AIR-COOLED TUBES:

TUBE TYPE	USER'S NET
343AA	$405.00
889RA	275.00
891R, 892R	342.00
893AR	1,000.00
5604	510.00
5667	290.00

*These prices currently apply when a new tube is purchased and a radiator and crate are returned prepaid in good condition with the replacement order.


889R-A

HELPFUL CHARTS AND LITERATURE FREE: Write for set of INTERCHANGEABILITY CHARTS, information at a glance, RAPID TUBE DATA REFERENCE TABLES, 19 pages of condensed information arranged for quick reference. Address your distributor or Amperex direct.

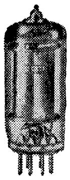
** Price on request.

AMPEREX ELECTRONIC CORP.
230 DUFFY AVE., HICKSVILLE, L. I., N. Y.

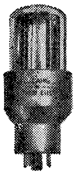
CHATHAM ELECTRONICS

Electronic Tubes and Equipment

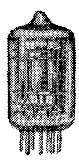
Tubes listed on this page can usually be supplied direct from stock. Many other types are available for immediate delivery — write for catalog. CHATHAM also designs, develops and manufactures special tubes to exact customer specifications — inquiries are invited.



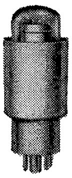
• CHATHAM RUGGEDIZED 2D21W THYRATRON
A ruggedized Xenon filled shield grid thyratron for grid controlled rectifier service. Permits use of high resistance in the grid circuit. Heater 6.3 volts, .6 amp. . . . inverse peak plate voltage 1300 volts, average plate current 100 ma.



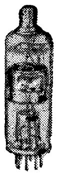
• CHATHAM RUGGEDIZED 5R4WGY RECTIFIER
A ruggedized full wave high vacuum rectifier designed for high altitude operation. Heater voltage 5 volts, heater current 2 amps. Peak inverse voltage 2800 volts, peak plate current 650 ma.



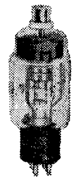
• CHATHAM RUGGEDIZED 6AL5W TWIN DIODE
A ruggedized miniature type twin diode. Heater voltage 6.3 volts, heater current .3 amps. Peak inverse plate voltage 330 volts, DC output current per plate 9 ma. max.



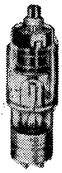
• CHATHAM RUGGEDIZED OC3W REGULATOR
A ruggedized glow discharge regulator tube designed to maintain D.C. output voltage constant at 105 volts with a maximum regulation of 2 volts. Tube operating current 5 to 40 ma.



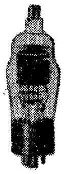
• CHATHAM 1Z2 RECTIFIER
A small bulb high voltage vacuum rectifier. Low cathode heating power and low dielectric losses make tube suitable for radio frequency supply circuits. Fil. 1.25 volts, .265 amp. . . . Inverse peak plate voltage 15,000 volts, 1.5 ma. average, 8.5 ma. peak plate current.



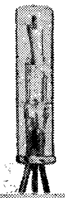
• CHATHAM 3B28 RECTIFIER
This rugged half wave Xenon filled rectifier will operate in any position and throughout an ambient temperature range of −75°C to +90°C Fil. 2.5 volts, 5.0 amp. . . . Inverse peak anode voltage 10,000 volts, .25 amp. average anode current.



• CHATHAM 4B32 RECTIFIER
A rugged half wave Xenon filled rectifier. Operates in any position throughout an ambient temperature range of —75°C to +90°C Fil. 5 volts, 7.5 amp. . . . Inverse peak anode voltage 10,000 volts, 1.25 amp. average anode current.

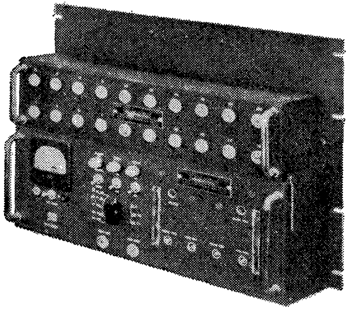


• CHATHAM 394A THYRATRON
A Mercury vapor and Argon filled thyratron for grid controlled rectifier service. Operates over a wide ambient temperature range. Heater 2.5 volts, 3.2 amps. . . . Inverse peak anode voltage 1250, average anode current 640 ma.



• CHATHAM 395A COLD CATHODE GAS TRIODE
Requires no filament supply and is used in many grid controlled rectifier and relay applications. Maximum DC anode current, 10 ma. Maximum DC anode voltage, 150 volts.

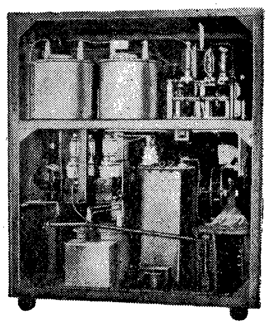
Custom-Built Electronic Equipment



• Pulse life test equipment built by CHATHAM checks receiver type tubes under pulse operating conditions.

CHATHAM specializes in the development, design, and construction of custom-built electronic equipment to exactly meet customers' requirements. Our capable staff of engineers will furnish prompt estimates or, if desired, will call to discuss your problem personally. Call or write today for complete information.

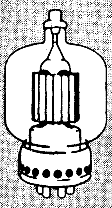
Write today for the informative CHATHAM catalog. For free copy address requests on company letterhead — no obligation.



• 5 Megawatts radar modulator built by CHATHAM to rigid government standards.

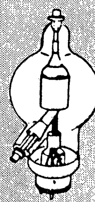
CHATHAM ELECTRONICS • INC

LIVINGSTON, NEW JERSEY



TETRODES

4-65A
4-125A
4-250A
4-400A
4-1000A
4PR60A
4W20000A
4X150A
4X150D
4X150G
4X500A
4X500F

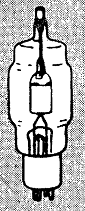


TRIODES

2C39A
3W5000A3
3W5000F3
3W10000A3
3X2500A3
3X2500F3
3X3000A1
3X3000F1
6C21
25T
35T
35TG
75TH
75TL
100TH
100TL
152TH
152TL
250TH
250TL
304TH
304TL
450TH
450TL
592/3-200A3
750TL
1000T
1500T
2000T

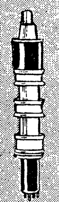
PENTODE

4E27A/5-125B



RECTIFIERS

2-01C
2-25A
2-50A
2-150D
2-240A
2-2000A
KY21A
RX21A
250R
253
866A
872A
8020 (100R)



KLYSTRONS

3K20 000LA
3K20 000LF
3K20 000LK

follow the leaders to

Eimac products have long been the criteria for good design in electronic equipment. Today Eimac tubes are the undisputed leaders of their field. Complete data on any of the Eimac products listed below are available by writing direct.

TRANSMITTING TYPE TUBES

		MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS			
EIMAC TUBE TYPE	PRICE	Plate Dissipation Watts	Plate Voltage	Plate Current Milliamperes	Grid Dissipation Watts	Screen Voltage	Screen Dissipation Watts	Filament, Volts	Filament, Amperes	Amplification Factor	Transconductance umhos
TETRODES											
4-65A	$ 20.00	65	3000	150	5	400	10	6.0	3.5	5	4000
4-125A	30.25	125	3000	225	5	400	20	5.0	6.5	5.9	2450
4-250A	41.25	250	4000	350	10	600	35	5.0	14.5	5.1	4000
4-400A	60.50	400	4000	350	10	600	35	5.0	14.5	5.1	4000
4-1000A*	132.00	1000	6000	700	25	1000	75	7.5	21	7.0	10,000
4PR60A*	90.00	60	20,000	†	†	1500	8	26	2.25	†	†
4W20,000A*	1850.00	20,000	8000	15,000	60	1500	200	10	30	5.5	75,000
4X150A*	48.00	150	1250	250	2	300	12	6.0	2.6	5	12,000
4X150D*	48.00	150	1250	250	2	300	12	26.5	.57	5	12,000
4X150G*	54.00	150	1250	250	2	300	15	2.5	6.25	5.0	12,000
4X500A*	121.00	500	4000	350	10	500	30	5.0	13.5	6.2	5200
4X500F*	93.50	500	4000	350	10	500	30	5.0	13.5	6.2	5200
		†Pulse Modulator									
TRIODES											
2C39A	34.00	100	1000	125‡	2	...	..	6.3	1.0	100	22,000
3W5000A3	198.00	5000	6000	2500	150	...	..	7.5	51	20	20,000
3W5000F3	198.00	5000	6000	2500	150	...	..	7.5	51	20	20,000
3W10,000A3	957.00	10,000	5000	10,000	100	...	..	10	30	20	55,000
3X2500A3	198.00	2500	6000	2500	150	...	..	7.5	51	20	20,000
3X2500F3	198.00	2500	6000	2500	150	...	..	7.5	51	20	20,000
3X3000A1*	198.00	3000	6000	2500	50	...	..	7.5	51	5	11,000
25T	9.00	25	2000	75	7	...	..	6.3	3.0	24	2500
35T	10.50	50	2000	150	15	...	..	5.0	4.0	39	2850
35TG	11.00	50	2000	150	15	...	..	5.0	4.0	39	2850
75TH	13.25	75	3000	225	16	...	..	5.0	6.25	20	4150
75TL	13.25	75	3000	225	13	...	..	5.0	6.25	12	3350
100TH	18.25	100	3000	225	20	...	..	5.0	6.3	38	4500
100TL	18.25	100	3000	225	15	...	..	5.0	6.3	14	3000
152TH	28.75	150	3000	450	30	...	..	5 or 10	12.5 or 6.25	20	8300
152TL	28.75	150	3000	450	25	...	..	5 or 10	12.5 or 6.25	12	7150
250TH	33.00	250	4000	350	40	...	..	5.0	10.5	37	5600
250TL	33.00	250	4000	350	35	...	..	5.0	10.5	14	2650
304TH	60.50	300	3000	900	60	...	..	5 or 10	25 or 12.5	20	16,700
304TL	60.50	300	3000	900	50	...	..	5 or 10	25 or 12.5	12	16,700
450TH	77.00	450	6000	600	80	...	..	7.5	12.0	38	6650
450TL	77.00	450	6000	600	65	...	..	7.5	12.0	18	5000
592/3-200A3	30.25	200	3500	250	25	...	..	10.0	5.0	25	3600
750TL	137.50	750	10,000	1000	100	...	..	7.5	21.0	15	3500
1000T	137.50	1000	7500	750	80	...	..	7.5	15.5	35	9050
1500T	220.00	1500	8000	1250	125	...	..	7.5	24.0	24	10,000
2000T	275.00	2000	8000	1750	150	...	..	10.0	23.5	23	11,000
PENTODE											
4E27A/5-125B	35.75	125	4000	200	5	750	20	5.0	7.5	5.0	2150
		Frequency Range Mc.		Collector Dissipation Watts		Beam Voltage		Beam Current Amperes	TV Peak Synchronizing Level		CW Power Amplifier
KLYSTRONS											
3K20 000LA	2975.00	470-580		20,000		14,000		1.7	5500		3000
3K20 000LF	2975.00	580-720		20,000		14,000		1.7	5500		3000
3K20 000LK	2975.00	720-890		20,000		14,000		1.7	5500		3000

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

*External Anode requiring forced-air cooling
**Water-cooled
‡Cathode Current

SEE NEXT PAGE

COMPLETE DATA AVAILABLE UPON REQUEST

EITEL-McCULLOUGH, INC.
San Bruno, California

EIMAC TUBES!

Years of efficient, dependable performance have given Eimac tubes a product-reputation difficult to surpass. That is why the criteria of good design of any electronic equipment are products trademarked "Eimac."

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

RECTIFIERS

TYPE	PRICE	FILAMENT VOLTAGE	FILAMENT CURRENT AMPS.	PEAK INVERSE VOLTAGE	CURRENT AMPS. PEAK PLATE	AVERAGE PLATE CURRENT MA.
HIGH VACUUM TYPES						
2-01C	$ 15.25	6.3	0.4	1,000	0.010	..
2-25A	11.00	6.3	3.0	25,000	1.0	50
2-50A	13.75	5.0	4.0	30,000	1.0	75
2-150D	19.25	5.0	13.0	30,000	3.0	250
2-240A	66.00	7.5	12.0	40,000	4.0	500
2-2000A	214.50	10.0	25.0	75,000	12.0	750
250R	22.00	5.0	10.5	60,000	2.5	250
253	20.50	5.0	10.0	15,000	2.5	350
8020(100R)	15.00	5.0	6.5	40,000	1.5	100
MERCURY VAPOR TYPES						
*KY21A	13.25	2.5	10.0	11,000	3	750
RX21A	9.00	2.5	10.0	11,000	3	750
866A	1.95	2.5	5.0	10,000	1	250
872A	8.20	5.0	7.5	10,000	5	1250

*Grid Controlled

VACUUM CAPACITORS

TYPE	PRICE	VARIABLE CAPACITY	RATING RF PEAK
VVC60-20	$ 66.00	10-60 mmfd	20-KV
VVC2-60-20	147.50	Split Stator 5-30 mmfd	40-KV
		Parallel 20-120 mmfd	20-KV
VVC4-60-20	284.00	Split Stator 10-60 mmfd	40-KV
		Parallel 40-250 mmfd	20-KV

TYPE	FIXED PRICE	CAPACITY	RATING RF PEAK
VC6-20	$15.00	6 mmfd	20-KV
VC6-32	17.25	6 mmfd	32-KV
VC12-20	16.50	12 mmfd	20-KV
VC12-32	20.00	12 mmfd	32-KV
VC25-20	20.00	25 mmfd	20-KV
VC25-32	23.25	25 mmfd	32-KV
VC50-20	24.25	50 mmfd	20-KV
VC50-32	27.50	50 mmfd	32-KV

AIR SYSTEM SOCKETS

TYPE	COMPLETE ASSEMBLY PRICE	REPLACEMENT CHIMNEY PRICE	FOR USE WITH TUBE TYPE
4X150A/4000	$18.00	$0.60	4X150A or 4X150D
4-400A/4000	16.00	6.00	4-400A
4-1000A/4000	22.50	7.50	4-1000A

HEAT DISSIPATING CONNECTORS

TYPE	Price	HOLE DIA.
HR-1	$ .60	.052
HR-2	.60	.0625
HR-3	.60	.070
HR-4	.80	.1015
HR-5	.80	.125
HR-6	.80	.360
HR-7	1.60	.125
HR-8	1.60	.570
HR-9	3.00	.570
HR-10	1.60	.500

IONIZATION GAUGE

100 IG — Price $22.50

An electronic vacuum pressure gauge.
Filament voltage 3.5 to 7.5 volts.

VACUUM SWITCH

VS-2 — Price $13.25

Single pole double throw switch within a high vacuum adaptable for high voltage switching. Contact spacing .015". Switch will handle R-F potentials as high as 20 Kv. In DC switching will handle approximately 1.5 Amps. at 5 Kv.

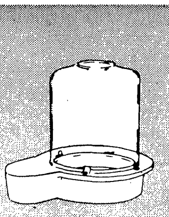
PREFORMED CONTACT FINGER STOCK

WIDTH	PRICE
17/32"	$1.65/ft.
31/32"	1.80/ft.
1-7/16"	2.00/ft.

A prepared strip of spring material slotted and formed into a series of fingers designed to make sliding contact.

Eimac TUBES

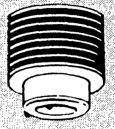
EITEL-McCULLOUGH, INC.
San Bruno, California



AIR SYSTEM SOCKETS

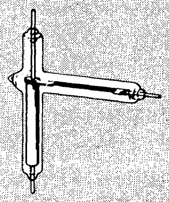
4-400A/4000	4-1000A/4006*
4-400A/4006*	4X150A/4000
4-1000A/4000	4X150A/4006*

*Replacement Chimneys



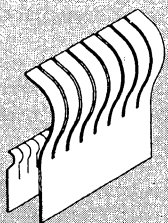
ACCESSORIES

HR Heat dissipating connectors
Preformed Contact Finger Stock



VACUUM SWITCH

VS-2
12V Coil
24V Coil



CONTACT FINGER STOCK

17/32"
31/32"
1-7/16"

VARIABLE VACUUM CAPACITORS

VVC60-20
VVC2-60-20
VVC4-60-20

ION GAUGE

100 IG ion gauge

VACUUM CAPACITORS

VC6-20	VC25-20
VC6-32	VC25-32
VC12-20	VC50-20
VC12-32	VC50-32

Net

CETRON ELECTRONIC TUBES

Engineered and Manufactured by Continental Electric Co.

CETRON PHOTOTUBES

CETRON phototubes are either of the gas-filled or of the vacuum type. With the gas-filled type, greater effective response is obtained, particularly in low impedance circuits, while the vacuum type is recommended where maximum stability is desired.

CETRON phototubes are selected as to their sensitivity and priced accordingly. Phototubes of the Super Class A/B or Q are generally used for experimental purpose where very high sensitivities are required; Class C or R mostly for motion picture equipment; Class D for relay work, etc.

CETRON RED SENSITIVE PHOTOTUBES

CETRON red sensitive phototubes are available in three sensitivity classes, A/B, C and D. The CETRON gas-filled red sensitive tubes comprise the most complete line of phototubes designed for sound reproduction. For complete engineering specifications, write for our PC 8/9.

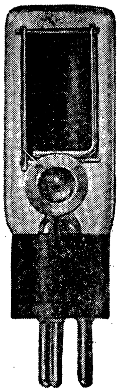
CETRON BLUE SENSITIVE PHOTOTUBES

CETRON blue sensitive phototubes are available in two sensitivity classes, Q and R. The gas-filled CETRON blue sensitive tubes comprise a most complete line for sound reproduction work from dye recorded film. For complete engineering specifications, write for our PC 8/9.

CETRON LEAD SULFIDE PHOTOCELLS

CETRON lead sulfide photo conductive cells are made in a variety of miniature types. They are also available in a variety of sensitive areas and resistances. CETRON lead sulfied photocells are available in three sensitivity classes, A, C and D. For complete engineering specifications, write for our lead sulfide literature.

Continental Electric also manufactures a complete line of special purpose photocells, such as the CE-5, CE-7, CE-8, CE-10, CE-12, CE-15, CE-18, CE-26, etc. We will be happy to work with you on design and development problems, also on any special phototubes your application may require. Full data, price, etc. on special phototubes will be forthcoming upon request.



CE-B25

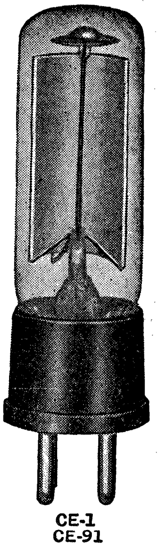
PRICES

RED SENSITIVE TYPES, GAS-FILLED. RMA SPECTRAL RESPONSE S1.

Type	Class A/B	Class C	Class D
CE-1/918	$6.20	$4.10	$2.50
CE-2/1P30	8.50	5.50	3.65
CE-3/1P31	8.50	5.50	3.30
CE-4/1P36	8.50	5.50	3.30
CE-21/920		5.60	3.60
CE-22		4.00	2.40
CE-23/923	5.50	2.90	1.75
CE-B25/927	12.00	5.50	2.50
CE-30/930	5.50	2.60	1.50
CE-36	12.00	5.50	2.50

RED SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S1

CE-1V	$8.50	$4.20	$2.60
CE-2V	10.00	6.00	3.30
CE-4V	10.00	6.00	3.65
CE-11V/917	12.00	5.00	3.00
CE-25V	12.00	5.50	3.00
CE-30V	8.50	2.80	1.85
CE-31V/919	12.00	5.00	3.00



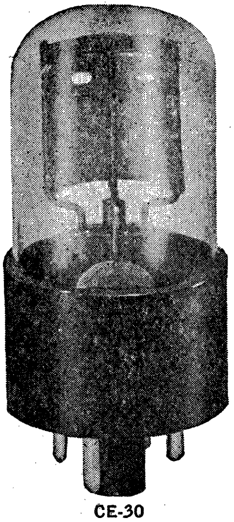
CE-1
CE-91

BLUE SENSITIVE TYPES, GAS-FILLED, RMA SPECTRAL RESPONSE S4

	Q	R
CE-59/5581	$9.00	$4.40
CE-64/5583	10.00	3.60
CE-74	12.00	6.50
CE-83/5612	16.00	10.00
CE-91	10.00	3.30
CE-97/5614	16.00	10.00

BLUE SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S4

CE-29/929	$9.00	$2.00
CE-34	10.00	4.50
CE-61	10.00	6.60
CE-99	16.00	6.50

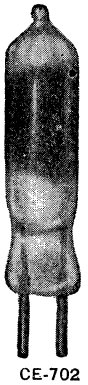


CE-30

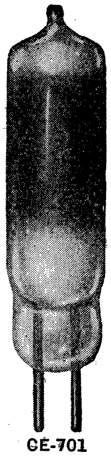
MINIATURE TYPES

LEAD SULFIDE TYPES

CE-701	Side Type	$10.00
CE-702	Side Type	10.00
CE-703	End Type	10.00
CE-704	Double Side Type	15.00
CE-705	End Type	10.00
CE-711	Three-Pin Side Type	10.00



CE-702



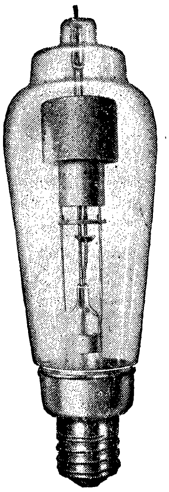
CE-701

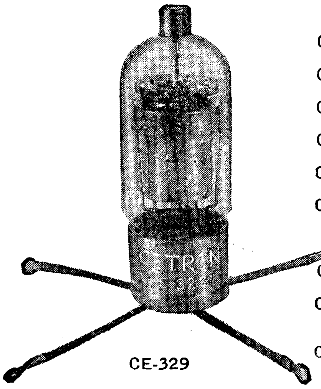
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

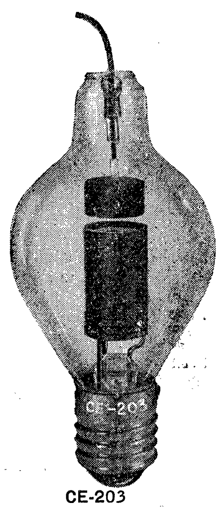
CETRON ELECTRONIC TUBES

Engineered and Manufactured by Continental Electric Co.

CETRON RECTIFIER and GRID CONTROL TUBES

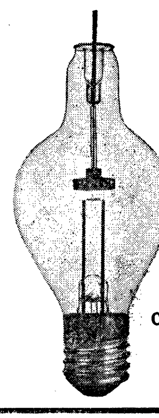

CE-202


CE-329


CE-203

Type New No.	Old No.	Description	Price	Data Sheet No.
CE-3B28	—	0.5 amp. half wave gas filled 1500 volts DC with medium 4 pin base	$ 8.50	143
CE-200A	CE-200	2 amp. full wave mercury vapor 250 volts DC with standard 4 pin base	7.75	111
CE-201A	CE-201	2 amp. full wave mercury vapor 250 volts DC with special 4 long pin base.	8.00	111
CE-202B	CE-202	15 amp. half wave mercury vapor 250 volts DC Mogul Screw base	35.00	108
CE-203	—	15 amp. half wave mercury vapor 150 volts DC Mogul Screw base	11.60	104
CE-205	2-RA-5	5 amp. half wave mercury vapor 250 volts DC Mogul Screw base	12.60	105
CE-206	2-RA-6	6 amp. half wave mercury vapor 90 volts DC Mogul Screw base	6.00	106
CE-207	—	15 amp. half wave mercury vapor 150 volts DC Mogul Screw base	35.00	108
CE-210A	CE-210	2 amp. full wave mercury vapor and gas 250 volts D.C. with standard 4 pin base	7.75	131
CE-213A	CE-213	2½ amp. half wave mercury vapor 600 volts DC standard 4 pin base	7.50	107
CE-220	CE-72	.020 amp. 20,000 half wave high vacuum, rect. tubes. Stand. 4 pin base	5.85	113
CE-221	4B25	6.4 amp. full wave gas filled 200 volts DC special 4 pin base	19.00	125
CE-222	—	1 amp. full wave gas filled 200 volts DC with medium 4 pin base	8.50	115
CE-225	—	6 amp. half wave gas filled 60 volts DC with Mogul Screw base	5.00	121
CE-226	R-6-A	6 amp. half wave gas filled 90 volts DC Mogul Screw base	5.00	112
CE-230	3B24	.060 amp. 20,000 half wave high vacuum rect. med. 4 pin base	13.20	123
CE-235	R-15-A	15. amp. half wave gas filled 60 volts DC Mogul Screw base	10.00	109
CE-235A	—	15 amp. half wave gas filled 60 volts DC Mogul Screw base and flexible anode lead	10.00	109
CE-249C	—	0.64 amp. half wave mercury vapor 2000 volts DC with medium 4 pin base	9.50	144
CE-303	3C31	1 amp. grid control tube, gas filled standard 4 pin base	13.25	114
CE-304	—	12.5 amp. grid control mercury vapor 125 amp. peak current No. 4310 4 pin ind. base	74.75	119
CE-305	—	2 amp. grid control tube, gas filled, standard 4 pin base	28.00	116
CE-306	—	6 amp. grid control tube, gas filled, 40 amp. peak current, 4 pin base No. 412	33.60	118
CE-309	FG17	.5 amp. grid control tube mercury vapor 5000 peak inverse med. 4 pin base	7.90	126
CE-311	3C23	1.50 amp. grid control tube mercury and gas filled 1000 peak inverse med. 4 pin base	15.75	127
CE-393A	—	1.50 amp. grid control tube mercury and gas filled 1250 peak inverse med. octal base	15.75	127
CE-323B	—	1.5 amp. grid control tube mercury vapor and gas filled 1250 peak inverse. Medium 5 pin base	15.75	133
CE-329	—	3 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	45.00	137
CE-330	—	5 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	50.00	138
CE-331	—	10 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	95.00	139
CE-394A	—	0.64 amp. grid control tube mercury and gas filled with medium 4 pin base	9.50	141
CE-627	—	0.64 amp. grid control tube mercury vapor with medium 4 pin base	15.75	142

Detailed engineering specifications on all tubes are available upon request. The extensive engineering and manufacturing facilities which we have, make possible the development and production of many types of special tubes to your specifications. If you have a problem involving the use of any CETRON tubes you are invited to consult us.


CE-226

WARRANTY

We guarantee all products manufactured by us to be free from all material and manufacturing defects and to give satisfactory service when operated in accordance with instructions indicated for their use.

Continental Electric Co.

Taylor CUSTOM BUILT Tubes

2312-18 WABANSIA AVENUE, CHICAGO 47, ILLINOIS

TRANSMITTING TRIODES

Type	Filament Volts	Filament Amps.	Max. Plate Dissipation Watts	Max. Plate D.C. Volts	D.C. M.A.	Max. Grid Drive Watts	Amp. Factor	Base	Max. Mc. for 100% Input	List Price
UX-CV11	10.0	2.5	75	1500	165	8.0	14	Spec.	30	$11.50
T-20	7.5	1.75	20	750	85	3.5	20	A4-10	60	4.00
TZ-20	7.5	1.75	20	750	85	3.5	62	A4-10	60	4.00
T-40	7.5	3.0	40	1500	150	9.0	25	A4-10	60	4.50
TZ-40	7.5	3.0	40	1500	150	9.0	62	A4-10	60	4.50
T-55	7.5	3.0	55	1500	150	7.0	20	A4-10	60	9.50
HF-60	10.0	3.0	60	1500	150	7.5	15	A4-10	60	12.50
T-60	10.0	3.0	60	1500	150	9.0	15	A4-10	60	11.50
T-200	10.0	5.75	200	2500	350	20.0	17	A4-29	30	25.00
T-300	10-11	6.0	300	3000	300	18.0	23	A4-30	30	30.00
468	10.0	4.5	150	2250	200	20.0	18	A4-30	30	29.50
805	10.0	3.25	125	1750	210	10.0	45 App.	A4-29	30	13.50
810	10.0	4.5	125	2250	275	15.0	36	A4-29	30	14.50
T-814	10.0	4.0	200	2500	300	17.0	12	A4-29	30	20.00
822	10.0	4.0	200	2500	300	17.0	30	A4-29	30	20.00
845	10.0	3.25	100	1230	175	10.0	5	A4-29	20	13.75
8000	10.0	4.5	125	2500	250	20.0	16.5	A4-29	30	14.50

GRID-CONTROLLED RECTIFIERS

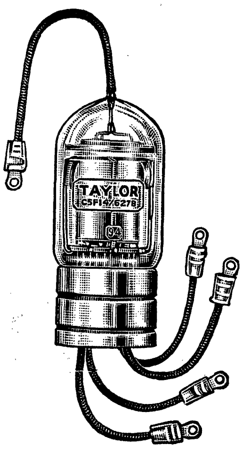
Type	Filament Volts	Filament Amps.	Anode Volts Peak Inverse	Amps. Peak	Amps. Average	Base	List Price
*5557/TT-17	2.5	5.0	2500	2.0	0.5	A4-10	$ 7.00
*873	5.0	6.75	3000	10.0	2.5	A4-29	17.25
C3A14	14.0	2.5	750	30.0	3.0	A4-81 Spec.	42.50
C3R14	14.0	2.5	500	30.0	3.0	A4-81 Spec.	42.50
6278/C5F14	14.0	2.5	500	60.0	5.0	A4-81 Spec.	45.50
C6A	2.5	17.5	600	77.0	6.4	G2-3	32.30
5685/C6J-A	2.5	21.0	1250	77.0	6.4	A4-81	31.90
C6M	2.5	21.0	1250	40.0	6.4	A4-81	32.20
*KY-21A	2.5	10.0	11000	3.0	0.750	A5-11	13.25

*Mercury Vapor—All others Inert Gas

RECTIFIERS

†3B28	2.5	5.0	10000	1.0	0.250	A4-10	$ 8.85
†6B	2.5	21.0	920	40.0	6.4	A4-81	12.40
†16B	2.5	36.0	620	96.0	16.0	G2-3	24.30
TR-40M	5.0	10.5	60000	1.0	0.25	A4-29	20.00
*249-B	2.5	7.5	10000	1.5	0.375	A4-10	9.00
*249-C	2.5	7.5	10000	1.5	0.375	A4-10	9.00
*249-S	2.5	7.5	5000	0.5	0.125	A4-10	7.00
*258-B	2.5	7.5	10000	1.5	0.375	Spec.	11.00
*866-A	2.5	5.0	10000	0.5	0.250	A4-10	1.95
*866 Jr.	2.5	2.5	5000	0.5	0.125	A4-10	1.65
*872-A	5.0	6.75	10000	5.0	1.25	A4-29	8.20
*875-A	5.0	10.0	15000	6.0	1.5	A4-29	21.00
*8008	5.0	6.75	10000	5.0	1.25	A4-18	8.20
†6277/3B28A	2.5	5.0	10000	1.0	0.250	A4-10	8.85
†6288	2.5	2.0	7500	2.5	0.175	A4-5	—
8013-A	2.5	5.0	40000	0.15	0.02	A4-9	10.30
8020	5.0	6.0	40000	0.75	0.10	A4-10	22.00
*RX-21A	2.5	10.0	11000	3.0	0.750	A5-11	9.00

*Mercury Vapor
†Inert Gas
All others High Vacuum



In addition to its many lines of standard power tubes, Taylor designs and manufactures special tube types for industrial and commercial applications. Special purpose tubes can be economically produced to your exacting requirements.

Contact our Application Engineering Department for information regarding standard or special tube types.

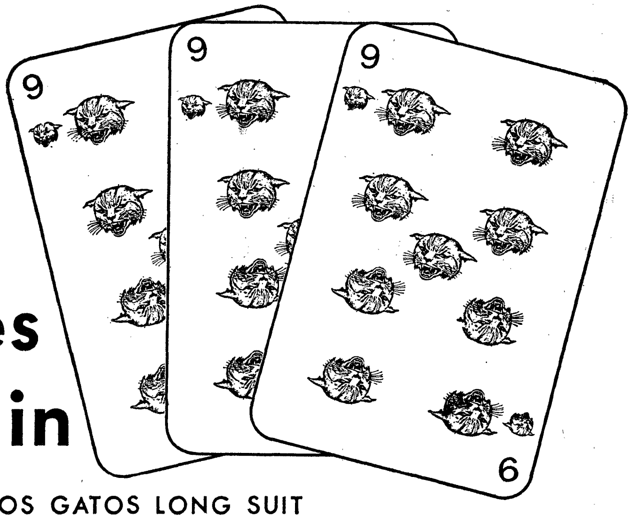
RAULAND *Television* PICTURE TUBES

PROVEN DEPENDABILITY ▪ SUPERIOR PERFORMANCE

Tube type	Bulb △	Maximum diameter	Length	Deflection angle approx.	Normal anode voltage	No. 2 grid voltage	No. 1 grid cutoff volts	Face glass	List Price	Suggested resale
10BP4	G	10½″	17⅝″	50°	9,000	250	−27 to −63	Clear	**$28.00**	**$21.00**
10BP4A	G	10½″	17⅝″	50°	9,000	250	−27 to −63	†Luxide	**28.00**	**21.00**
10FP4★	G	10½″	17⅝″	50°	9,000	250	−27 to −63	Clear	**34.50**	**26.00**
10FP4A★	G	10½″	17⅝″	50°	9,000	250	−27 to −63	†Luxide	**34.50**	**26.00**
12KP4★	G	12 7/16″	17⅝″	54°	11,000	250	−27 to −63	Clear	**38.50**	**29.90**
12KP4A★	G	12 7/16″	17⅝″	54°	11,000	250	−27 to −63	†Luxide	**38.50**	**29.90**
12LP4	G	12 7/16″	18¾″	54°	11,000	250	−27 to −63	Clear	**32.50**	**24.25**
12LP4A	G	12 7/16″	18¾″	54°	11,000	250	−27 to −63	†Luxide	**32.50**	**24.25**
12UP4A	M	12 7/16″	18⅝″	54°	11,000	250	−27 to −63	†Luxide	**40.50**	**30.25**
12UP4B	M	12 7/16″	18⅝″	54°	11,000	250	−27 to −63	‡Luxan	**40.50**	**30.25**
14BP4	G	13 11/16″ □	16 11/16″	65°	11,000	250	−27 to −63	†Luxide	**34.50**	**26.00**
14CP4	G	13 11/16″ □	16 11/16″	65°	11,000	250	−27 to −63	†Luxide	**34.50**	**26.00**
16AP4	M	15⅞″	22¼″	53°	12,000	300	−33 to −77	Clear	**46.00**	**34.50**
16AP4A	M	15⅞″	22¼″	53°	12,000	300	−33 to −77	†Luxide	**46.00**	**34.50**
16EP4	M	15⅞″	19⅝″	60°	12,000	300	−33 to −77	Clear	**51.00**	**38.20**
16EP4A	M	15⅞″	19⅝″	60°	12,000	300	−33 to −77	†Luxide	**51.00**	**38.20**
16EP4B	M	15⅞″	19⅝″	60°	12,000	300	−33 to −77	‡Luxan	**51.00**	**38.20**
16GP4	M	15⅞″	17 11/16″	70°	12,000	300	−33 to −77	†Luxide	**46.00**	**34.50**
16GP4B	M	15⅞″	17 11/16″	70°	12,000	300	−33 to −77	‡Luxan	**46.00**	**34.50**
16TP4	G	14⅞″ □	18⅛″	65°	12,000	300	−33 to −77	†Luxide	**37.25**	**28.10**
16KP4/16RP4	G	14⅞″ □	18″ □	65°	12,000	300	−33 to −77	†Luxide	**37.25**	**28.10**
17AP4	G	16⅝″ □	19¼″	70°	12,000	410	−33 to −77	†Luxide	**35.00**	**26.00**
17BP4A	G	16⅝″ □	19¼″	70°	12,000	410	−33 to −77	†Luxide	**35.00**	**26.00**
17CP4	G	16⅝″ □	19¼″	70°	12,000	410	−33 to −77	‡Luxan	**34.50**	**26.00**
*17HP4/*17RP4	G	16⅝″ □	19 3/16″	70°	14,000	300	−33 to −77	†Luxide	**38.25**	**28.75**
17LP4A/17VP4	G	16⅝″ □	19 3/16″	70°	14,000	300	−33 to −77	†Luxide	**38.25**	**28.75**
19AP4A	M	18⅝″	21½″	66°	13,000	250	−27 to −63	†Luxide	**59.00**	**44.00**
19AP4B	M	18⅝″	21½″	66°	13,000	250	−27 to −63	‡Luxan	**59.00**	**44.00**
20CP4A/20DP4A	G	20 3/16″ □	21 7/16″	70°	15,000	410	−33 to −77	†Luxide	**51.50**	**38.50**
20HP4A/20LP4	G	20 3/16″	21¾″	70°	14,000	300	−33 to −77	†Luxide	**53.50**	**40.00**
21AP4	M	20¾″	22⅝″	70°	14,000	300	−33 to −77	‡Luxan	**55.00**	**41.50**
21EP4A	G	21 7/32″ □	23″	70°	14,000	300	−33 to −77	†Luxide	**55.00**	**41.50**
*21FP4A	G	21 7/32″ □	23″	70°	14,000	300	−33 to −77	†Luxide	**57.00**	**43.00**
21MP4	M	20¾″	22⅝″	70°	16,000	500	−33 to −77	‡Luxan	**57.00**	**43.00**
*21YP4	G	21 7/32″ □	22 15/16″	70°	14,000	300	−33 to −77	†Luxide	**54.50**	**40.75**
21ZP4A	G	21 7/32″ □	22 15/16″	70°	14,000	300	−33 to −77	†Luxide	**51.50**	**38.50**
24AP4	M	24″	24¼″	70°	15,000	300	−33 to −77	†Luxide	**101.00**	**75.30**
*24BP4	M	24″	24¼″	70°	15,000	300	−33 to −77	†Luxide	**101.00**	**75.30**
27AP4	M	26⅞″	21⅜″	90°	15,000	300	−33 to −77	‡Luxan	**151.50**	**113.00**

★ Aluminized type, no ion magnet required. △ Metal-Glass—M. All Glass—G. □ Retangular bulb—diagonal dimension. All heaters 6.3 volts, 0.6 amps. All types magnetic deflection and focus. * Electrostatic Lo Focus Vol. † Dark Face. ‡ Dark Face Etched.

TUBES
with nine-plus lives built in



THE LOS GATOS LONG SUIT

LOS GATOS TYPE NUMBER	TUBE TYPE	USER PRICE	LOS GATOS TYPE NUMBER	TUBE TYPE	USER PRICE
3B24W	Rectifier	$11.75	**250R**	Rectifier	20.00
4D21/4-125A	Beam Tetrode	30.25	**250TH**	Triode	22.50
4E27	Beam Pentode	24.50	**250TL**	Triode	22.50
4E27A	Beam Pentode	35.75	**253**	Rectifier	19.50
4E27TV	Pentode specially designed for TV transmitters	27.50	**254**	Triode	16.50
			332A	Pentode	32.00
100R	Rectifier	13.50	**705A**	Rectifier	19.00
100TH	Triode	16.50	**719A**	Clipper Diode	32.00
100TL	Triode	16.50	**8020**	Rectifier	22.00

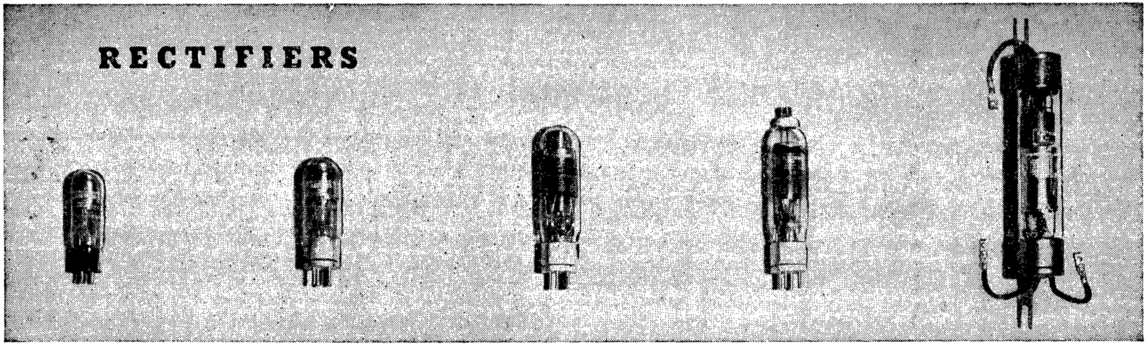
Los Gatos Brand Tubes in both JAN and commercial types are setting new performance records throughout the electronic field. Exclusive new SINTERCOTE black-body surface on Molybdenum anodes improves heat dissipation, keeps tubes hard during operation. Send for technical data bulletins.
Inquiries are welcomed for special tubes designed to your specifications.

LEWIS and KAUFMAN, Ltd.
LOS GATOS 3 CALIFORNIA

LOS GATOS
LONG LIFE

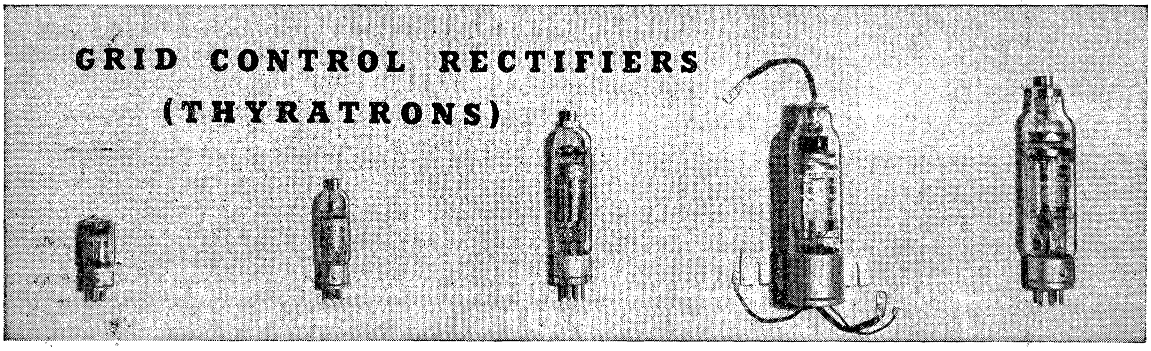
"EL" XENON GAS-FILLED TUBES

RECTIFIERS



	FULL WAVE RECTIFIER EL 1C	FULL WAVE RECTIFIER EL 3C	FULL WAVE RECTIFIER EL 6C	HALF WAVE RECTIFIER EL 6B & EL 6F	HALF WAVE RECTIFIER EL 16F
D.C. Output (Amps.)	1.0	2.5	6.4	6.4	16.0
Peak Anode Current	4.0	10.0	25.6	40.0	96.0
Peak Inverse Volts	725	725	725	920	620
Filament Volts	2.5	2.5	2.5	2.5	2.5
Filament Amperes	6.0	11.5	17.0	21	36
Overall Length	5½"	7"	7½"	(6B) 9" (6F) 8¼" (Panel Mounting)	15⅝" (Panel Mounting)
Price	$7.52	$8.90	$16.63	$12.40	$24.30

GRID CONTROL RECTIFIERS (THYRATRONS)



	EL C1K	EL C3J	EL C6J	EL C16J	EL C6C
D.C. Output (Amps.)	1.0	2.5	6.4	16.0	6.4
Peak Anode Current	8.0	30.0	77.0	160.0	77.0
Peak Forward Volts	1000	750	750	1000	2000
Peak Inverse Volts	1250	1250	1250	1250	4000
Filament Volts	2.5	2.5	2.5	2.5	2.5
Filament Amperes	6.3	9.0	21.0	31.0	24.0
Overall Length	4¼"	6⅛"	9"	10" (Panel Mounting)	11"
Price	$9.43	$12.15	$30.90	$56.67	$43.22

	EL C1B/A	EL C3J/A	EL C6J/A
D.C. Output (Amps.)	1.0	2.5	6.4
Peak Anode Current	8.0	30.0	77.0
Peak Forward Volts	750	1000	1000
Peak Inverse Volts	1250	1250	1250
Filament Volts	2.5	2.5	2.5
Filament Amperes	6.3	9.0	21.0
Overall Length	4½"	6⅛"	9"
Price	$9.43	$15.04	$31.90

FOR SPECIAL APPLICATIONS

- EL C3A14
- EL C3H
- EL C3P14
- EL C5F14
- EL C6M
- EL C6P
- EL C6L

ELECTRONS, INCORPORATED

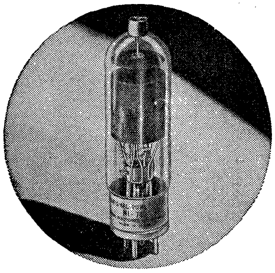
Inert gas rectifier and thyratron tube specialists since 1928.

NATIONAL ELECTRONICS, INC.

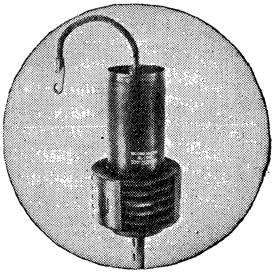
GENEVA • ILLINOIS • U.S.A.

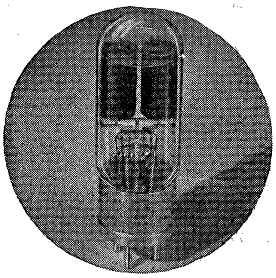
QUICK-HEATING INDUSTRIAL ELECTRONIC TUBES

NL-3C23 THYRATRON


NL-740 THYRATRON

NL-5552 IGNITRON


NL-1005 IGNITRON


NL-604 RECTIFIER

IGNITRONS

TYPE NUMBER	VOLTS	MAXIMUM RATINGS				PRICE
		Maximum Demand	Corresponding Current DC-Amps.	Maximum Current DC-Amps.	Corresponding Demand	
NL-1001	250 - 600	150 Kva	4.9	9.0	50 Kva	$37.50
NL-1005	250 - 600	600 Kva	30.2	56	200 Kva	$80.50
NL-5551	250 - 600	600 Kva	30.2	56	200 Kva	$80.50
NL-5552	250 - 600	1200 Kva	75.6	140	400 Kva	$121.00
NL-5822	1500 peak	1200 peak	20	70	420 peak	$143.00

THYRATRONS

TYPE NUMBER	GAS FILLING	DC OUTPUT AMPERES	PEAK AMPS. RATING	PEAK INVERSE VOLTAGE	FILA-MENT VOLTS	FILA-MENT AMPERES	PRICE
NL-3C23	Arg. & Merc.	1.5	6	1250	2.5	7	$12.50
NL-323B	Arg. & Merc.	1.5	6	1250	2.5	7	$13.25
NL-393A	Arg. & Merc.	1.5	6	1250	2.5	7	$13.25
NL-710/ 6011	Arg. & Merc.	2.5	30	1250	2.5	9	$12.15
NL-714	Arg. & Merc.	1	3	1250	2.5	5	$7.75
NL-715/ 5557	Mercury	1	3	5000	2.5	5	$7.75
NL-740	Arg. & Merc.	4	50	1250	2.5	16	$20.50
NL-741	Mercury	4	50	5000	2.5	16	$20.50
NL-760	Arg. & Merc.	6.4	77	1250	2.5	21	$30.90

HALF-WAVE RECTIFIERS

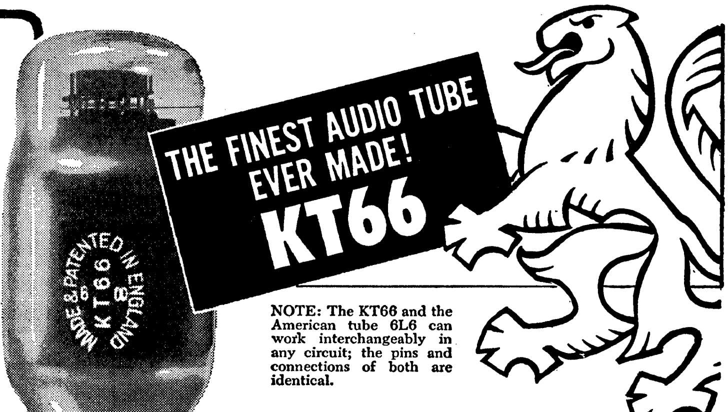
NL-249C	Mercury	.64	2.5	7500	2.5	7.5	$12.75
NL-614	Xenon	2.5	15	900	2.5	8.5	$8.90
NL-615	Mercury	2.5	10	2000	2.5	7	$7.50
NL-617	Mercury	5	20	1000	2	12	$11.60
NL-618	Xenon	6.4	40	750	2.5	18	$12.40
NL-623	Mercury	15	45	500	2.5	20	$11.60
NL-625	Mercury	15	45	900	2.5	20	$29.00
NL-627	Mercury	20	120	1000	2.5	26	$35.00
NL-635	Mercury	6.4	40	1000	2.5	18	$12.60
NL-643	Mercury	15	90	700	2.5	23	$13.50
NL-649/ 5834/249R	Mercury	2	10	900	2.5	7	$7.50
NL-653/ 5835/BR-3	Mercury	3	12	900	2.5	10	$10.75
NL-5558/ FG-32	Mercury	2.5	15	5000	5.0	4.5	$14.00

FULL-WAVE RECTIFIERS

NL-600	Arg. & Merc.	1	4	900	2.5	6	$8.20
NL-602	Arg. & Merc.	2	4	900	2.5	9	$10.20
NL-604	Arg. & Merc.	2.5	10	900	2.5	12	$8.90
NL-606	Arg. & Merc.	6.4	25.6	900	2.5	17	$16.63

Prices and other data subject to change without notice.

WRITE FOR INDIVIDUAL TUBE DATA SHEETS FOR FULL DETAILS.



This is Britain's famous power amplifying tube . . . for years the favorite tube of experimenters and research laboratories; acknowledged in every country of the world to be the finest tetrode ever made. It is currently used in the Leak, Williamson, Radio Craftsmen and other fine amplifiers.

The KT66 is a versatile power tetrode with a number of useful applications. It may be used in the output stage of an audio-frequency power amplifier, either tetrode-connected for maximum sensitivity and power output or triode-connected for high quality working. In transmitting circuits using frequencies up to 30 Mc/s it may also be used as an oscillator or as a radio frequency amplifier.

A high slope, indirectly heated beam tetrode, the KT66 is suitable for either single or push-pull audio operation and may be employed as a beam tetrode with aligned grids. This alignment of the grids reduces losses in the screen and makes for the highest possible power conversion efficiency. With this system of construction high orders of power output may be obtained with a low screen dissipation, and the anode is designed to dissipate 25 watts continuously with a reliable life performance.

RATINGS

		Tetrode connected	Triode connected	
Heater Voltage		6·3	6·3	volts
Heater Current		1·27	1·27	amps.
Anode Voltage		500	400	volts max.
Screen Voltage		400	—	volts max.
Anode Dissipation		25	25	watts max.
Screen Dissipation		3·5	—	watts max.
Anode Impedance*		22500	1450	ohms.
Mutual Conductance*		6·3	5·5	mA/volt
*measured at	Va	250	400	
	Vg2	250	—	
	Vgl	–15	–38	

Capacitances :

	Tetrode connected	Triode connected	
Grid to all	16·0		pF approx.
Anode to all	11.5		" "
Anode to Grid	1·1		" "
Grid to Cathode		8·7	" "
Anode to Cathode		15·8	" "
Anode to Grid		7·2	" "

PRECAUTIONS IN USE

1. For the prevention of parasitic oscillation, always connect a resistance of 100/300 ohms close to the screen grid terminal of the valve holder. When used as a triode this resistance is connected between screen and anode. A control grid (stopper) resistance of 10,000 ohms to 50,000 ohms is also recommended.

2. The maximum permissible D.C. resistance from control grid to cathode is limited to 0.5 megohms for auto bias and 0.1 megohm for fixed bias application.

3. The heater-cathode voltage should not exceed 100 volts when used as a cathode-coupled driver valve, the heater and cathode should be joined and a separate heater supply used for each valve.

4. In push-pull applications showing a large change in anode current between the quiescent and full output conditions, a choke input smoothing circuit having a good regulation should be used. A badly regulated supply will lead to a fall in power output and/or excessive quiescent anode dissipation.

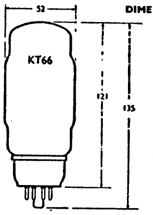
5. The use of a common auto-bias resistance is not recommended except in applications where the maximum anode dissipation is not attained under any condition of operation.

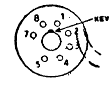
6. Ventilation: Adequate ventilation around the bulb should be provided.

The circuit information given does not imply any license under any patents which may be involved.

NOTE: The KT66 and the American tube 6L6 can work interchangeably in any circuit; the pins and connections of both are identical.

DIMENSIONS





BASE

View looking on underside of base.

7-PIN " OCTAL "

Pin 1 : Not connected
2 : Heater
3 : Anode
4 : Screen Grid, g2
5 : Control Grid, g1
6 : Omitted
7 : Heater
8 : Cathode

All dimensions are in mm. and are the maximum except where otherwise stated.

OPERATING CONDITIONS

Single Valve A.F. Amplifier

	Tetrode connected	Triode connected		
Anode and Screen Voltage	250	400	250	volts
Bias Voltage	–15	–38	–19	volts
Anode Current	85	63	60	mA.
Screen Current	6·3	—	—	mA.
Input Voltage	15	38	19	volts peak
Bias Resistance	160	600	315	ohms.
Anode Load Resistance	2200	4500	2750	ohms.
Distortion	9	7	6	%
Power Output	7·25	5·8	2·2	watts

Two Valves Push-Pull, A.F. Amplifier. Tetrode connected, Auto Bias.

(Data per pair of valves unless otherwise stated.)

		450v. supply	250v. supply	
Anode Voltage.	Full load	390	250	volts
Screen Voltage.	Full load	275	250	volts
Bias Voltage ...		–22·5	–17·5	volts
Anode Current	No load	104	162	mA.
	Full load	125	165	mA.
Screen Current	No load	5	12	mA.
	Full load	18	20	mA.
Anode Dissipation, per valve	No load	9·5	12	watts.
Screen Dissipation, per valve		2·5	2·5	watts
Bias Resistance, per valve		500	200	ohms.
Input Voltage, grid to grid		70	36	volts
Load Resistance, anode to anode		8000	4000	ohms.
Distortion		6	4	%
Power Output		30	17	watts

Two Valves Push-Pull, A.F. Amplifier. Triode connected, Auto Bias.

(Data per pair of valves unless otherwise stated).

	450v. supply	250v. supply	
Anode and Screen Voltage ...	400	250	volts
Bias Voltage	–38	–20	volts
Anode Current	125	110	mA.
Input Voltage, grid to grid	80	40	volts
Bias Resistance, per valve ...	600	360	ohms.
Load Resistance, anode to anode ...	4000	2500	ohms.
Distortion	3·5	2	%
Power Output	14·5	4·5	watts

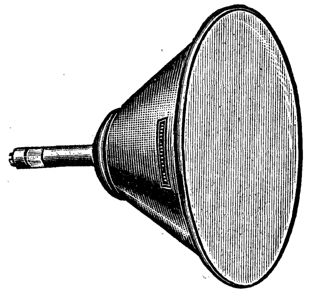
Two Valves Push-Pull, A.F. Amplifier. Tetrode connected, Fixed Bias.

For low distortion and permitting continuous full load operation.
(Data per pair of valves unless otherwise stated).

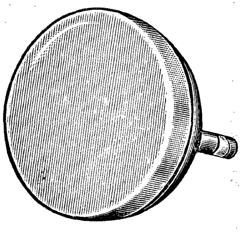
	No signal	Full signal	
Anode Voltage	510	475	volts
Screen Voltage†	395	360	volts
Bias Voltage ...	–40	–40	volts
Anode Current	80	175	mA.
Screen Current	3	19	mA.
Anode Dissipation, per valve	21	17	watts
Screen Dissipation, per valve	0·6	3·5	watts
Input Voltage, grid to grid	—	80	volts
Load Resistance, anode to anode ...	5000	5000	ohms.
Distortion	—	5	%
Power Output	—	50	watts.

† Stabilised screen supply voltage

BRITISH INDUSTRIES CORPORATION • NEW YORK 13, N. Y.



DU MONT
TELETRONS



Du Mont Teletrons have consistently led the field of television picture tubes since 1939. Lifelike pictures along with unsurpassed dependability and uniformity have made Teletrons the choice of the most discriminating receiver manufacturers for original equipment. These same qualities make Du Mont Teletrons the finest replacement picture tube on the market. The Selfocus* types listed below may be used for replacing either magnetic or electrostatic tube types of the same mechanical characteristics without any alterations. They provide automatic focus at all times without a focusing coil or control.

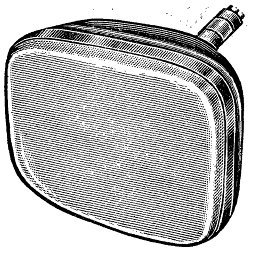
TUBE TYPES OFFERED BY DU MONT AT TIME OF PRINTING

Tube	Type	Picture Area	Deflection Angle	Focusing
12LP4A	Round Glass	88 sq. in.	55°	Magnetic
12QP4, 12QP4A B1034	Round Glass	88 sq. in.	55°	Magnetic
15DP4 B1014	Round Glass	145 sq. in.	57°	Magnetic
16FP4	Round Glass	152 sq. in.	62°	Magnetic
16TP4	Rectangular Glass	145 sq. in.	70°	Magnetic
16KP4 16RP4	Rectangular Glass	145 sq. in.	70°	Magnetic
17AP4	Rectangular Glass	150 sq. in.	70°	Magnetic
17BP4A	Rectangular Glass	150 sq. in.	70°	Magnetic
17HP4	Rectangular Glass	150 sq. in.	70°	Low-Voltage Electrostatic
17KP4	Rectangular Glass	150 sq. in.	70°	Selfocus*
17LP4	Rectangular Glass Cylindrical face	152 sq. in.	70°	Low-Voltage Electrostatic
19AP4 19AP4A	Round Metal	203 sq. in.	66°	Magnetic
20CP4 20CP4A	Rectangular Glass	215 sq. in.	70°	Magnetic
20HP4A	Rectangular Glass	215 sq. in.	70°	Low-Voltage Electrostatic
20JP4	Rectangular Glass	215 sq. in.	70°	Selfocus*
21EP4A	Rectangular Glass Cylindrical face	245 sq. in.	70°	Magnetic
21FP4A	Rectangular Glass Cylindrical face	245 sq. in.	70°	Low-Voltage Electrostatic
21KP4A	Rectangular Glass	245 sq. in.	70°	Selfocus
21YP4	Rectangular Glass	247 sq. in.	70°	Low-Voltage Electrostatic
21ZP4A	Rectangular Glass	247 sq. in.	70°	Magnetic

* Trade Mark.

THE COMPLETE PICTURE TUBE LINE

Additional information and specifications on tubes on request.
The name of the Du Mont representative in your area on request.

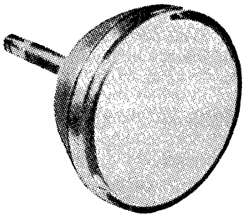


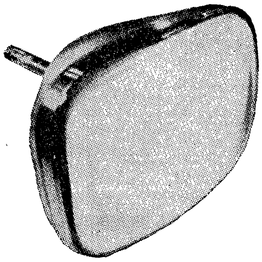
DU MONT

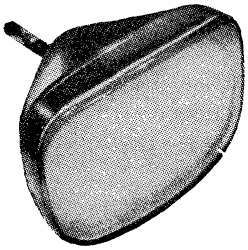
CATHODE-RAY TUBE DIVISION
ALLEN B. DU MONT LABORATORIES, INC.
CLIFTON, NEW JERSEY

TEL-O-TUBE TV PICTURE TUBES

Magnetic Focus Picture Tube Specifications

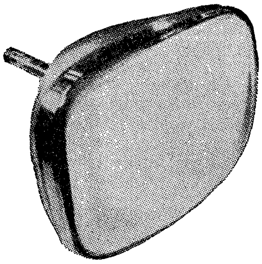


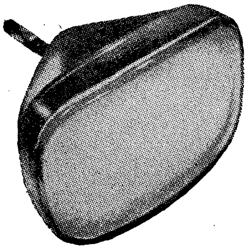




Type	Face Plate	Deflection	Ion Trap	Coating	Electron Gun
ALL GLASS ROUND TELEVISION TUBES					
12 LP4A	Gray Filter	55°	Single Pole	External Conductive	Straight
16 DP4A	Gray Filter	60°	Single Pole	External Conductive	Straight
19 FP4A	Gray Filter	66°	Single Pole	None	Straight
ALL GLASS RECTANGULAR TELEVISION TUBES (Spherical Face)					
14CP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
16 KP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
17BP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
20CP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
20DP4A	Gray Filter	70°	Single Pole	None	3° Offset
21WP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
21ZP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
ALL GLASS RECTANGULAR TELEVISION TUBES (Cylindrical Face)					
17UP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
21EP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset

Electrostatic Focus Picture Tube Specifications





ALL GLASS RECTANGULAR TELEVISION TUBES (Spherical Face)					
17HP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
20HP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
21XP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
21YP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
ALL GLASS RECTANGULAR PICTURE TUBES (Cylindrical Face)					
17LP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
21FP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset

TEL-O-TUBE Corporation of America

Sales Office: TEL-O-TUBE Sales Corporation, 580 Fifth Ave., New York 19, N. Y.

None Better in the Industry—

"BEST-IN-SIGHT"

THAN *Federal*

. . . IN A CUSTOMER TEST OF LEADING MAKES, MORE THAN

99%

of FEDERAL PICTURE TUBES HIT THE BULL'S-EYE for QUALITY!

No other make tested made a higher score than Federal! Here's *proof* for servicemen that there is no finer picture tube on the market. Here's assurance of *customer satisfaction* . . . of fewer call-backs . . . *of more dollars of profit!*

Federal's leadership in picture tube quality is the result of Federal's long-time world leadership in power tubes — for broadcast, industry, military communications and other major uses.

The *same* high standards maintained for power tubes are rigidly adhered to in the engineering and production of *picture* tubes!

The trend is to Federal — because it pays to replace with the best . . . !

TUBE TYPE	DESCRIPTION		DEALER PRICE	SUGGESTED LIST PRICE
	ENVELOPE	FACEPLATE		
10BP4A	Round, Glass	Filter	$20.90	$27.85
12LP4A	Round, Glass	Filter	24.00	32.00
14BP4	Rectangular, Glass	Filter	26.15	34.85
14CP4	Rectangular, Glass	Filter	26.15	34.85
16DP4A	Round, Glass	Filter	30.25	40.50
16KP4	Rectangular, Glass	Filter	28.00	37.00
16RP4	Rectangular, Glass	Filter	28.00	37.00
16TP4	Rectangular, Glass	Filter	28.00	37.00
17BP4A	Rectangular, Glass	Filter	26.50	35.50
17HP4	Rectangular, Glass	Filter	28.00	37.50
17LP4	Rectangular, Glass	Filter Cylindrical, Face	28.00	37.50
19DP4A	Round, Glass	Filter	38.00	50.50
20CP4	Rectangular, Glass	Filter	38.00	50.50
21EP4A	Rectangular, Glass	Filter Cylindrical, Face	40.75	54.25
21FP4A	Rectangular, Glass	Filter Cylindrical, Face	42.00	56.00
21YP4	Rectangular, Glass	Filter, Spherical Face	41.50	55.00
21ZP4A	Rectangular, Glass	Filter, Spherical Face	40.00	53.50

Suggested List Prices effective April 15, 1953.
Suggested List and Dealer Prices include Federal Excise Tax.
See your Federal Distributor for TV Picture Tube return allowance information.

All prices subject to change without notice

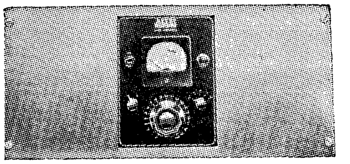
Consult your local Federal Distributor or write to Federal direct

amplifiers

ALTEC LANSING CORPORATION

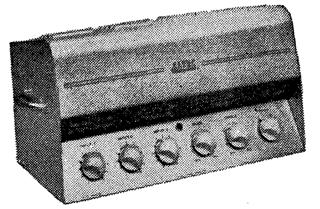
9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.



A-127 AMPLIFIER

Rack mounted power amplifier. POWER: 18 watts. GAIN: 66 db. IN: A-127—100,000 ohms; A-127A, A-127B—30, 250, 500-600 ohms. OUT: A-127, A-127A—8, 16 ohms; A-127B—500, 2,000, 3,000 ohms. FREQUENCY: ±1 db, 20-20,000 cycles, NOISE: —53 db. POWER SUPPLY: 105-130 V. at 50-60 cycles. EXT. VOLTAGES: 6.3 V. at 2.5 amp.; 350 V. at 20 Ma. DIM: 19" wide; 8¾" high; 7" deep. WT.: 18 lbs. COLOR: Blue Gray. **NET PRICE: A-127—$234.00; A-127A or A-127B—$267.00.**



A-326 AMPLIFIER

Portable P.A. amplifier. 20 watts—2 microphone, 1 phono input. ±1 db. 30-15,000 cycles. OUT: 4. 8, 16 ohms. POWER SUPPLY: 117 V, 50/60 cycle. DIM: 7¾" x 7⅞" x 14⅛". WT.: 21 lbs. COLOR: Aluminum hammertone.

A-326A—IN: mic, 30, 150, 500 ohms; phono, 500,000 ohms. GAIN: mic., 104 db; phono, 74 db. NOISE: mic., —13 dbm; phono, —38 dbm.
NET PRICE: $198.00

A-326B—IN: mic., 100,000 ohms; phono, 500,000 ohms. GAIN: mic., 99 db; phono, 74 db. NOISE: mic., —15 dbm; phono, —38 dbm.
NET PRICE: $165.00

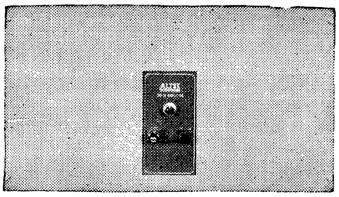
1500 SERIES AMPLIFIERS WITH 530A POWER SUPPLY*

A complete group of integrated amplifiers and pre-amplifiers adaptable to all high quality amplifying installations.

1510A PREAMPLIFIER—2 channels. GAIN: 47 db. IN: 50, 150, 300, 600 ohms. OUT: 10,000 ohms. DIM: 4 7/16" wide; 5 3/16" high; 5" deep.
LIST PRICE: $115.00

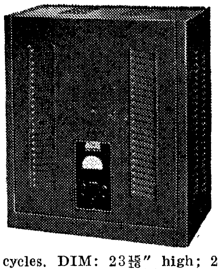
1511A AMPLIFIER—Equalized for VR pickup—has bass and treble controls for 1500 series system. GAIN: 34 db. BASS CONTROL: +10 db —14 db at 40 cps. TREBLE CONTROL: +10 db. —20 db at 10,000 cps. INPUT: for VR pickup. OUT: 10,000 ohms. DIM: 4 7/16" wide; 5 3/16" high; 5" deep. **LIST PRICE: $90.00**

1520A AMPLIFIER—Rack mounted. POWER: 35 watts. GAIN: 75 db. IN: 100,000 ohms. OUT: 4, 8, 16 ohms and 70 V line. EXT. VOLTAGES: (max.) 300 V. DC at 15 ma; 6.3 V. AC at 1.35 a. for 1510A and 1511A. DIM: 19" wide; 10½" high; 9" deep. WT.: 55 lbs. **LIST PRICE: $253.20**



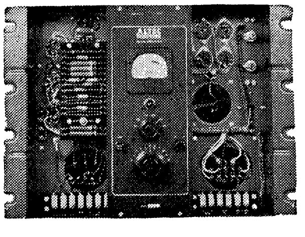
A-247B AMPLIFIER

Single stage Class AB2 push-pull beam power amplifier. POWER: 75 watts. GAIN: 10 db. IN: 16 ohms. OUT: 4, 8 and 16 ohms. FREQUENCY: ±1 db; 20-20,000 cycles. NOISE: —27 dbm. POWER SUPPLY: 105-125 V.; 50-60 cycles. DIM: 10½" high; 19" wide; 8½" deep. WT.: 56 lbs. COLOR: Blue gray.
NET PRICE: $276.00



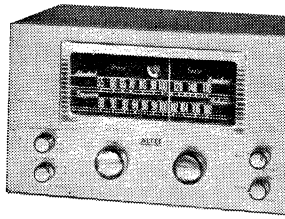
A-287WS AMPLIFIER

Class B power amplifier especially adaptable to installations where large audio power is required in 1 package. POWER: 250 watts. GAIN: 12 db. IN: 8, 16, 250, 500 ohms. OUT: 2.25-20 ohms. FREQUENCY: ±1 db, 100 - 10,000 cycles. NOISE: —27.8 db. POWER SUPPLY: 105-130 V.; 50-60 cycles. DIM: 23 15/16" high; 20 1/16" wide; 13" deep, in wall cabinet. WT.: 141 lbs. COLOR: Gray.
NET PRICE: $715.00



A-256C AMPLIFIER

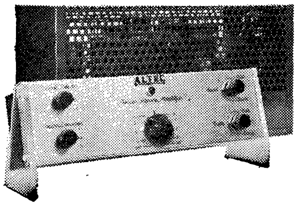
Beam power rack mounted amplifier designed for high quality public address and monitor purposes. POWER: 75 watts. GAIN: 50 db. IN: 500 ohms, 5,000 ohm bridging. OUT: 4, 8 and 16 ohms (can be supplied with TM-226 output transformer—500 ohm and 70 V. line). FREQUENCY: ±1 db, 20-20,000 cycles. NOISE: —45 dbm. POWER SUPPLY: 105-130V.: 50-60 cycles. EXT. VOLTAGES: 6.3 V. at .6 amp., 300 V. at 5 Ma. DIM: 14" high; 19" wide; 9" deep. WT.: 60 lbs. COLOR: Blue gray. **NET PRICE: $399.00**



303B TUNER

AM-FM tuner includes a built-in power supply and multistage audio circuit. AM section is of the superhet type, designed to provide a broad band flat top curve. FM circuit has cascode type RF stage, separate oscillator and triode mixer stage and three stages of IF amplification in addition to a ratio detector. Both the AM and FM sections incorporate AVC and a magic eye. Multistage amplifier includes a preamp equalized for variable reluctance pickup and contains a four-channel selector switch for AM, FM, phono and spare; three-step selection of record crossover frequencies; filter for 33⅓ r.p.m. recording characteristic use; variable control of rise and droop in both treble and bass, and a continously variable volume control. Cathode follower used in output stage enables the tuner to be connected to any power amplifier with a high impedance input. For best results the Altec A-333A power amplifier is recommended.

NET PRICE: $280.00



A-333A POWER AMPLIFIER A-433A REMOTE CONTROL PRE-AMPLIFIER

Designed especially for use in home music systems for the highly critical audiophile. Extremely versatile. Remote pre-amplifier contains controls for bass rise and droop; treble rise and droop; 3 selections for recording crossover frequencies; equalization for variable reluctance pickup; filter for 33⅓ recording characteristic rise; 3 input selector switch and volume control. System frequency response flat to +0 —1 db from 20 cycles to 20,000 cycles and is within 3 db of flat response up to 100,000 cycles. Power amplifier will deliver full 27 watts of audio power at less than 5% total harmonic distortion; 20 watts at less than 2% total harmonic distortion; and 15 watts at less than ½% total harmonic distortion.

NET PRICES: A-333A—$111.00; A-433A—$87.00

1530A AMPLIFIER: Rack mounted. POWER: 70 watts. GAIN: 75 db. IN: 100,000 ohms. OUT: 4, 8, 16 ohms and 70 V line. EXT. VOLTAGES: (max.) 300 V. DC at 30 ma; 6.3 V. AC at 2.7 a. for 1510A and 1511A. DIM: 19" wide; 14" high; 9" deep. WT.: 60 lbs. **LIST PRICE: $327.15**

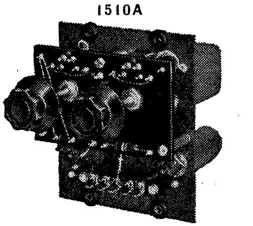
1540A AMPLIFIER—GAIN: 65 db. IN: 100,000 ohms. OUT: 62.5, 125, 500 ohms. DIM: 3½" wide; 5 3/16" high; 6¼" deep. **LIST PRICE: $105.00**

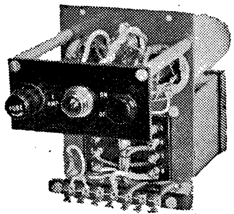
1550A APPARATUS UNIT—Line level matching transformer. PRI: 30, 125, 250, 500 ohms. SEC: 17,500-70,000 ohms. DIM: 3½" wide; 5 3/16" high; 4½" deep.
(Not Shown) **LIST PRICE: $38.25**

530A POWER SUPPLY—300 V. DC 50 ma max.; 6.3 V. AC 3.2 a. max. DIM: 3½" wide; 5 3/16" high; 6¾" deep. **LIST PRICE: $54.00**

*Distributed by Graybar Electric Co.

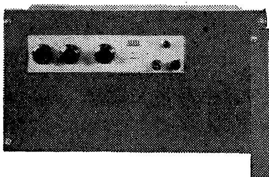
1510A



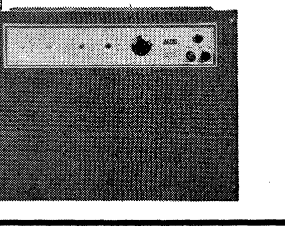


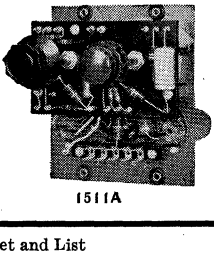
530A

1530A

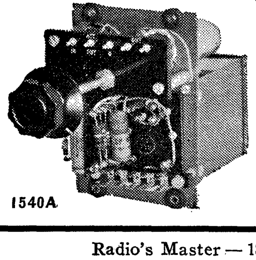


1520A





1511A



1540A

BELL SOUND EQUIPMENT

TAPE RE-CORD-O-*fone* (Three Speed) Model RT-65B

SPECIFICATIONS

Power Output: 3.5 Watts

Controls: Rewind-Off-Forward; Tone with AC Power Switch; Volume; Erase/Record or Playback; Equalization Switch.

Outputs: External Speaker, 3.2 Ohms; Monitor, 500 Ohms for Headphones, or External Amplifier.

Input: Microphone and External Radio or Phono.

Forward Speed: 1⅞, 3¾ and 7½ inches per second.

Speaker: 8 Watts 6″ P.M.

Rewind: 45 inches per second.

Record: Dual Track Type "A" Tape.

Frequency Response: 70 Cycles to 8,000 Cycles at 7½ IPS.

Tubes: 1-12AX7; 1-12AU7; 1-6V6GT; 1-6X5GT.

Power: 80 Watts—117 Volts—60 Cycles A.C.

Dimensions: 16″ Deep; 8½″ High; 15″ Wide.

Weight: 33 Lbs. Net; Shipping Wt. 40 Lbs.

HIGH FIDELITY AMPLIFIER Model 2122B

SPECIFICATIONS

Output: 10 Watts at Less than 3%. Peak Power 15 Watts.

Frequency Response: 20 to 20,000 Cycles ±¾ db with Controls set for Flat Response.

Gain: Radio (Hi-Z) 76 db; Crystal Phono (Hi-Z) 74 db; Mag #1 95 db; Mag #2 110 db.

Hum Level: 65 db. Below Rated Output.

Inputs: 1-Radio; 1-Crystal Phono; 1-Mag #1; 1-Mag. #2. Selected by 3 Position Switch.

Input Impedance: Radio 100K; Crystal Phono .6 Meg; Mag #1 27K; Mag #2 47K.

Controls: (4) 1-Overall Volume Control; 1-Bass Control —14 db to +13 db, at 100 Cycles; 1-Treble Control with AC Power Switch —13 db to +12 db, at 10K Cycles; 1-Selector Switch (3 positions) #1—TV, Tape or Crystal Pickup. #2—Radio, #3—Magnetic Pickup.

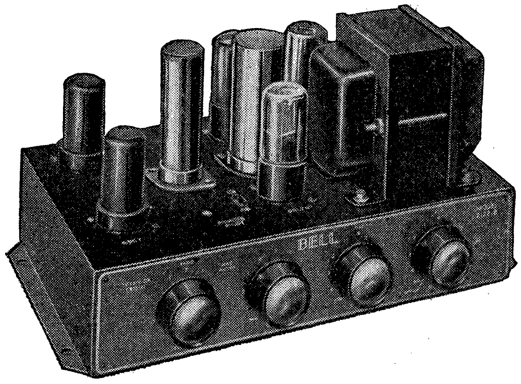
Output Impedance: 4 ohms; 8 ohms; 16 ohms.

Power Consumption: 76 Watts; 117 Volts; 60 Cycles.

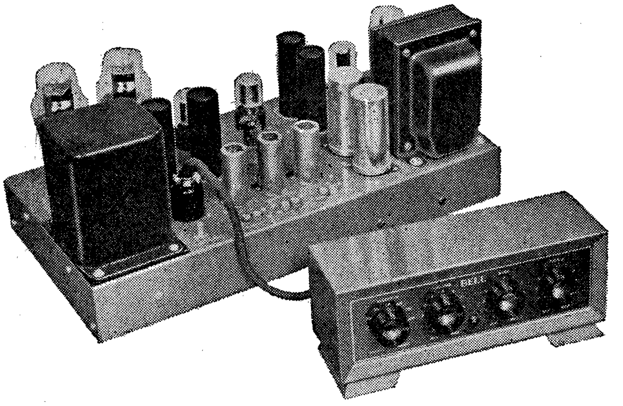
Tubes: 1-5Y3GT; 2-6V6GT; 1-6SL7GT; 2-6SC7.

Dimensions: 7½″ Deep; 6″ High; 11½″ Long.

Net Weight: 8½ Lbs.



CUSTOM HIGH FIDELITY AMPLIFIER Model 2145A



NOTE: Model 2148 20 ft. extension cable available for above.

SPECIFICATIONS

Frequency Response: Within ±.25 db 20 to 30,000 cycles.

Power-Distortion: (a) Distortion at normal listening levels is less than .2 of 1%.
(b) 20 watts at less than 2%. Peak output 30 watts.
(c) Less than .1 of 1% total distortion contributed by pre-amplifiers and control unit.

Hum and Noise Level: (a) 80 db below full output minimum.
(b) No audible hum with all controls at maximum, noise at least 10 db below surface noise of best record surface.

Inputs: Six: Hi-level mag; Lo-level mag; Crystal pickup; Microphone; Hi-level radio; Lo-level radio.

Controls: Remote Control Unit Selector Switch: 5 phono positions, 2 radio positions; Volume control (compensated); Bass control; Treble control; Power Amplifier: AC switch, Provision for remote AC switch, Master gain control.

Output Impedance: 4, 8, 16 ohms.

Tubes: Eleven—3-12AU7; 3-12AX7; 2-6SN7GTA; 2-6B4G; 1-5V4G.

Power Consumption: 150 watts nominal at 117 Volts, 50-60 Cycles.

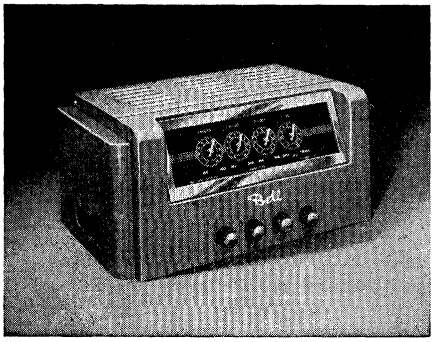
Dimensions and Weights: Remote Control Unit: 3½″ deep, 10″ wide, 4¼″ high—Weight: 3½ Lbs.
Power Amplifier: 8½″ deep, 17″ wide, 7″ high—Weight: 35 Lbs.

Mfg. by THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio

BELL SOUND EQUIPMENT

15 WATT BELL AMPLIFIER

Model 3715B



- Three Input Circuits
- Illuminated Control Panel
- Beam Power Output Tubes
- Exceptional Tone Quality
- Phono Tops Available

A fine performing, versatile, 15 watt amplifier. Utilizes push-pull beam power output tubes, and an inverse feedback to reduce total distortion. Three inputs with separate volume controls permit simultaneous mixing of two microphones and a phonograph. Standard top can be easily replaced with a phono top accessory, either single speed (Model 2196) or three speed (Model 2197), making the phonograph an integral part of the amplifier.

SPECIFICATIONS

Power Output: 15 Watts at Less Than 5%. Peak Power: 18 Watts.
Frequency Response: 30 to 15,000 Cycles Plus or Minus 2 db.
Gain: Microphone Channels, 120 db; Phono Channel, 81 db.
Hum Level: 65 db Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Impedances: Micro Channels, 3 megs.; Phono Channel, ½ meg.
Controls: 2 Micro Volume; 1 Phono Volume; 1 Tone with AC Switch.

Output Impedances: 2.5; 4; 8; 16; 250; 500 Ohms and 70 V Constant Voltage Tap.

Power Consumption: 100 Watts; 117 Volts; 50-60 Cycles.

Tubes: 2-6AU6; 1-6SF5; 1-6N7; 2-6V6GT; 1-5U4G.

Dimensions: 11½″ Deep; 8″ High; 16½″ Wide.

Shipping Weight: 32 lbs.

25 WATT BELL AMPLIFIER

Model 3725B

An eight tube version of one of Bell's most popular units, this model incorporates several new design features, including an additional microphone input. Each of the three microphone inputs and the phonograph input has a separate volume control. Bass and treble tone controls are also separate. Easy-to-read, sloping, lighted control panel. Wide range of output impedances permits matching to any speaker load.

Phono Tops: Standard top can be easily replaced with single or three speed (Models 2196 or 2197) turntable phono top.

SPECIFICATIONS

Power Output: 25 Watts at Less Than 5%. Peak Power: 33 Watts.
Frequency Response: 30 to 18,000 cycles Plus or Minus 2 db.
Gain: Microphone Channels, 122 db; Phono Channel, 80 db.
Hum Level: 65 db Below Rated Output.
Inputs: 3 Microphone; 1 Phonograph.
Input Impedances: Micro Channels, 3 megs.; Phono Channel, ½ meg.
Controls: 3 Micro Volume; 1 Phono Volume; Bass; Treble, with AC Switch.

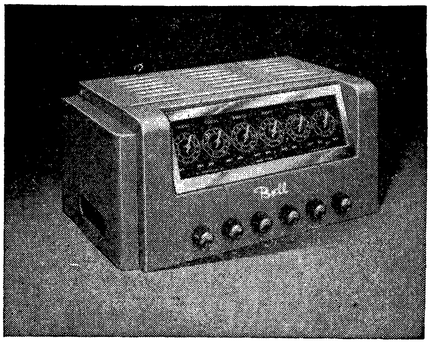
Output Impedances: 2.5; 4; 8; 16; 250; 500 Ohms; 70 V Constant Voltage Tap.

Power Consumption: 150 Watts, 117 Volts, 50-60 Cycles.

Tubes: 3-6AU6; 1-6SF5; 1-6N7; 2-6L6G; 1-5U4G.

Dimensions: 11½″ Deep; 8″ High; 16½″ Wide.

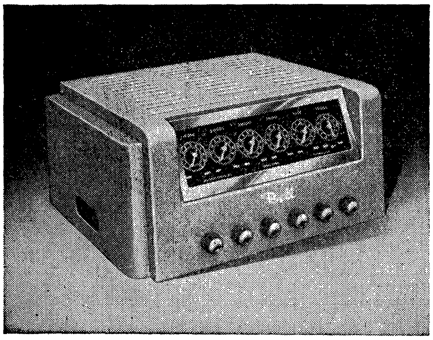
Shipping Weight: 34 lbs.



- Attractive Modern Design
- Four Inputs: Three microphone, 1 Phonograph
- Separate Bass and Treble Controls
- Illuminated Control Panel
- Phono Tops Available

50 WATT BELL AMPLIFIER

Model 3750B



- Rugged Construction.
- Four Inputs.
- Bass and Treble Boost.
- Available for Remote Standby Operation.
- Excellent Frequency Response.

Sufficient wattage to cover 90 per cent of commercial sound requirements. Tone control circuits, operating in an inverse feedback network, provide wide tone adjustments with very low distortion.

Model 3750BR is the same basic amplifier with built-in stand-by relay for economical operation and prolonged life.

SPECIFICATIONS

Power Output: 50 Watts at Less Than 5%. Peak Power: 80 Watts.
Frequency Response: 30 to 15,000 Cycles Plus or Minus 1 db.
Gain: Micro Channels, 125 db; Phono Channel, 85 db.
Hum Level: 67 db Below Rated Output.
Inputs: 3 Microphone; 1 Phonograph.
Input Impedances: Micro Channels, 10 megs.; Phono Channel, 1 meg.
Controls: 3 Microphone Volume; 1 Phono Volume; Bass; Treble, with AC Power Switch. Model 3750BR has Stand-by Relay.

Output Impedances: 2.5; 4; 8; 16; 250; and 500 Ohms and 70 V Constant Voltage Tap.

Power Consumption: 260 Watts at 117 Volts; 50-60 Cycles. Adjustable 105-117-128 Volts.

Tubes: 3-7C6; 3-6SC7; 1-6SN7GT; 2-6L6G; 1-5U4G; 1-5R4GY; 1-5V4G.

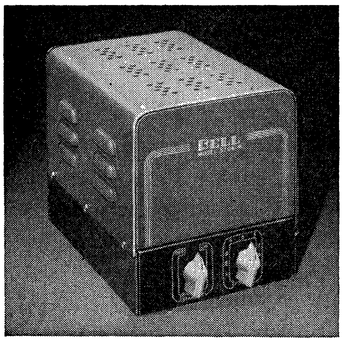
Dimensions: 16½″ Deep; 8″ High; 16½″ Wide.

Shipping Weight: 60 lbs.

Mfg. by THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio

BELL SOUND EQUIPMENT

8 WATT BELL MOBILE AMPLIFIER Model 3706-MB



- **Phono & Micro Inputs.**
- **Chassis Removable for Servicing.**
- **Fits under most dashboards.**
- **Battery Stand-by Switch.**

Here is a brand new addition to the time-proven Bell line of amplifiers. A compact, rugged and amazingly efficient low wattage mobile amplifier. It was especially designed for use by Municipal Police and Fire Departments, Safety Patrols, Traffic Control and outdoor audible advertising. The tubes and vibrator can be inspected or changed without disturbing the installation because the chassis and front panel are so constructed that they easily slide out of the case. In an emergency a whole new spare unit can be inserted in the case. It will operate on 6 volts DC or 117 volts 60 cycles and is provided with a standby switch to conserve battery drain. It comes complete with two cables. Any high impedance microphone can be used with this amplifier.

SPECIFICATIONS
Model 3706-MB

Power Output: 8 Watts at Less than 5%. Peak Power: 12 Watts.
Frequency Response: 60 to 15,000 Cycles Plus or Minus 2 db.
Gain: Micro Channel, 112 db; Phono Channel, 75 db.
Hum Level: 60 db Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph.
Input Impedances: Micro Channel, 3 megs; Phono Channel, ½ meg.
Controls: Volume with Power Switch; Battery Saver Stand-by Switch.
Output Impedances: 4; 8; 16 Ohms.
Power Consumption: 45 Watts, 117 Volts, 50-60 Cycles AC; 11 Amperes, 6 Volts DC.
Tubes: 1-6SJ7; 1-6SN7GT; 1-6L6; 1-6X5GT.
Dimensions: 10″ Deep; 5½″ Wide; 6½″ High.
Shipping Weight: 15 lbs.

25 WATT BELL MOBILE AMPLIFIER Model 3723-MB

This improved model incorporates for the first time a bifilar-wound power transformer. Two windings and four sets of vibrator contacts greatly extend the life of the vibrator. This high-quality mobile amplifier has two microphone inputs and built-in phono unit, each with separate volume control. Attractive, rugged steel cabinet has a sloping, lighted control panel. Economical stand-by switch saves battery power while keeping filaments hot and ready for immediate operation. AC power and DC battery cables both supplied.

SPECIFICATIONS

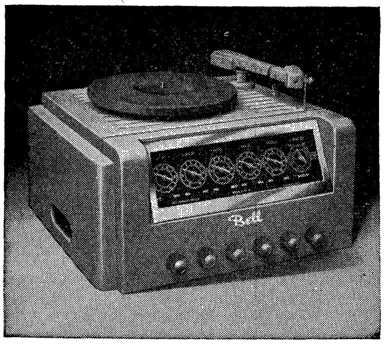
Power Output: 25 Watts at Less than 5%. Peak Power: 38 Watts.
Frequency Response: 30 to 15,000 Cycles Plus or Minus 2 db.
Gain: Micro Channels, 120 db; Phono Channel, 76 db.
Hum Level: 60 db Below Rated Output.
Inputs: Two Microphone; One Phonograph.
Input Impedances: Micro Channels, 3.3 megs.; Phono Channel, ½ meg.
Controls: Two Micro Volume Controls; Phono Volume; Tone with Power Switch; Stand-by Switch; Phono Motor "Off-On" Switch.
Output Impedances: 2.5; 4; 8; 16; 250; 500 Ohms and 70 V Constant Voltage Tap.
Phono Motor: Single Speed, Rim Drive, 78 r.p.m.
Power Cosumption: 115 Watts, 117 Volts, 60 Cycles AC; 24 Amperes, 6 Volts DC.
Tubes: 2-6AU6; 1-6J5; 1-6SN7GT; 2-6L6G; 2-6AX5GT.
Dimensions: 11½″ Deep; 16½″ Wide; 10″ High.
Shipping Weight: 40 lbs.

Model 3723-MB3
Three Speed Turntable

Offers all the outstanding features of Model 3723-MB, **plus** the added advantage of three speed motor-driven turntable. Plays 33⅓, 45, and 78 r.p.m. records. Pickup has crystal, turnover-type cartridge for playing either microgroove or standard records.

- **Built-in Phono Unit**
- **Two Microphone Inputs**
- **Bifilar-wound Power Transformer**
- **Heavy Duty Dual Vibrator**
- **Power Economizer Switch**

32 WATT BELL MOBILE AMPLIFIER Model 3728-MB



• Circuit Breaker Protection on 6 Volts. • Bass Boost and Treble Compensation. • Power Economizer Switch. • Three Input Channels. • Heavy Duty Dual Vibrator.

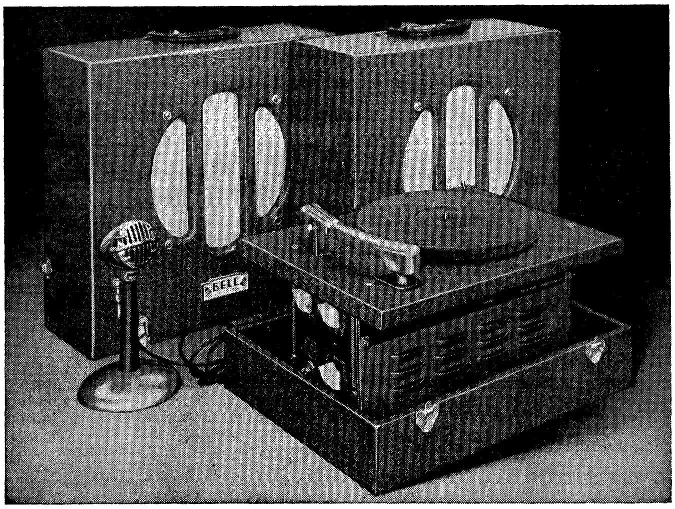
A mobile amplifier for general use, combining a top quality 32-watt amplifier of excellent tone with a phono pickup of the latest design. Plays all 12″ and smaller records at 78 r.p.m. Operates on either 6 volts DC or 117 volts 60 cycles AC. Conversion by simple plug transfer. AC power and DC battery cables both supplied.

SPECIFICATIONS

Power Output: 32 Watts at Less than 5% Peak Power: 45 Watts.
Frequency Response: 50 to 14,000 Cycles Plus or Minus 2 db.
Gain: Micro Channels, 120 db; Phono Channel, 84 db.
Hum Level: 60 db. Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Impedances: Micro Channels, 10 megs; Phono Channel, 1 meg.
Controls: Two Micro Volume; Phono Volume; Bass Tone; Treble Tone with Power Switch; Stand-by Switch; Phono Motor "Off-On" Switch.
Output Impedances: 2.5; 4; 8; 16; 250; 500 Ohms and 70 V Constant Voltage Tap.
Phono Motor: Single Speed, Rim Drive, 78 r.p.m.
Power Consumption: 180 Watts, 117 Volts, 60 Cycles AC; 28 Amperes, 6 Volts DC.
Tubes: 1-6X5GT; 2-6AX5GT; 3-7B4; 1-6SL7GT; 2-6L6G.
Dimensions: 16½″ Deep; 16½″ Wide; 10″ High.
Shipping Weight: 60 lbs.

***Mfg. by* THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio**

BELL SOUND EQUIPMENT



10 WATT BELL PHONO-PA SYSTEM

SPECIFICATIONS Model PA-3710B-P3

Amplifier: 3710B.

Speakers: 2-10″ Heavy Duty P.M.

Cables: 2-25′ Type SV with Plugs.

Phono Equipment: Three speed (33⅓, 45, 78 RPM) motor and turntable and dual purpose turnover crystal pickup.

Microphone: JT-30 with desk type stand.

Microphone Cable: 15′ Shielded Rubber with Connector.

Microphone Stand: Furnished with Micro.

Case: Model 3710B, 3 piece Portable.

Dimensions: 12″ Deep; 18½″ High; 15¾″ Wide.

Shipping Weight: 44 lbs.

15 WATT BELL SINGLE CASE PA SYSTEM

SPECIFICATIONS Model PA-3715B

Amplifier: 3715B (see page B-3)

Speakers: 2-10″ Heavy Duty P.M.

Cables: 2-25′ Type SV with Plugs.

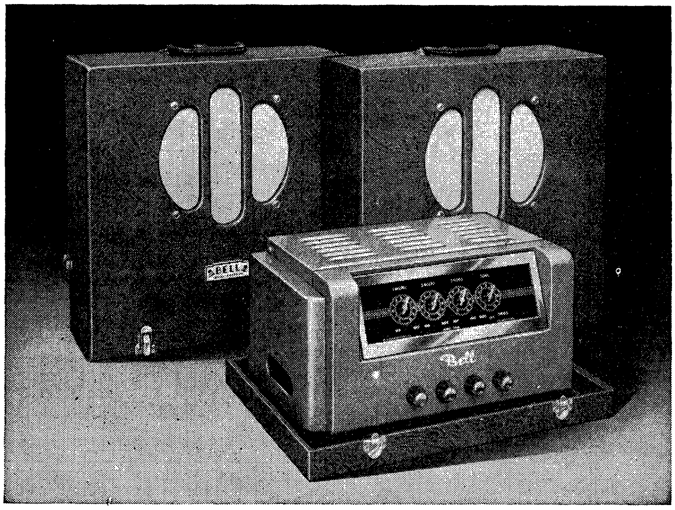
Built-in Phono Equipment: None. Phono Tops (Models 2196 and 2197) are available as accessories.

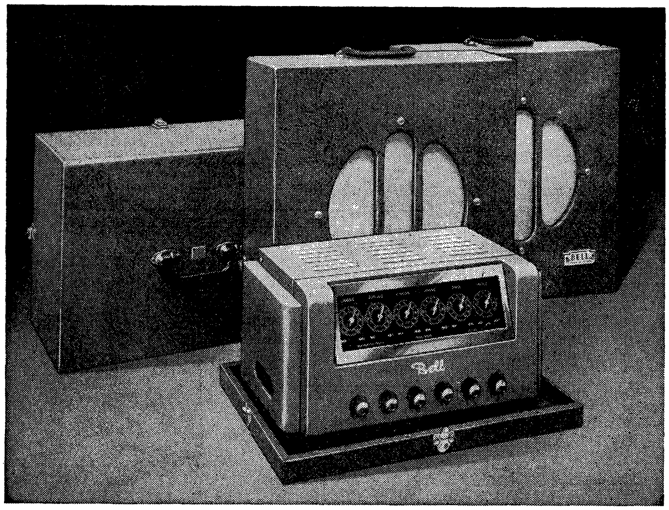
Microphone: Not furnished with this system.

Case: Model 15 Three pc.

Dimensions: 13¾″ Deep; 20¼″ High; 18″ Wide.

Shipping Weight: 62 lbs.





25 WATT BELL DUO-CASE PA SYSTEM

SPECIFICATIONS Model PA-3725B

Amplifier: 3725B (See page B-3).

Speakers: 2-12″ Heavy Duty P.M. with Line Matching Trans.

Cables: 2-50′ Type SV with Plugs.

Built-in Phono Equipment: None. Phono Tops (Models 2196 and 2197) are available as accessories.

Microphone: Not furnished with this system.

Case: 1 Model 95. 1 Model 14-A.

Dimensions: Model 14-A, 13¾″ Deep; 11¼″ High; 18″ Wide.

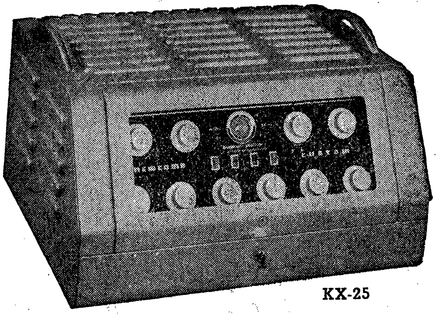
Model 95, 13¾″ Deep; 20½″ High; 18″ Wide.

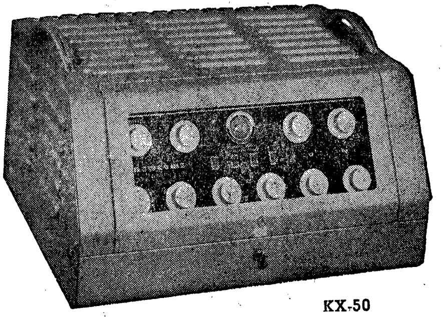
Shipping Weight: Complete System, 87 lbs.

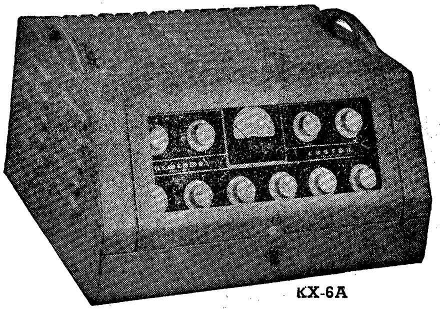
Mfg. by THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio

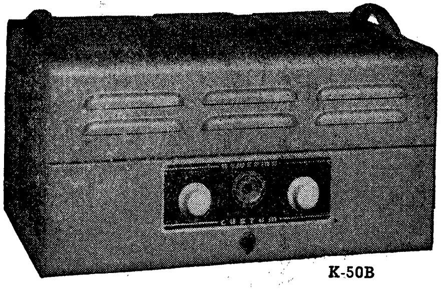
Newcomb CUSTOM K SERIES AMPLIFIERS

Designed and Built To The
Very Highest Standards of
Quality In The Entire Industry


KX-25


KX-50


KX-6A


K-50B

Without equal at any price. The best examples why the name Newcomb is so revered by Engineers and Owners alike. Will improve any system. A **must** when using the new 2-way wide range speakers. Check these important features and specifications.

- ★ **20—20,000 cycles ± 1 db**
- ★ **Less than 3% distortion**
- ★ **90% of rating at less than 1%**
- ★ **Full power any output tap**
- ★ **Audio bandwidth selectors**
- ★ **Hum and noise level—80 db.**
- ★ **Remote control provision—all inputs**
- ★ **U/L approved**
- ★ **Continuous duty—longer life parts**
- ★ **Key locked control cover**
- ★ **Sensitive volume and overload indicators**
- ★ **Wired for plug-in input transformers**

Full audio power, 50 to 5000 cycles (region of all major power requirements) within ± 1/4 db, less than 5% distortion. Separate tone controls for Bass and Treble Boost or Attenuation of advanced design for better curve shape, greater range. Feedback controlled, 2 stage mike pre-amplifiers. Hum balancing control, all models but booster. Linear mixer frequency response. All but Pre-Amplifier have output impedance of 4, 8, 16, 250, 500 ohms, PLUS a 70 volt "constant voltage" tap, with convenient, simple, impedance selector. Multistage inverse feedback. Large, heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installation. A. C. convenience outlet in rear, all models except booster. Cabinets: Heavy gauge welded steel beautifully styled. Finish: Silver Grey Hammertone Baked Enamel. Panels: Etched metal, illuminated. Knobs: Round, large, skirted type, for easy operation. Additional specifications given under specific model numbers.

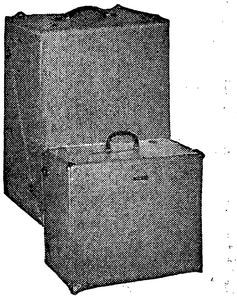
KX-25 POWER OUTPUT: 25 watts design center rating, 30 watts max. at less than 3% distortion any output tap. PEAK POWER: 40 watts design center, 48 watts max. INPUTS (6): 5 mike (2 meg.), gain 123 db; 1 phono either Magnetic input gain 99 db based on 27,000 ohm input, bass equalization + 10 db or Crystal input 1/2 meg. gain 90 db REMOTE CONTROL: Use RC-6 remote control unit. BASS TONE CONTROL: Range —16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. HUM: —80 db controls off, —75 db crystal phono, —65 db mike and magnetic pickup inputs (Referred to rated output). CONTROLS (15): 5 mike, 1 phono, 1 bass, 1 treble, 4 bandwidth, 1 master, 1 volume indicator (all under keylocked control cover) A.C. power switch. TUBES (15): 6—6SC7, 2—6J5, 1—6J7, 1—6SQ7, 1—6SN7, 2—6L6G, 1—6AF6G, 1—5U4G. POWER CONSUMPTION: 135 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 40 lbs. LIST: (with tubes) $379.50. Plug Kit: $6.92.

KX-50 POWER OUTPUT: 50 watts design center rating, 60 watts max. at less than 3% distortion any output tap. PEAK POWER: 80 watts design center, 90 watts, max. BOOSTER COUPLING JACK for connecting K50B Boosters for 100 watts or more. All other characteristics identical with KX-25 except gains, which are all 3 db higher than KX-25. TUBES (18): 6—6SC7, 2—6J5, 1—6SQ7, 1—6J7, 1—6SN7, 4—6L6G, 1—6AF6G, 2—5U4G. POWER CONSUMPTION: 235 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 49 lbs. LIST: (with tubes) $460.00. Plug Kit: $7.03.

KX-6A: A 6 channel mixer pre-amplifier designed to feed broadcast lines or boosters for finest quality. OUTPUT: +31 VU, less than 3% distortion, +30 VU at less than 1%. Has built in power supply and genuine VU meter with meter range extension switch. INPUTS for 5 mikes (2 meg.) gain 97 db and 1 phono either crystal (1/2 meg.) gain 64 db or magnetic (27,000 ohms) gain 73 db. Use RC-6 Unit for remote control. Includes Master Volume Control and same fine Dual Tone Controls and Audio Bandwidth Selectors as in KX-25 and KX-50. BASS TONE CONTROL: Range —16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. **HUM:** —80 db controls off, —80 db crystal —75 db mike and magnetic. CONTROLS (12): 5 mike, 1 phono, 1 bass, 1 treble, 1 master, 1 four position bandwidth (all under key locked cover), 1 A.C. power switch, 1 VU meter range switch (in rear). TUBES (12): 6—6SC7, 4—6J5, 1—6J7, 1—6X5. POWER CONSUMPTION 35 WATTS, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 32 lbs. LIST: (with tubes) $345.00. Plug Kit: $5.29.

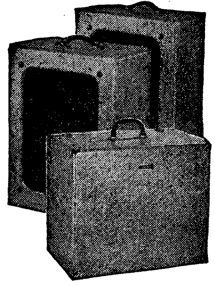
K50B: Booster Amplifier. Performance, power and output impedance same as KX-50 with but one input of 1/2 meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Built for continuous duty with long life parts, separate plate, and filament power transformers, individually fused, permits dependable plate power switching. Includes volume and overload indicators as in KX-50. Ample multistage feedback to minimize effects of speaker load variations. Etched metal panel. TUBES (10): 1—6SJ7, 1—6SN7, 1—6SQ7, 4—6L6G, 1—6AF6G, 2—5U4G. POWER CONSTRUCTION: 230 watts 117 volts 60 cycles. 129 volts max. DIMENSIONS: 9⅜" x 17¾" x 12¼". SHIPPING WEIGHT: 45 lbs. LIST: (with tubes) $210.00. Plug Kit: $2.50.

NEWCOMB CUSTOM PORTABLE SYSTEMS



KX-2512X: Portable system with KX-25 amplifier and two heavy duty, extremely efficient speakers, each with 50' cable. System is carried in two cases: Model KA for the amplifier, size 19" x 11¾" x 16⅞"; Model K-212 for two speakers, size 18½" x 12½" x 22½". Speakers face inside for maximum protection when split case is closed. Mikes and mountings not included as requirements vary.

KX-25R12X: Portable system identical to KX-2512X but with each speaker mounted in an individual portable reflex baffle, Model KR-112, for utmost tone quality. Speaker cases size, 18½" x 12½" x 24½". Mikes and mountings not included as requirements vary.



KA: Amplifier case fits all model K amplifiers.

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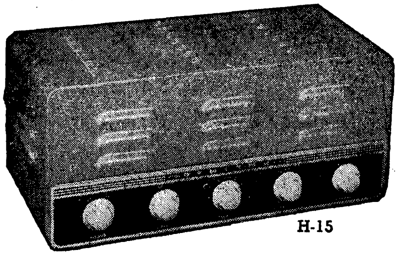
Newcomb DELUXE H SERIES AMPLIFIERS

Compare These Deluxe
Amplifiers with Any
Other Brand at Any Price

For Performance, Dependability and Value check these features and specifications:

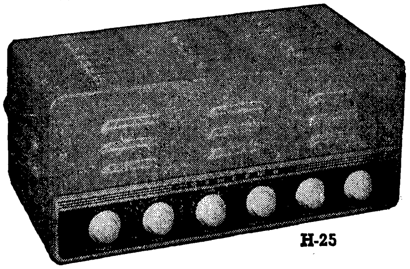
- ★ **20-20,000 cycles ± 2 db**
- ★ **Full Power any output tap**
- ★ **Less than 5% distortion**
- ★ **90% of rated power at less than 2%**
- ★ **Remote Control provision—all mikes**
- ★ **U/L approval**
- ★ **Continuous duty—longer life parts**
- ★ **Wired for plug-in input transformers**

Full Audio Power, 50 to 5000 cycles (region of all major power requirements) within ± ½ db, less than 5% distortion. Individual boost and attenuate type bass and treble tone controls in new distortion free circuit. Linear mixer frequency response. All models but pre-amplifier have output impedances of 4, 8, 16, 250, and 500 ohms PLUS a 70 volt "constant voltage" tap, with easily-operated impedance selector. Multi-stage inverse feedback. Large heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installations. A. C. convenience outlet in rear, all models except boosters. Cabinets: Heavy gauge welded steel beautifully styled in modern functional simplicity that endures. Finish: Silver Grey Hammertone Baked Enamel. Panel: Etched metal, illuminated. Knobs: large, round, skirted type, for ease of operation. Additional specifications under specific model numbers.



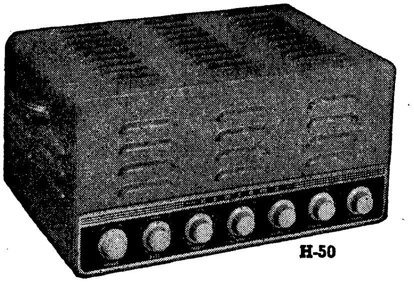
H-15

H-15 POWER OUTPUT: 17 watts design center rating, 20 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 26 watts design center, 31 watts max. INPUTS (3): 2 mike (2 meg.), gain 120 db; 1 phonograph (½ meg.), gain 80 db. BASS TONE CONTROL: Range —16 to +14 db. TREBLE TONE CONTROL: —34 to +13 db. HUM: — 72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (5): 1 mike-phono, 1 mike, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-2 remote control unit. TUBES (7): 2-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5Z4. POWER CONSUMPTION: 85 watts, 117 volts 60 cycles A.C. Max. input 129 volts. DIMENSIONS: 8¼" x 19" x 10⅛". SHIPPING WEIGHT: 23 lbs. LIST: (with tubes) $149.50. Plug Kit: $4.09.



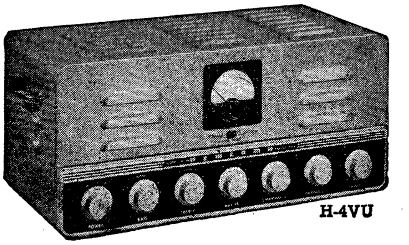
H-25

H-25 POWER OUTPUT: 25 watts design center rating, 30 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 40 watts design center, 48 watts maximum. INPUTS (4): 3 mike (2 meg.), gain 124 db; 1 phonograph (½ meg.), gain 80 db. BASS TONE CONTROL: —18 to +15 db. TREBLE TONE CONTROL: Range —27 to +10 db. HUM: —72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (6): 2 mike, 1 mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-3 remote control unit. TUBES (8): 3-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5U6G. POWER CONSUMPTION: 125 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8½" x 19" x 10⅛". SHIPPING WEIGHT: 27 lbs. LIST: (with tubes) $186.50. Plug Kit: $5.03.



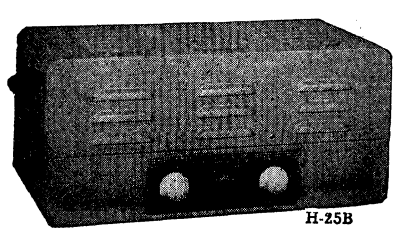
H-50

H-50 POWER OUTPUT: 50 watts design center rating, 60 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 80 watts design center, 90 watts max. INPUTS (5): 4 mike (2 meg.), gain 124 db. 1 phono (½ meg.), gain 81 db. BOOSTER COULPING JACK for connecting H-25B or H-50B Boosters for 75 to 100 watts or more. BASS TONE CONTROL: Range —21 to +16 db. TREBLE TONE CONTROL: Range —27 to +10 db. HUM: —72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (7): 3 mike, 1 mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-4 remote control. TUBES (12): 4-6SF5, 1-6SJ7, 1-6SN7, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 225 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". SHIPPING WEIGHT: 42 lbs. LIST: (with tubes) $250.00. Plug Kit: $6.10.



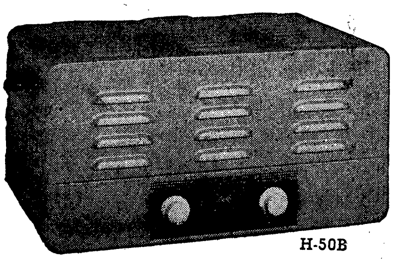
H-4VU

H-4VU Mixer Pre-Amp. with built-in power supply. Extremely low hum. Suitable for feeding telephone lines or booster amplifiers such as the H-25B or H-50B. Output +22 db at less than 5% distortion. +21 db at less than 2%. INPUTS for three mikes (2 mg.), gain 90 db. 1 phono (½ meg.), gain 51 db. HUM: Better than, —80 db from phono input or —75 db, mike inputs. Use RC-3 Unit for remote control. Includes master control and genuine VU meter with meter range extension switch. BASS TONE CONTROL: Range —16 to +14 db. TREBLE TONE CONTROL: Range —27 to +13 db. TUBES (7): 3-6SF5, 1-6SJ7, 1-6SN7, 1-6J5, 1-6X5. POWER CONSUMPTION: 30 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8⅛" x 19" x 10⅛". SHIPPING WEIGHT: 21 lbs. LIST: (with tubes) $195.00. Without VU meter: $150.00. Plug Kit: $3.44



H-25B

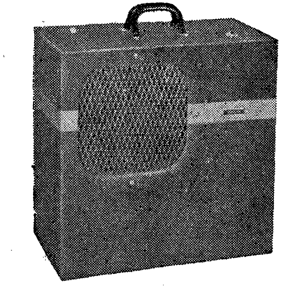
H-25B Booster Amplifier — Performance Power and Output Impedances same as H-25 with but one input of ½ meg. impedance, gain 68 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. power switch and volume control. Ideal for use with H-4 Pre-amplifier. Built for long life. TUBES (5): 1-6SJ7, 1-6J5, 2-6L6G, 1-5U4G POWER CONSUMPTION: 120 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8⅛" x 19" x 10⅛". SHIPPING WEIGHT: 25 lbs. LIST: (with tubes) $127.50. Plug Kit: $1.69.



H-50B

H50B Booster Amplifier — Performance, Power and Output Impedances are same as H-50 with but ont input of ½ meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. switch and volume control. Built for long life. Ideal for use with H-4 Pre-Amp. TUBES (8) 1-6SJ7, 1-6J5, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 220 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". SHIPPING WEIGHT: 38 lbs. LIST: (with tubes) $162.50. Plug Kit: $1.69.

Newcomb Deluxe Portable Systems



H-1512R: Portable system with H-15 amp. and two 12" speakers, each with 25' cable, in split case Model EH-212, size 11⅛" x 20½" x 21", covered in washable fabricoid. Kickproof metal grills protect speakers. Mikes and mountings not included as requirements vary.

H-2512R: Portable system with H-25 amp. and two 12" speakers, each with 25' cable in split case, Model EH-212. Size, 20½" x 11⅛" x 21". Mikes and mountings not included as requirements vary.

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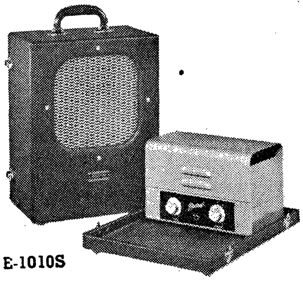
E SERIES AMPLIFIERS

A Low Priced Line of Superior Utility Amplifiers

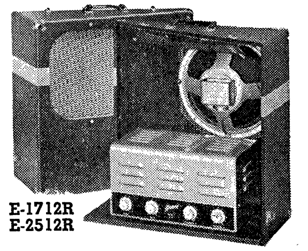
The same fine workmanship and materials as the incomparable KX- and H-Series. Designed to lead the low-price field. For performance, dependability and economy the E-Series is today's best combination of high quality and low cost. All models U/L approved.



E-1010S

E-10 AMPLIFIER . . . Delivers full 10 watts from push-pull 6V6 tubes. Inputs for mike and phono. **SPECIFICATIONS** . . . POWER OUTPUT: 10 watts at less than 5% distortion. FREQUENCY RESPONSE: 40 to 15,000 cycles ±2 db. Inputs (2): 1 mike (2 meg.), gain 116 db; 1 phono (½ meg.), gain 77 db. TONE CONTROL: Range 0 to —24 db. MULTI-STAGE INVERSE FEEDBACK CIRCUIT. OUTPUT IMPEDANCES: 4, 8 and 16 ohms to octal socket. TUBES (5): 1-6SC7, 1-6SQ7, 2-6V6GT and 1-6X5GT. FINISH: Silver-gray hammertone baked enamel. PANEL: Genuine etched metal. DIMENSIONS (Incl. cover): 5¾" x 10⅜" x 6¾" high. POWER CONSUMPTION: 60 watts at 117 volts; 60 cycles A.C. SHIPPING WEIGHT: Amplifier only, less cover, 9 lbs. Including cover, 10½ lbs. LIST: (with tubes) $65.00. Cover: $6.00. Plug Kit: $1.71.

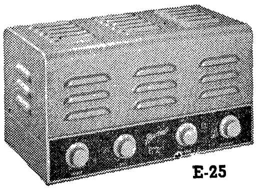
E-1010S PORTABLE SYSTEM . . . 10 watt basic system with 10" speaker, 25' cable and plug, and E-10 amp. Case model E-110, size 12¼" x 15¾" x 8¾". Mike and mountings not included.



E-1712R
E-2512R

E-17 AMPLIFIER . . . A conservative 17-watt amplifier with separate bass and treble tone controls, phonograph bass boost, multistage inverse feedback circuit, and provision for conversion to low impedance mike input. Input controls for mike and phone. **SPECIFICATIONS** . . . POWER UNIT 17 watts at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS: 1 mike (2 meg.) gain 115 db; 1 phono (½ meg.), gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. TUBES (5): 1-6SC7, 1-6SJ7, 2-6L6G, 1-5Z4. PANEL: Etched metal, illuminated. FINISH: Silver-gray hammertone baked enamel. DIMENSIONS: (Incl. cover): 8⅜" x 14⅛" x 8" high. POWER CONSUMPTION: 75 watts at 117 volts, 60 cycles A.C.SHIPPING WT.: 18 lbs. LIST: (with tubes less cover) $93.00. Cover $6.50. Phono Cover $39.50*. 3 Speed Cover $49.50*. Changer Cover $99.50. Plug Kit: $2.28. (*Plus Excise Tax.)

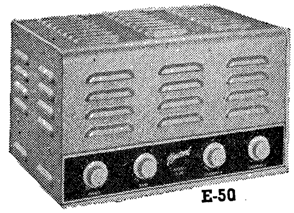
E-1712R PORTABLE SYSTEM . . . 17 watt amp. model E-17 and two 12" speakers each with 25' cable and plug. Split case model EH-212, size 20½" x 11⅛" x 21". Mikes and mountings not included.



E-25

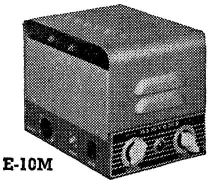
E-25 AMPLIFIER . . . A dependable full 25-watt amplifier with inputs for two mikes and one phono, separate bass and treble tone controls, phono bass boost, multistage inverse feedback circuit, and provision for conversion to low impedance mike inputs. **SPECIFICATIONS** . . . POWER OUTPUT: 25 watts at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS (3): 2 mike (2 meg.), gain 117 db; and 1 phono (½ meg.), gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 2-6L6G and 1-5Z4. FINISH: Two-tone hammertone baked enamel. PANEL: Etched metal, illuminated. POWER CONSUMPTION: 90 watts at 117 volts; 60 cycles A.C. SHIPPING WT.: 19 lbs. LIST: (with tubes less cover) $118.50. 3 Speed Cover $49.50*. Cover $6.50. Phono Cover $39.50*. Changer Cover $99.50*. Plug Kit: $3.24. (*Plus Excise Tax.)

E-2512R PORTABLE SYSTEM . . . 25 watt amp. model E-25 and two 12" speakers each with 25' cable and plug. Split case model EH-212, size 20½" x 11⅛" x 21". Mikes and mountings not included.



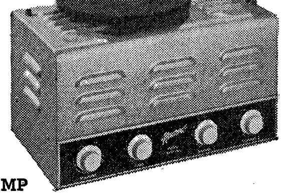
E-50

E-50 AMPLIFIER . . . A distortion-free conservatively rated 50-watt amplifier using push-pull parallel 6L6 tubes and multistage inverse feedback circuit. Has inputs for two mikes and one phono, separate bass and treble tone controls, phono bass boost, and provision for conversion to low impedance mike inputs. **SPECIFICATIONS** . . . same as E-25 except as following: POWER OUTPUT: 50 watts at less than 5% distortion. Mike gain 120 db.; phono gain 79 db. OUTPUT IMPEDANCES: 4, 8, 16 and 250 ohms. TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 4-6L6G and 2-5Z4. DIMENSIONS (including cover): 11¼"x14¾". POWER CONSUMPTION: 170 watts at 117 volts; 60 cycles A.C. SHIPPING WT.: 31 lbs. LIST: (with tubes) $189.50. Plug Kit: $3.24.



E-10M

E-10M MOBILE AMPLIFIER . . . The Model E-10-M is a particularly rugged, dependable, low cost 10 watt mobile amplifier, designed for use on 6 V.D.C. or 117 volts, 60 cycles A.C. power. Features push-pull beam power output tubes with inverse feedback for low distortion; Standby battery saver switch; New freedom from vibrator hash; Special mounting to simplify removal of chassis for servicing; Inputs for mike and phono; Sturdy Jones connectors for battery and A.C. cables. **SPECIFICATIONS** . . . POWER OUTPUT: 10 watts at less than 5% distortion. FREQUENCY RESPONSE: 50 to 15,000 cycles ±2 db. Mike Input (2 megs.), gain 115 db; Phono Input (½ meg.), gain 75 db. OUTPUT IMPEDANCES: 4, 8, and 16 ohms. Jewelled pilot lamp. Etched metal panel. Silvertone-gray, baked enamel hammertone finish. TUBES (5): 1-6SC7, 1-6SF5, 2-6V6GT, 1-6X5GT. POWER CONSUMPTION: 60 watts at 117 volts A.C. 8 amps at 6 V.D.C. SHIPPING WEIGHT: 13½ lbs. LIST: (with tubes) $97.50. Plug Kit: $1.39.



E-25MP

E-25MP PHONO TOP MOBILE AMPLIFIER . . . A full 25 watts from either 6 V. Storage Battery or 117 V. A.C. at new low price. Consumes least possible current per watt output. "Standby" switch reduces battery consumption, keeps tubes warm for instant use. Separate A.C. power and turntable switches. Heavy duty Jones plugs and receptacles provide dependable connections to battery or A.C. power source. **SPECIFICATIONS** . . . POWER OUTPUT: A full 25 watts at less than 5% distortion from either 117 volts A.C. or 6-volt storage battery. RESPONSE: ±2 db, 50-15,000 cycles. INPUTS for two mikes (2 meg.) gain 119 db; and one phono (½ meg.), gain 78 db. HIGH FREQUENCY ATTENUATOR range, 28 db. CIRCUIT FEATURES: Multi-stage inverse feedback, resistance capacity coupling, phase correction for phono motor, 2000 volt Hermetically sealed oil buffer condenser. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms to two octal speaker sockets and impedance selector. PHONOGRAPH MOTOR: Constant speed 78 R.P.M. PICKUP: Crystal. TUBES (7): 1-6SC7, 1-6SJ7, 1-6J5, 2-6L6, 2-6X5GT. POWER CONSUMPTION: 107 watts at 117 volts, 60 cycles A.C. or 20.5 amps. including phono motor from 6-volt storage battery. FINISH: Silver-gray hammertone baked enamel. PANEL: Etched metal, illuminated. DIMENSIONS (including cover): 8¾" x 14⅛" x 10" high overall. SHIPPING WT.: 30 lbs. LIST: (with tubes and phono cover) $199.50. Plug Kit: $3.24. (Excise Tax on cover).

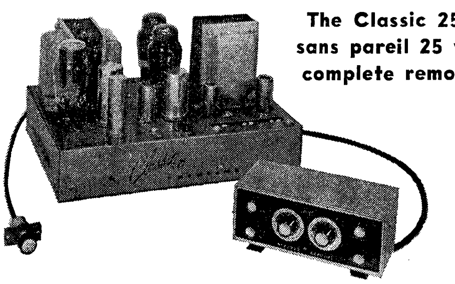
E-25M . . . Same as E-25MP, Mobile Amplifier, with cover, tubes, less phono unit. Power consumption: 91 watts A.C. or 17 amps. from 6 V.D.C. Dimensions: 8⅜" x 14⅛" x 8" high. SHIPPING WT.: 27 lbs. LIST: (with tubes and plain cover) $181.00. Plug Kit: $3.24.

ALL MODELS U/L APPROVED

All Prices and Specifications Subject to Change Without Notice.

Newcomb PHONO AMPLIFIERS

For the Finest Phonograph
Performance Ever Achieved

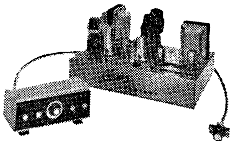


The Classic 25, Fidelity sans pareil 25 watts with complete remote control

An unexcelled combination of technical perfection, flexibility and listening pleasure. Average level distortion is reduced to vanishing point. "Audi-balance" achieves perfect balance of output tubes for lowest distortion in seconds. Here is fidelity with ample reserve power, hum eliminated by D.C. filament supply, a high damping factor reduces transient distortion to minimum without disregarding needs of speakers, new A.E.S. response position, a new output connection to tape recorder. Panel mounting simplified. "Adjusta-panel" extends control shafts to ¾". Remote cable extends up to 100'.

POWER AMPLIFIER: Frequency response flat from 10 to 30,000 cycles with negligible deviation from 5 to 100,000 cycles. 25 watts at less than 2% distortion. Typical readings show 20 watts at 20 and 20,000 cycles at less than ½% with mid-frequencies at less than ¼% and 1 watt readings as low as .005%. **Hum and Noise:** 95 db below 25 watts. **Six Inputs:** All at main amplifier, 1 low level magnetic pickup (.0092 volts), 1 high level magnetic pickup (.046 volts), 1 crystal (.61 volts), 1 radio (1 volt), 1 TV (1 volt), 1 tape (1 volt). **Pre-amp:** Shock mounted with full frequency compensation for various inputs. **Controls:** 1 master phono gain or "limit" control, 1 crystal-magnetic selector switch, 1 "Audi-balance" switch, 1 "Audi-balance" control, 1 A.C. power switch on 5' cable. **Outputs:** To speakers, 8 or 16 ohms at terminal strip. To tape recorder, up to 6½ volts to high impedance "external amplifier" input of tape recorder. Auxiliary A.C. socket. **Fuse** for protection. **Tubes:** (power amp.) 2-12AX7, 1-12AU7, 2-6L6G, 1-5U4G. **Power Consumption:** 125 watts 117 volts 60 cycles A.C. **Finish:** Dove brown hammertone baked enamel. **Size:** 14" x 10" x 7¼".

REMOTE CONTROL: Cable length 5' (Model 2X, 20' extension cable available). **Panel Controls:** 1 bass, range —16 db to +23 db. (Special curve shape avoids overemphasis of mid-bass frequencies), 1 treble, range —25 to +23 db., 1 five position record condition compensator, 1 five position crossover control selects ideal playback characteristics and automatically equalizes for lower average level of microgroove records, 1 program selector, 1 volume control Fletcher-Munson compensated for both highs and lows for utmost low level realism, 1 petite pilot lamp. **Tubes:** (remote unit) 1-12AX7, 1-12AV6. **Finish:** Brushed brass. **Size:** 8⅝" x 4⅜" x 3⅞" high. **Weight:** total 28½ lbs. Audiophile, NET $269.50.



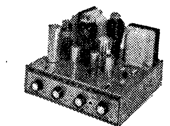
Classic 15, Ultra-High Fidelity 15 watts with complete remote control

Low distortion, excellent reserve power, advanced circuitry, new features, superb reproduction, easy installation are characteristics. Remote extends up to 50'. Design makes substantial savings possible in installation. Features new "Audi-balance" and "Adjusta-panel," excellent damping factor reduces speaker transient distortion, a new 5 position crossover selector includes A.E.S. and automatic level correction for microgroove recordings, and a new output connection to tape recorders.

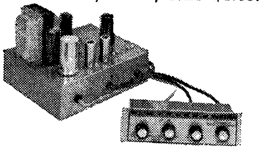
POWER AMPLIFIER: Frequency response ±1 db. 10-25,000 cycles with excellent response to 100,000 cycles. 15 watts at less than 1% distortion. Typical readings show 14 watts at 20 and 20,000 cycles at less than 1% with mid-frequencies less than ¼% and less than 1/10% at 10 watts. **Hum and Noise:** 85 db. below 15 watts. **Six Inputs:** All at main amp., 1 low-level magnetic pickup (.008 volts), 1 high level magnetic pickup (.032 volts), 1 crystal pickup (.546 volts), 1 radio (1 volt), 1 TV (1 volt), 1 tape (1 volt). **Pre-amp:** Shock mounted and full frequency corrected for various inputs. **Controls:** 1 master phono gain or "limit" control, 1 crystal-magnetic selector switch, 1 "Audi-balance" control, 1 hum balance control, 1 A.C. power on 5' cord. **Outputs:** To speakers, 8 or 16 ohms at terminal strip. To tape recorder, up to 1.9 volts to high impedance "external amp." input of recorder. Auxiliary A.C. socket. **Fuse** for protection. **Tubes:** (in power amp), 2-12AX7, 1-6AV6, 2-6L6G, 1-5V4G. **Power Consumption:** 90 watts 117 volts 60 cycles A.C. **Finish:** Dove brown. **Size:** 14" x 10" x 7¼".

REMOTE CONTROL: Cable 5' (Model 2X, 20' extension available). **Panel Controls:** 1 bass, range —17 to +20 db., 1 treble, range —20 to +18 db., 1 five position crossover control, 1 program selector, 1 vol. control, Fletcher-Munson compensated for both highs and lows, 1 petite pilot lamp. **Tubes:** (remote) 1-6AV6, 1-12AX7. **Finish:** Brushed brass. **Size:** 8⅝" x 4⅜" x 3⅞" high. **Weight:** (amp. and remote), 20¾ lbs. Audiophile, NET $179.50.

A-15 HIGH FIDELITY 15 WATTS



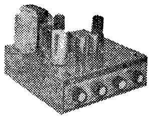
Distortion at 15 watts less than 1%. 10 to 100,000 response within —1 db. from 20 to 20,000 cycles. Built-in pre-amp fully compensated for magnetic pickups. Distortion free individual bass and treble controls. Cross-over selector with A.E.S. response position. Fletcher-Munson bass and treble compensation. "Adjusta-panel" shaft extension. High damping factor. Hum balance control. **Four Inputs:** 1 low level magnetic pickup (.0085 volts), 1 high level magnetic pickup (.037 volts), 1 crystal (.307 volts), 1 for radio, TV or tape (.975 volts). **Hum and Noise:** 82 db. below 15 watts. **Controls:** 1 bass, range to +19 db., 1 treble, range —20 to +19 db., 1 program and crossover selector, 1 vol. **Tubes:** 1-6AV6, 2-12AX7, 2-6L6G, 1-5V4G. **Output Impedances:** 8 and 16 ohms to terminal strip. Auxiliary A.C. socket for accessories. **Power Consumption:** 90 watts at 117 volts 60 cycles A.C. **Fuse** for protection. **Size:** 10" x 10" x 7⅝". **Weight:** 15 lbs. Audiophile, NET $99.50. Separate escutcheon, PT-67, NET $1.80.



A-104R HIGH FIDELITY 12 WATTS

with remote control for easier installation

10 watts at less than 1%. ±1 db. 20 to 20,000 cycles with good response to 100,000 cycles. Built-in pre-amp for magnetic pickups. Separate bass and treble tone controls. "Adjusta-panel" feature (Pat. applied for). Phono crossover selector with A.E.S. position. Fletcher-Munson bass and treble compensation. Hum balance control. Multi-stage inverse feedback. The A-104R offers listening pleasure, technical refinements, parts quality, workmanship and special features not heretofore offered in this price class. Specifications include: 12 watts at less than 2%. **Four Inputs:** Direct to main chassis, 1 low level magnetic pickup (.0115 volts), 1 high level magnetic pickup (.0515 volts), 1 crystal pickup (.58 volts), 1 radio, TV or tape (.98 volts). **Hum and Noise:** 70 db. below 12 watts. **Controls:** (on remote) 1 bass and power switch, range 0 db. to +19 db., 1 treble, range —24 db. to +13 db., 1 crossover and program selector, 1 vol. **Tubes:** 2-6AV6, 1-12AX7, 2-6V6G, 1-5Y3GT. **Output Impedances:** 8 and 16 ohms to terminal strip. Aux. A.C. socket for accessories. **Power Consumption:** 70 watts 117 volts 60 cycles A.C. **Fuse** for protection. **Finish:** Dove brown hammertone baked enamel. Remote panel finish, brushed brass. **Size:** (main amp.) 7½" x 9" x 6⅜" high, (remote) 8" x 2" x 2", (panel) 9⅛" x 2⅝". Remote cable 4'. **Weight:** (amp and remote) 11 lbs. Audiophile, NET $69.50.

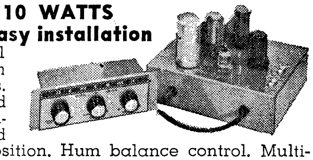


A-104 HIGH FIDELITY 12 WATTS

Identical to A-104R except no remote control. Controls are on main amp. "Adjusta-panel" permits control shafts to be lengthened up to ¾". **Size:** 9" x 9" x 6⅜". **Weight:** 9½ lbs. U/L approved. LIST $96.69. Audiophile, NET $59.50. Separate escutcheon, PT-66, NET. $1.65.

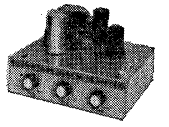
AM-10R HIGH FIDELITY 10 WATTS

with remote control for easy installation



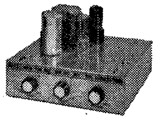
10 watts at less than 3%. ±1 db. 20 to 20,000 cycles with good response to 75,000 cycles. Built-in pre-amp compensated for magnetic pickup. New "Interlocked" individual bass and treble controls. A.E.S. tone position. Hum balance control. Multistage inverse feedback. "Adjusta-panel."

Value packed with advanced features the AM-10R brings new listening pleasure and installation ease within everybody's reach. Never before has so much been offered for so little. Specifications include: **Four Inputs:** direct to main amp. chassis) 1 low level magnetic pickup (.0069 volts), 1 high level magnetic pickup (.039 volts), 1 crystal pickup (.485 volts), 1 radio, TV or tape input. **Hum and Noise:** 80 db. below 10 watts. **Controls:** (on remote) 1 bass with power switch, range 0 to +17 db., 1 treble, range —16 db. to +16 db., 1 vol. **Tubes:** 1-6SC7, 1-12AX7, 2-6V6GT, 1-6X5GT. **Output Impedances:** 8 and 16 ohms to terminal strip. Auxiliary A.C. socket for accessories. **Power Consumption:** 60 watts 117 volts 60 cycles A.C. **Fused** for protection. **Finish:** Dove brown hammertone baked enamel. Remote panel finish, brushed brass. Remote cable 4'. **Size:** (main amp.) 8" x 6⅝" x 5⅜", (remote) 2⅛" x 2" x 5¾", (remote panel) 7" x 2½". **Wt:** 8½ lbs. Audiophile, NET $54.45.



AM-10 HIGH FIDELITY 10 WATTS

Identical to AM-10R without remote. Controls on main amp. "Adjusta-panel" extends shafts up to ¾". **Size:** 8" x 7¾" x 5⅜". **Weight:** 7¾ lbs. Audiophile, NET $45.00. Separate escutcheon, PT-65, NET $1.50.



A-10 HIGH FIDELITY 10 WATTS

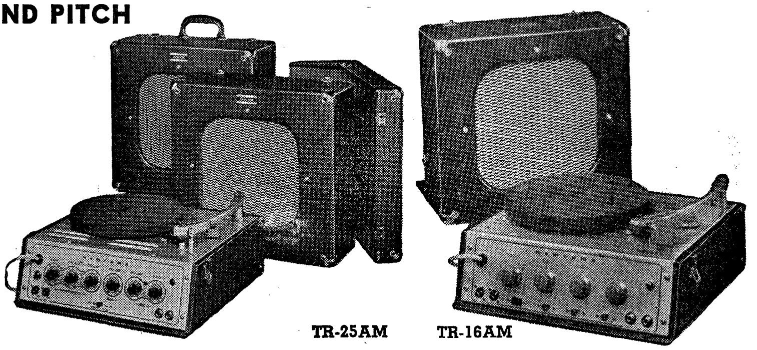
Similar to AM-10 but with lower gain for crystal pickups. Includes identical panel controls and "Adjusta-panel." **Inputs:** (2) Crystal, .55 volts. Radio, TV or tape, 1.15 volts. **Size:** 8" x 7¾" x 5⅜". **Tubes:** (4) 1-12AX7, 2-6V6GT, 1-6X5GT. **Weight:** 7½ lbs. Audiophile, NET $39.50. Separate escutcheon, PT-65, NET $1.50.

ALL MODELS U/L APPROVED

COMBINATION TRANSCRIPTION PLAYERS—P. A. SYSTEMS

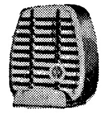
VARIABLE CONTROL OF TEMPO AND PITCH

TR-25AM A 25 watt, 3-speed transcription player and P.A. system that plays all records up to 17¼". Features 2 mike inputs and separate tone controls for phono and mike with second mike unaffected by either set of tone controls. Speed control knob provides variation from any of the three basic speeds, 33⅓, 45 or 78 rpm. Scratch suppressor controls surface noise. Pickup is twist type, dual needle G.E. variable reluctance. "Floating Sound" prevents needle skipping due to jars. Two 12" speakers in split case, protected by kickproof metal grills. Each has 25' cord. Amp-phono case is 16¼" x 16¼" x 7⅞", weighs 36 lbs. Speaker case 16¼" x 16¼" x 12", weighs 19 lbs. Power Output: 25 watts at less than 5% distortion. Frequency response ±2 db 40-15,000 cycles. Inputs for 2 high impedance mikes, gain 120 db. Tubes (10) 2-6SC7, 1-6SJ7, 1-6SN7, 4-6V6GT, 2-5Y3. Output impedances 4 or 8 ohms to two speaker sockets. Power consumption 130 watts 117 volts 60 cycles A.C. including phono motor. LIST: $352.50.



TR-25AM TR-16AM

TR-16AM Deluxe 10 watt, 3-speed player and P.A. system plays all records up to 17¼". Separate mike and phono volume controls allow mixing. Individual bass and treble tone controls prevent phono bass boost from adding unwanted bass to mike. 3-speed motor is also variable. Has extra speaker socket, an A.C. receptacle, and a radio jack for connecting to phono changer or B-100 radio. Scratch suppressor controls surface noise. Pickup is G.E. dual needle, variable reluctance, magnetic. "Floating Sound" avoids needle skipping. 12" Alnico #5PM dynamic speaker in removable lid with 25' cord and kickproof grill. Size: 14¾" x 15¾" x 11⅞". Weight 33 lbs. Power consumption 70 watts 117 volts 60 cycles A.C. including phono motor. Amp. response ±2 db 50-10,000 cycles. Tubes (6) 2-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. LIST: $235.00.



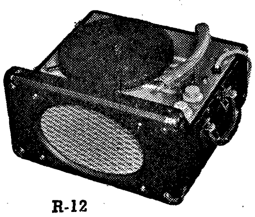
CR-11

T-112R

TR-16A A 10 watt, 3-speed player and P.A. system with dual needle, crystal pickup. Has all features of TR-16AM except scratch suppressor. Needles are semi-permanent, easily replaceable. Tubes (5) 1-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. Weight 33 lbs. LIST: $212.50.

T-112R EXTRA SPEAKER for TR-16 series. A 12" Alnico #5PM dynamic, with 25' cord, kickproof metal grill. Plywood case covered with fabricoid. Size 16¼" x 16¼" x 7⅞". Weight 12 lbs. LIST: $45.00.

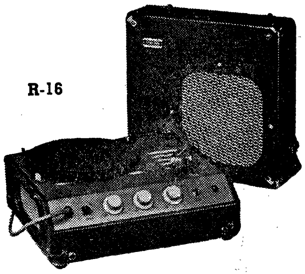
CR-11 NEWCOMB-SHURE hand or desk mike. For all TR models and R-16. New controlled reluctance principal combines good voice with ruggedness. Has on-off switch. Comes with bracket for mounting in system case, 7' cable and plug. LIST: $23.75.



R-12

NEWCOMB PORTABLE PHONOGRAPHS AND RADIOS

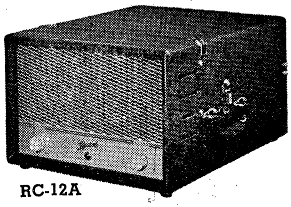
R-12 Here is "Console" quality in a portable case only 13¾" x 14⅛" x 7¾" weighing only 20 lbs. Complete A.C. construction. Has a 5 watt amp. with inverse feedback. A 3-speed turntable with crystal pickup and a 6" x 9" Alnico #5 dynamic speaker. Plays 33⅓, 45 or 78 rpm records any size up to 12". Has tone control, volume control and pilot light. "Floating Sound" prevents needle skipping. Case is plywood covered with fabricoid. Speaker grill is kickproof metal. Designed especially for classroom use, it is ideal wherever portable quality is desired. LIST: $79.50.



R-16

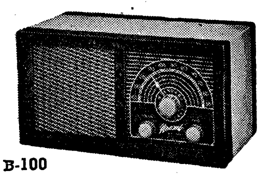
R-16 A 3-speed transcription player and P.A. system for schools. Weighs only 22 lbs. in case 14" x 15" x 8½". Has a 5 watt straight A.C. amp. with inverse feedback and a 10" Alnico #5 dynamic speaker. A mike input jack and mixing volume control make it a practical P.A. system. Speaker section has 25' cord. Plays all control, volume control and pilot light. "Floating Sound" prevents needle skipping. Panel includes pilot light, tone control, mike volume control, and phono volume control. Speaker protected by kickproof metal, case is plywood covered with fabricoid. LIST: $115.00.

RC-12A Combines a dependable 3-speed record changer with all the quality and performance features of the R-12 model. Plays all records up to 12". Smartly styled case is plywood covered with fabricoid, size 14⅜" x 9⅝" x 18½". Weighs only 31½ lbs. LIST: $115.00.



RC-12A

B-100 A portable AM radio, extremely sensitive, gives exceptional performance in all areas. Has built-in loop. 3-gang design eliminates heterodynes squeals and assures adequate selectivity. Has jack for connection to any TR-16 series system for added volume. May also be used for headphones. All A.C. construction. Speaker is 6" Alnico #5PM dynamic. Amp. design utilizes inverse feedback circuit and beam powered output. Plywood cabinet covered in two-toned fabricoid. Metal grill protects speaker. Size 7⅝" x 14¼" x 8". Weighs 13¼ lbs. Tubes (6) 2-6SK7, 1-6SA7, 1-6SQ7, 1-6V6GT, 1-6X5GT. LIST: $69.50.



B-100

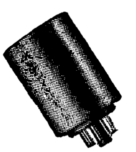
APPROVED BY LEADING SCHOOL AUTHORITIES COAST TO COAST

(Transcription Players, Phonos and Radios subject to Excise Tax)

ALL MODELS U/L APPROVED

All Prices and Specifications Subject to Change Without Notice.

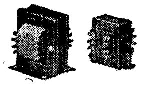
Newcomb AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE • LOS ANGELES 38, CALIFORNIA



TR-91: A distinct contribution to high quality P.A. systems. Features sextuple alloy and copper shielding for quiet operation right in amp. proper; alloy core and specially designed windings for extended frequency response from 20 to 20,000 cycles; plug base for easy installation without tools in any H or K series Newcomb amp. For use between 30-50 or 200-250 ohm mikes and grid. Shipping weight, 1¼ lbs. LIST: $27.50.

TR-92: Input impedance 5,000 ohms to grid for bridging a 500-600 ohm line. Alloy shielded for minimum hum. When plugged into the socket provided on K50B, H50B, H25B, it converts these amps for use as bridging amps. Shipping weight, 1¼ lbs. LIST: $25.00.

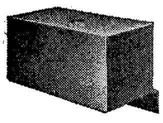
TR-100: Identical to TR-91 but designed for use between 125-150 or 500-600 ohm microphone and grid. LIST: $27.50.



LS-4 **LS-5**

LS-2: (not shown) High Power Impedance matching auto-transformer having 28 impedance from 580 ohms to 1.21 ohms. Capacity 100 watts. Shipping weight, 5¼ lbs. LIST: $22.50.

LS-4: Multi-winding general purpose transformer. Range of impedance from 3,000 to 18,000 ohms in steps of 1,500 ohms. Capacity 8 watts. LIST: $10.00.

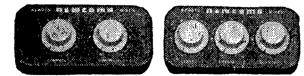


TC

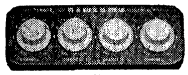
LS-5: Transformer: Similar to LS-4 with range of impedances from 500 to 3,000 ohms in steps of 250 ohms. Capacity 20 watts. LIST: $12.50.

TC-: Weatherproof housing for use with all three transformers. Box size: 3¼" x 4" x 5¾". LIST: $7.50.

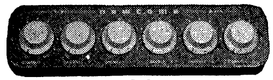
REMOTE CONTROL UNITS



RC-2 **RC-3**



RC-4



RC-6

Permit mixing and fading from a remote point all "H" Series microphone inputs. On "K" Series, all microphone inputs PLUS phonograph may be controlled. Up to 2000 ft. cable may be used. No inductive pickup.

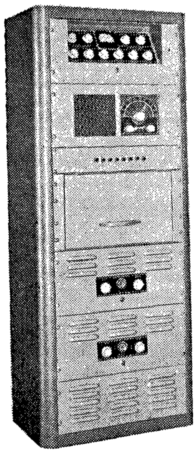
RC-2 for H-15 amp. Requires ordinary 3 wire cable. Dimensions: 2¾" x 6" x 2⅛". Shipping weight: 1 lb. LIST: $10.50.

RC-3 for H-25 or H-4 amplifiers. Requires ordinary 4 wire cable Dimensions: 2¾" x 6" x 2⅛". Shipping weight: 1 lb. LIST: $15.50.

RC-4 for H-50 amp. Requires ordinary 5 wire cable. Dimensions: 2¾" x 7⅝" x 2⅛". Shipping weight: 1¼ lbs. LIST: $19.50.

RC-6 for KX-25, KX-50, KX-6A amplifiers. Requires ordinary 7 wire cable. Dimensions: 2¾" x 11¼" x 2⅛". Shipping weight: 2 lbs. LIST: $27.50.

RACK AND PANEL ASSEMBLIES



To assist engineers in assembling sound units, for the varied applications of industry, schools, churches, fairs, stadiums, etc., Newcomb offers the basic elements for custom cabinet rack systems. Designed for flexibility, the rack assemblies enable the engineer to install public address equipment of the highest quality, tailored to each customer's exact needs. Any standard Newcomb amplifier may be obtained panel mounted on special order in 19" x 8¾" panels, thus giving the custom designer a wide choice of equipment to meet any need.

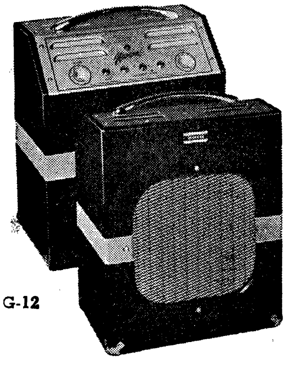
MODEL 595-19 CABINET: (Illustrated) Supplies a demand for a beautifully finished housing that is fully in keeping with the Newcomb tradition and reputation for quality. Panel space is 56". Design accepts standard 19" wide panels. Mounting holes are RMA standard 1¼" and ½" spacings. Panel mounting holes are tapped in ⅛" stock. Fully ventilated rear door provides easy accessibility. Entire cabinet is a complete welded assembly ready for use as you receive it. Finish is dark grey hammertone. Provision is made in the rear for nine ½" conduits. Included is a removable terminal strip mounting plate located near conduit inlets. Overall dimensions: 59½" x 23" wide x 16" deep. Shipping weight: 92 lbs. LIST: $189.50.

MODEL 385-19 CABINET: Identical to model illustrated except that it provides 35" of panel space for standard 19" panels. Mounting holes are standard RMA, 1¼" and ½" spacings. Overall dimensions: 38½" x 23" wide x 16" deep. Shipping weight: 72 lbs. LIST: $149.50.

In addition to the panel mounted amplifiers Newcomb also provides a wide selection of other equipment designed for custom rack installations.

MODEL 1050-C PHONOGRAPH CHANGER PANEL is a practical solution to mounting a phono changer in cabinet 595-19. Ball bearing drawer with wood motor board is adaptable for mounting most popular changers. Panel size 19" x 10½". All panels are finished in silver-grey hammertone baked enamel. **MODEL E2-525 PRE-AMPLIFIER** answers the need for a simple, dependable but economical pre-amp for rack use. **MODEL TB2-525 INTERCOM AMPLIFIER** has built-in power supply, speaker, talk-listen switch and separate talk and listen volume controls. **MODEL B-100-875 AM RADIO** is the Newcomb B-100 radio mounted on an 8¾" panel. (See listing page B-35.) **MODEL 700-MP MONITOR** is available for installation of any 6" speaker. **LEVER KEY PANELS** are provided for use with CRL keys, 3½" deep with slots for 6, 8, 10 or 12 keys. **LOUVERED PANELS** for additional ventilation and **BLANK PANELS** are made in assorted sizes. A self-powered **TONE GENERATOR** can be furnished on special order on panel 3½" deep. **SPECIAL PANELS** are made to order to fit special equipment. Templates or suitable drawings must accompany order for any special sheet metal work. Full details of Newcomb rack and panel equipment available on request.

MODEL G-12 PROFESSIONAL MUSICAL INSTRUMENT AMPLIFIER



G-12

G-12 Gives full, clear true tones at any desired volume. Lightness and beautiful appearance. Plus exceptional ruggedness and dependability characterize the Model G-12. There are three inputs with ample gain for Musical Instruments, plus an additional higher gain input for a microphone. Entire unit weighs only 20½ lbs. for easy carrying. The amplifier frequency response is 30 to 15,000 cycles. Special circuit designed for musical instruments, provides a full 12 watts power at less than 5% distortion (over 90% of full output at less than 2% distortion). Exceptionally efficient big full 12" Alnico V permanent magnet speaker in an acoustically designed enclosure. A kickproof grill gives real protection for speaker. Case construction gives needed rigidity for best tone and freedom from rattles and strength necessary to stand the abuse of constant traveling. Amplifier mounting screws enter into metal inserts. The case is covered in durable, washable, airplane type fabric. Truly a professional instrument. Built for years of trouble free service under the most rugged conditions. U/L Approved.

SPECIFICATIONS: Power Consumption: 65 watts at 117 volts, 60 cycles A.C. Tubes (5): 1-6SC7, 1-6SF5, 2-6V6GT, and 1-5Y3GT. Size: 9¼" deep x 14⅞" x 18⅜" high. WEIGHT: 23 lbs. LIST: (with tubes) $115.00.

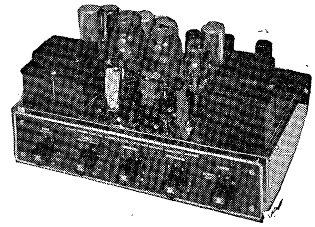
ALL NEWCOMB EQUIPMENT U/L APPROVED • PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

HERMON HOSMER SCOTT, INC.

"PACKAGED ENGINEERING"

THESE MAKE THE DIFFERENCE . . .
CONTROL, COMPENSATION, FIDELITY, WARRANTY

There is indeed a difference between even the best high fidelity amplifiers. Why are H. H. Scott Amplifiers the standard against which others are compared? Only because they give not only extreme fidelity and power but also complete control and compensation under all record conditions, room acoustics, and individual preferences.

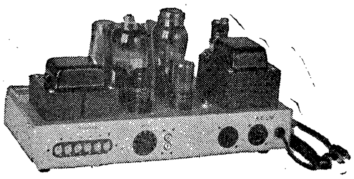


TYPE 210-B DYNAURAL LABORATORY AMPLIFIER

Rated power output, 20 watts, maximum power 25 watts; 1st order difference-tone intermodulation distortion at full rated output less than 0.1%; Harmonic distortion, less than 0.5% at full rated 20 watt output, less than 0.3% at 15 watts, 0.2% at 8 watts; Frequency range, flat from 12 to 22,000 cycles; New-type automatic loudness control; 3-channel continuously adjustable bass and treble controls; Dynamic noise suppressor, latest wide-range DYNAURAL gate circuits open to full range of amplifier; Input impedance, 0.5 megohms; Speaker impedance, matches all speakers from 1 to 24 ohms; Hum level 84 db below full output; Exclusive pickup level adjustment; Preamplifier, operated entirely on DC; Adjustable record-distortion filter; Tubes, 2—12SL7GT, 1—6SN7GT, 1—6SQ7, 2—6SG7, 1—6J5, 2—6L6G, 1—5V4G; Weight, 19¼ lbs.; Dimensions, total depth including knobs, etc. 10¾", depth behind panel 10¼", width 12½", height 8½". Net price $224.00.

TYPE 120-A EQUALIZER-PREAMPLIFIER

Three high-level and one low-level inputs; 8 position record-equalizer to match almost all record characteristics and levels; also offers input switching between phono, tuner, TV, recorder, etc.; Frequency range, flat from 19 to 35,000 cps; New-type automatic loudness control; 3-channel continuously variable tone controls; Pickup level adjustment; Minimum input for rated output, 6 mv on phono input, 0.6 volt on 3 high-level inputs; Preamplifier entirely DC operated; Effective preamp. noise equivalent to 5 micro-volts at low level input, hum below thermal noise level; With low capacity cable, remote control can be placed up to 70 ft. from power amplifier; Input impedances 1 meg. on all inputs; Normal load impedance, 250,000 ohms or more; Tubes: 1—12AX7, 2—12AU7; Weight 8 lbs.; Dimensions 10 x 4½ x 6¾; Walnut cabinet; Unit can be used with power amplifiers other than 220-A below; Net price $76.25.



TYPE 220-A LABORATORY POWER AMPLIFIER

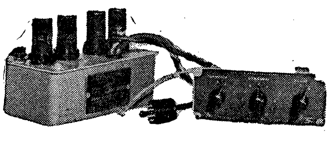
The first-order difference-tone intermodulation distortion at full rated peak output is less than 0.1%; Harmonic distortion, less than 0.5% at full rated 20 watt output, less than 0.3% at 15 watt output, less than 0.2% at 8 watt output; Rated power output 20 watt, maximum power output 25 watt; Frequency range, flat from 12 to 55,000 cycles; Input impedance, 0.5 megohms for low level input, 1.5 megohms for high level input; Speaker impedance, matches all speakers from 1 to 24 ohms impedance; Low output impedance provides less than 2 db regulation, and optimum speaker damping; Hum level, minus 90 db below full output; Input for full rated 20 watt output, 0.5 volt on low level input, 1.5 volt on high level input; Power supply socket, for powering Type 120-A Equalizer Preamplifier or similar unit; Tubes, 1—6SN7GTA, 1—6J5, 1—5V4G, 2—6L6G; Weight, 18 lbs.; Dimensions, 14" x 6½" x 7¾". Net price $117.50.

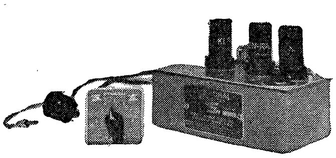
TYPE 214-A REMOTE CONTROL AMPLIFIER

Consists of Type 120-A Equalizer-Preamplifier and Type 220-A Laboratory Power Amplifier. 120-A is separated from 220-A by 6 ft. extension cable. A 20 ft. extension cable is available as an accessory (Type 120-X1). Specifications, weights and dimensions given above. Type 214-A Remote Control Amplifier net price $193.75.

TYPE 112-B DYNAURAL PREAMPLIFIER

Features: wide-range DYNAURAL noise suppressor; excellent preamplifier for magnetic pick ups; range control and record-distortion filter with high frequency cutoffs of 5,000, 9,000, and 15,000 cps; adjustable turnover control providing turnover frequencies at 300, 500 or 800 cps; AM whistle filter; Frequency range, flat 30-15,000 cycles, usable 20-20,000 cycles; input: level 6 mv minimum, impedance 23,000 ohms; output: level (average) 0.5 volt, load impedance ½ megohm or more; exclusive pickup level adjustment; tubes 1—6SC7, 1—6SQ7, 2—6SG7; power required 180-300 v DC @ 6 ma, 6.3 v AC @ 1.1 amp., obtained from adapter plug inserted under amplifier power-output tube such as 6K6, 6V6, 6L6, 6F6; weight 3 lbs. Net price $51.00.





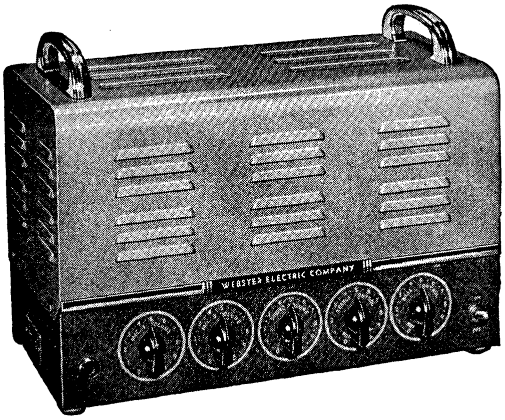
TYPE 111-B DYNAURAL CONVERTER

Amazing DYNAURAL Noise Suppressor virtually eliminates annoying record scratch and turntable rumble; frequency range, flat 30-10,000 cycles, usable 20-15,000 cycles; input: level, 0.2 v minimum, impedance, ½ megohm; Output; level (average), 0.5 volt; Impedance, ½ megohm or higher; Pickup: Crystal or other high-level pickup; Controls: A single remote control allows continuous adjustment of the DYNAURAL suppression from no suppression to maximum suppression. A calibrated adjustment is also provided to compensate for different pickup levels; Tube complement: One Type 6SQ7, two Type 6SG7; Power required: 180-300 v DC @ 5 ma., 6.3 v AC @ 0.8 a. (obtained from radio set or amplifier by means of adaptor provided); Special a-c power supply also available); Weight: 2½ lbs.; Dimensions: 7" long, 3¾" wide and 4¾" high. Net price $30.60

SPECIFICATIONS AND PRICES SUBJECT TO CHANGE WITHOUT NOTICE

AMPLIFIERS

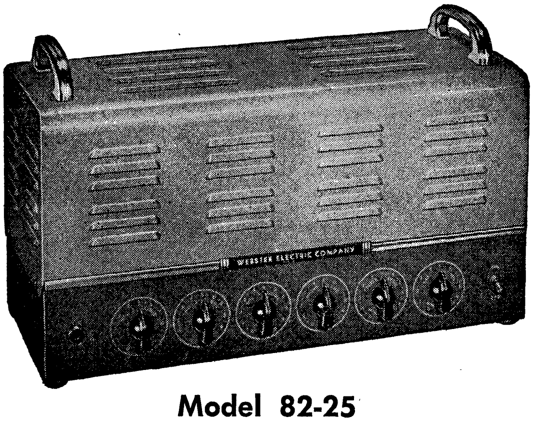
In auditoriums, churches, schools, restaurants, clubs, playgrounds, retail stores, parking lots and garages—wherever 15 or 25 watts of output is required, Webster Electric amplifiers are an exceptional buy. These units offer outstanding quality and performance and have the most features of importance to the user. These amplifiers are housed in sturdy, all-steel cases, equipped with metal carrying handles for ease in transportation. The finish is baked enamel, two-tone grey, with chrome trim.



Model 81-15

Model 81-15 is a 15 watt amplifier which offers a frequency response of 60 to 15,000 cycles, within 2 db. Separate bass and treble controls make it possible to adjust the amplifier to suit almost any acoustical or noise conditions. Separate gain controls are provided for each of the two high impedance microphone channels and for the high impedance phonograph channel. Selection of the output impedance desired is made by a convenient rotary tap switch. All input and output receptacles, the power cord and replaceable fuse are located on the back of the cabinet.

List Price $114.40



Model 82-25

Model 82-25 is a 25 watt amplifier which provides for the mixing of 3 high impedance microphones and one high impedance phonograph pickup, with separate gain controls for each. Separate bass and treble controls permit adjustment of the amplifier for maximum clarity under a wide variety of operations. A complete range of output impedances are available and selection of the impedance desired is accomplished by means of a rotary tap switch. All output and input receptacles are placed on the back panel, together with the power cord and replaceable fuse. The 82-25 amplifier has a frequency response ranging from 30 to 15,000 cycles.

List Price $138.25

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

Bogen SOUND EQUIPMENT

MODEL HX50

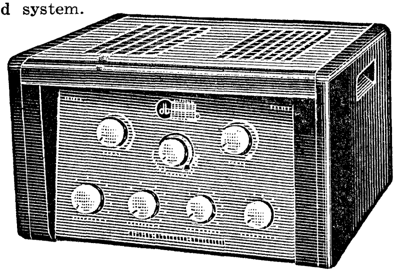
50 WATTS

SPECIFICATIONS

POWER OUTPUT: 50 watts at less than 3%.
PEAK POWER: 90 watts.
FREQUENCY RESPONSE: 20-20,000 cycles ±2 db. TONE CORRECTOR RANGE: bass control: —30 to +20 db at 100 cycles; treble control: —14 to +21 db at 10,000 cycles.
HUM: **Fund.:** —65 db Mic.: —58 db.
OUTPUT IMPEDANCE: 4-8-15 ohm and 2 constant voltage taps (70 and 140 V).
POWER CONSUMPTION: 240 watts, 117 V, 50-60 cycles AC.
TUBES: Total 12. 5-6SC7, 2-6SL7, 1-6SN7, 1-5R4GY, 2-807, 1-5Y3.
DIMENSIONS: 17" long, 9" high, 14"deep.

THREE MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL —
DUAL ELECTRONIC TONE CORRECTORS — CONSTANT VOLTAGE OUTPUT
UNDERWRITERS' LABORATORIES APPROVED

The proudest achievement in Bogen's 20 years of sound leadership. Incorporates the new Bogen ANTI-FEEDBACK CONTROL which permits easy "tuning out" of acoustic feedback. Allows greater output to be used—makes mike placement less critical—stabilizes entire sound system.


Model HX50

HX50 HIGH IMPEDANCE AMPLIFIER:
Complete with tubes.
List Price........................$279.50

HXL50 LOW IMPEDANCE AMPLIFIER:
Same as HX50 but first microphone input is low impedance 200 ohms. (50 or 500 ohms available if specified.)
List Price........................$304.25

HX30 HIGH IMPEDANCE AMPLIFIER:
Similar to HX50 but 30 watts output..
List Price........................$219.50

MODEL H30

30 WATTS

SPECIFICATIONS

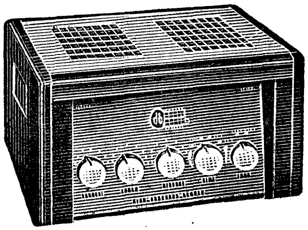
POWER OUTPUT: 30 watts at less than 5%.
PEAK POWER: 40 watts.
FREQUENCY RESPONSE: 30-12,000 cycles, ±2.5 db.
GAIN: Microphone: 119 db. Phono: 77 db.
HUM: Fund.: —68 db. Mic.: —60 db.
OUTPUT IMPEDANCE: 4-8-16 ohms and 70V-TAP (167 ohms.)
POWER CONSUMPTION: 140 watts, 117 V, 50-60 cycles AC.
TUBES: Total 7: 3-6SF5, 1-6SL7, 2-6L6G, 1-5U4G.
DIMENSIONS: 15½" long, 11" deep, 7½" high.

TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL
SIX POSITION MULTI-RANGE TONE CORRECTOR
LOW NOISE LEVEL — UNDERWRITERS' LABORATORIES APPROVED

H30 HIGH IMPEDANCE AMPLIFIER:
Complete with tubes.
List Price........................$132.75

HL30 LOW IMPEDANCE AMPLIFIER:
Same as H30 but first microphone input is low impedance, 200 ohms. (50 or 500 ohms available if specified.)
List Price........................$157.50

H15 HIGH IMPEDANCE AMPLIFIER:
Similar to H30 but 15 watts output.
List Price........................$114.00


Model H30

MODEL H623

23 WATT MOBILE SYSTEM

SPECIFICATIONS

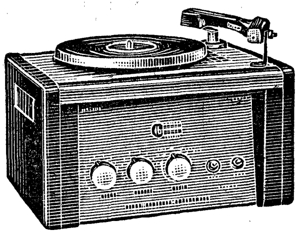
POWER OUTPUT: AC: 23 watts at 5%. DC: 20 watts at 5%.
PEAK POWER: 30 watts.
FREQUENCY RESPONSE: 30-14,000 cycles ±2.5 db.
GAIN: Microphone channel: 116 db. Phono channel: 73 db.
HUM: AC: Fund.: —74 db.; Mic.: —60 db. DC: Fund.: —75 db.; Mic.: —62 db.
OUTPUT IMPEDANCE: 4-8-15 ohms and 70 V.
POWER CONSUMPTION: 115 watts, 117 V. AC; 14 amp, 6 V DC.
TUBES: Total 6: 2-6SF5, 1-6SL7GT, 2-6L6G, 1-7Z4.
DIMENSIONS: 15¼" long, 10⅞" deep, 10⅛" high.

UNIVERSAL OPERATION 6 VOLT DC OR 110 VOLT AC
ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL
SIX POSITION TONE CORRECTOR
BUILT-IN PHONOGRAPH — UNDERWRITERS' LABORATORIES APPROVED

H623 AMPLIFIER: Complete with phono and tubes.
List Price........................$205.00

H623TJ OUTDOOR SYSTEM: Includes: H623 amplifier with tubes; 1 Jensen VH20 projector unit, 1 Bogen-Shure 710 crystal microphone with stand adapter, 7' cable and plug.
List Price........................$291.75

H623TU OUTDOOR SYSTEM: Same as H623TJ substituting Bogen-University PH trumpet with MA25 unit.
List Price........................$269.75


Model H623

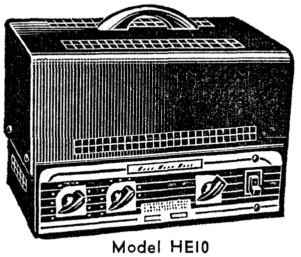
MODEL HE10

10 WATTS

SPECIFICATIONS

POWER OUTPUT: 10 watts at 4%.
PEAK POWER: 15 watts.
FREQUENCY RESPONSE: 60-10,000 cycles, ±1.5 db.
GAIN: Mic. channel: 117 db. Phono channel: 66 db.
HUM: Fund.: —66 db. Mic.: —59 db.
OUTPUT IMPEDANCE: 4-8-15-500 ohms.
POWER CONSUMPTION: 70 watts, 117 V, 50-60 cycles AC.
TUBES: Total 5: 1-6SJ7, 1-6SL7, 2-6V6, 1-5Y3GT.
DIMENSIONS: 7" deep, 11" wide, 7¼" high.

ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL
SIX POSITION MULTI-RANGE TONE CORRECTOR — PUSH-PULL OUTPUT
FIVE TUBE, HIGH GAIN CIRCUIT — LOW NOISE LEVEL
UNDERWRITERS' LABORATORIES APPROVED


Model HE10

HE10 HIGH IMPEDANCE AMPLIFIER:
List Price........................$71.25

HEL10 LOW IMPEDANCE AMPLIFIER:
Complete with tubes.
Same as HE10 but microphone input is low impedance, 200 ohms. 50 or 500 ohms available on transformer.
List Price........................$96.00

FOR FURTHER INFORMATION ON AMPLIFIERS AND COMPLETE BOGEN SYSTEMS ASK FOR THE LATEST BOGEN CATALOG
PRICES IN ZONE 2 ARE APPROXIMATELY 5% HIGHER • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 14, N. Y.

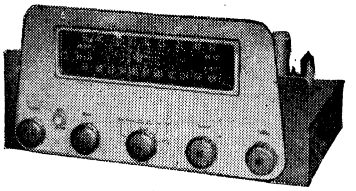
Bogen HIGH FIDELITY EQUIPMENT

The material on this page is condensed from the new Bogen High Fidelity catalog: "To Gratify Your Wish For Excellence." For complete details and specifications write to the company, Attn: Dept. RM.

MODEL R701

AM-FM TUNER

A magnificent new tuner which embodies the most important developments in radio design. Cascode RF amplifier and triode mixer assure maximum sensitivity. Three gang tuning, a dual limiter in the FM discriminator and a push button controlled AFC circuit provide maximum ease of tuning and an absence of drift. The AM circuit includes a variable band-width IF channel to permit selection of wide range response or maximum selectivity and a 10 kc. whistle filter to eliminate inter-station whistles. A low impedance loop antenna is furnished. The R701 has built-in preamplifier to accommodate all popular crystal and magnetic phono cartridges, separate bass and treble tone controls, tuning and volume controls, input selector switch. Beautifully styled escutcheon permits easiest possible custom high fidelity installations. Bogen models HO10-1 and DO10 amplifier are ideal companions for model R701 tuner.


Model R701

SPECIFICATIONS

POWER CONSUMPTION: 60 watts, 117 volts, 60 cps.
TUBES: 1-6BK7-A, 1-6AB4, 4-12AT7, 2-6BA6, 1-6BE6, 3-6AU6, 1-6AL5, 1-6X4 (14 tubes including rectifier).
SENSITIVITY: FM: Input required for 30 db quieting: 3 microvolts. AM: 5 microvolts.
FREQUENCY RANGE: FM: 88-108 MC.
AM: 530-1650 KC.
HUM & NOISE: FM, AM: —65 db below 100% modulation. TV, PHONO: —65 db below 2 volts.
AUDIO OUTPUT: 3 volts at 6000 ohms.
DISTORTION: 3 volts at .2%.
TONE CONTROL: At 60 cycles: 17 db boost, 19 db cut. At 10,000 cycles: 15 db boost, 18 db cut. At 15,000 cycles: 17 db boost, 21 db cut.
FREQUENCY RESPONSE: FM: 20-20,000 cps ± .5 db. AM: 20-4,000 cps ± .5 db normal position. 20-7,500 cps ± .5 db Hi-Fi position.
PHONO PREAMPLIFIER: 35 db gain and 21 db equalization at 30 cycles.
AM SELECTIVITY: Normal: at 8 KC: 6 db. Hi-Fi: at 15 KC: 6 db.
FM SELECTIVITY: 180 KC: 6 db. Discrimination peak to peak separation: 375 KC.
ANTENNA INPUT: AM: Low impedance loop or high impedance external antenna. FM: 300 ohms.
CONTROLS: 1. Volume, 2. Bass, 3. Function Switch (Off, phono, AM normal, AM Hi-Fi, FM, TV), 4. Treble, 5. Tuning.
FM DRIFT: ±20 KC with AFC defeated.
±3 KC with AFC in.
SIZE: 15" x 8½" x 9".
SHIPPING WEIGHT: 17 lbs.

MODEL R604 AM-FM TUNER

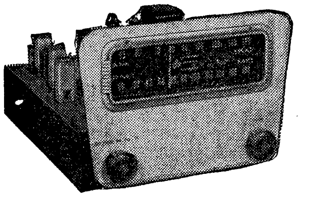
A new superheterodyne AM-FM tuner with outstanding sensitivity, selectivity and response characteristics. It is supplied with a low impedance loop antenna, full mounting hardware including shock mounts and a newly styled escutcheon which assures simple, good looking installation. Equipped with Power/Function switch and tuning controls the R604 is the ideal AM-FM tuner for use in conjunction with complete single chassis amplifiers, such as the Bogen DB20, DB10-1 and PH10-1.

MODEL FM801 FM TUNER

Designed to satisfy the need for a high fidelity tuner, covering the FM band only. The FM801 employs three gang tuning, a dual limiter in a Foster-Seeley discriminator and a superior AFC circuit that assures ease of tuning and absence of drift. Two controls provide tuning and selection of (a) Power Off, (b) Phono, (c) FM, (d) TV. Full mounting hardware, including shock mounts and a beautiful escutcheon are furnished.

MODEL AM901 AM TUNER

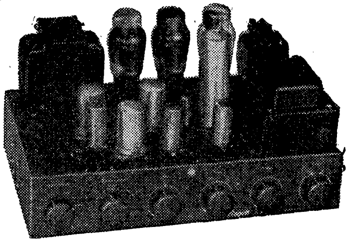
Designed for high fidelity installations in areas where FM is not available or required. This all-new tuner embodies the most advanced engineering techniques, including a variable band-width IF channel to permit selection of either maximum wide range response or maximum selectivity—as local conditions may dictate. A low impedance loop antenna is furnished, eliminating the need, in most cases, for an outdoor antenna. Two controls provide tuning and selection of (a) Power Off, (b) Phono, (c) High Selectivity, (d) High Fidelity Response. Full mounting hardware, including shock mounts and beautiful escutcheon are provided.


Model R604

MODEL DB20

20 WATT AMPLIFIER

A truly remarkable new amplifier featuring the most complete and versatile control of sound reproduction available today in a single chassis model. The exclusive Bogen Loudness Contour Selector provides compensated frequency response to match any listening level. Seven record equalization positions cover all normal requirements. Separate, wide range, continuously variable bass and treble tone controls, volume control and input selector round out the matchless flexibility of the DB20. Five feedback loops and partial cathode loaded output reduce distortion to 0.3% at 20 watts output. D.C. phono preamplifier filament supply keeps hum to a minimum.

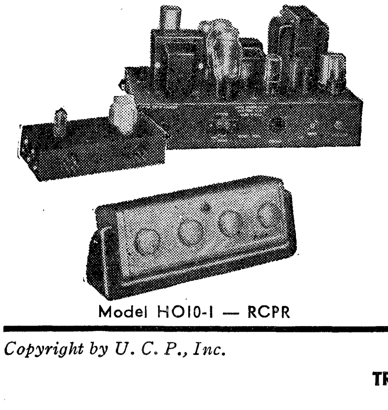

Model DB20

SPECIFICATIONS

POWER OUTPUT: 20 watts at .3%; peak: 30 watts.
FREQUENCY RESPONSE: 20 to 20,000 cps ± .7 dbs.
GAIN: Magnetic, 106 dbs; crystal and radio, 93 dbs.
HUM: —75 dbs (referred to rated output).
TONE CORRECTOR RANGE: Bass Control: +17 to —18 dbs at 40 cps. Treble Control: +15 to —21 dbs at 15 kc.
OUTPUT IMPEDANCE: 8 or 16 ohms.
RECORD COMPENSATOR POSITIONS: (7) LP, AES, NAB, AM78, EU78, FFRR, POPULAR.
INPUT SELECTOR POSITIONS: (4) Mag. phono, radio, TV, tape.
LOUDNESS CONTOUR SELECTOR POSITIONS: (5) Loud (flat), Loud (—10 dbs), Medium (—20 dbs), Soft (—30 dbs), Soft (—40 dbs).
POWER CONSUMPTION: 117 volts, 60 cps, 150 watts.
TUBES: Total (7): 3-12AT7, 1-12AU7, 2-6L6G, 1-5U4G.
DIMENSIONS: 15" wide x 10" deep x 8" high.
WEIGHT: 25 pounds.
DAMPING FACTOR: 13.

MODEL HO10-1

10 WATT POWER AMPLIFIER


Model HO10-1 — RCPR

Model HO10-1 is a superb all triode high fidelity power amplifier. It is designed to be driven by the output of a quality radio tuner or a magnetic pickup preamplifier. It provides a rare combination of superior technical characteristics and overall balance: minimum distortion (less than three-tenths of one percent at ten watts), maximum frequency response (flat from 10 to 50,000 cycles), optimum damping (exceeds 20) and tremendous dynamic range (over 70 db.)

Model RCPR is a complete remote controller for use with the Bogen Model HO10-1 amplifier. The separate preamplifier section of the RCPR is located in the console with the HO10-1. A single thin cable connects the remote controller to the amplifier. RCPR controls Power, Function, Tone, Volume and Turnover Frequency. Control panel is edge lighted. Cradles available in blonde or mahogany.

MODEL DO10

A popular priced high fidelity custom amplifier. It is designed to be driven by the output of a quality AM or FM tuner or a magnetic pickup preamplifier, and can be mounted directly behind the tuner in most installations. Ten watts output at less than 1% distortion. Response flat from 20 to 20,000 cycles. Underwriters' Laboratories approved. Model RCPR remote controller may be used with the DO10.

MODEL DB10-1

A popular priced single chassis 10 watt output amplifier incorporating built-in preamplifier, input selector switch, volume control and separate bass and treble tone controls. U.L. approved.

Bogen CENTRALIZED SOUND SYSTEMS AND COMMUNO-PHONES

BOGEN CENTRALIZED SCHOOL SOUND SYSTEMS: The entirely new Bogen centralized school systems now make available to progressive educators an instructional tool for which they have long sought. Simple—yet versatile—the new systems provide for radio and record program transmission selectively to any or all classrooms. Skillful design, which embodies many exclusive features, enables the entire school body to participate in dramatic presentations, school debates and similar activities where the audience was previously limited to the seating capacity of the auditorium.

Bogen Centralized School Sound Systems are designed to meet every requirement of the modern educational institution, regardless of size. They comply fully with requirements of the U. S. Office of Education and the RTMA. Simplicity of operation enables the administrator to reduce confusion and thus to assure efficient, effective work in all departments. Versatility of the systems speeds learning, provides instant communication for fire drills and supplements the general routine.

Write for Complete Descriptive Catalog.

BOGEN CUSTOM DIVISION: The Custom Division of the David Bogen Co. is maintained for the express purpose of offering engineering consultation on custom built requirements. This technical service covers initial design and layout of electrical specifications of any sound installation, large or small.

Although the David Bogen Co. manufactures the largest and most complete line of standard and De Luxe sound equipment, very often a customer's problem requires the design and construction of special equipment to meet particular requirements.

We invite you to submit your sound problems, technical inquiries, or requests for quotations on special equipment to our Custom Division. If no specifications are available for your particular problem, merely send a description and pencilled sketch of the intended installation to our Custom Division. Its Engineering Staff is equipped with the finest facilities in the country and they will be glad to aid you in the solution of your particular problem, without obligation.

NEW BOGEN COMMUNO-PHONE SYSTEMS

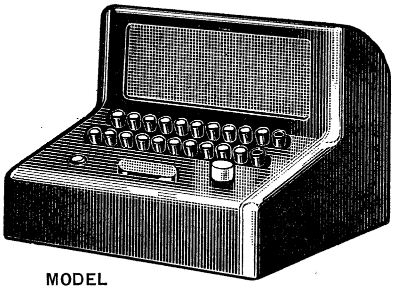
Three Versatile Models to Solve Every Intercommunication Problem

MODEL "X"—Completely universal. Will serve installations requiring single master and several remote stations—installations requiring several masters—or installations requiring several masters and several remotes. Hand-rubbed walnut finished cabinets; typewriter keyboard action; automatic busy signal; provision for plug-in of handset; 115 v. A.C.; U.L. Approved.

MODEL "D"—Serves installations requiring either a single master and several remote stations or several master stations only. Operates on voice coil lines. Will not serve installations requiring a combination of several masters and remotes. A.C.-D.C.; no busy signal: similar to Model "X" in other respects.

MODEL "TWIN"—Complete 2-station system, requiring no cable between stations. Simply plug stations into regular power line and talk. Additional stations available; all will receive when any one transmits. Any can be locked in "continuously transmitting" position. U.L. approved.

WRITE FOR LATEST BOGEN COMMUNO-PHONE CATALOG



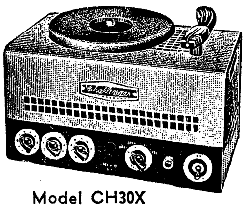
MODEL
21X, 21D

CHALLENGER SOUND EQUIPMENT

30 WATT AMPLIFIER

FEATURES

- Individual controls for two microphones, phonograph, selectone.
- Terminal strip and 2 speaker plug-in sockets for connection of speaker lines.
- Moulded bakelite sockets throughout.
- Inverse feedback for better response and regulation.
- Extractor type fuse. • Recessed carrying handles.
- Underwriters' Lab. Approved.



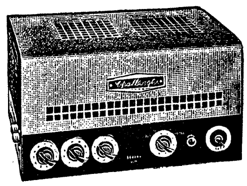
Model CH30X

MODEL CH30X—30 watt amplifier, tubes and built-in phono. top. List Price................................$121.25

MODEL CH30XP-1—Complete portable system containing 1-CH30X amplifier with tubes; 2-12" Alnico V PM speakers, each with 25 ft. cable and plug, mounted in split portable case which also carries amplifier; 1 BOGEN-Shure 710 Crystal Microphone with Stand Adapter, 7 ft. cable and plug.
List Price..$198.00

SPECIFICATIONS

Power Output: 30 watts.
Response: 30-12,000 c.p.s. ±2 db.
Gain: Mic. No. 1: 118 db. Mic. No. 2: 118 db. Phono: 85 db.
Output Impedances: 4, 8, 15 ohms, 70 volts.
Tubes: 2-6SC7, 1-6SL7GT, 2-6L6G, 1-5U4G.
Tone Control: SelecTone.
Dimensions: CH30: 15" W. x 10" D. x 8" High.



Model CH30

MODEL CH30—30 watt amplifier, tubes and cage. List Price..$96.75

MODEL CH30P-1—Complete portable system containing 1-CH30 amplifier with tubes, cage; 2-12" Alnico V PM speakers, each with 25 ft. cable and plug, mounted in split portable case which also carries amplifier; 1 BOGEN-Shure 710 Crystal Microphone with Stand Adapter, 7 ft. cable and plug.
List Price $173.00

MODEL CH618 18 WATT UNIVERSAL MOBILE AMPLIFIER

For 115 Volt A.C. and 6 Volt D.C.

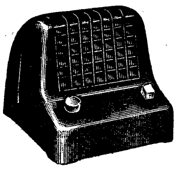
Features individual controls for microphone, phono, tone; inverse feedback for better response and regulation; constant voltage output for easy speaker matching. Built-in constant speed phonograph. Complete with tubes and cage. Underwriters' Lab. Approved.

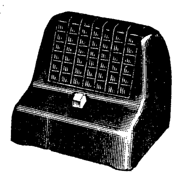
List Price $153.25

SPECIFICATIONS

Power Output: 18 watts.
Response: 30-12,000 c.p.s. ±2 db.
Gain: Mic.: 118 db.. Phono: 78 db.
Output Impedances: 4, 8, 15 ohms, 70 volts.
Tone Control: SelecTone.
Tubes: 2—6SF5, 1—6SL7GT, 2—6V6GT, 1—7Z4.
Dimensions: 15" Wide x 10" Deep x 10" High.

CHALLENGER INTERCOM SYSTEMS



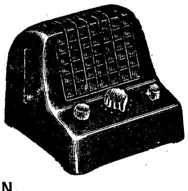


CHALLENGER 200 is a complete system—a master, a remote station and 50 ft. of cable. Operates 117V. AC-DC. Dual-Duty volume control keeps remote "alive" or permits master to silence it. Excellent for nursery, restaurant, business use. Underwriters' Lab. Approved.

CHALLENGER 200 SYSTEM—Complete with 50 ft. of cable and plugs.
List Price $43.95

CHALLENGER 600 Master may be used in one of two systems: (1) A single master with up to five remote stations; (2) An all master system of six stations. Operates 117 V AC-DC. In sturdy beautiful polystyrene cabinet. Remote can initiate calls also. Underwriters' Lab. Approved.

CHALLENGER 600 MASTER with tubes. List Price $39.05
CHALLENGER 60R REMOTE STATION.
List Price $12.93



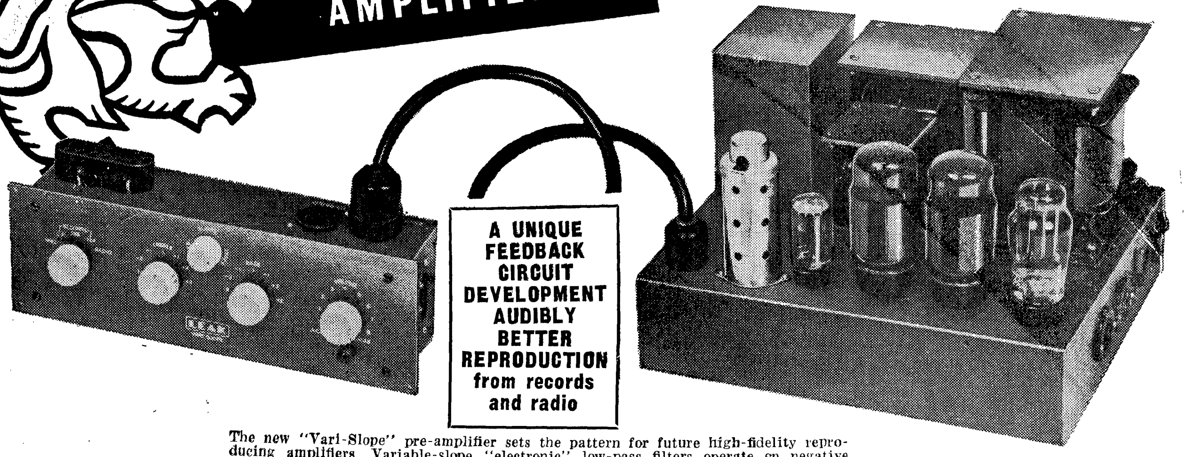
For complete listings of CHALLENGER Amplifiers, Systems and Intercoms, ask for latest CHALLENGER catalog.
PRICES APROXIMATELY 5% HIGHER IN ZONE 2.

CHALLENGER AMPLIFIER CO., NEW YORK 14, N. Y.

LEAK
"POINT ONE" AMPLIFIER

Britain's Best!

Frequency Response 20-20,000 cycles, ± 0.1 db
Harmonic Distortion: 0.1% at 1000 cycles; 10w
Intermodulation Distortion: 0.4%, 40 & 7000 c.p.s



A UNIQUE FEEDBACK CIRCUIT DEVELOPMENT AUDIBLY BETTER REPRODUCTION from records and radio

The new "Vari-Slope" pre-amplifier sets the pattern for future high-fidelity reproducing amplifiers. Variable-slope "electronic" low-pass filters operate on negative voltage feedback principles.
NO INDUCTORS ("CHOKES") ARE USED and all their disadvantages are completely eliminated.

REMOTE CONTROL "VARI-SLOPE" PRE-AMPLIFIER
For use only with Leak Amplifiers

THE PROBLEM: When there are defects in radio transmissions and in records, the most satisfying results can be obtained when the high-frequency response of the reproducing amplifier is restricted.

The requirement is for a very flexible system which will vary not only the frequency at which the response begins to fall but also the RATE at which the response falls off. Conventional "low-pass" choke-capacitor filters, even when properly designed and constructed, introduce considerable distortion on transients. This transient distortion is very real: it can be predicted from theory, demonstrated by oscilloscope, and most importantly, it is audible, particularly with steep slopes of attenuation.

THE SOLUTION to the problem is the elimination of all choke-coils, and this has been achieved by using modified twin-T resistor-capacitor networks in negative-feedback loops. We have evolved an ideal form of continuously-variable slope control which increases the feedback as the slope is made steeper. The advantages of the Leak electronic feed back method over conventional choke-coil filters are:

- (a) Improved transient response characteristics and the consequent reduction of "ringing"
- (b) Extremely low harmonic and intermodulation distortion due to the negative voltage feedback action
- (c) No discontinuities in the rates of slope when the slope control is operated, and no change in signal level at frequencies below cut-off
- (d) There are no chokes to give rise to magnetic hum
- (e) Smaller size, lighter weight, greater uniformity in production

Leak Vari-Slope will operate from ANY known phone pick-up, crystal or magnetic, foreign or domestic; from ANY moving coil microphone; from ANY radio unit.

Equalization circuit: Proper equalization positions for LP records, Foreign or American recordings of all speeds.

Switching to Pick-Up, Microphone and Tuner, with automatic alteration of tone-control characteristics.

Controls: Input Selector; Bass Gain and Loss; Treble Gain and Loss; Volume with AC on-off switch to permit switching of remotely placed power amplifier, Vari-Slope control.

Output Impedance: 0-30,000 ohms at 20 kc.p.s.

Chassis: 10" x 3" x 2¾" high. Front panel: 10¾" x 3½".

TL/12 12W. TRIPLE LOOP POWER AMPLIFIER
All valves replaceable with Standard U.S. Tubes

The Leak Amplifier offers exceptional performance and reliability in a manner acceptable both to the amateur enthusiast and the professional communications engineer seeking the highest available standard of sound reproduction. It incorporates a Leak 3 stage triple loop feedback circuit, the main loop giving 26 db. feedback and covering the complete amplifier from input to output terminals. This results in the following major advantages:

In the TL/12 amplifier the hum and noise levels fall within –80 db and –72 db relative to 10 watts. This amount of power, as hum and noise, is inaudible from the most efficient loudspeakers. Notice particularly that the feedback is taken from the low side of the output transformer. Many other circuits show it to be taken from the anode side, which will result in higher hum levels than without feedback.

In this amplifier, due to the magnitude of feedback, there can be no rise of voltage to cause "boom" in the loudspeaker at the frequency of brass resonance, and the capacity of a loudspeaker to reproduce transients, especially low-frequency transients, is astonishingly improved.

Push-pull triode output stage. 400 V. on Anodes. No. H.V. electrolytic smoothing or decoupling condensers. Impregnated transformers; tropically finished components. H.V. and L.V. supplies for pre-amp. and radio units. DISTORTION: 1/10 of 1% at 1000 c.p.s. and 10w. output: no significant increase at any other frequencies. HUM AND NOISE: minus 80 db. on 10w. FREQUENCY RESPONSE: ±0.1 db. from 20 c.p.s. to 20,000 c.p.s. SENSITIVITY: 160 mV. DAMPING FACTOR: 40, with negligible variation throughout power range. INPUT IMPEDANCE: 1 meg. OUTPUT IMPEDANCES: 2, 7-9, 15-20, and 28-36 ohms. STABILITY MARGINS: Gain, 10 db. ±3 db.; Phase, 20° ± 10°. DIMENSIONS: 12½" x 10" x 8¼" high.

ALSO AVAILABLE! TL/25 A-25 WATT MODEL, A MODIFICATION OF THE TL/12.

DISTORTION APPROXIMATELY 0.25% AT 1000 CYCLES FOR 20W. OUTPUT. GAIN AND FREQUENCY RESPONSE ARE APPROXIMATELY THE SAME AS THE TL/12.

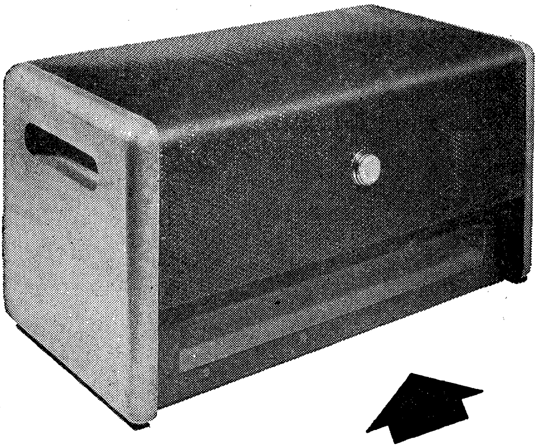
12W and 25W Amplifier sold with or without pre-amplifier. Pre-amplifier is not sold separately.

BRITISH INDUSTRIES CORPORATION **164 DUANE STREET, NEW YORK 13, N. Y.**

THE "MisteR" SOUND EQUIPMENT LINE MEETS SPECIFIC REQUIREMENTS.

Basic amplifiers are adaptable by use of interchangeable input units to meet any power output and input channel requirement.

In minutes, any of the amplifiers listed below can be used with any input unit.



Input units to be used interchangeably in all amplifiers.

5212 SERIES, AMPLIFIER

POWER OUTPUT: 12 Watts at less than 5% distortion. Peak power 18 Watts.
OUTPUT IMPEDANCE: 4, 8, 15, 250 or 500 ohms.
FREQUENCY RESPONSE: 30-15,000 cps, ± 2 db.
DIMENSIONS: 8-5/16" h x 17-7/16" w x 9-1/8" d.

5220 SERIES, AMPLIFIER

POWER OUTPUT 20 Watts at less than 5% distortion. Peak power 33 Watts.
OUTPUT IMPEDANCE: 4, 8, 15, 250 or 500 ohms.
FREQUENCY RESPONSE: 30-15,000 cps, ± 2 db.
DIMENSIONS: 8-5/16" h x 17-7/16" w x 9-1/8" d.

5230 SERIES, AMPLIFIER

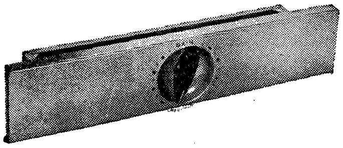
POWER OUTPUT: 30 Watts at less than 5% distortion. Peak power 40 Watts.
OUTPUT IMPEDANCE: 4, 8, 15, 250 or 500 ohms.
FREQUENCY RESPONSE: 30-15,000 cps, ± 2 db.
DIMENSIONS: 8-5/16" h x 17-7/16" w x 9-1/8" d.

5250 SERIES, AMPLIFIER

POWER OUTPUT: 50 Watts at less than 5% distortion. Peak power 75 Watts.
OUTPUT IMPEDANCE: 2, 4, 8, 15, 250 or 500 ohms.
FREQUENCY RESPONSE: 30-15,000 cps, + 2 db.
DIMENSIONS: 8-5/16" h x 17-7/16" w x 13-3/4" d.

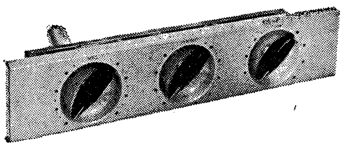
5225M MOBILE AMPLIFIER

POWER OUTPUT: 25 Watts at less than 5% distortion. Peak power 33 Watts.
POWER INPUT: 117 Volts A. C. or 6 Volts D. C.
OUTPUT IMPEDANCE: 4 8, 15, 250 or 500 ohms.
FREQUENCY RESPONSE: 30-15,000 cps. ± 2 db.
DIMENSIONS: 8-5/16 h x 17 7/16" w x 13-3/4" d.
Equipped with turntable. Also available with record changer as Model 5225MC



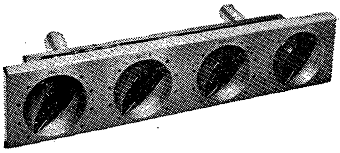
"A" INPUT UNIT

INPUTS: One—½ meg. impedance.
CONTROLS: One—gain with a-c switch.



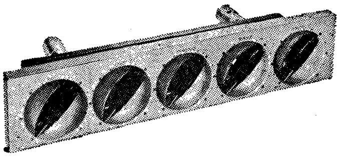
"B" INPUT UNIT

INPUTS: One microphone—2 meg. impedance, one phonograph—½ meg. impedence.
CONTROLS: One microphone, one phonograph, one treble with a-c switch.



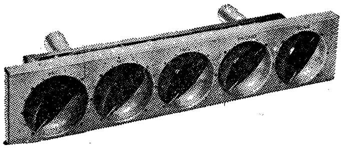
"C" INPUT UNIT

INPUTS: Two microphone—each 2 meg. impedance, one phonograph —½ meg. impedance.
CONTROLS: Two microphone, one phonograph, one treble with a-c switch.



"D" INPUT UNIT

INPUTS: Two microphone—each 2 meg. impedance, one phonograph —½ meg. impedance.
CONTROLS: Two microphone, one phonograph, one bass, one treble with a-c switch.



"E" INPUT UNIT

INPUTS: Three microphone—each 2 meg. impedance, one phonograph —½ meg. impedance.
CONTROLS: Three microphone, one phonograph, one treble with a-c switch.

Morgan-Rhein, inc.
Manufacturers of Electronic Equipment
2319 McRae Street • Orlando, Florida

MICHEL manufacturing CO.

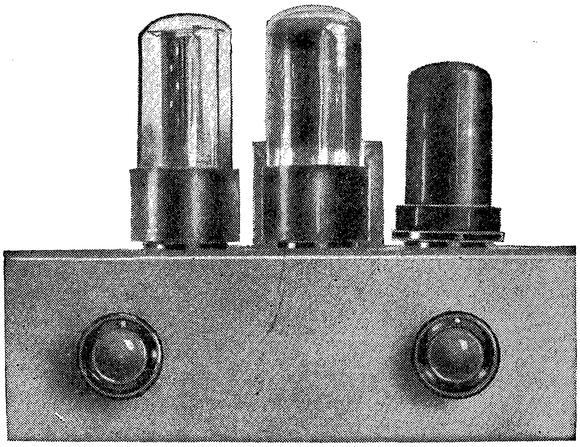
MILWAUKEE 2, WISCONSIN

music amplifier

FOR:

WIRED MUSIC

PHONOGRAPHS



MODEL 52A816

SPECIFICATIONS:

INPUT:

High Impedance.

OUTPUT:

Standard 3.2 ohm voice coil. Output transformer mounted on chassis.

POWER REQUIREMENTS:

117 Volts AC/DC. No shock danger. The chassis is not connected or grounded to the power line. 35 Watts.

CONTROLS:

Volume Control with switch. Tone Control.

RESPONSE:

Plus or minus one DB from 70 CPS to above 20,000 CPS.

POWER OUTPUT:

1.5 Average watts. Sufficient for two 6″ speakers.

TUBE COMPLEMENT:

50L6, 12SQ7, 35Z5. Tubes are furnished with amplifier.

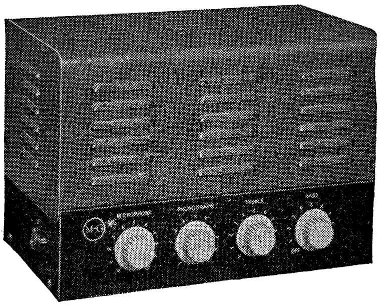
SUGGESTED LIST PRICE $17.37
SUGGESTED DEALER COST $10.42

AMPLIFIERS and SOUND SYSTEMS

DON McGOHAN, INC., 3700 W. Roosevelt Road, Chicago 24, Ill.

Amplifiers licensed under U. S. Patents of Western Electric Company, Inc., and American Telephone and Telegraph Company.

M-G Sound Equipment is a complete line of quality products for sound reinforcement and reproduction. Amplifiers and Sound Systems are designed to give exceptional performance but priced within the reach of all users of sound equipment. M-G Amplifiers include features found only in equipment offered usually at greatly increased prices. Components such as loudspeakers, microphones, record changers and players, projectors, speaker baffles and carrying cases are of equally high quality, all designed to work efficiently together as companion products. Performance ratings of M-G amplifiers are conservative and can be depended upon to deliver performance claimed. Altogether M-G Sound Equipment can be purchased with complete confidence in its value.



MODEL M-G 18 AMPLIFIER

Features: 18-watt undistorted output. Microphone and phonograph inputs. Bass and treble controls. Output impedance 4, 8, 16, 500 ohms.

SPECIFICATIONS

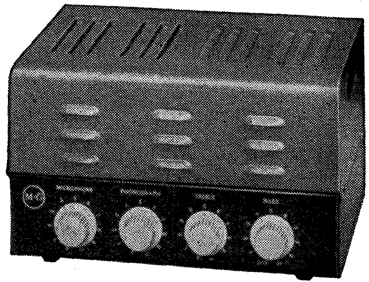
Power Output: 18 watts, less than 5% distortion. **Gain:** Microphone, 114 db; phonograph, 75 db. **Controls:** Microphone, phonograph, treble, bass with on-off switch. **Bass range** +10 db at 100 cps.; treble range −18 db at 10,000 cps. **Inputs:** Microphone, phonograph. **Tubes:** 1 6SC7, 1 6SJ7, 2 6L6G, 1 5U4G. **Output Impedance:** 4, 8, 16, 500 ohms. **Power Consumption:** 90 watts, 117 volts, 60 cps. **Hum Level:** 63 db below 10 watts. **Frequency Response:** ±2 db, 35 to 15,000 cps. **Dimensions:** 12" x 7" x 8¼" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

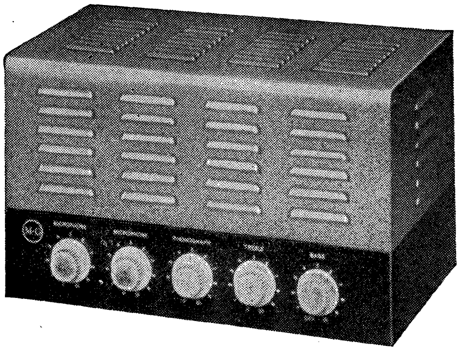
MODEL M-G 10B AMPLIFIER

Features: 10-watt undistorted output. Bass and treble controls. Output Impedance 4, 8, 16, 500 ohms. Can be used with reluctance pickup.

SPECIFICATIONS

Power Output: 10 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 80 db. **Controls:** 1 microphone, 1 phonograph, 1 treble, 1 bass with on-off switch. Bass range +14 db to −4 db at 100 cps.; treble range +10 db to −20 db at 10,000 cps. **Inputs:** 1 microphone (may be used with reluctance pickup), 1 phonograph. **Tubes:** 1 6SC7, 1 6SN7GT, 2 6V6GT, 1 5Y3GT. **Output Impedance:** 4, 8, 16, 500 ohms. **Power Consumption:** 65 watts, 117 volts, 60 cps. **Hum Level:** 65 db below 10 watts. **Frequency Response:** ±2 db, 35 to 15,000 cps. **Dimensions:** 11¼" x 7" x 6⅝" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.





MODEL M-G 20B AMPLIFIER

Features: 20-watt undistorted output. 2 microphone, 2 phonograph inputs. Bass and treble controls. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms. Input for reluctance pickup.

SPECIFICATIONS

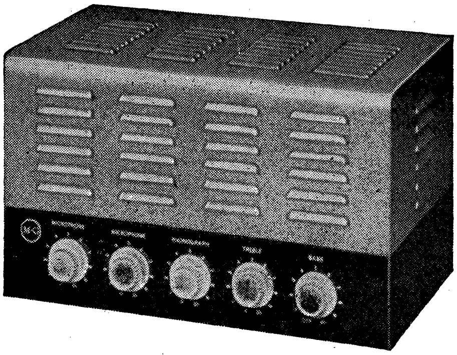
Power Output: 20 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph for crystal or reluctance, 1 treble, 1 bass with on-off switch. Bass range +9 db at 100 cps; treble range −18 db at 10,000 cps. **Inputs:** 2 microphone, 2 phonograph (1 crystal, 1 reluctance). **Tubes:** 2 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 1 5V4G. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** 90 watts, 117 volts, 60 cps. **Hum Level:** −60 db below 20 watts. **Frequency Response:** ±2 db, 40 to 15,000 cps. **Dimensions:** 14" x 8" x 8¼" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

MODEL M-G 30B AMPLIFIER

Features: 30-watt undistorted output. 2 microphone, 2 phonograph inputs. Bass and treble controls. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms. Input for reluctance pickup.

SPECIFICATIONS

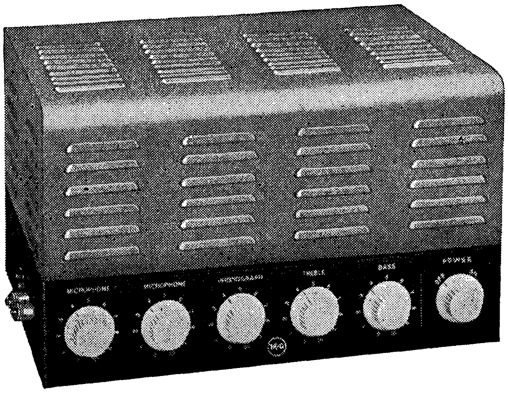
Power Output: 30 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph for crystal or reluctance, 1 treble control, 1 bass control with on-off switch. Bass range +9 db at 100 cps; treble range −18 db at 10,000 cps. **Inputs:** 2 microphone, 2 phonograph (1 crystal, 1 reluctance). **Tubes:** 2 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 1 5V4G. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** 130 watts, 117 volts, 60 cps. **Hum Level:** 62 db below 30 watts. **Frequency Response:** ±2 db, 40 to 15,000 cps. **Dimensions:** 14" x 8" x 8¼" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.



All specifications and prices subject to change without notice.

AMPLIFIERS and SOUND SYSTEMS

DON McGOHAN, INC., 3700 W. Roosevelt Road, Chicago 24, Ill.



MODEL M-G 60 AMPLIFIER

Features: 60-watt undistorted output. 2 microphone, 2 phonograph inputs. Bass and treble controls. Output Impedance 4, 8, 16, 250 ohms, 70 and 140 volts.

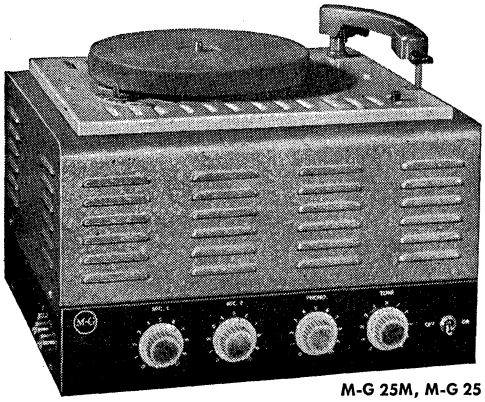
SPECIFICATIONS

Power Output: 60 watts, less than 5% distortion. **Gain:** Microphone, 124 db; phonograph, 80 db. **Controls:** 2 microphone, 1 phonograph, 1 bass, 1 treble, 1 on-off switch. **Inputs:** 2 microphone, 2 phonograph. **Tubes:** 2 6SJ7, 1 6SL7GT, 1 6V6GT, 2 807, 2 5U4G, 1 5Y3GT. **Output Impedance:** 4, 8, 16, 250 ohms, 70 and 140 volts. **Power Consumption:** 195 watts, 117 volts, 60 cps. **Hum Level:** 64 db below 60 watts. **Frequency Response:** ±2 db, 20 to 20,000 cps. **Dimensions:** 14" x 10" x 8¾" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

MODEL M-G 60X BOOSTER AMPLIFIER

SPECIFICATIONS

Power Output: 60 watts, less than 5% distortion. **Gain:** 75 db. **Controls:** ½ megohm gain, separate power switch. **Tubes:** 1 6SJ7, 1 6V6GT, 2 807, 2 5U4G, 1 5Y3GT. **Output Impedance:** 4, 8, 16, 250 ohms, 70 and 140 volts. **Power Consumption:** 185 watts, 117 volts, 60 cps. **Hum Level:** 64 db below 60 watts. **Dimensions:** 14" x 8" x 8¾" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.



M-G 25M, M-G 25

MODEL M-G 25M MOBILE AMPLIFIER

Features: 18 to 25 watt undistorted output. Tone control. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms. Removable top can be replaced with 3-speed manual record player (shown) or 3-speed automatic record changer.

SPECIFICATIONS

Power Output: A.C. 25 watts, less than 5% distortion; D.C. 18 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph, 1 tone control, 1 separate on-off switch, 1 standby switch. Tone control range −21 db at 10,000 cps. **Inputs:** 2 microphone, 1 phonograph. **Tubes:** 1 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 2 6X5GT. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** A.C. 90 watts, 117 volts, 60 cps.; D.C. 18 amps., 6 volts. **Hum Level:** 60 db below 25 watts. **Frequency Response:** ±2 db, 40 to 15,000 cps. **Dimensions:** 13" x 14½" x 9" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

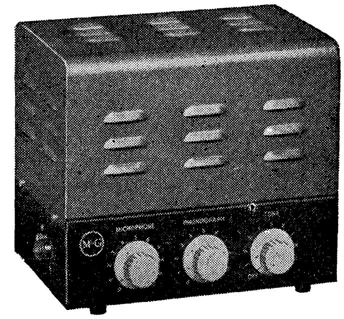
NOTE: Automatic record changer and manual record player subject to excise tax.

MODEL M-G 25 AMPLIFIER

Features: 25-watt undistorted output. 2 microphone, 1 phonograph inputs. Tone control. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms.

SPECIFICATIONS

Power Output: 25 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph, 1 tone control, separate on-off switch. Tone control range −21 db at 10,000 cps. **Inputs:** 2 microphone, 1 phonograph. **Tubes:** 1 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 1 5V4G. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** 90 watts, 117 volts, 60 cps. **Hum Level:** 60 db below 25 watts. **Frequency Response:** ± 2 db, 40 to 15,000 cps. **Dimensions:** 13" x 14½" x 9" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.



MODEL M-G 7B AMPLIFIER

Features: 7 watts usable output. Microphone and phonograph inputs. Output impedance 4 and 8 ohms.

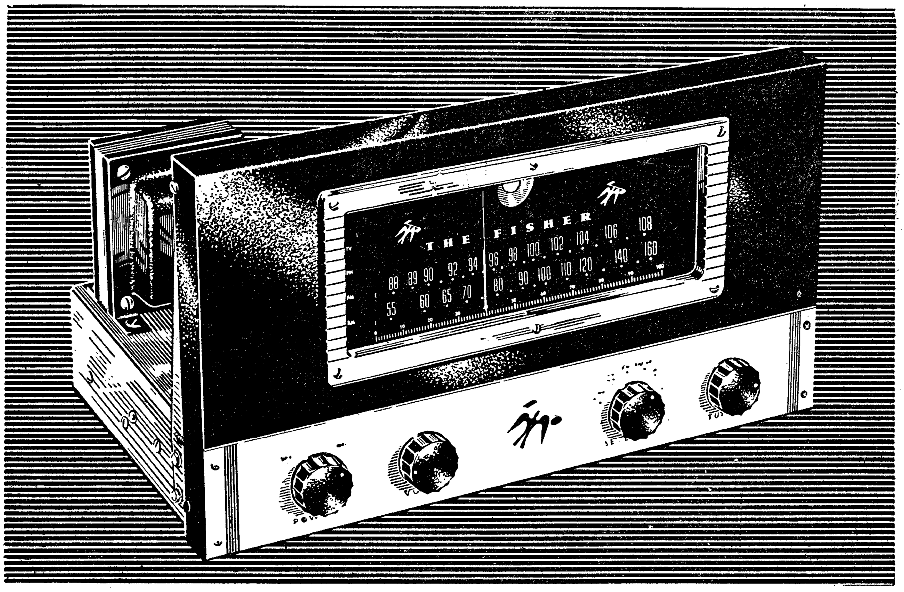
SPECIFICATIONS

Power Output: 7 watts. **Gain:** Microphone, 113 db; phonograph, 75 db. **Controls:** 1 microphone, 1 phonograph, 1 tone control with on-off switch. Tone control range −18 db at 10,000 cps. **Inputs:** 1 microphone, 1 phonograph. **Tubes:** 1 6SC7, 1 6L6G, 1 5Y3GT. **Output Impedance:** 4 and 8 ohms. **Power Consumption:** 60 watts, 117 volts, 60 cps. **Hum Level:** 61 db below 7 watts. **Frequency Response:** ±3 db, 80 to 10,000 cps. **Dimensions:** 9" x 5½" x 8¾" high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

All specifications and prices subject to change without notice.

FISHER

America's Finest
FM-AM TUNERS
AUDIO AMPLIFIERS
PREAMPLIFIER-EQUALIZERS



THE FISHER FM-AM TUNER

MODELS 50-R and 50-RT

THE FISHER FM-AM Tuner, Model 50-R, is without an equal in engineering, beauty of design and workmanship. Here are its features:

Frequency Modulation. Armstrong system, two IF stages, dual limiters, cascode RF stage, dual antenna inputs, either 72-ohm, or 300-ohm balanced. Full limiting on signals as low as one microvolt. Sensitivity: 2½ microvolts for 30 db of quieting on 72-ohm antenna input. Frequency response: 20 to 20,000 cycles ± 1 db. AFC; the latter is on a switch, and adjustable for locality.

Amplitude Modulation. Two IF stages and one tuned RF stage. IF band width adjustable from front panel. Frequency response: ± 2 db to 6000 cycles (—3 db at 7000 cycles) in broad tuning position. Sensitivity: less than one microvolt input for one volt output. Dual antenna inputs. Built-in 10 Kc filter.

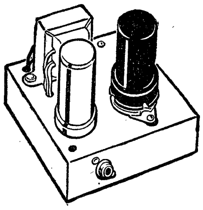
Audio. Uniform response, ± 1 db, 20 to 20,000 cycles. Distortion less than 0.04% for one volt output. Hum level more than 100 db below two volts output. Cathode follower output.

General Features. Completely shielded construction, including variable condenser. Bottom plate. Six-gang variable condenser, separate front ends for AM and FM. Completely shock-mounted. Etched aluminum chassis. Brushed brass control plate. AM loop and FM dipole antennas supplied. Tube Complement: 2-6BQ7A, 1-6CB6, 1-6BE6, 3-6BA6, 2-6AU6, 2-6AL5, 1-12AU7, 1-5Y3 and 1-6U5. Dimension: 14¾" wide, 8½" high, 9¼" deep. Shipping weight: 17 pounds.

Model 50-R (For use with any preamplifier equalizer; 50-R has no tone controls.) ....User's net **$159.50**

Model 50-RT (Same as above, but supplied with tone controls and phono equalization facilities.)

User's net **$179.50**



THE FISHER MODEL PR-4 PREAMPLIFIER

■ Can be used with low-level magnetic pickups of any make, including GE, Fairchild, Pickering, Audax, Clarkstan and others. Correct equalization is provided in each case. The PR-4 can also be used as a microphone preamplifier. **General Features:** Hum more than 60 db below one volt output. Uniform response, 30-20,000 cycles. Self-powered. Bottom cover. Uses dual triode. Gain: On phono — 20 millivolts for one volt output; on microphone — 5 millivolts for one volt output, a voltage gain of 500. Circuit permits long output lead, up to 50 feet. Size: 3¾" x3⅝"x3⅝"high. ....User's net **$12.57**

FISHER RADIO CORPORATION • NEW YORK

FISHER

America's Finest
FM-AM TUNERS
AUDIO AMPLIFIERS
PREAMPLIFIER-EQUALIZERS

THE FISHER
Master Audio Control
MODEL 50-C

■ Features high gain with extreme reserve output voltage. Intermodulation distortion virtually unmeasurable. Self-powered, completely shielded, DC on all filaments. Hum inaudible. All-triode circuit, fully shock-mounted. Cathode follower input and two cathode follower output stages. The 50-C can be used with any amplifier.

General Features: Five inputs and five input level controls. Main and recorder outputs permit leads to 200 feet. Harmonic distortion 0.02% at 1 volt, 0.05% at 5 volts, 0.4% at 15 volts. Intermodulation distortion, 0.08% at 1 volt. Frequency Response, ± 0.5 db, 20-20,000 cycles. Hum and noise more than 100 db below normal signal on radio input, 68 db below output on phono with a 10 mv input signal. Controls: Volume, Loudness (Fletcher-Munsen), Loudness Control Switch, Selector Switch, Low and High Frequency Phono Equalization Switches (lever type) with 16 combinations, Power Switch. Base and Treble Controls. Three spare AC receptacles. Tube Complement: 2-12AX7, 1-12AU7.

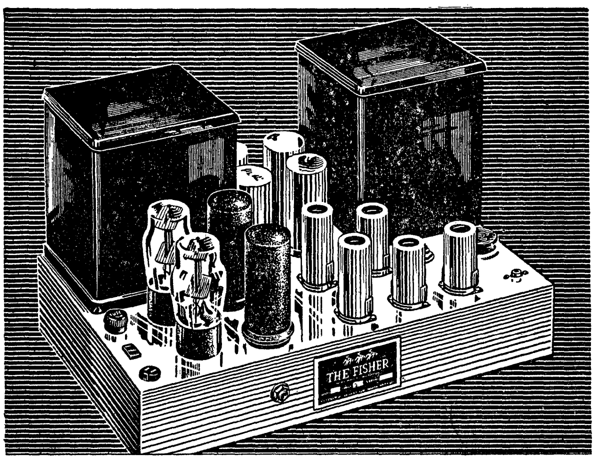
Size—Chassis Model: 14¾" wide, 3½" high, 6⅛" deep.
Cabinet Model: 15¾" wide, 4½" high, 6⅛" deep.

Model 50-CH (Chassis Only)	User's Net **$89.50**
Model 50-CM (Mahogany)	User's Net **$97.50**
Model 50-CB (Blonde)	User's Net **$97.50**

THE FISHER
VOLUME
SELECTOR
PHONO
LOUDNESS
MASTER AUDIO CONTROL
BASS
TREBLE
OFF
ON
POWER

THE FISHER
Laboratory Standard Amplifier—Model 50-A

■ THE FISHER 50-A was expressly designed to satisfy these criteria: low internal impedance, low harmonic and intermodulation distortion at all power levels, extremely low hum and noise level, unusual reserve power handling capacity, high efficiency, good transient response, wide frequency response, good linearity (output versus input,) compactness, long component life, simple circuitry and moderate cost.



Technical Specifications: High output, with less than 0.3% harmonic distortion at 40 watts (0.05% at 5 watts, 0.08% at 10 watts.) Intermodulation distortion less than 0.4% at 10 watts, 0.8% at 40 watts (measured 40/7000 cycles at 4 to 1.) Frequency response uniform ± .1 db from 20 to 20,000 cycles, and 1 db from 5 to 100,000 cycles. Power output constant within 1 db at 40 watts, 15 to 60,000 cycles. Hum and noise more than 96 db below full output. Internal impedance is .53 ohms at the 16-ohm tap, giving a damping factor of 31. Tube Complement: 3-12AU7, 2-6CL6, 2-1614 and 2-5V4G. 8 and 16 ohm outputs. Size: 8"x14½"x9" high. Shipping weight, 41 pounds. Level control. AC receptacle. User's net **$159.50**

FISHER RADIO CORPORATION • NEW YORK

ESPEY MANUFACTURING CO. INC
NEW YORK 21, NEW YORK

1928-1953

SILVER ANNIVERSARY "TROPHY" MODELS

Model 100 AM-FM RADIO CHASSIS

Dealer-Serviceman... **Net $88.50**

I. **DESCRIPTION AND SALIENT FEATURES:** Espey Model 100 is a Superheterodyne AM-FM Radio Receiver chassis designed to operate on 105/125 volts A.C., 50/60 cycles. Power consumption is 95 watts. It is of rugged construction using high quality components and is dressed off with a professionally designed attractive panel in grey that will neutrally blend into any home surroundings, whether installed in a cabinet, console or a bookcase.

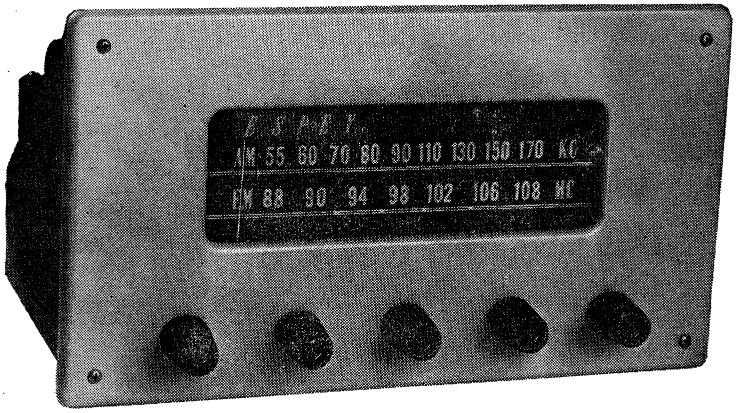
The Model 100 incorporates an improved frequency modulation circuit that is drift compensated to eliminate the need for troublesome automatic frequency control circuits; an extra stage of RF gain on FM; high fidelity AM-FM reception; a pre-amplifier tube for use with reluctance type of phonograph pickup cartridges; a Ferrite Loop Stick antenna for AM and a folded dipole for FM reception; full use of dual purpose tubes to obtain maximum performance; tone control; automatic volume control; beam power audio output; a special heater winding with a control to balance out residual line frequency hum; easy tuning combined with an easily readable, attractive "slide-rule" dial that is edge lighted; dual impedance output transformer to match 3.2 or 8 ohm speaker voice coils. These features are further enhanced by the recent addition of a 3 position equalizer switch to compensate for recording characteristics in long playing AES or European recordings.

The Model 100 tunes from 535 to 1720 Kc on AM and from 88 to 108 Mc on FM. Sensitivity is such that outside antennas usually are not necessary. It is manufactured under licenses from RCA and Hazeltine and is RTMA listed Code #174.

II. **TUBE COMPLEMENT:** The Model 100 has 9 tubes plus a rectifier. Tube complement is 6BA6 FM RF Amplifier, 6BE6 AM Oscillator and Mixer, 6BA6 IF Amplifier, 6AU6 FM Detector Driver, 6AL5 FM Detector, 12AT7 FM Oscillator and Mixer, 6AV6 AM Detector and Audio Amplifier, 12AX7 Pickup Pre-amplifier Tube, 6V6GT Beam Power Audio Output Amplifier and 5Y3GT Rectifier.

III. **ACCESSORIES:** The Model 100 chassis is supplied ready to operate, complete with tubes, antenna and all necessary hardware.

IV. **CHASSIS DIMENSIONS AND WEIGHT:** Chassis is 13½" wide x 7½" high x 9" deep. Carton is 17" x 11" x 12". Shipping weight 18 lbs. each.


E S P E Y
AM 55 60 70 80 90 110 130 150 170 KC
FM 88 90 94 98 102 106 108 MC

Model 100—AM-FM Chassis

Model 101—AM-FM TUNER

Outstanding AM-FM TUNER, self-powered for use with all types of Audio Amplifiers.

DEALER - SERVICEMAN . . . . **Net $70.50**

I. **DESCRIPTION AND SALIENT FEATURES:** Espey Model 101 is a Superheterodyne AM-FM Radio Tuner chassis designed to operate on 105/125 volts A.C., 50/60 cycles. Power consumption is 60 watts. Its function is to deliver audio to an external amplifier. It is of the same rugged construction, high quality and professional design as the Model 100.

The Model 101 incorporates an improved frequency modulation circuit that is drift compensated to eliminate the need for troublesome automatic frequency control circuits; an extra stage of RF gain on FM; high fidelity AM-FM reception; a Ferrite Loop Stick antenna for AM and a folded dipole for FM reception; full use of dual purpose tubes to obtain maximum performance; automatic volume control; phono input for use with standard crystal pickups or pre-amplifiers; a special heater winding with a control to balance out residual line frequency hum; and easy tuning combined with an easily readable attractive "slide-rule" dial that is edge lighted.

The Model 101 tunes from 535 to 1720 Kc on AM and from 88 to 108 Mc on FM, sensitivity is such that outside antennas are usually not necessary. It is manufactured under licenses from RCA and Hazeltine and is RTMA listed Code #174.

II. **TUBE COMPLEMENTS:** The Model 101 has 7 tubes plus a rectifier. Tube complement is 6BA6 FM RF Amplifier, 6BE6 AM Oscillator and Mixer, 6BA6 IF Amplifier, 6AU6 FM Detector Driver, 6AL5 FM Detector, 12AT7 FM Oscillator and Mixer, 6AT6 AM Detector and Audio Amplifier and 5Y3GT Rectifier.

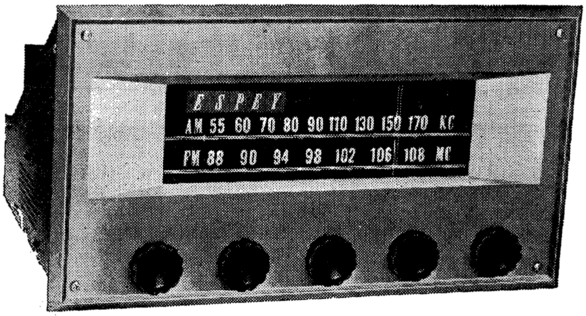
III. **ACCESSORIES:** The Model 101 is supplied ready to operate, complete with tubes, antenna and all necessary hardware.

IV. **CHASSIS DIMENSIONS AND WEIGHT:** Chassis is 13½" wide x 7½" high x 9" deep. Carton is 17" x 11" x 12". Shipping weight 16 lbs .each.

ESPEY MANUFACTURING CO. INC.
NEW YORK 21, NEW YORK

1928-1953

SILVER ANNIVERSARY "TROPHY" MODELS


ESPEY
AM 55 60 70 80 90 110 130 150 170 KC
FM 88 90 94 98 102 106 108 MC

Model 200—AM-FM RADIO CHASSIS

CONTAINS
PRE-AMP PICKUP TUBE 12AX7

DEALER - SERVICEMAN.... Net $120.00

I. DESCRIPTION AND SALIENT FEATURES: Espey Model 200 is a DeLuxe Superheterodyne AM-FM Radio Receiver chassis designed to operate on 105/125 volts A.C., 50/60 cycles. Power consumption is 105 watts. It is of rugged, sturdy construction using high quality components. Its outward appearance is multi-grey toned, professionally designed to blend into any home surroundings, whether installed in a cabinet, console or a bookcase.

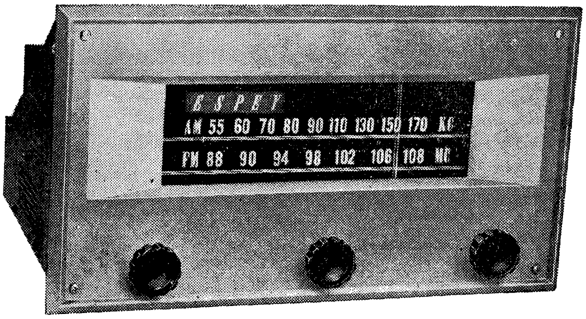
The Model 200 incorporates an improved frequency modulation circuit that is drift compensated to eliminate the need for troublesome automatic frequency control circuits; 6 gang tuning condenser; high fidelity AM-FM reception; tuned RF amplifiers to make use of low field strength signals; a pre-amplifier for use with reluctance type phonograph pickup cartridges; a Ferrite Loop Stick antenna for AM and a folded dipole for FM reception; full use of dual purpose tubes to obtain maximum performance; AF input; line power outlets; auxiliary position on switch for use when T.V. Audio is channeled through set; push-pull beam power audio power amplifier; full range bass and treble tone controls; automatic volume control; provision for external antennas; a special heater winding with a control for balancing out residual line frequency hum; easy tuning combined with an easily readable attractive "slide-rule" dial that is edge lighted; special multi-impedance output transformer to match 4, 8 and 500 ohms speaker loads. The latest improvement on the Model 200 is a dual control which operates a record roll-off equalizer network to compensate for recording characteristics in long playing AES or European recordings.

The Model 200 tunes from 535 to 1720 Kc on AM and from 88 to 108 Mc on FM. Outside antennas are not normally needed. It is manufactured under licenses from RCA and Hazeltine and is RTMA listed Code #174.

II. TUBE COMPLEMENT: The Model 200 has 13 tubes plus a rectifier. Tube complement is 6BA6 AM RF Amplifier, 6BA6 FM RF Amplifier, 6BE6 AM Oscillator and Mixer, 6BA6 IF Amplifier, 6AU6 FM Detector Driver, 6AL5 FM Detector, 6C4 FM Oscillator, 6BE6 FM Mixer, 6AV6 AM Detector and Audio Amplifier, 12AT7 Audio Amplifier and Phase Inverter, 12AX7 Phono Pre-amp, 2 6V6/GT Push-Pull Beam Power Audio Power Amplifiers and a 5Y3GT Rectifier.

III. ACCESSORIES: The Model 200 is supplied ready to operate complete with tubes, antenna and all necessary hardware.

IV. CHASSIS DIMENSIONS AND WEIGHT: Chassis is 13½" wide x 7¾" high x 10" deep. Carton is 19½" x 12" x 14". Shipping weight 24 lbs. each.


ESPEY
AM 55 60 70 80 90 110 130 150 170 KC
FM 88 90 94 98 102 106 108 MC

Model 300—AM-FM TUNER

Outstanding AM-FM TUNER, self-powered for use with all types of Audio Amplifiers.

DEALER - SERVICEMAN.... Net $109.50

I. DESCRIPTION AND SALIENT FEATURES: Espey Model 300 is a DeLuxe Superheterodyne AM-FM Radio Tuner chassis designed to operate on 105/125 volts A.C., 50/60 cycles. Power consumption is 75 watts. Its function is to deliver audio to an external amplifier. It is of rugged, sturdy construction using high quality components. Its outward appearance is multi-grey toned, professionally designed to blend into any home surroundings, whether installed in a cabinet, console or a bookcase.

The Model 300 incorporates an improved frequency modulation circuit that is drift compensated to eliminate the need for troublesome automatic frequency control circuits; 6 gang tuning condenser; high fidelity AM-FM reception; tuned RF amplifiers to make use of low field strength signals; a pre-amplifier for use with reluctance type phonograph pickup cartridges; a Ferrite Loop Stick antenna for AM and a folded dipole for FM reception; full use of dual purpose tubes to obtain maximum performance; auxiliary position on switch; AF input; line outlets; automatic volume control; provision for external antenna; a special heater winding with a control for balancing out residual line frequency hum; easy tuning combined with an easily readable attractive "slide-rule" dial that is edge lighted. The latest improvement on the Model 300 is a dual control which operates a record roll-off characteristic network to compensate for recording characteristics in long playing AES or European recordings.

The Model 300 tunes from 535 to 1720 Kc on AM, and from 88 to 108 Mc on FM. Outside antennas are not needed, even in the weakest signal areas. It is manufactured under licenses from RCA and Hazeltine and is RTMA listed Code #174.

II. TUBE COMPLEMENT: The Model 300 has 10 tubes plus a rectifier. Tube complement is 6BA6 AM RF Amplifier, 6BA6 FM RF Amplifier, 6BE6 AM Oscillator and Mixer, 6BA6 IF Amplifier, 6AU6 FM Detector Driver, 6AL5 FM Detector, 6C4 FM Oscillator, 6BE6 FM Mixer, 6AT6 AM Detector and Audio Amplifier, 12AX7 Phono Pre-amp, and 5Y3GT Rectifier.

III. ACCESSORIES: The Model 300 is supplied ready to operate complete with tubes, antenna and all necessary hardware.

IV. CHASSIS DIMENSIONS AND WEIGHT: Chassis is 13½" wide x 7¾" high x 10" deep. Carton 19½" x 12" x 14". Shipping weight 17 lbs. each.

ESPEY MANUFACTURING CO. INC.
NEW YORK 21, NEW YORK

1928-1953

SILVER ANNIVERSARY "TROPHY" MODELS

Lowest Priced on the Market DeLuxe AM-FM TUNER

Model 400—AM-FM DeLuxe TUNER
Dealer-Serviceman . . . . Net $109.50

Model 500—DeLuxe Audio Amplifier, 20 Watts (not shown)
Dealer-Serviceman . . . . Net $ 54.75

Model 400

I. DESCRIPTION AND SALIENT FEATURES: Espey Model 400 is a DeLuxe Superheterodyne AM-FM Radio Tuner chassis. It is powered from and used in conjunction with Espey Model 500 Amplifier. The combination operates at 105/125 volts, 50/60 cycles A.C. Power consumption is 135 watts. It is of rugged, sturdy construction using high quality components. Its outward appearance is multi-grey toned, professionally designed to blend into any home surroundings, whether installed in a cabinet, console or a bookcase.

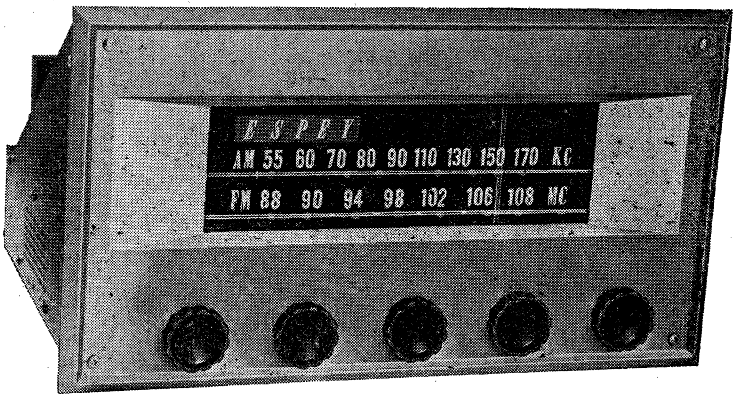
The Model 400 incorporates an improved frequency modulation circuit that is drift compensated to eliminate the need for troublesome automatic frequency control circuits; 6 gang tuning condenser; high fidelity AM-FM reception; tuned RF amplifiers to make use of low field strength signals; a pre-amplifier for use with reluctance type phonograph pickup cartridges; a Ferrite Loop Stick antenna for AM and a folded dipole for FM reception; full use of dual purpose tubes to obtain maximum performance; full range bass and treble tone controls; auxiliary position on switch for audio input; line outlets; automatic volume control; provision for external antenna; a special control for balancing out residual line frequency hum; easy tuning combined with an easily readable attractive "slide-rule" dial that is edge lighted. The latest improvement on the Model 400 is a dual control which operates a record roll-off characteristic network to compensate for recording characteristics in long playing AES or European recordings.

The Model 400 tunes from 535 to 1720 Kc on AM, and from 88 to 108 Mc on FM. Outside antennas are not needed, even in the weakest signal areas. It is manufactured under licenses from RCA and Hazeltine and is RTMA listed Code #174.

II. TUBE COMPLEMENT: The Model 400 has 11 tubes. Tube complement is 6BA6 AM RF Amplifier, 6BA6 FM RF Amplifier, 6BE6 AM Oscillator and Mixer, 6BA6 IF Amplifier, 6AU6 FM Detector Driver, 6AL5 FM Detector, 6C4 FM Oscillator, 6BE6 FM Mixer, 6C4 AM Detector, 6AV6 1st Audio Amplifier, and 12AX7 Phono Pre-Amp.

III. ACCESSORIES: The Model 400 is supplied ready to operate complete with tubes, antenna and all necessary hardware.

IV. CHASSIS DIMENSIONS AND WEIGHT: Chassis is 13½" wide x 7¾" high x 9" deep. Carton 19½" x 12" x 14". Shipping weight 13 lbs. each.


ESPEY
AM 55 60 70 80 90 110 130 150 170 KC
FM 88 90 94 98 102 106 108 MC

Model 400 — AM-FM
Deluxe Tuner

MODEL 500
AUDIO AMPLIFIER

I. Model 500 DeLuxe Power Supply and Audio Amplifier contains 6 tubes, plus 2 rectifiers in a high gain push-pull amplifier circuit. It is designed specifically for use in conjunction with the Model 400 Tuner, but may be used wherever a high quality audio amplifier may be required. Power requirements are: 105/125 volts AC; 50/60 cycles; power consumption: approximately 135 watts when used in conjunction with Model 400.

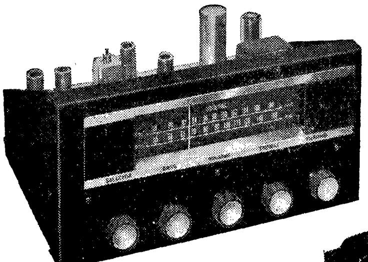
II. FEATURES:

1. Parallel Push-Pull Beam Power Output Circuit.
2. Self-Balanced 3-Phase Inverter System.
3. Extended Range High-Fidelity Response.
4. Inverse Feedback Circuit.
5. 6 Tubes plus 2 Rectifiers.
6. Output Impedance selective for any speaker requirement (4 to 500 ohms).
7. Licensed under RCA.
8. RTMA listed.

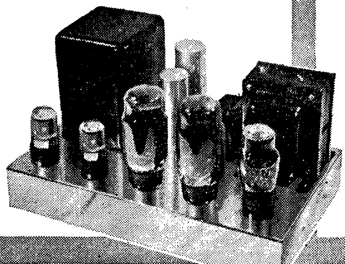
III. DESCRIPTION: The Model 500 Power Supply-Audio Amplifier employs the best proven engineering design. Six tubes are incorporated in a balanced phase inverter parallel push-pull amplifier. By the use of an inverse feedback circuit, high-fidelity performance is obtained.

IV. TUBE COMPLEMENT: 2 6J5 Audio Driver tubes. — 4 6V6 Beam Power Audio Output tubes. — 2 5Y3 Rectifier tubes.

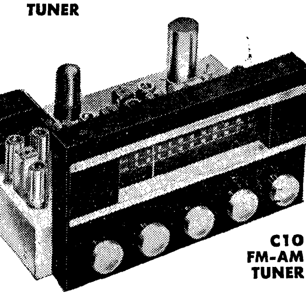
V. CHASSIS DIMENSIONS AND WEIGHT: 13½" wide x 7½" high x 9" deep. Weight 18 lbs.



C800 FM-AM TUNER

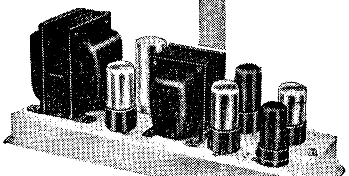


C500 ULTRA-FIDELITY AMPLIFIER



C10 FM-AM TUNER

HERE ARE craftsmen HIGH-FIDELITY COMPONENTS FOR EVERY CUSTOM INSTALLATION . . .



C400 HIGH-FIDELITY AMPLIFIER

C800 FM-AM Tuner is Craftsmen's finest. Built-in phono pre-amplifier and record equalizer make the C800 extremely versatile for installations of all types. Front-panel-selected equalization for AES, LP or EURopean recording characteristics. Inverse feedback compensated dual triode phono preamp for correct turnover and rolloff characteristics. Double shadow tuning eye and AFC on FM simplifies tuning. Front-panel AFC cutout for tuning weak stations. Has cathode follower audio output, bass and treble controls continuously variable from attenuation to boost. Size: 13¾ x 10½ x 7 in. high. Shipping weight, 17 lbs. $159.50

C10 FM-AM Tuner, rated highest by several independent testing organizations has become famous for its non-drifting FM circuits. Fly-wheel tuning and automatic-frequency control FM tuning enables quick and accurate station selection. Compensated pre-amplifier for variable-reluctance phono cartridge, cathode-follower output, bass and treble controls (provide either boost or cut) all use low-distortion triode tubes. Includes AM whistle filter, FM-AM antenna, 11 tubes plus rectifier. Size 13½ x 9½ x 7 in. high. Shipping weight, 16 lbs. Net. $131.50

C500 Ultra-Fidelity Amplifier—finest made at any price. Based on famous Williamson all-triode circuit with 20db. inverse feedback. 10 watts output at less than 1/10% har. or ½% I.M. distortion; 1 watt at 1/100% har. or 1/20% I.M. distortion. Freq. response: 5 to 100,000 cps. ±2 db. Hum: —90 db. Damping factor: 32:1. Matched push-pull KT66 output tubes provide lowest possible distortion. Size: 13½ x 8 x 7½ in. Shipping weight, 25 lbs. Net. $99.50

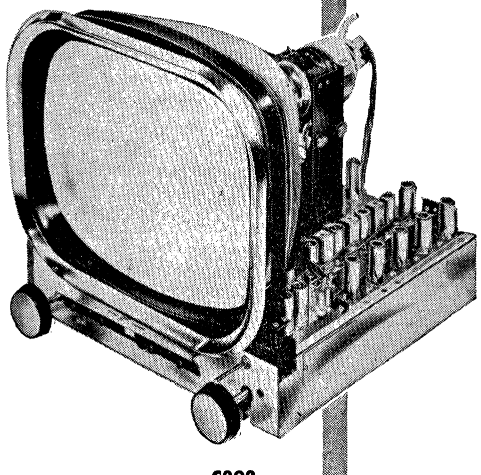
C400 High-Fidelity Amplifier—for less-costly applications. New convenient size fits many mounting arrangements. 10 watts output at less than 1% har. or 5% I.M. distortion. Freq. response: 10 to 30,000 cps. ±1 db. Hum: —70 db. Damping factor: 4:1. Tubes: 6J5, 6SN7GTA, push-pull 6V6GT's, 5Y3GT rect. Size: 14 x 4½ x 5¼ inches high. Shipping weight, 12 lbs. Net. $42.90

C202 High-Fidelity Television includes 5 watt (at less than 2% distortion) push-pull audio amplifier (response: 20-20,000 cps. ±1 db.) Standard-Coil turret tuner adaptable to UHF. Features keyed AGC, 16-kv. anode supply, 4 mc. video response, separate sound IF including cascade limiters and Foster-Seeley discriminator. Output connection for use with any of above units. 27 tubes plus 5 rect. Overall size including escutcheon and knobs with 20CP4, 21 x 23 x 21 in. high; with 24AP4 26 x 26 x 29 in. high. Shipping weight, 60 lbs. Net. $252.50

Accessory kits include escutcheon, mask, safety glass, and mounting accessories.

217R for 17BP4 picture tube. Net.	**$15.40**
221R for 21FP4 picture tube. Net.	**$21.40**
224M for 24AP4 picture tube (incl. polyethylene ring and sleeve). Net.	**$42.50**

C800, C10 and C202 are designed to work equally well with either of above amplifiers or in any combination.



C202 TELEVISION

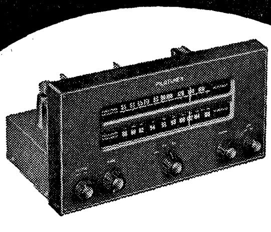
All chassis finished in polished chromium and shipped complete with all hardware and instructions necessary to complete a professional custom installation.

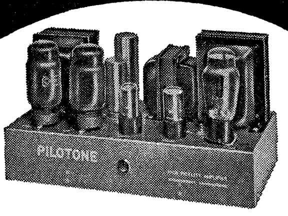
THE RADIO
craftsmen INC.

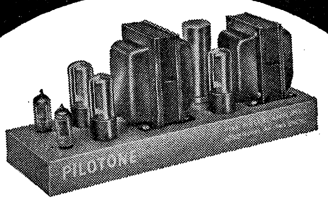
4401 N. Ravenswood Ave., Chicago 40, Ill.

HIGH FIDELITY EQUIPMENT
by
PILOT
"The Standard of Excellence"

PILOTUNER AF-824
$119.50


PILOTUNER AF-723
$79.95


PILOTONE AMPLIFIER AA-901
$99.50


PILOTONE AMPLIFIER AA-902
$46.95

PRE-AMPLIFIER PA-912
$49.95

THE AF 824 AM-FM PILOTUNER

The DeLuxe AM-FM Pilotuner engineered for peak AM-FM reception and versatile control of high fidelity phono reproduction. Unique Pilot features include automatic frequency control (AFC) for effortless, drift-free FM tuning. Front panel AFC disabling switch to facilitate tuning weak stations. Complete record equalization including LP, NAB, AES, and foreign characteristics. Cathode follower output allowing up to 100 feet of leads between tuner and audio amplifier without loss of fidelity. 19 db boost and cut on individual bass and treble controls. The hum level is 80 db below 1 volt, hum balancing adjustment provided. Audio Frequency response ±½ db 20 to 20, 000 cps. Audio Distortion .2% at 1 volt output. Slide rule dial with selectively illuminated and fly wheel tuning for maximum ease in station selection. Handsome bronze finish escutcheon readily removable for cabinet installation.
Tube Complement: 6BA6 RF Amplifier, 6U8 Oscillator, Mixer, 6BA6 1st IF Amplifier, 6AU6 2nd IF Amplifier, AM Detector, 6AL5 FM Ratio Detector, 6AB4 AFC, 12AX7 Phono Preamp, 12AT7 Tone Amplifier, 12AU7 Audio and Detector Output Cathode Followers, 6X5GT Power Rectifier.
Size: 14$\frac{5}{16}$" L x 7½" H x 8½" D behind panel; **Shipping Weight:** 15 pounds.

THE AF 723 AM-FM PILOTUNER

Pilot precision engineering at economy level. Automatic frequency control (AFC) for freedom from drift and ease of tuning. Removable bronze finish escutcheon for custom installations. Slide rule dial with selectively illuminated scales. Cathode follower output allows use of up to 100 feet of leads between tuner and audio amplifier. Power line antenna for FM and built-in ceramic powdered iron loop stick antenna for AM. Self-contained power supply for 117 volt 60 cycle operation. Crystal phono input. FM fully shielded against oscillator radiation. **Tube Complement:** 6BA6 RF Amplifier, 6U8 Oscillator, mixer, 6BA6 1st IF Amplifier, 6AU6 2nd IF Amplifier, AM Detector, 6AL5 FM Ratio Detector, 12AU7 Audio Amplifier, Cathode Follower, 6AB4 Automatic Frequency Control, 6X5GT Power Rectifier. **Overall Dimensions:** 14¼" wide & 7½" high x 8½" deep behind mounting panel. **Shipping Weight:** 15 pounds.

THE PILOTONE AMPLIFIER MODEL AA901

Utilizes full Williamson circuit for optimum high fidelity. **Features:** Underwriters Laboratory Approved. Fused for safety. Uses KT-66 tubes in the output stage to conform with original Williamson Amplifier design.
Power Output: 15 watts maximum. **Frequency Response:** ±0.1 db. 20 cps. to 20,000 cps. at 10 watts. **Total Harmonic Distortion:** Less than 0.1% at 10 watts output from 30 cps. to 15,000 cps. Less than 0.5% at 15 watts output from 30 cps. to 15,000 cps. **Intermodulation Distortion:** Less than 0.5% at 10 watts (50 and 7,000 cps.: 4/1). **Sensitivity:** 1 volt input for 10 watts output (input resistance 470,000 ohms). **Hum and Noise Level:** 90 db. below 10 watts. **Negative Feedback:** 20 db. **Speaker Output Impedances:** 8 and 16 ohms. **Output Internal Impedance:** 0.5 ohms at 8 ohm tap. **Phase Shift:** ±10 degrees, 20 to 20,000 cps. **Power Consumption:** 140 watts, 117 volts, 60 cycle AC. **Tube Complement:** 6SN7GT Audio Amplifier and Phase Inverter, 6SN7GT Pushpull Audio Amplifier, KT-66(2) Pushpull Power Output, 5U4G Power Rectifier. **Overall Dimensions:** 14¼" wide x 7½" deep x 7½" high. **Shipping Weight:** 25 pounds.

THE PILOTONE AMPLIFIER MODEL AA 902

Quality without compromise where space and economy are prime factors. Output transformer is made with interleaved winding for reduced leakage inductance. All input and output terminals are on top of chassis to facilitate mounting in minimum space. Underwriters Laboratory Approved.
Power Output: 10 watts maximum. **Frequency Response:** ±1 db. 15 cps. to 40,000 cps. at rated output (10 watts). **Total Harmonic Distortion:** Less than 1% at 10 watts from 30 cps. to 15,000 cps. Less than 0.1% at 1 watt from 30 cps. to 15,000 cps. **Intermodulation Distortion:** Less than 2% at rated output. (50 and 7,000 cps.: 4/1.) **Sensitivity:** 1 volt for rated output (10 watts). (Input resistance 470,000 ohms.) **Hum and Noise Level:** 90 db. below rated output. **Negative Feedback:** 15 db. **Phase Shift:** ±10 degrees, 20 to 20,000 cps. **Speaker Output Impedances:** 4, 8, and 16 ohms. **Output Internal Impedance:** 1 ohm at 8 ohm tap. **Power Consumption:** 65 watts, 117 volts 60 cycles. **Tube Complement:** 6C4 Voltage Amplifier, 12AU7 Amplifier and Phase Inverter, 6V6GT(2) Power Amplifiers, 5Y3GT Rectifier. **Overall Dimensions:** 14½" wide x 4⅝" deep x 5¼" high. **Shipping Weight:** 13 lbs.

THE PA 912 PILOTONE PREAMPLIFIER

Offers versatile and flexible control for all high fidelity amplifiers. Cathode Follower output permits remote operation up to 100 feet from audio amplifier.
Tube Complement: 12AX7 Phono Preamplifier and Microphone Preamplifier, 12AX7 Voltage Amplifier and Tone Amplifier, 12AT7 Voltage Amplifier and Cathode Follower, 6X4 Power Rectifier. **Power Supply:** 105-120 volts, 60 cycles, 10 watts. **Cabinet:** Attractive Hammertone bronze finish. **Overall Dimensions:** 11⅝" long x 5⅜" high x 5¾" deep. **Shipping Weight:** 6½ lbs.
Features: Self contained power supply for 117V 60 cycle AC line. Detachable front panel plate for convenient custom installation. Full base and treble controls with "flat" positions at center settings of control knobs. Selector switch to choose signal from any one of 4 playback **equalizers.** Separate microphone input control permits voice to be superimposed on radio, television or phonograph reproduction for special effects. This volume control has built-in switch, cutting off microphone completely when knob is turned to extreme left.

PA 912 SPECIFICATIONS (Continued)
Hum Level: 80 db. below 1 volt. **Output Impedance:** 500 ohms Cathode Follower. **Phono Equalizers:** LP, NAB, AES, FOREIGN.
Tone Control Range:

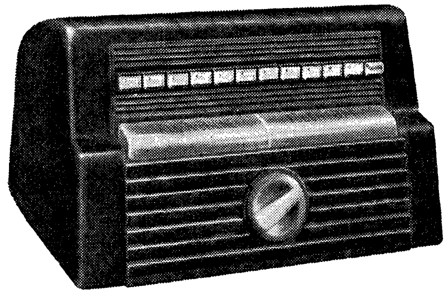
20 cps.	100 cps.	800 cps.	10,000 cps.	20,000 cps.
19 db. Boost	12 db. Boost	0 db. Boost	14 db. Boost	19 db. Boost
19 db. Cut	12 db. Cut	0 db. Cut	14 db. Cut	19 db. Cut

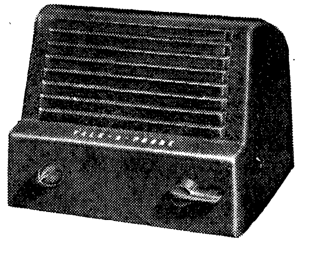
PILOT RADIO CORP., LONG ISLAND CITY 1, NEW YORK

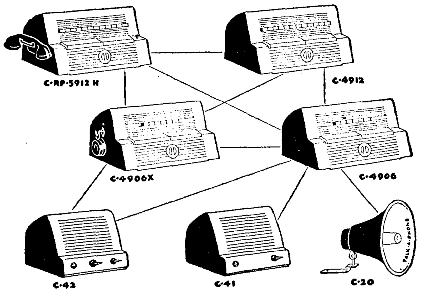
TALK-A-PHONE

INTER-COMMUNICATION SYSTEMS
FOR INDUSTRY • STORES • OFFICES • HOMES

Known wherever inter-communication is used as the World's finest system, TALK-A-PHONE is designed, developed, and precision-engineered by the leader in its field, with more than a quarter-century experience in electronics. TALK-A-PHONE stations are designed to withstand continuous day and night use; and are built to give you years of dependable service. The Armed Forces; Governmental Agencies; America's giant industrial firms, with highly complex and elaborate intercom needs depend on TALK-A-PHONE.







ONE MODEL DOES EVERYTHING

TALK-A-PHONE's patented, exclusive **"DYNASONIC"** features gives you one model that "Does Everything." The same unit can be used for every type of application, whether it be as all Master Stations, or a Master and Staff Stations, or a number of Masters inter-mixed with Staff Stations. The Master Stations may talk with any other Master in the system as well as with all Staff Stations. Six, twelve, twenty and thirty capacity Master Stations can be used within the same system. The Staff Station may answer Master Stations and originate calls to one, two or six Master Stations, depending on its capacity. Staff Stations converse with Master Stations only. Staff Stations are not connected to electrical outlet.

Through its **"DIFFERENTIAL STAFF"** feature, TALK-A-PHONE permits any Staff Station to be used as either "Private" or "Non-Private", and also permits some Staff Stations to be "Private" and others "Non-Private" in the same system. "Private" Staff Stations have complete privacy, and no other station can "listen-in". Persons at "Non-Private" Staff Stations can answer from a distance up to 50 feet from the unit without leaving work. All Master and Staff Stations are assured of privacy, except where by choice, Staff Stations are designated as "Non-Private", in which case the Master Station can "listen-in" on the "Non-Private" Staff Stations.

REDI-POWER . . . the simple means of having additional output without a separate power booster . . . has now been further developed to furnish a maximum of 20 watts. One or more **REDI-POWER** Masters can be combined with regular "Chief" Masters and Staff Stations in the same system. Use to call a number of stations simultaneously with sufficient volume, or to call very noisy locations singly. Has all the operational features of a regular "Chief" Master unit with the additional feature of ***built-in*** extra power for use when needed. Available in 12 and 20 station capacity.

BEAUTIFULLY STYLED: The Bakelite walnut cabinet of the "CHIEF FORTY-NINER" is unsurpassed in simplicity of design and appearance.

TRANSLUCENT LIGHTING further enhances its beauty as well as indicating whether the unit is "on" or "off."

MULTI-MAGIC SELECTOR: A patented exclusive TALK-A-PHONE feature. Twelve, twenty, thirty station capacity in SAME BEAUTIFUL CABINET with only TWELVE PUSH BUTTONS. Six-station Master has six push buttons.

HOLD-A-MATIC CONFERENCE CONTROL: TALK-A-PHONE "HOLD-A-MATIC" feature ALLOWS CONFERENCE between THREE or a GROUP OF STATIONS by merely selecting desired buttons.

UNI-TRANS: Gives you "DICTATION CONTROL."

VOICE RANGE POWER: The powerful, rugged amplifier gives you amazing, brilliant "voice range" power. Stations may be up to 3000 feet apart.

DEPENDABILITY: PROVED IN BILLIONS OF HOURS OF ACTUAL USE.

PRIVACY EARPHONE: Optional equipment on Master Stations. Provides listening privacy; and conversation with other Masters without continuous operation of touch bar.

CRADLE PHONE: Optional equipment to provide completely private conversations.

BUSY SIGNAL: Talk-A-Phone "Busy Signal" functions as a visual indication that the Master Station being called is busy. Can be ordered as optional feature with any "Chief" Master Station.

All Master Stations and C-46 Staff Stations — 12" W x 9" D x 7" H.

C-41 and C-42 Staff Stations — 8¼" W x 7½" D x 6¼" H.

C-4906 Push button Master for six-station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 13 lbs. **List Price ea. $89.50**

6212 CABLE — For inter-connecting C-4906. **List Price per foot 24c**

C-4912 Push button Master for twelve-station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 14 lbs. **List Price ea. $106.00**

C-RP-5912 REDI-POWER push button master for 12 Station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 18 lbs. **List Price ea. $160.00**

6224 CABLE — For inter-connecting C-4912; C-4920; C-RP-5912; and C-4930.........**Lise Price per foot 47c**

C-41 Staff Station for origination of call to one Master. Wt. 5 lbs.......................**List Price ea. $22.00**

C-42 Staff Station for origination of calls to two Masters. Wt. 5 lbs....................**List Price ea. $29.00**

C-46 Push button Staff Station for origination of calls to six Masters. Wt. 9 lbs. **List Price ea. $65.00**

6204 CABLE — For connecting C-41, C-42 and C-46 Staff Stations to Masters........**List Price per foot 10c**

Master Stations also available in capacities up to 60 Stations. For cradle phone models add $45.00 to list price of unit. For earphone models add $20.00 to list price of unit. For "Busy Signal" add $12.00 to list price of Master. All models available in Executive Gray Cabinets at slightly additional cost. Write for full details.

HOW TO DETERMINE CABLE REQUIREMENTS: To interconnect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., and total. For **C-4920** or **C-RP-5920** use two lengths of **6224** Cable, and for **C-4930** use three lengths of **6224** Cable. To connect **C-41** Staff Station, measure from Staff Station to the one Master to which Staff Station originates calls. To connect **C-42** and **C-46** Staff Stations, measure a separate length of cable from Staff Station to each Master Station to which Staff Station originates calls (for each **C-42** or **C-46**, follow same procedure).

Manufactured under exclusive **TALK-A-PHONE** *Patents. Licensed under U. S. Patents of A. T. & T. Co. and Western Electric Co. Inc.*

Prices and Specifications Subject to Change Without Notice
All prices 5% higher west of Rocky Mountains

CHICAGO ***TALK-A-PHONE CO.*** **ILLINOIS**

TALK-A-PHONE

INTER-COMMUNICATION SYSTEMS
FOR INDUSTRY • STORES • OFFICES • HOMES

Master Station

Sub-Station

TALK-A-PHONE reaches every department with the speed of sound. Quick as you can flick a finger—Talk and Listen. For the Home, Farm, Professional Man, Office and Business. Eliminate time consuming trips, by-pass congested switchboards.

TALK-A-PHONE offers "private" or "non-private" inter-communication, provides utmost flexibility with true economy. Designed for continuous day and night use.

TALK-A-PHONE operates at but a fraction of a cent a day . . . and it can be installed by anyone. All units are complete, ready for installation. Walnut bakelite cabinets. All models Underwriters Laboratories Approved.

MASTER SELECTIVE SYSTEM

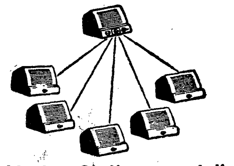
Designed for use where one Central Location is to converse with several outlying locations. Master Station, in Central Location, can be connected with one or more (up to 10) Sub-Stations. Start with a Master and only one or two Sub-Stations and then add later as necessary. Optional installation of system whereby user can connect Sub-Stations "privately" or "non-privately" and still originate calls to the Master. When system is "non-private," persons at Sub-Stations need operate no controls and can reply from a distance. When system is "private," Master unit cannot listen in on Sub-Stations; however, Sub-Stations can still answer and originate calls. Operates universally on 110-120 volts, AC-DC. Sturdy bakelite cabinets.

Model LM-5—Master Station for 5 Sub-Stations, complete with tubes and easy-to-follow instructions. Weight 7 lbs. .... **List $45.00**

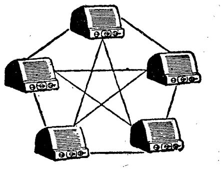
Model LM-10—Master Station for 10 Sub-Stations, complete with tubes and easy-to-follow instructions. Weight 7 lbs. .... **List $58.00**

Model LR-3 (Bakelite) — Model LR-3M (Metal) Sub-Station for use with LM-5 or LM-10 Masters. Weight 5 lbs. .... **List $15.95**

No. 5303—Cable for connecting LR-3 to LM-5 or LM-10 .... **List, per 10' $ .50**


Master Station can talk with any Sub-Station or with all at once. Enables replies at a distance from unit without operation of controls.

SUPER SELECTIVE SYSTEM


Consists of all Master Stations. Any Station can call any other Station. Several completely private 2-way conversations possible at same time.

Here is a versatile low cost intercom system offering extreme flexibility to meet many requirements in industry, offices. homes, etc. Consists entirely of Master Stations so that several separate two-way conversations may be carried on simultaneously without interference to each other. Any Station can call and carry on a conversation with any other Station in the system with absolute "privacy." Stations cannot listen in on each other, nor can a third unit listen in on a conversation of two others. Have a visitor in your office and your mind is at ease that no one can eavesdrop on your conversation.. Variable volume, adjustable at each unit, controls incoming voice. You can begin with two Masters and add later as needed. Operates universally on 110-120 volts, AC-DC Sturdy bakelite cabinets.

Model LS-5—Master Station for 5 Masters, complete with tubes and easy-to-follow instructions. Weight 7 lbs. .... **List $45.00**

Model LS-10—Master Station for 10 Masters, complete with tubes and easy-to-follow instructions. Weight 7 lbs. .... **List $58.00**

No. 5506—Cable for connecting LS-5 Masters. **List, per 10' $1.30**

No. 9911—Cable for connecting LS-10 Masters. **List, per 10' $2.40**

COMBINATION SYSTEM

Personnel can answer incoming calls as far as 40 feet from their unit. Master Stations may talk to each other and with any Sub-Station selectively. Master Stations can switch themselves "private" or "non-private" at will. You can begin with 2 Stations (at least one must be a Master) and add other units as required. Model CL-5 Master has a total inter-connecting capacity of 5 Stations, including Masters and Sub-Stations; while Model CL-10 Master has a total capacity of 10 Stations. Sub-Stations do not consume electric current. Operates universally on 110-120 volts, AC-DC. Sturdy bakelite cabinets.

Model CL-5—Combination Master for 5 Station use, complete with tubes and easy-to-follow instructions. Weight 7 lbs. .... **List $55.00**

Model CL-10—Combination Master for 10 Station use, complete with tubes, easy-to-follow instructions and Junction Box for greater ease-of-installation. Weight 8½ lbs. .... **List $74.00**

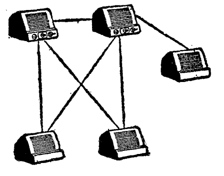
Model LR-2—Sub-Station for use with either of above Masters. Weight 5 lbs. .... **List $15.95**

Model LR-2M—Same operation as LR-2, but in brown metal cabinet suitable for wall or desk mounting. Weight 3 lbs. .... **List $15.95**

No. 6212—Cable for connecting CL-5 Masters. **List, per 10' $2.40**

No. 6224—Cable for connecting CL-10 Masters. **List, per 10' $4.70**

No. 6902—Cable for connecting LR-2 and LR-2M to CL-5 or CL-10 Masters .... **List, per 10' $ .35**


For the more flexible type of system requiring operation of more than one Master Station, along with Sub-Stations which need not originate calls.

COMPLETE TWO-STATION SYSTEM

A complete low cost intercom system providing voice communication between any two points. Hundreds of uses . . . connects bedroom with nursery, keeps parents tuned in on baby's every move. Ties in home with garage, farmhouse with barn, etc. . . . Ideal, too, for offices, stores, small factories. Sub-Station can be connected for "private" or "non-private" use. When connected "privately," Master unit cannot listen in on Sub-Station, but both can originate calls to each other. When connected "non-privately," Master can listen in on Sub-Station, and persons can reply to Master from as far as 40 feet from the Sub-Station. Adjustable volume. Sturdy bakelite cabinets. Operates universally on 110-120 volts, AC-DC.

Model LC-2—Two-Station System, complete with Master, Sub-Station, 50' Cable, and easy-to-follow instuctions. Wt. 11 lbs. .... **List $51.00**

No. 5303—Additional cable for greater distance .... **List, per 10' $ .50**

HOW TO DETERMINE CABLE REQUIREMENTS

For LM-5, LM-10 MASTER SELECTIVE Systems, measure from each Sub-Station to the Master and order total. For LS-5, LS-10 SUPER SELECTIVE Systems, measure from first Master to second Master only; from second Master to third Master only; etc., and total. Cable between first and last Masters not necessary. For CL-5, CL-10 COMBINATION Systems, Master cable, measure from Master to Master as above. Sub-Station cable, measure from each Sub-Station to nearest Master only.

All units above available with "privacy" Earphone attachment at $20.00 per station list. Also in unusually attractive Pearl Gray cabinets at slightly additional cost.

Prices and Specifications Subject to Change Without Notice
All prices 5% higher west of Rocky Mountains

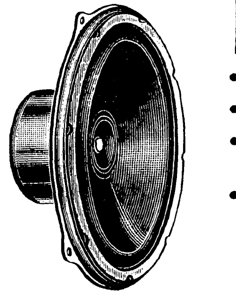
CHICAGO *TALK-A-PHONE CO.* ILLINOIS

RCA ELECTRONIC COMPONENTS

SPEAKERS — PICKUPS

QUALITY ENGINEERED TO INSURE DEPENDABLE PERFORMANCE

PM & EM LOUDSPEAKERS



RCA Duo-Cone 15" Speaker

- Mountings Designed to RTMA Standards.
- Dustproof, Rust-Resistant.
- Universal Transformer Mounting Bracket on All 4", 4" x 6", and 5" PM's.
- Rugged Mechanical Construction With Welded Housing Assembly.
- Moisture-Resistant Voice-Coil Suspension Assures High Efficiency and Dependability.
- Speaker Mounting Bracket Enclosed With All 4", 4" x 6", and 5" PM's.
- Rim Gaskets Supplied with all 12" Speakers.

RCA SPEAKER CHARACTERISTICS

Permanent-Magnet Types

SIZE	TYPE	RESONANT FREQUENCY (cps)	MAGNET WEIGHT (oz.)	VOICE-COIL IMPEDANCE	MAXIMUM POWER HANDL'G CAP. (WATTS)	SUGGST'D LIST PRICE
2" x 3"	214S1	230-340	1.0	11.8 ohms at 1000 cycles	0.125	$ 4.75
3"	216S1	250-300	1.0	3.2 ohms at 400 cycles	2	3.70
4" (shallow pot type)	304S2	175-225	1.0	3.2 ohms at 400 cycles	3	4.00
4"	404S2	170-225	1.47	3.2 ohms at 400 cycles	3	4.35
4" x 6"	246S2	150-200	0.68	3.2 ohms at 400 cycles	3	4.20
4" x 6"	446S2	150-200	1.47	3.2 ohms at 400 cycles	3	4.75
5"	205S2	150-200	0.68	3.2 ohms at 400 cycles	3	4.00
5"	405S2	150-200	1.47	3.2 ohms at 400 cycles	3	4.60
5¼"	217S1	135-165	1.0	3.2 ohms at 400 cycles	4	4.00
5" x 7"	257S1	120-140	1.47	3.2 ohms at 400 cycles	6	5.75
6"	306S1	100-140	1.47	3.2 ohms at 400 cycles	4	6.25
6" x 9"	269S1	95-120	2.4	3.2 ohms at 400 cycles	8	10.40
8"	208S2	75-95	2.15	3.2 ohms at 400 cycles	8	7.50
8"	208S4	75-95	2.15	6-8 ohms at 400 cycles	8	7.50
10"	410S1	75-125	6.8	6-8 ohms at 400 cycles	10	13.25
12"	112S1	65-90	2.15	3.2 ohms at 400 cycles	12	10.50
12"	412S6	65-90	6.8	3.2 ohms at 400 cycles	12	13.75
12"	412S7	65-90	6.8	6-8 ohms at 400 cycles	12	15.00
15"	515S2	40-55	32	16 ohms at 400 cycles	25	82.50

Field-Coil Types

SIZE	TYPE	RESONANT FREQUENCY (cps)	FIELD RESISTANCE (ohms)	FIELD CURRENT	VOICE COIL IMPEDANCE	MAXIMUM POWER HANDL'G CAP. (WATTS)	SUGGST'D LIST PRICE
4" x 6"	746S1	150-200	450	65 ma.	3.2 ohms at 400 cycles	3	$ 6.00
5"	705S1	150-200	450	65 ma.	3.2 ohms at 400 cycles	3	6.00
6" x 9"	869S1	95-120	6	1 amp.	3.2 ohms at 400 cycles	8	8.25
12"	712S2	70-85	1000	70 ma.	3.2 ohms at 400 cycles	12	14.00

Transformers for Use with 15" Speaker (515S2)

TYPE	DESCRIPTION	PRIMARY IMPEDANCE	SECONDARY IMPEDANCE	POWER-HANDLING CAPABILITY	SUGGST'D LIST PRICE
213T1	Output Transformer (Line-to-Voice Coil)	250, 500, 1000, 1500, 2000 ohms	16 ohms	25 watts	$ 9.95
214T1	Output Transformer (Tube-to-Voice Coil)	4500, 7000, 10000, 14000 ohms	16 ohms	25 watts	10.95

CRYSTAL PICKUPS & STYLI

CRYSTAL PICK-UPS

Stock No.	Suggested List Price
9890	$ 7.00
14820	11.00
31050	4.20
31156	4.75
34307	4.20
37158	4.75
38598	7.25
38610	5.55
39686	4.75
39919	7.25
70338	6.75
70338A	7.00

Stock No.	Suggested List Price
70339	$ 7.00
72551	7.75
74067	6.00
74625	6.00
74984	7.40
75044	10.75
75475	9.75
75575	6.00
75976	6.75
76257	6.75
76297	7.40

STYLI

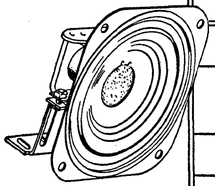
Stock No.	Suggested List Price
39564	$ 1.40
70915	3.00
72345	3.00
74068	1.60
74818	1.60
74985	1.80
75045	1.50
75046	1.50
75496	1.50
75497	1.50
75770	2.50
76374	1.45

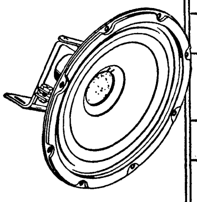
Note: Stock #72898 Adapter Kit (package quantity 10) List Price $.25 each can be used with Stock #70338 Crystal to replace Stock #71173 used in Models 55U and 55AU.

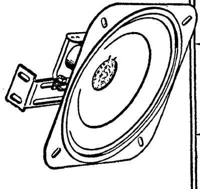
SPEAKERS

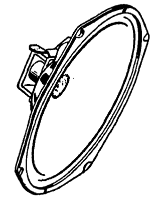
A Speaker For Every Application!

HIGH-FIDELITY ★ LONG LIFE


4″ Speaker

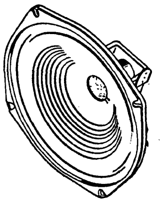

5″ Round Speaker

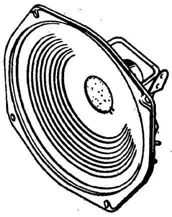

5¼″ Speaker

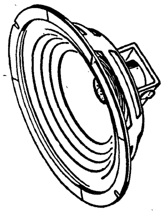

6″ x 9″ Speaker

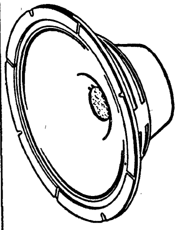
CATALOG NUMBER	Size (Inches)	Magnet Weight (Ozs.)	Rating Power (Watts)	V.C. Imp. (Ohms)	Response (Cycles)	List Price*
HIGH FIDELITY SPEAKERS						
1201A	12	14.5	25	8.0	50 to 13,000	$33.95
1203A	12	9.0	25	8.0	50 to 13,000	23.60
PUBLIC ADDRESS SPEAKERS						
818D	8	6.8	12	8.0	80 to 10,000	14.40
1018D	10	6.8	12	8.0	60 to 7,000	18.10
1218D	12	6.8	12	8.0	60 to 8,000	19.55
DRIVE-IN THEATRE SPEAKERS						
400C22	4	1.3	4	3.2	160 to 7,000	4.00
525C18	5¼	1.3	4	3.2	120 to 7,000	4.30
GENERAL REPLACEMENT SPEAKERS						
400D	4	1.3	4	3.2	140 to 7,000	4.60
402D	4	1.0	4	3.2	140 to 7,000	4.25
403D	4	.68	4	3.2	140 to 7,000	4.00
500D	5	1.3	4	3.2	125 to 8,000	4.80
503D	5	.68	4	3.2	125 to 8,000	4.20
525D	5¼	1.3	4	3.2	120 to 7,000	5.00
526D	5¼	1.0	4	3.2	120 to 7,000	4.65
527D	5¼	.68	4	3.2	120 to 7,000	4.60
625D	6½	1.3	4	3.2	110 to 9,000	5.20
626D	6½	1.0	4	3.2	110 to 9,000	5.00
650D	6½	2.98	8	3.2	100 to 10,000	6.10
703D	6x9	1.47	8	3.2	70 to 13,000	8.65
800D	8	2.98	8	3.2	80 to 11,000	10.30
810D	8	6.8	12	3.2	80 to 10,000	13.80
1000D	10	6.8	12	3.2	60 to 7,000	17.55
1001D	10	14.5	25	8.0	60 to 8,000	28.45
1003D	10	9.0	25	8.0	60 to 8,000	21.30
1012D	10	3.16	12	3.2	60 to 7,000	11.80
1200D	12	6.8	12	3.2	60 to 8,000	19.00
1212D	12	3.16	12	3.2	60 to 8,000	12.95

**Prices subject to change without notice.*


6½″ Speaker


8″ Speaker


10″ Speaker


12″ Speaker

WRITE FOR COMPLETE INFORMATION: General Electric Company, Section 393, Electronics Park, Syracuse, New York.

GENERAL ELECTRIC

speakers, cabinets multicellular horns

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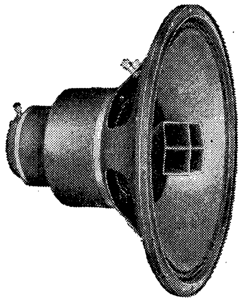
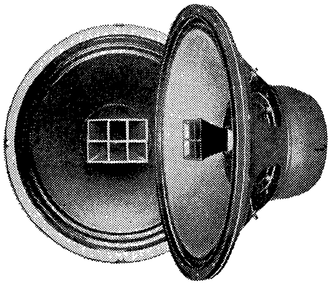


604C DUPLEX SPEAKER

The 604C Duplex is the finest single speaker on the market. Factory guaranteed frequency range from 30-22,000 cycles. Handles 50 watts peak power. The perfect speaker for music systems, highest quality paging, and public address. 90° horizontal distribution, 30° vertical. Network impedance, 16 ohms. Dimensions: 15 3/16″ diam., 11⅛″ deep. Weight with network, 40 pounds.

Net Price including Network: $156.00



601A and 602A DUPLEX SPEAKERS

Highest quality for the home. Completely independent high and low frequency speakers in a single frame. Factory guaranteed range of 30-22,000 cycles.

601A—POWER: 20 watts cont.; 35 watts peak. IMPEDANCE: 8 ohms. DIM.: 12¼″ diam., 5⅝″ deep. WT. with network: 17 lbs.

Net Price with network: $99.00

602A—POWER: 20 watts count.; 35 watts peak. IMPEDANCE: 8 ohms. DIM.: 15 3/16″ diam., 7¼″ deep. WT. with network: 25 lbs.

Net Price with network: $114.00

CABINETS

Engineered for high quality sound reproduction. Cabinets are made of heavy plywood. All joints are screwed and glued. Interiors padded to eliminate spurious rattles and reflections. Code letters show speaker size: A-15″; B-12″; C-8″.

605-A—Furniture Finish Walnut or Mahogany. Height 35¾″, Width 31″, Depth 17⅛″.
Net Price: $165.00

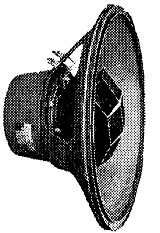
606-A, B—Corner cabinet. Height 36½″, Width 36″, Depth 23½″.

Walnut or Mahogany	**Net Price: $122.00**
Blonde	**Net Price: $128.00**

612-A, B—Hammertone Gray. Height 29½″, Width 25½″, Depth 17¾″.
Net Price $56.00

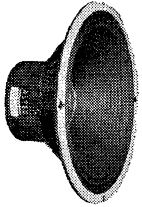
614-A, B, C—Portable, Hammertone Gray. Height 24¾″, Width 18¾″, Depth 14¼″.
Net Price: $47.50

618-B, C—Portable, Slanting Front, Hammertone Gray. Height 22″, Width 17″, Depth 13¼″.
Net Price: $36.00



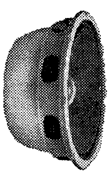
603B MULTICELL DIA-CONE SPEAKER

Offers high efficiency, broad distribution, wide frequency response, freedom from distortion. Dia-Cone principle provides extended frequency response. Multicellular horn loads high frequency diaphragm and distributes sound over 60° hor., 40° vert.: 15″ cone insures full bass reproduction and 25 watt power-handling capacity. Voice coil: 8 ohms. Weight: 18 lbs. Diameter: 15 3/16″. Depth 7″. **Net Price: $75.00**



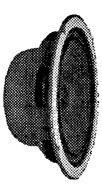
600B DIA-CONE SPEAKER

Efficiency, small space requirements, light weight and superior quality of reproduction, make the 600B an ideal unit in the lower priced speaker field. Utilizes Dia-Cone principle. Similar in construction to the 603B. V. C. 8 ohms. Power rating: 20 watts. Weight: 12 lbs. Diameter: 12¼″. Depth: 5¼″. **Net Price: $46.50**



400B DIA-CONE SPEAKER

Designed for use where the benefits of large-speaker performance cannot be utilized because of space and weight limitations. An extremely efficient, high quality unit, it is ideal for use in portable devices, airplanes, busses, etc. V. C. imp. 8 ohms. Power rating: 12 watts. Weight: 4 lbs. Diameter: 8¼″. Depth: 3⅝″. **Net Price: $22.50**

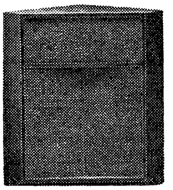


755A SPEAKER*

Exceptional frequency response, small size and moderate power handling capacity provide an ideal combination for low level distribution systems where multiple speakers are used. Its small size makes wall installations practical and easy. 70-13,000 cps. Impedance, 4 ohms. 8 watts. Dimensions: 8⅝″ dia. x 3⅛″ deep. Weight: 4¾ lbs.

List Price: $26.25

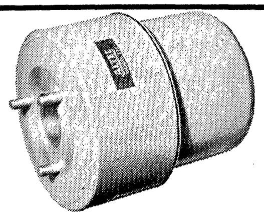
*Distributed by Graybar Electric Co.



820A CORNER SPEAKER SYSTEM

The Concert Grand of the loudspeaker world—full two-way system built into an attractive mahogany corner cabinet—includes newly designed direct radiating horn in reflex cabinet, an 802B H.F. unit mounted on H-808 multicellular horn, two 803A L.F. units and an N-800D (800 cycle) network. Provides unsurpassed quality over the entire audio range for home music installations, small auditoriums, audition rooms, etc. Impedance 12 ohms—30 watts. Dimensions: height 47⅜″; maximum width 42½″; maximum depth 29″. Wt. 230 lbs. **Net Price: $525.00**

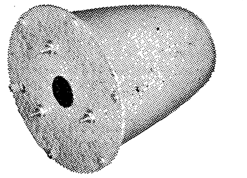
821A frame only—Net Price: $99.00



290C DRIVER UNIT

For use with Altec multicellular horns. When attached to H-805 8 cell horn will produce sound level of 127 db at 5 feet with an input of 150 Watts warble frequency of 700-1300 cycles. Diaphragm and voice coil unit field replaceable. 300-8000 cycles. Has provision for mounting 15045-70 volt matching transformer under weather proof hood. Continuous power above 300 cycles 125 Watts, peak 150 Watts. When used as all-range speaker must attenuate frequencies below 300 cps. Impedance 4 ohms. Dimensions: 5⅞″ diameter, 7½″ high, weight 19 lbs.

Net Price without transformer $188.00



730A DRIVER UNIT

For use with Altec 30A and 40A horns. Has provision for mounting 15037X-70 Volt matching transformer under weather proof hood. 200-7,000 cycles. Diaphragm and voice coil assembly field replaceable. Power 40 Watts continuous, 80 Watts peak. When used as all-range speaker must attenuate frequencies below 200 cps. Impedance 8 ohms. Dimensions: 5⅞″ diameter, 7″ high.

Net Price without transformer $36.00

ADJUST-A-CONE
QUAM
A radio sounds only as good as it's loudspeaker

SPEAKERS

These speakers are engineered and manufactured solely for the replacement field for use in home receivers, auto sets, television sets and intercommunication systems. RTMA standard dimensions. Fully dust-proofed. Baked aluminum enamel finish. RTMA service guarantee. QUAM UNIVERSAL MOUNTING BRACKET comes with all 3½" to 6½" speakers and may be attached to any two of the FOUR mounting holes in the U shaped pot. Voice coil impedance of speakers listed below is 3.2 ohms ±10%.

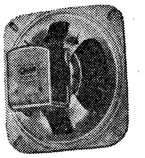


Fig. A

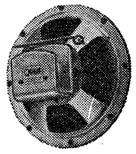


Fig. B

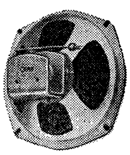


Fig. C

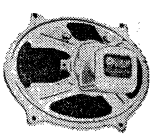


Fig. D

ED — *Electro Dynamic Speakers*

PM — *Permanent Magnet Speakers*

Replacement Speakers

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	DIMENSIONS IN INCHES			SHIP. WT., LBS.	LIST PRICE
						C	D	E		
ED	3E45	3½"	A	450 Ohms	2.5	1-1/4	1-7/8	1-1/4	3/4	$ 4.40
PM	3A07*	3½"	A	.68 oz. Alnico 5	2.5	3/4	1-19/32	1-3/16	1/2	4.00
ED	4E45	4"	A	450 Ohms	3	1-1/4	2	1-7/16	1	4.40
	4E10	4"	A	1000 Ohms	3	1-1/4	2	1-7/16	1	4.40
	4E27	4"	A	2700 Ohms	3	1-1/4	2	1-7/16	1	4.40
PM	4A07*	4"	A	.68 oz. Alnico 5	3	3/4	1-23/32	1-5/16	1/2	4.00
	4A1	4"	A	1.0 oz. Alnico 5	3	1	2-3/16	1-9/16	3/4	4.25
	4A15	4"	A	1.47 oz. Alnico 5	3	1	2-3/16	1-9/16	3/4	4.70
ED	5EV6	5"	C	6 Volt	3.5	1-1/4	2-1/8	1-19/32	1-1/4	4.60
	5E45	5"	C	450 Ohms	3.5	1-1/4	2-1/8	1-19/32	1	4.60
	5E10	5"	C	1000 Ohms	3.5	1-1/4	2-1/8	1-19/32	1	4.60
	5E18	5"	C	1800 Ohms	3.5	1-1/4	2-1/8	1-19/32	1-1/4	4.60
	5E27	5"	C	2700 Ohms	3.5	1-1/4	2-1/8	1-19/32	1	4.60
PM	5A07*	5"	C	.68 oz. Alnico 5	3.5	3/4	1-7/8	1-7/16	3/4	4.20
	5A1	5"	C	1.0 oz. Alnico 5	3.5	1	2-5/16	1-11/16	1	4.45
	5A15	5"	C	1.47 oz. Alnico 5	3.5	1	2-5/16	1-11/16	1	4.85
ED	52EV6	5¼"	A	6 Volt	4	1-1/4	2-1/2	1-13/16	1-1/2	5.00
	52E10	5¼"	A	1000 Ohms	4	1-1/4	2-1/2	1-13/16	1-1/4	5.00
PM	52A1	5¼"	A	1.0 oz. Alnico 5	4	1	2-23/64	1-3/4	1	4.65
	52A21	5¼"	A	2.15 oz. Alnico 5	4	1-1/8	2-5/8	1-7/8	1-1/4	5.70
ED	6EV6	6½"	C	6 Volt	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40
	6EHV6	6½"	C	6 Volt	6	1-31/64	2-25/32	2-1/16	2	6.10
	6E10	6½"	C	1000 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40
	6E18	6½"	C	1800 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40
	6E25	6½"	C	2500 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40
	6E45	6½"	C	450 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40
PM	6A1	6½"	C	1.0 oz. Alnico 5	5	1	2-5/8	2	1	4.80
	6A15	6½"	C	1.47 oz. Alnico 5	5	1	2-5/8	2	1	5.20
	6A21	6½"	C	2.15 oz. Alnico 5	5	1-1/8	2-7/8	2-1/8	1-1/4	5.85
	6A31	6½"	C	3.16 oz. Alnico 5	6	1-3/8	3-11/64	2-9/32	1-3/4	6.75
ED	7EV6	7"	F	6 Volt	7	1-9/32	2-3/4	—	2	6.75
	7EV6A†	7"	F	6 Volt	7	1-9/32	2-3/4	—	2	6.75
PM	7A21*	7"	F	2.15 oz. Alnico 5	6	7/8	2-21/32	—	1	7.25
	7A31	7"	F	3.16 oz. Alnico 5	9	1-1/4	3-1/32	—	2	8.50
ED	8EV6	8"	C	6 Volt	7	1-1/4	3-9/32	—	1-3/4	6.75
	8E10	8"	C	1000 Ohms	7	1-1/4	3-9/32	—	1-1/2	6.75
	8EH10	8"	C	1000 Ohms	9	1-11/32	3-13/16	—	2-1/4	7.75
	8E18	8"	C	1800 Ohms	7	1-1/4	3-9/32	—	1-3/4	6.75
	8EH18	8"	C	1800 Ohms	9	1-11/32	3-13/16	—	2-1/4	7.75
	8E25	8"	C	2500 Ohms	7	1-1/4	3-9/32	—	1-1/2	6.75
	8EH25	8"	C	2500 Ohms	9	1-11/32	3-13/16	—	2-1/4	7.75
PM	8A21	8"	C	2.15 oz. Alnico 5	7	1-1/8	3-13/32	—	1-1/2	7.20
	8A31	8"	C	3.16 oz. Alnico 5	9	1-3/8	3-21/32	—	2-1/4	8.50
ED	10E60	10"	B	600 Ohms	10	1-3/4	5-1/16	—	4	10.50
	10E10	10"	B	1000 Ohms	10	1-3/4	5-1/16	—	4	10.50
	10E15	10"	B	1500 Ohms	10	1-3/4	5-1/16	—	4	10.50
	10E25	10"	B	2500 Ohms	10	1-3/4	5-1/16	—	4	10.50
PM	10A31	10"	B	3.16 oz. Alnico 5	9	1-3/8	4-1/2	—	2-3/4	10.50
	10A4A	10"	B	4.64 oz. Alnico 5	10	1-3/8	4-1/2	—	3-1/4	11.70
	10A6A	10"	B	6.8 oz. Alnico 5	12	1-7/16	4-5/8	—	3-3/4	13.60
ED	12E60	12"	B	600 Ohms	12	1-3/4	5-5/8	—	5	12.65
	12E10	12"	B	1000 Ohms	12	1-3/4	5-5/8	—	5	12.65
	12E15	12"	B	1500 Ohms	12	1-3/4	5-5/8	—	5	12.65
	12E25	12"	B	2500 Ohms	12	1-3/4	5-5/8	—	5	12.65
PM	12A31	12"	B	3.16 oz. Alnico 5	10	1-1/4	4-19/32	—	3-3/4	11.35
	12A4A	12"	B	4.64 oz. Alnico 5	12	1-3/8	5-1/8	—	4	12.65
	12A6A	12"	B	6.8 oz. Alnico 5	14	1-7/16	5-1/4	—	4-1/2	14.50

*Very shallow construction.   †Rotated Pot

3½" Speakers — without Adjust-a-Cone suspension.

QUAM ADJUST-A-CONE SUSPENSION

While in other speakers, the spider is cemented in place with no means of accurate final adjustment, the QUAM method permits precision centering of the voice coil in a final production operation.

QUAM U SHAPED COIL POT

A patented feature used throughout the QUAM replacement line, provides an unbroken flux path of sufficient cross section to carry the full energy of the magnetic field.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

ADJUST-A-CONE
QUAM
A radio sounds only as good as its loudspeaker

SPEAKERS

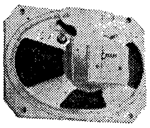


Fig. E

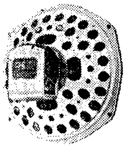


Fig. F

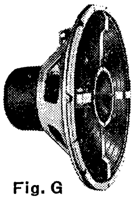


Fig. G

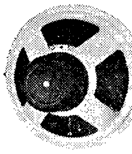


Fig. H

QUAM speakers have been produced under the same management since 1923 and are used by leading set and sound manufacturers throughout the world. Only QUAM speakers use the Adjust-a-Cone feature and the U shaped coil pot. Fully protected by patents—their use insures customer satisfaction.

Replacement Speakers (Cont'd)

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	DIMENSIONS IN INCHES C	DIMENSIONS IN INCHES D	DIMENSIONS IN INCHES E	SHIP. WT., LBS.	LIST PRICE
ED	46E45	4"x6"	E	450 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	$ 5.30
	46E10	4"x6"	E	1000 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	5.30
	46E15	4"x6"	E	1500 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	5.30
PM	46A07*	4"x6"	E	.68 oz. Alnico 5	3.5	3/4	1-15/16	1-27/64	3/4	4.45
	46A1	4"x6"	E	1.0 oz. Alnico 5	3.5	1	2-1/4	1-9/16	1	4.75
	46A15	4"x6"	E	1.47 oz. Alnico 5	3.5	1	2-1/4	1-9/16	1	5.15
ED	57E45	5"x7"	E	450 Ohms	5	1-1/4	3-1/64	2-11/32	1-1/2	6.00
	57E10	5"x7"	E	1000 Ohms	5	1-1/4	3-1/64	2-11/32	1-1/2	6.00
PM	57A1	5"x7"	E	1.0 oz. Alnico 5	5	1	2-57/64	2-9/32	1	5.40
	57A15	5"x7"	E	1.47 oz. Alnico 5	5	1	2-57/64	2-9/32	1	5.80
	57A21	5"x7"	E	2.15 oz. Alnico 5	5	1-1/8	3-9/64	2-13/32	1-1/4	6.45
ED	69EV6	6"x9"	D	6 Volt	8	1	3-13/16	—	2	7.50
	69E10	6"x9"	D	1000 Ohms	8	1	3-13/16	—	2	7.50
PM	69A2*	6"x9"	D	1.4 oz. Alnico 5	8	7/8	2-15/16	—	1-1/2	7.50
	69A3	6"x9"	D	3.2 oz. Alnico 5	10	1-1/4	3-5/16	—	1-3/4	8.95

*Very shallow construction.

Voice coil impedance of above speakers is 3.2 ohms ±10%

High-Fidelity Adjust-a-Cone Speakers

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
PM	8A10X	8"	C	10 oz. Alnico 5	10	1	3-3/4	—	3-1/4	$18.60
	10A10X	10"	H	10 oz. Alnico 5	12	1	5-5/8	—	3-3/4	24.00
	12A10X	12"	H	10 oz. Alnico 5	15	1	6-1/8	—	4-3/4	26.00

Co-axial Speakers

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
COAX	12A6CO	12"	G	6.8 oz. Alnico 5	14.0	2-1/4	6-11/16	—	10	$30.00
	15A10CO	15"	G	10 oz. Alnico 5	20.0	2-5/16	8-3/8	—	15	47.50

Voice coil impedance of above speakers is 6-8 ohms.

Tweeters

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
	3A15T	3½"	—	1.47 oz. Alnico 5	10	3-1/2	2-1/16	3-1/2	3/4	$ 5.75
	5A15T	5"	—	1.47 oz. Alnico 5	10	2-5/8	5	—	1	6.50

Voice coil impedance of above speakers is 16 ohms.

Public Address Speakers

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
PM	8A4	8"	B	4.64 oz. Alnico 5	12	1-3/8	3-3/4	—	2-3/4	$10.20
	8A6	8"	B	6.8 oz. Alnico 5	12	1-7/16	3-7/8	—	3-1/4	12.10
PM	10A4	10"	B	4.64 oz. Alnico 5	14	1-3/8	4-1/2	—	3-1/4	11.70
	10A6	10"	B	6.8 oz. Alnico 5	14	1-7/16	4-5/8	—	3-1/2	13.60
	10A10	10"	B	10 oz. Alnico 5	20	1-3/8	4-21/64	—	3-1/2	18.00
PM	12A4	12"	B	4.64 oz. Alnico 5	15	1-3/8	5-1/8	—	4	12.65
	12A6	12"	B	6.8 oz. Alnico 5	15	1-7/16	5-1/4	—	4-3/4	14.50
	12A10	12"	B	10 oz. Alnico 5	25	1-3/8	4-15/16	—	4-3/4	19.00

Voice coil impedance of above speakers is 6-8 ohms.

Intercom Speakers

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
PM	3A07Z45	3½"		.68 oz. Alnico 5	2.5	3/4	1-19/32	1-3/16	1/2	$ 4.25
	4A07Z45	4"		.68 oz. Alnico 5	3.0	3/4	1-23/32	1-5/16	1/2	4.25
	4A1Z45	4"		1.00 oz. Alnico 5	3.0	1	2-3/16	1-9/16	3/4	4.50
	5A07Z45	5"		.68 oz. Alnico 5	3.5	3/4	1-7/8	1-7/16	3/4	4.45
	5A1Z45	5"		1.00 oz. Alnico 5	3.5	1	2-5/16	1-11/16	1	4.70

Television Speakers

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
ED	5E62	5"	C	62 Ohms	3.5	1-1/4	2-7/16	1-19/32	1-1/4	$ 4.60
	5E95	5"	C	95 Ohms	3.5	1-1/4	2-7/16	1-19/32	1-1/4	4.60
	46E62	4"x6"	E	62 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	5.30
	46E95	4"x6"	E	95 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	5.30
	6E62	6½"	C	62 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40
	6E95	6½"	C	95 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40

Voice coil impedance of above speakers is 3.2 ohms

Outdoor Theatre Speakers

QUAM weatherproofed speakers are designed for outdoor application. A time tested moisture resistant cone treatment and a special finish over air gap surfaces plus the rugged QUAM construction assure long, trouble free life under the most adverse conditions. Quantity quotations on request. All types and sizes are available.

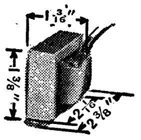
TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
PM	4A1 OT	4"		1.0 oz. Alnico 5	3	1	2-3/16	1-9/16	3/4	$ 4.25
	5A15 OT	5"		1.47 oz. Alnico 5	3.5	1	2-5/16	1-11/16	1	4.85
	6A15 OT	6½"		1.47 oz. Alnico 5	5	1	2-5/8	2	1	5.20

ADJUST-A-CONE QUAM
A radio sounds only as good as it's loudspeaker

TRU-MATCH OUTPUT TRANSFORMERS

Designed by speaker engineers to give a true impedance match for a wide range undistorted sound.

Spcifications of each unit include a full stack of best electrical steel, the maximum amount of copper, highest quality insulation and adhesives. Underwriters approved lead wire and complete vacuum impregnation. Individually packed in attractive boxes using the widely known QUAM descriptive part numbering system.



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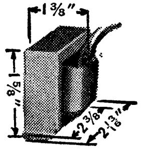

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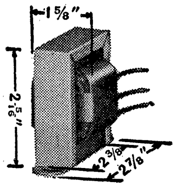


¾"x¾"

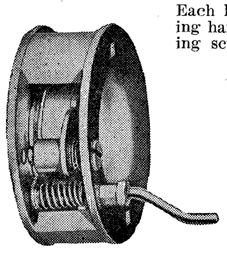
Catalog Number	Primary Impedance (Ohms)	Secondary Load (Ohms)	Core Size (Inches)	Power Rating (Watts)	Primary M.A. (Max.)	Shipping Weight (Oz.)	List Price
TA20	2000	3.2	½ x ½	5	60	6	$1.50
TA50	5000	3.2	½ x ½	5	40	6	1.75
TA75	7500	3.2	½ x ½	5	35	6	1.75
TA100	10000	3.2	½ x ½	5	30	6	1.75
TA100T	10000 CT_1	3.2	½ x ½	5	30	6	2.00
TA160	16000	3.2	½ x ½	5	10	6	1.75
TA250	25000	3.2	½ x ½	5	10	6	1.75
TAL	$LINE_2$	3.2	½ x ½	5	—	6	2.50
TC20	2000	3.2	⅝ x ⅝	8	60	10	$2.25
TC50	5000	3.2	⅝ x ⅝	8	50	10	2.25
TC70	7000	3.2	⅝ x ⅝	8	40	10	2.25
TC85	8500	3.2	⅝ x ⅝	8	40	10	2.25
TC100T	10000 CT_1	3.2	⅝ x ⅝	8	40	10	2.50
TC140T	14000 CT_1	3.2	⅝ x ⅝	8	40	10	2.50
TC160	16000	3.2	⅝ x ⅝	8	15	10	2.25
TC250	25000	3.2	⅝ x ⅝	8	40	10	2.25
TCL	$LINE_2$	6-8	⅝ x ⅝	8	—	10	3.00
TCU	$UNIV_3$	3.2	⅝ x ⅝	8	50	10	3.50
TD25	2500	3.2	¾ x ¾	12	70	17	$3.00
TD50T	5000 CT_1	3.2	¾ x ¾	18	150	17	3.25
TD70	7000	3.2	¾ x ¾	12	50	17	3.00
TD100T	10000 CT_1	3.2	¾ x ¾	12	50	17	3.25
TD140T	14000 CT_1	3.2	¾ x ¾	12	50	17	3.25
TDL	$LINE_2$	6-8	¾ x ¾	15	—	17	3.75
TDU	$UNIV_3$	3.2	¾ x ¾	12	50	17	4.00

1. TA10T, TC10T, TC14T, TD5T, TD10T & TD14T have center tapped primaries for push-pull output use. Plate to plate impedance is given.

2. TAL, TCL & TDL are for speaker to line use and have primary taps at 500, 1000, 1500 & 2000 ohms.

3. TCU & TDU are universal type output transformers and provide matching impedances of 2500, 4000, 7500, 10000 & 16000 ohms, also 7500 ohm CT, 10000 ohm CT & 16000 ohm CT.

QUAM FOCALIZER UNIT KITS



Each kit consists of a Focalizer* unit, a centering handle, an aluminum mounting plate, mounting screws and nuts and instruction sheet.

- **Provides sharper focus of the Television picture.**
- **Unaffected by temperature and voltage fluctuations.**
- **Easy to install.**
- **Ideal for replacement or rebuilding Television sets for larger tubes.**
- **Used as original equipment in many leading sets.**

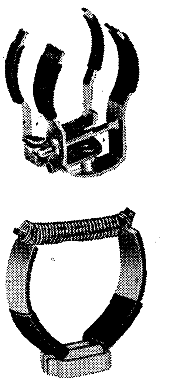
Dimensions: O.D. 3⅜". Thickness: 1¼". Weight: 1½ lbs.

Q F 1—for use with most picture tubes anode voltages up to 12 KV. **List Price $4.75**

Q F 2—for use with picture tubes operating at anode voltages of 12 KV and up. **List Price $5.95**

Q F 3—for use with picture tubes operating at anode voltages of 15 KV to 18 KV. **List Prices $5.95**

QUAM ION TRAPS



Quam ion traps can be used on any picture tube where a trap was used as original equipment. IT1 and IT2 Traps are equipped with wing nut and binding screw. IT3 and IT4 are spring type. Individually packed with instruction sheet.

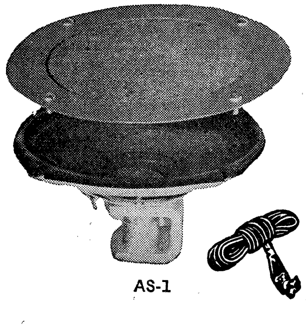
I T 1—Double field for tubes up to 10" in diameter. Field strength of 38 Gauss. Generally used with straight gun tubes. **List Price $1.50**

I T 2—Double field for tubes from 10" in diameter up. Field strength of 46 Gauss. Generally used with straight gun tubes .... **List Price $1.50**

I T 3—Single field tubes requiring field strength of 35 to 45 gauss. Generally used with tubes having a bent gun. **List Price $1.00**

I T 4—Single field for tubes requiring field strength of 45 to 55 gauss. Generally used with tubes having a bent gun. **List Price $1.00**

QUAM REAR SEAT AUTO SPEAKERS



AS-1

Catalogue #AS-1 6½" PM

Economy model: Kit includes Quam 6½" PM Adjust-A-Cone speaker with capacity to handle full output of any single-ended auto set; 1.47 oz. Alnico V Magnet; rugged 3-position switch for dash mounting, ample cable for any installation, flocked grill screen, baffle plate, miscellaneous hardware, and installation instructions.

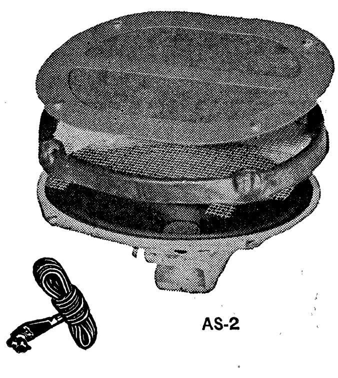
Shipping wt. 2¾ lbs. .... **List Price $9.95**

Catalogue #AS-2 6"x9" PM

Deluxe model: Kit includes Quam heavy duty 6" x 9" PM Adjust-A-Cone speaker with ample capacity to handle full output of the most powerful auto set; 2.15 oz. Alnico V Magnet; rugged 3-position switch for dash mounting, sufficient cable for any installation, flocked grill screen, baffle plate, sponge rubber gasket for easy and trouble-free installation, miscellaneous hardware, and installation instructions.

Shipping wt. 4 lbs.. **List Price $13.95**

Chrome plated grille for AS-2............................ **List Price 2.15**



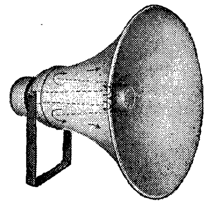
AS-2

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

SINCE 1922 **RACON** ACOUSTICAL EXCELLENCE

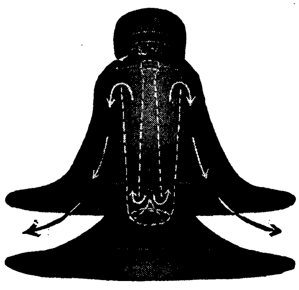
RE-ENTRANT TRUMPETS
RADIAL HORNS and SPEAKERS
PM DRIVER UNITS

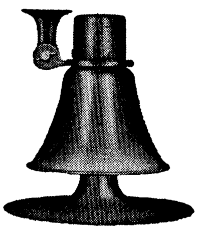
Re-Entrant Trumpets, Radial Horns and Speakers


RE-35 RE-50 RE-60

RACON re-entrant horns and speakers are designed to deliver highly concentrated sound with great efficiency over long distances. This is due to true exponential design throughout and the elimination of all vibratory members and sound dissipating devices. The base and inside tone arms are husky aluminum castings and bell is a heavy gauge aluminum spinning. The RE-35, RE-50 and RE-60 incorporate reflectors made of patented **RACON ACOUSTIC MATERIAL** to prevent resonant effects. All models are supplied with "U"-bracket mounting (ratchet swivel type on request). Finish is in weatherproof hard baked gray hammertone. RE-60 & RE-50 recommended for maximum low frequency music reproduction. RE-35 and RE-25 best suited for incidental music and high speech intelligibility.

The SR-35R and SR-60R are weatherproof radial re-entrant horns designed to project sound over an area of 360 degrees. The centre reflectors are of patented **RACON ACOUSTIC MATERIAL** and the deflectors are aluminum spinnings covered with this same non-vibratory material. Standard "U" bracket supplied. Thread size is 1⅜"-18, permitting the use of any driver unit listed below. 1$\frac{7}{16}$"-16 thread on request. The SR-60R is ideal for church tower sound installations and the SR-35R for incidental music and speech.


SR-35R SR-60R

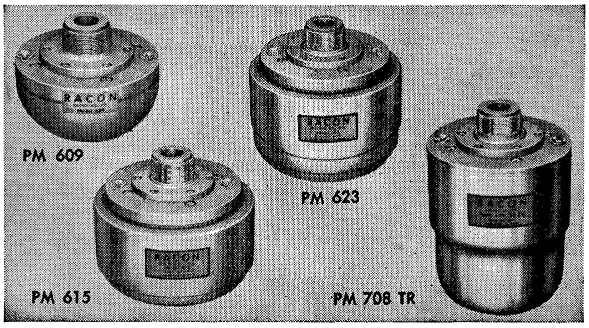

SR-15R SR-12R

The SR-15R and SR-12R are rated at 20 and 10 watts respectively and are supplied complete with built-in 15 ohm* driver units. These models are intended primarily for speech in paging and "talk back" systems and are completely weatherproof. Supplied with cast swivel ratchet and wall bracket.

Model No.	Acoustic Length	Bell Diam.	Over-all Length	Cut-off (cycles)	Distrib. Angle	Ship. Wt. lb.	Code	List Price
**RE-60	6′	26″	28″	112	45°	21	REMOL	$70.00
**RE-50	4½′	25¼″	23½″	140	50°	19	REMOY	52.50
**RE-35	3½′	19″	16¼″	175	55°	12½	REMOX	35.50
**RE-25	2½′	13½″	11″	225	60°	9	REMOD	27.50
**SR-60R	6½′	36″	34½″	115	360°	47	RADAL	90.00
**SR-35R	4′	17″	16″	175	360°	16	RADAK	47.50
SR-15R	20″	9″	12″	350	360°	7	RADAS	39.75
SR-12R	15″	7″	9″	450	360°	4	RADAB	31.00

* 8 or 45 ohms on request at same price. 4 ohm 1.00 list additional.
** horn only

Waterproof Permanent Magnet Driver Units



The driver unit is the most important single element in a successful public address system. In these four new driver units, primary emphasis is on: high continuous power handling capacity with ample reserve for overload peaks up to 100%, maximum conversion efficiency, response ranges suitable for every type sound system, and waterproof construction.

These four units employ Alnico V magnets and Armco magnetic iron throughout. All soft steel parts are doubly plated to prevent corrosion. An automatic electromagnetic cut-out switch is used in the magnetizing process, assuring maximum flux density in the gap and high uniformity. Units are individually measured for flux density. Each unit is tested with special equipment for power handling capacity as well as a 350-volt ground test.

Long life plastic diaphragms and formers are supplied. Voice coil leads are non-fatiguing beryllium copper, insuring lifetime performance. All units are completely waterproof, yet permit ready replacement of diaphragm where needed.

NEW SUPER X UNITS USING LATEST ALNICO V MAGNETS

Model No.	Weight Net	Weight Ship.	Flux Density per sq. cm.	Frequency Range	Imp.	Diam.	Ht.	Thread	Capacity (watts) Peak	Capacity (watts) Oper.	Code	List Price
PM-623	6 lbs.	6.5 lbs.	15,500 gausses	80-7000	15	5″	5″	1⅜″-18	65	35	RETIX	$52.50
PM-615	6.5 lbs.	7 lbs.	13,500 gausses	90-7000	15	5″	4½″	1⅜″-18	60	30	RETIN	38.50
PM-609	4 lbs.	4.5 lbs.	12,000 gausses	90-7000	15	4″	3¼″	1⅜″-18	60	30	RETEG	29.00
PM-708TR*	6 lbs.	6.5 lbs.	11,000 gausses	90-7000	15	4½″	5½″	1⅜″-18	50	25	RETOY	42.75

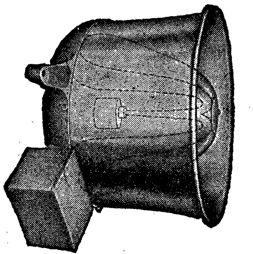
***NOTE:** Contains built-in 25-watt line matching transformer, primary tapped at 500, 1000, 1500, 2000; secondary; secondary 8 and 15 ohms.

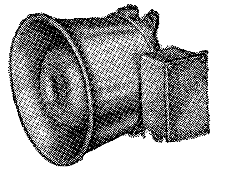
SINCE 1922 **RACON** ACOUSTICAL EXCELLENCE

DOUBLE RE-ENTRANT MARINE SPEAKERS
RE-ENTRANT PAGING SPEAKERS
CONE SPEAKER ENCLOSURES

DOUBLE RE-ENTRANT MARINE SPEAKERS

The regular (model MR-30M), midget (model MG-21J), and miniature (model MN-15B) marine speakers are designed primarily to meet the vigorous sound systems requirements aboard ship.
The driver unit and connecting leads are all enclosed, resulting in a completely waterproof speaker. Heavy aluminum spinnings are used throughout and back base is a husky, non-corrosive aluminum casting. A baked chromatic undercoat plus an outside lacquer finish is assurance of lasting service under severe conditions of humidity and temperature. Designed for three legged flush rear mounting. All models provided with cast aluminum transformer housing. Model MN-15B supplied with "U" bracket; "U" bracket for other models on request at slight additional cost.


MR-30M

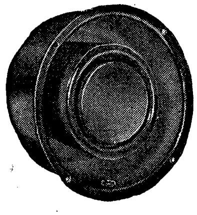

MG-21J

Model No.	Frequency Range	Distribution Angle	Bell Diam.	Capacity (watts) Oper.	Capacity (watts) Peak	Imp.	No. Driver Units	Over-all Length	Ship. Wt. lb.	Code	List Price
MR-30-M	250-6000	50°	14″	30	60	15	1	10″	29¼	REDIX	$175.00
MR-32M	250-6000	50°	14″	60	120	8	2	18½″	43	REDIT	235.00
MG-21J	350-5000	55°	9½″	25	50	15	1	6¾″	13¾	RASOM	63.50
MG-21-B	350-6000	55°	9½″	20	35	15*	1	6¾″	9¼	RASOB	59.00
MN-15B	450-6000	65°	6¼″	20	35	15*	1	4¾″	6¼	REDUP	47.25
MN-15C	(same as MN-15B, but less "U" bracket)									REDUT	45.00
MN-15D	(same as MN-15B, but less "U" bracket and less transformer box)									REDUZ	41.25

* 8 or 45 ohms on request at same price. Four ohm 1.00 list additional.

RE-ENTRANT PAGING SPEAKERS

RE-15 RE-12


DW-9R

These weatherproof re-entrant paging speakers are capable of high intelligibility in locations where high noise levels prevail. Construction is non-vibratory throughout and consists of heavy aluminum spinnings and castings. Voice coils are wound with aluminum wire to provide a high degree of efficiency when these speakers are also used as microphones in "talk-back" systems. Ideal for replacing conventional cone speakers. RE-12 and RE-15 provided with heavy cast aluminum ratchet bracket. DW-9R is supplied with flange for flush mounting.

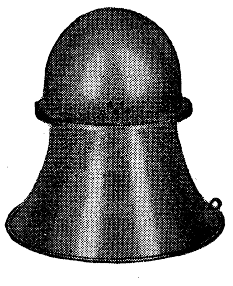
Model No.	Frequency Range	Distribution Angle	Operating Capacity	Imp.	Bell Diam.	Over-all Length	Ship. Wt. lb.	Code	List Price
RE-15	350-8500	60°	20 watts	*15 ohms	9″	9¾″	6	REMAC	$36.00
RE-12	450-10,000	65°	10 watts	*15 ohms	7″	6½″	3¼	REMAB	27.80
DW-9R	750-10,000	70°	8 watts	*15 ohms	5″	2½″	2	REDOX	32.50

* 8 or 45 ohms on request at same price. Four ohm 1.00 list additional.

CONE SPEAKER ENCLOSURES

These housings are strongly constructed, practically abuse-proof. Back spinnings are steel and incorporate a watertight overlap seal which eliminates rain leakage at the juncture of front bell and rear housing. Two offset mounting hooks are provided for easy installation. Aluminum Bell; Steel back acoustically damped—cone opening protected by wire screening and silk gauze.

Model No.	CP-12AW	CP-8AW
Cone Size	12″	8″
Bell Diameter	17″	15″
Length	20″	15″
Shipping Wt.	8 lbs.	6 lbs.
Code	ROBOT	RIFLE
List Price	$21.00	$17.00

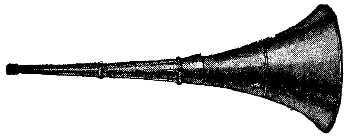

CP-120AW
CP-8AW

RACON ACOUSTICAL EXCELLENCE

SINCE 1922

STRAIGHT EXPONENTIAL TRUMPETS • COBRA-TYPE HORN
CELLULAR HORN TWEETERS • CROSSOVER NETWORKS

STRAIGHT EXPONENTIAL TRUMPETS

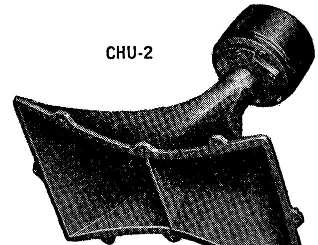


Output from any straight trumpet is approximately 2 DB higher than corresponding re-entrant type because it lacks the attenuation inherent in all re-entrant horns. **"Stormproof"** Trumpets are made of non-vibratory **RACON ACOUSTIC CLOTH.** Weather-treated for indoor or outdoor use. **"All Aluminum"** Trumpets are made of heavy gauge aluminum spinnings with rolled beaded edge and cast aluminum throat sections. **"Unbreakable"** Trumpets are made of heavy gauge aluminum spinnings reinforced and damped with Patented **RACON ACOUSTIC MATERIAL.** Large sizes are useful for church chime systems, C-D systems, airports and stadiums, parks, playgrounds, music festivals, for both speech and music. Smaller sizes for railroad and bus terminals, waiting rooms, factories.

Model No.	Air Column (length)	Units Required	Cut-off (cycles)	Distribution Angle	Bell Diam.	Material	Ship. Weight	Code	List Price
*ST-415A	6′	1	115	45°	30″	Unbreakable	37 lb.	REGON	$135.00
**ST-414A	6′	1	115	45°	30″	Stormproof	39 lb.	RIDER	100.00
*ST-417A	6′	1	115	45°	30″	All Aluminum	35 lb.	RHINO	99.00
**ST-412A	4½′	1	145	50°	25″	Stormproof	34 lb.	RACEY	76.00
*ST-413A	4½′	1	145	50°	25″	All Aluminum	27 lb.	RIANT	73.50
**ST-411A	3½′	1	195	50°	22″	Stormproof	28 lb.	RENEW	52.50
**ST-251A	2′	1	250	55°	12″	Stormproof	6 lb.	RISAT	18.35
**ST-251B	2′	1	250	55°	12″	All Aluminum	5 lb.	RIMAD	17.50

* Delivery, 4 weeks. ** Delivery, 1-2 weeks.
NOTE: Models with 2, 4 and 8 unit throats available. Prices on request.

CAST ALUMINUM HORN TWEETERS

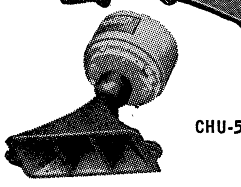


CHU-2

Response is essentially flat to 12,000 cycles, with excellent usable output to 15,000 cycles. Horn design permits wide angle distribution. Designed for a 1000 and 1500 cycle crossover to assure optimum cone response. These models must be used with a cross-over network. The networks listed below are recommended and when employed, the CHU-5 and CHU-2 may be used with amplifiers having an output rating to 25-30 watts.

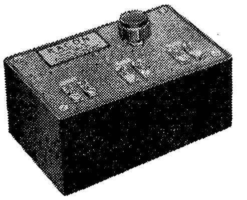
NOTE: Instructions are packed with each tweeter, providing an easy method of home building a professional type 1000-cycle crossover network.

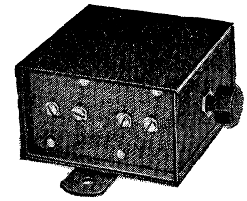
Model No.	Impedance	Freq. Range	Dispersion Angle Horiz.	Dispersion Angle Vert.	Material	Ship. Wt.	Code	List Price
CHU-2	15 Ohms	750-15000	100°	50°	Alum. Cast.	6 lbs.	RALUX	$40.25
CHU-5	15 Ohms	1000-15000	80°	40°	Alum. Cast.	4½ lbs.	RALUM	32.00



CHU-5

CON-30
CON-20





CON-15R
CON-17R

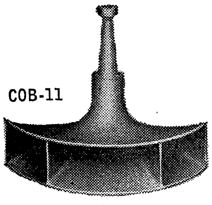
CROSSOVER NETWORKS

The models CON-20 and CON-15R have crossovers of 1000 cycles. The CON-30 and CON-17R cross over at 1500 cycles. The CON-20 and CON-30 are R-C-L Networks. The CON-15R and CON-17R are of the high-pass filter type. Cone speaker impedances may vary from 4-15 ohms. Both models include HF level controls.

Model No.	CON-15R	CON-17R	CON-20	CON-30
Description	Var. Audio Taper R-C Network	Var. Audio Taper R-C Network	Var. Audio Taper R-C-L Network	Var. Audio Taper R-C-L Network
Ship. Wt.	2½ lbs.	2½ lbs.	3½ lbs.	3½ lbs.
Code	RAFIR	RAFIT	RADUX	RADUT
List Price	$11.80	$11.80	$24.00	$24.00

COBRA TYPE HORN

COB-11

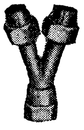


The RACON COB-11 "cobra" type horn is designed for public address systems requiring high clarity reproduction with maximum concentration of sound in a horizontal plane. It is of "straight" horn design and exponentially flared for maximum transfer of energy. The low cutoff of 250 cycles results in crisp, highly articulate quality without a trace of boominess. The horn consists of a heavy two-piece non-vibratory aluminum casting and is provided with a two-section serrated mounting bracket. Finish is baked gray hammertone over a zinc chromate primer.

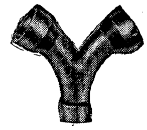
Cut-off	250 cycles
Dispersion	120° H, 40° V
***Thread**	1⅜″—18
Dimensions	17⅝″ H, 22¼″ W, 13⅜″ D
Net Wt.	12 lbs.
Shipping Wt.	17 lbs.
Code	ROBON
List Price	$75.00

* 1-7/16″-16 on request at same price.

ACCESSORIES

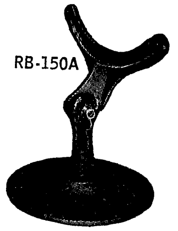


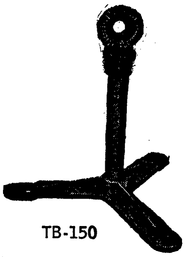
DC-302A



DC-2U

RB-150A





TB-150

Steel Swivel Brackets for Cone Projectors

For wall or truck mounting. Has tooth ratchet swivel and pipe connection to give 180° angular movement. Can be used on any Racon Cone Projector.

Model No.	Description	Cone Size	Code	List Price
RB-150	Without Base	8″ or 12″	RAMIS	$4.50
RB-150A	With Base	8″ or 12″	RAMIT	6.50

Bronze Swivel Bracket for Re-entrant Trumpets

A cast bronze three-legged base and ratchet connection. May be used when specifying ratchet mounted trumpets. Over-all height 9″.

Model No.	Code	List Price
TB-150	RAMUG	$6.50

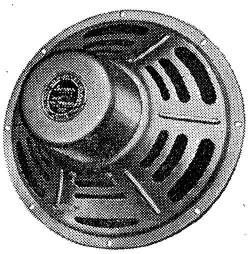
Multiple Horn and Unit Connectors

Model No.	Description	Material	Code	List
DC-302A	2 St. Trumpet Connector 75° Dispersion Angle	Bronze	RADIX	$18.35
DC-2U	Dual Unit Connector for all standard thread horns to permit the use of two driver units on one horn	Bronze	RADAX	15.75

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Jensen

Standard Series speakers, although moderately priced, are exceptionally good in performance and are highly recommended for use in radio and television receivers, recorders, public address equipment, intercommunication systems and similar applications. Models listed on this page have been completely redesigned in every detail. Magnetic structures have been designed to achieve maximum gap energy, cones selected for uniformity of response, and all speakers are completely dust-proof. Models listed are standard fidelity response only. Standard Series speakers are finished in aluminum.

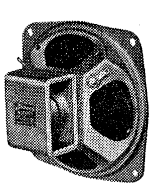


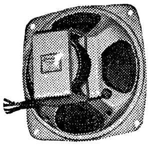
ALNICO 5 PM MODELS

These PM speakers embody the highly efficient Alnico 5 magnets which insure long life and highest efficiency. Because Alnico 5 magnets are many times more powerful, ounce for ounce, than their predecessors, speakers so equipped offer obvious advantages: lighter weight, for savings in shipping costs; and smaller size, for savings in space in cabinet installations.

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Openg.	VOICE COIL Diam., In.	Imped., Ohms	Power Watts	*Transformer Size	List Price
12"	P12-S	ST-102	1.5	12⅛	6 1/16	10½	1	6-8	10.0	⅞x⅞"	$18.85
	P12-T	ST-101	1.1	12⅛	6 1/16	10½	1	6-8	9.0	¾x¾"	14.50
10"	P10-S	ST-120	1.5	10⅛	5¼	8¾	1	6-8	9.0	¾x¾"	16.30
	P10-T	ST-119	1.1	10⅛	5¼	8¾	1	6-8	8.0	¾x¾"	12.75
6x9"	P69-S	ST-812	1.5	6⅜x9¼	3 11/16	5⅜x8⅛	1	3-4	8.0	¾x¾"§	14.00
	P69-T	ST-811	1.1	6⅜x9¼	3 11/16	5⅜x8⅛	1	3-4	7.5	¾x¾"§	11.85
	P69-V	ST-810	.51	6⅜x9¼	3¼	5⅜x8⅛	¾	3-4	5.0	⅝x⅝"§	9.75
8"	P8-S	ST-104	1.5	8⅛	3 13/16	6¾	1	6-8	8.0	¾x¾"	13.70
	P8-T	ST-117	1.1	8⅛	3⅝	6¾	¾	3-4	7.0	¾x¾"	11.50
	P8-U	ST-116	.74	8⅛	3½	6¾	¾	3-4	6.0	⅝x⅝"	10.20
	P8-V	ST-115	.51	8⅛	3⅜	6¾	¾	3-4	5.0	⅝x⅝"	8.70
7"	P7-T	ST-807	1.1	7⅝	3¼	6	¾	3-4	6.5	¾x¾"§	9.85
	P7-U	ST-806	.74	7⅝	3¼	6	¾	3-4	5.5	⅝x⅝"§	8.65
6"	P6-T	ST-112	1.1	6 11/16	3 3/16	5¼	¾	3-4	6.0	⅝x⅝"	9.65
	P6-V	ST-110	.51	6 11/16	2 15/16	5¼	9/16	3-4	4.0	⅝x⅝"	7.40
	P6-W	ST-109	.36	6 11/16	2⅞	5¼	9/16	3-4	3.5	½x½"	6.40
	P6-X	ST-108	.25	6 11/16	2¾	5¼	9/16	3-4	3.0	½x½"	5.70
5¼"	P525-V	ST-803	.51	5¼	2½	4½	9/16	3-4	4.0	⅝x⅝"§	6.65
5"	P5-V	ST-107	.51	5	2 7/16	4	9/16	3-4	3.5	½x½"	6.70
	P5-X	ST-105	.25	5	2¼	4	9/16	3-4	2.5	½x½"	5.30
	P5-X	ST-740	.25	5	2¼	4	9/16	45-50	2.5	½x½"	5.55
4"	P4-X	ST-113	.25	5	2	3½	9/16	3-4	2.0	½x½"	5.00
	P4-X	ST-739	.25	5	2	3½	9/16	45-50	2.0	½x½"	5.40

*Size recommended. †Millions of ergs. §No transformer mounting facilities.



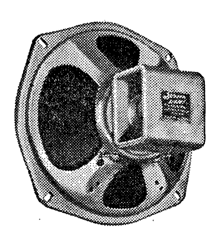


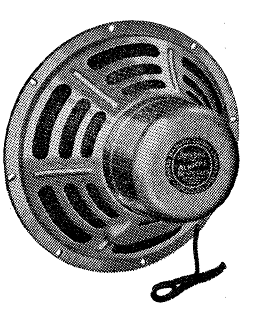
FIELD COIL MODELS

Like their PM counterparts, Standard Series field coil models have been completely redesigned and are equipped with hum neutralizing coils. Finish is aluminum. Models listed on this page are standard fidelity.

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	FIELD Resist., Ohms	Power Watts	*Transformer Size	List Price
12"	F12-S	ST-744	1.5	12⅛	6 7/16	10½	1	3-4	10.0	1000	8.5	⅞x⅞"	$18.52
	F12-S	ST-173	1.5	12⅛	6 7/16	10½	1	3-4	10.0	1500	8.5	⅞x⅞"	18.46
10"	F10-S	ST-745	1.5	10⅛	5⅝	8¾	1	3-4	9.0	750	8.5	¾x¾"	15.53
	F10-S	ST-175	1.5	10⅛	5⅝	8¾	1	3-4	9.0	1500	8.5	¾x¾"	16.04
6x9"	F69-T	ST-814	1.1	6⅜x9¼	4 1/16	5⅜x8⅛	1	3-4	7.5	4	6-volt	¾x¾"§	11.73
	F69-U	ST-813	.74	6⅜x9¼	3½	5⅜x8⅛	¾	3-4	6.0	4	6-volt	⅝x⅝"§	10.06
8"	F8-S	ST-746	1.5	8⅛	4 9/16	6¾	1	3-4	8.0	750	8.5	¾x¾"	13.46
	F8-S	ST-177	1.5	8⅛	4 9/16	6¾	1	3-4	8.0	1500	8.5	¾x¾"	14.03
	F8-T	ST-179	1.1	8⅛	4⅛	6¾	¾	3-4	7.0	1000	7.0	¾x¾"	11.21
	F8-T	ST-180	1.1	8⅛	4⅛	6¾	¾	3-4	7.0	‡1800	7.0	¾x¾"	11.33
	F8-W	ST-736	.36	8⅛	3⅜	6¾	¾	3-4	4.0	1000	5.0	⅝x⅝"	8.40
	F8-W	ST-737	.36	8⅛	3⅜	6¾	¾	3-4	4.0	‡1800	5.0	⅝x⅝"	8.86
7"	F7-T	ST-809	1.1	7⅝	3 3/16	6	1	3-4	7.0	4	6-volt	¾x¾"§	10.93
	F7-U	ST-808	.74	7⅝	3¼	6	¾	3-4	5.5	4	6-volt	⅝x⅝"§	9.43
6"	F6-U	ST-186	.74	6 11/16	3⅜	5¼	¾	3-4	5.0	1000	6.0	⅝x⅝"	8.57
	F6-U	ST-187	.74	6 11/16	3⅜	5¼	¾	3-4	5.0	‡1800	6.0	⅝x⅝"	8.57
	F6-X	ST-189	.25	6 11/16	2 15/16	5¼	9/16	3-4	3.0	450	4.5	½x½"	7.02
	F6-X	ST-166	.25	6 11/16	2 15/16	5¼	9/16	3-4	3.0	1000	4.5	½x½"	7.13
	F6-X	ST-168	.25	6 11/16	2 15/16	5¼	9/16	3-4	3.0	‡1800	4.5	½x½"	7.48
5"	F5-X	ST-194	.25	5	2 7/16	4	9/16	3-4	2.5	450	4.5	½x½"	6.79
	F5-X	ST-165	.25	5	2 7/16	4	9/16	3-4	2.5	1000	4.5	½x½"	6.84
	F5-X	ST-167	.25	5	2 7/16	4	9/16	3-4	2.5	‡1800	4.5	½x½"	7.13
4"	F4-X	ST-196	.25	5	2¼	3½	9/16	3-4	2.0	450	4.5	½x½"	6.50
	F4-X	ST-164	.25	5	2¼	3½	9/16	3-4	2.0	1000	4.5	½x½"	6.56
	F4-X	ST-198	.25	5	2¼	3½	9/16	3-4	2.0	2800	4.5	½x½"	6.84

*Size recommended. †Millions of ergs. ‡Tapped at 300 ohms. 1500-ohm section can be used at full power excitation. Field resistance for full excitation will rise approximately 20%.
§No transformer mounting facilities.





VOLUME AND RANGE CONTROLS

These "L Pad" type volume controls are highly satisfactory for use in voice coil circuits. Complete with pointer knob and escutcheons.

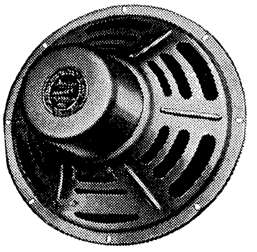
ST-276—Level Control, 6-8 ohms, 5 watts	$2.50
ST-411—Level Control, 6-8 ohms, 15 watts	3.30
ST-606—Range Control, 16 ohms, 15 watts	3.80
ST-760—Level Control, 3-4 ohms, 5 watts	2.75
ST-761—Level Control, 500-600 ohms, 15 watts	4.60

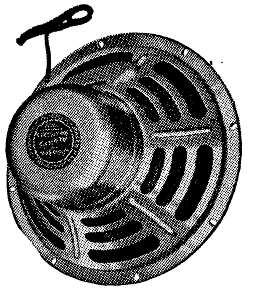
Jensen

Concert SPEAKERS

JENSEN Concert Series speakers have long been known and acclaimed by the trade and by users for their **plus** performance. From the earliest days, Concert speakers have been recognized by such familiar designations as A12-PM, PM8-C and others and have been known as the finest speakers anywhere available for heavy-duty applications. Now, in greatly improved design, they are highly recommended for any purpose where exceptional power handling ability and high-quality performance are essential. Standard fidelity models are listed on this page.

Concert speakers are attractively finished in blue-gray lacquer and completely dustproofed. Field coil models are equipped with hum neutralizing coils.





ALNICO 5 PM MODELS

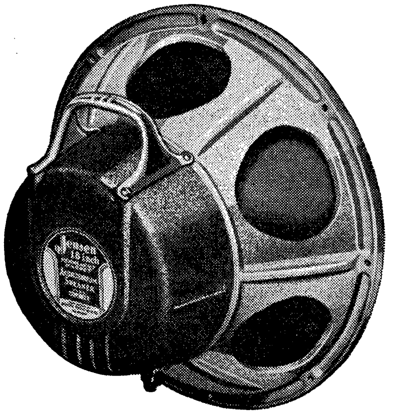
Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Power Watts	*Transformer Size	List Price
15″	P15-N	ST-654	6.6	15⅛	8	13¼	1½	8	20.0	1x1″	$70.50
	P15-P	ST-655	4.6	15⅛	8	13¼	1½	8	18.0	1x1″	54.75
	P15-Q	ST-678	3.2	15⅛	8	13¼	1¼	8	16.0	⅞x⅞″	44.25
12″	P12-N	ST-656	6.6	12 1/16	7	10½	1½	8	18.0	1x1″	56.50
	P12-P	ST-657	4.6	12⅛	6 7/16	10½	1½	8	16.0	⅞x⅞″	39.20
	P12-Q	ST-673	3.2	12⅛	6 1/16	10½	1¼	8	14.0	⅞x⅞″	32.90
	P12-R	ST-103	2.2	12⅛	6 1/16	10½	1	6-8	12.0	⅞x⅞″	21.20
10″	P10-Q	ST-676	3.2	10⅛	5¼	8¾	1¼	8	12.0	⅞x⅞″	29.00
	P10-R	ST-121	2.2	10⅛	5¼	8¾	1	6-8	10.0	⅞x⅞″	18.70
8″	P8-Q	ST-677	3.2	8⅛	4 15/16	6¾	1¼	8	10.0	⅞x⅞″	29.45
	P8-R	ST-169	2.2	8⅛	4	6¾	1	6-8	9.0	¾x¾″	16.40

Model P8-Q weatherproof design. No transformer mounting facilities.

FIELD COIL MODELS

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	FIELD Resist., Ohms	Power Watts	*Transformer Size	List Price
15″	F15-N	ST-661	6.6	15⅛	8⅜	12⅛	1½	8	20.0	4000	17.5	1x1″	$55.66
	F15-N	ST-662	6.6	15⅛	8⅜	12⅛	1½	8	20.0	5300	17.5	1x1″	55.66
	F15-Q	ST-663	3.2	15⅛	8⅜	12⅛	1¼	8	16.0	1000	12.0	⅞x⅞″	36.05
12″	F12-N	ST-666	6.6	12 1/16	7 13/16	10½	1½	8	18.0	4000	17.5	1x1″	46.17
	F12-N	ST-667	6.6	12 1/16	7 13/16	10½	1½	8	18.0	5300	17.5	1x1″	46.17
	F12-Q	ST-668	3.2	12⅛	7 13/16	10½	1¼	8	14.0	1000	12.0	⅞x⅞″	26.57

*Size recommended. See Transformer listing. †Millions of ergs. Field resistance for full excitation will rise approximately 20%.



AUDITORIUM SPEAKERS

The first highly-efficient large-size speaker was designed and produced by JENSEN in 1928. It was named the "Auditorium" and never were critics more consistent in its endorsement as the utmost in heavy-duty speakers. For more than 20 years JENSEN Auditorium speakers have set the highest standards for efficiency, response characteristics and faithful performance. Today, the Auditorium line has been completely redesigned and comprises undeniably the best known and most highly respected speakers available, second only to JENSEN Coaxials. They are recommended for theatres, public address systems, fine electronic musical instruments, where the utmost in quality reproduction and power handling ability are required.

Nominal Size	Model No.	Stock No.	†Gap Energy Levels	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	*Transformer Size	List Price
18″	PMJ-18	ST-541	28.1	18	9¾	15¾	2½	8	30	1x1¼″	$340.00
15″	P15-L	ST-758	13.6	15⅛	8	13¼	2	8	25	1x1¼″	122.50

*Size recommended. †Millions of ergs.

VIKING LOUDSPEAKERS by Jensen

MOST PERFORMANCE AT LOWEST COST FOR RADIO AND TV REPLACEMENTS & UTILITY APPLICATIONS

JENSEN has designed these VIKING loudspeakers to give you the most performance at low cost for radio and TV replacements and utility applications. A complete range of sizes from 3½ inch to 12 inch, with three oval types—all with Alnico 5 magnets. Designs are especially compact, an evident advantage in the servicing of compact and portable sets. CTM Bracket Set available separately contains parts and hardware for mounting speaker on chassis and ½ x ½ transformer on speaker if necessary.

Nominal Size	Model No.	DIMENSIONS Overall	Depth	V. C. Imped. Ohms	Price**
3½"	35J4	3 7/16	1⅜	3.2	$1.89
4"	4J4	4⅛	1 9/16	3.2	1.87
5"	5J4	5 1/16	1¾	3.2	2.05
5¼"	525J4	5 5/16	1⅞	3.2	2.12
6"	6J4	6 1/16	2⅛	3.2	2.26
7"	7J9	6⅞	2 13/16	3.2	3.04
8"	8J9	7 11/16	2 15/16	3.2	3.25
10"	10J11	10⅛	3⅝	3.2	5.54
12"	12J11	12⅛	4⅜	3.2	6.01
4x6"	46J6	6 3/16x4⅛	1⅞	3.2	2.49
5x7"	57J9	7¼x5	2⅝	3.2	3.17
6x9"	69J9	9¼x6⅜	3	3.2	3.51
6x9"	69J10*	9¼x6⅜	3 1/16	3.2	4.28

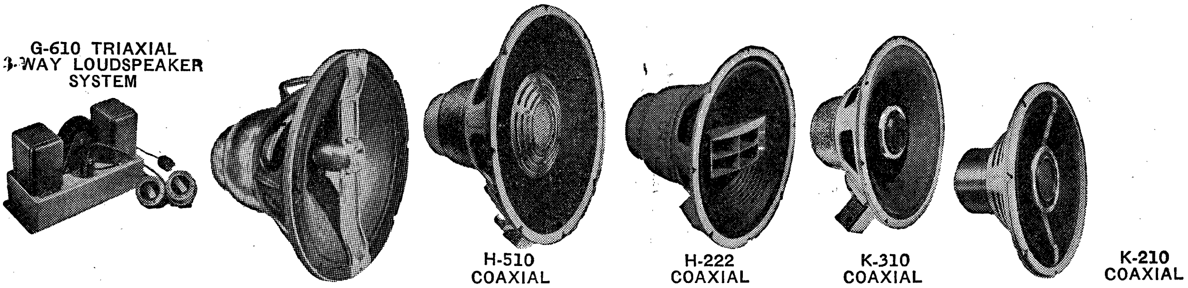
*Especially recommended for automotive replacement use.

CTM Bracket Set contains necessary parts and hardware for mounting ½″ x ½″ transformer on speaker and speaker on receiver chassis. Fits 3½″, 4″, 5″, 5¼″ and 6″ speakers. **Dealer Net $0.25****

**Net

Jensen

HIGH FIDELITY LOUDSPEAKERS AND COMPONENTS



GENUINE JENSEN WIDE RANGE is the designation given to a distinguished series of loudspeakers, each designed to give the finest possible reproduction for the particular type and size. A selection of a high fidelity loudspeaker from this series thus insures a maximum of reproduction quality at any cost level. Particular attention has been given to the 7 Performance Points essential to thrilling, realistic reproduction: (1) Wide Frequency Range, (2) Balanced Frequency Response, (3) Smooth Response, (4) Wide Angle Distribution, (5) Low Distortion, (6) Good Efficiency, and (7) Adequate Power-Handling Capacity.

The G-610 Triaxial, world's finest unitary system loudspeaker, reproduces everything the ear can hear and provides true transport to the original. Model H-510, with compression-driver horn loaded "tweeter" and Acoustic Lens, is the outstanding speaker of the times in the 15 inch coaxial class. New coaxial Model H-222, also with horn-loaded compression-driver "tweeter," offers for the first time, "big speaker" performance in a 12-inch unit. **For complete information on these and other Jensen speaker systems and components, write for free High Fidelity Catalog 1020.**

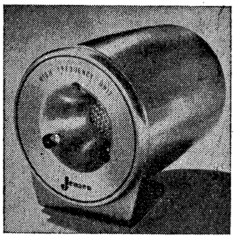
TRIAXIAL AND COAXIAL SPEAKERS

Nominal Size	Model No.	Type	Stock No.	Input Imped. Ohms	Power Watts	Freq. Range Rating	Baffle Opening In.	O.D. In.	Depth In.	List Price
15"	G-610#	Triaxial	ST-900	16	35	+8 LIM	13¼	15⅜	10¾	**$382.50**
15"	H-510	Coaxial	ST-828	16	25	+7 LIM	13¼	15⅛	9 9/16	**154.50**
12"	H-222	Coaxial	ST-875	16	25	+7 LIM	10½	12⅛	8¼	**79.50**
15"	K-310	Coaxial	ST-830	16	16	+7 LIM	13¼	15⅛	8⅛	**65.50**
12"	K-210	Coaxial	ST-831	8	12	+7 LIM	10½	12⅛	6 5/16	**39.50**

EXTENDED-RANGE SINGLE-UNIT DIRECT-RADIATOR LOUDSPEAKERS (+6 LIM)

Nominal Size	Model No.	Stock No.	*Gap Energy Level	Dimensions, Inches O.D.	Depth	Baffle Open	Voice Coil Diam. In.	Imped. Ohms	Pwr. Watts	Transformer Size†	List Price
15"	P15-NX	ST-817	6.6	15⅛	8	13¼	1½	8	18.0	1"x1"	**$76.75**
12"	P12-NX	ST-819	6.6	12 1/16	7	10½	1½	8	16.0	1"x1"	**61.50**
	P12-RX	ST-885	2.2	12⅛	6 1/16	10½	1	6-8	11.0	⅞"x⅞"	**23.80**
	P12-SX	ST-821	1.5	12⅛	6 1/16	10½	1	6-8	9.0	⅞"x⅞"	**21.20**
10"	P10-RX	ST-886	2.2	10⅛	5¼	8¾	1	6-8	9.0	⅞"x⅞"	**21.00**
	P10-SX	ST-823	1.5	10⅛	5¼	8¾	1	6-8	8.0	¾"x¾"	**18.55**
8"	P8-RX	ST-887	2.2	8⅛	4	6¾	1	6-8	8.0	¾"x¾"	**18.20**
	P8-SX	ST-825	1.5	8⅛	3 13/16	6¾	1	6-8	7.0	¾"x¾"	**15.20**
6"	P6-TX	ST-826	1.1	6 11/16	3 3/16	5¼	¾	3-4	5.0	⅝"x⅝"	**10.35**
5"	P5-TX	ST-827	1.1	5 1/16	2⅝	4 5/16	¾	3-4	4.0	½"x½"	**9.50**

*Millions of ergs. †Size recommended. #Complete with Crossover Control Network.

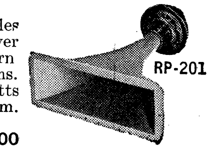


RP-302 H-F UNIT

Improve the realism of your sound reproduction . . . make a 3-way system from your present coaxial, or a 2-way from a single speaker by adding this new compact "super-tweeter" from the famous G-610 Triaxial. Makes an unexcelled top end for custom built multi-channel systems. Unit sits atop cabinet or mounts flush on baffle. Provides smooth, clean "highs" from 4000 cycles to limits of audibility. Impedance, 16 ohms. Useful coverage angle, 120 degrees. Maximum power, 30-40 watts speech and music with A-402 Crossover Network. A-402 recommended for best results, but can be used with 2 mfd condenser. Satin brass finish. OD, 2¾"; length 3⅝". Specify ST-899. List Price.............................. **$56.00**

A-402 Crossover Network. Full 180° constant-resistance type. RP-302 connects to hi-channel, present speaker or system to low channel. Crossover at 4000 cycles. Impedance, 16 ohms input and each channel. Screw terminals for easy connections. In metal case, 4⅜" high, 3½" wide, 3¼" deep. Specify ST-898.
List Price **$11.25**

RP-201 H-F UNIT

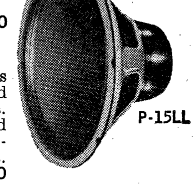


Reproduces the range from 60 to 4000 cycles as the mid channel in a 3-way system. Driver unit loaded by cast aluminum Hypex horn Coverage angle 115°. Impedance, 16 ohms. Power rating with A-61 network 35 watts speech and music signal input to system. Shipping Weight, 8 lbs. ST-897.
List Price $71.00

A-61 600 CYCLE NETWORK

Sends frequencies above 600 cycles to A-402 for further division; below 600 cycles to the P15-LL L-F unit. ST-896.
List Price $25.00

P15-LL L-F UNIT

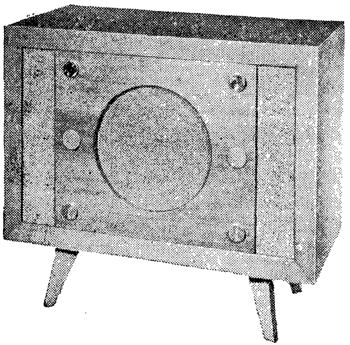


Rugged 15-inch "woofer" handles the bass region up to 600 cycles. Edge damping used on annulus. Free air resonance, 37 cycles. Power rating, 35 watts in back-loading folded horn; 25 watts in baffle or bass reflex. Impedance, 16 ohms. Shipping Weight, 18 lbs.
List Price $85.00

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Jensen

BASS REFLEX CABINETS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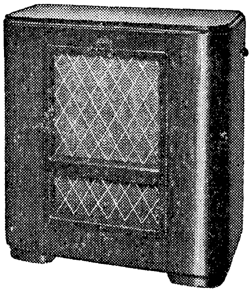
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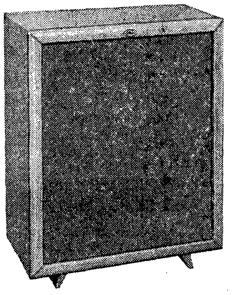
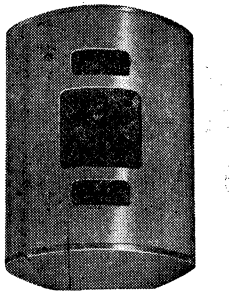

TYPE C


TYPE H

TYPE M CUSTOMODE IMPERIAL CABINET is an outstanding example of fine modern design with the outstanding performance of JENSEN Bass Reflex. Accommodates any 15″ speaker. May be placed on side or end as desired. Front panel easily, quickly removed for installation or replacement by unscrewing four brass discs. Speaker is held in place by means of machine screws and anchor nuts set into back of panel. Concealed cut-outs for H-F Range and Level Controls. Furnished complete with removable grille cloth-screen and two wedge foot rails. (Note: Leg Assembly illustrated not furnished and must be ordered separately. See below.)

LEG ASSEMBLY FOR M CABINET. Modern leg assembly for "lowboy" effect with Type M cabinet as illustrated above. Raises cabinet 8″ above floor. Not furnished with cabinet; must be ordered separately. Shipping wt., 15 lbs. Specify ST-843 for Blonde; ST-863 for Cordovan.
List Price **$15.75**

TYPE B UTILITY CABINET is designed for those who desire inexpensive but durably built enclosures. Well constructed of impregnated composition board and finished in hammered brown lacquer. For 12-inch speakers. Feet unmounted are furnished.

TYPE D IMPERIAL CABINET is handsomely styled, suitable for any environment, and is well constructed of beautifully striped satin finish veneered walnut, with interlaced bronze strip grille over matching fabric. They are available in two sizes; for 15-inch and for 12-inch speakers.

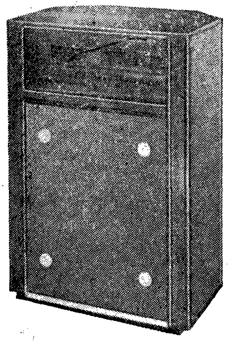
TYPE C CABINETS. Here at last is a cabinet for low-budget high-fidelity audio systems. Features include attractive tapered foot design, sturdy baffle with Bass Reflex concealed under grille cloth, in choice of blonde or mahogany finishes. Lacquer easily applied to blonde for other finish colors if desired. Concealed cut-outs in Model C-151 for easy installation of flush H-F and Level Controls used with Jensen Triaxial and Coaxial speakers.

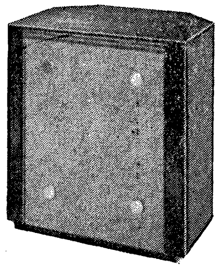
TYPE H SECTOR CABINET is especially designed for public entertainment or paging. With front curved to a 14¼″ radius, they fit anywhere—in corners, on walls, at intersection of ceiling and wall, or on posts. May be mounted in pairs or clusters for wide-angle sound distribution. Finished in brown lacquer; covering colors may be applied to match installation.

Jensen No.	Stock No.	Speaker Size	Finish	DIMENSIONS, Inches Height	Width	Depth	Shipping Weight, Lbs.	List Price
M-253	**ST-838**	15″	Blonde Mahogany	36	24	18	80	**$164.27**
M-353	**ST-858**	15″	Cordovan Mahogany	36	24	18	80	**164.27**
D-151	**ST-157**	15″	Regular Walnut	31	27¾	13⅜	50	**77.50**
C-151	**ST-868**	15″	Blonde	32	28	15	53	**62.00**
C-151	**ST-869**	15″	Mahogany	32	28	15	53	**62.00**
D-121	**ST-156**	12″	Regular Walnut	31	27¾	13⅜	50	**77.50**
C-121	**ST-866**	12″	Blonde	29	25	13½	42	**49.75**
C-121	**ST-867**	12″	Mahogany	29	25	13½	42	**49.75**
B-121	**ST-742**	12″	Brown Lacquer	28½	23¾	11⅞	34	**36.00**
C-81	**ST-864**	8″	Blonde	23½	20	9	26	**37.50**
C-81	**ST-865**	8″	Mahogany	23½	20	9	26	**37.50**
H-81	**ST-141**	8″	Brown Lacquer	22¾	17¾	8½	14	**24.75**

NEW Type BL Cabinets

Back-Loading Folded-Horn Design


←BL-151


BL-121→

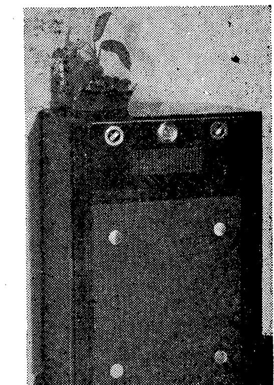
Outstanding Performance . . . In Corner or on Sidewall

Jensen acoustic research now brings you these new back-loading folded-horn cabinets for better bass response. Ideal for corner where walls give horn extension, but may be used against sidewall with excellent results. Reduces resonance, lowers distortion. Baffle easily, quickly removed from front for access to speaker. Fine furniture treatment throughout, with selected hardwood veneers, hand rubbed.

BL-151. For 15″ Speakers. Recommended for Coaxial and Triaxial units. Removable front panel covering compartment for controls, h-f unit, etc. Three 1 11/16″ holes in panel covered by matching wood squares. 38¾″ H; 25½″ W; 18¾″ D. Shipping wt., 106 lbs.
BL-151. Cabinet. Mahogany. ST-877. List Price **$175.00**
BL-151. Cabinet. Blonde Korina. ST-876. List Price **$180.00**
BL-121. For 12″ Speakers. Has one concealed cut-out under grille cloth for control. 28¾″ H; 25½″ W; 18¼″ D. Shpg. wt., 65 lbs.
BL-121. Cabinet. Mahogany. ST-879. List Price **$96.75**
BL-121. Cabinet. Blonde Korina. ST-878. List Price **$102.00**

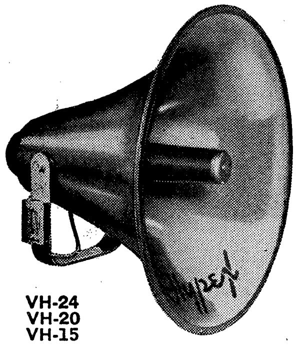
TRI-PLEX

3-way reproducer system



The TRI-PLEX is a complete three-way high fidelity reproducer designed to achieve the utmost in smooth, finely balanced music reproduction, free from stridency and all forms of distortion which mar listening pleasure. The complete range from low bass to the utmost limits of audibility is covered with a faithfulness that will be a revelation to the discriminating listener. We know of no system that can approach TRI-PLEX in performance. The TRI-PLEX employs the system components described on page C-10, which were especially developed for this application. Each unit is built by skilled craftsmen and individually tested by experienced audio engineers. Cabinetry is of the new Jensen BL type taking full advantage of the "corner" effect where one is available, but with full side-wall utility as well. A long folded horn within the cabinet leads the rear of the l-f unit for clear, efficient low bass reproduction. Available in fine selected Mahogany or Blonde Korina veneers with matching hardwood trim. Trim details are satin brass.
TP-100. TRI-PLEX. ST-903. Mahogany ....**List Price $498.95**
TP-100. TRI-PLEX. ST-902. Blonde Korina ....**List Price $509.00**

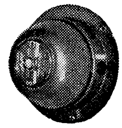
Jensen


VH-24
VH-20
VH-15

JENSEN HYPEX PROJECTORS

Because of the Hypex formula (Patent 2,338,262) giving wider sound distribution and greatly improved acoustical performance, JENSEN Hypex projectors are superior to the usual "exponential" type horns. The Alnico 5 unit is entirely enclosed within the one-piece rigid horn yet easily removed and replaced. Stainless steel and other corrosion-resistant materials and specially treated steel parts insure against weather exposure. **Models VH-24, VH-20** and **VH-15** have mounting brackets with clutch-type heavy "U" trunnions which afford complete flexibility of adjustment with positive locking into desired position. Weatherproof terminal boxes provide easy, solderless connections with no exposed terminals. **Model VH-91** has a universal mounting bracket which permits pointing in any direction and secure locking by a single wing nut.

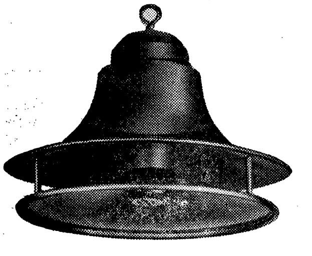
VH-91


V-21

SPECIFICATIONS

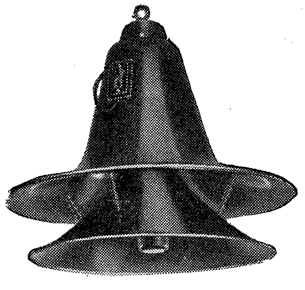
Model No.	Stock No.	Cut-Off, CPS	Acoust. Path, In.	Coverage Angle Degrees	Power Rating Watts	Voice Coil Imped. Ohms	Diam. In.	Length, In.	Trans.* Core Size	List Price
VH-24	**ST-685**	110	58	75	25	16	25	22⅜	1x1¼	**$89.50**
VH-20	**ST-684**	140	52	80	25	16	21	20¼	1x1¼	**76.00**
VH-15	**ST-757**	180	36	90	15	8	16	15	¾x¾	**56.50**
VH-91	**ST-171**	300	16	100	15	8	8⅞	7⅝	⅝x⅝	**35.80**

*Not included.


VR-11

HYPEX *"Three-sixty"* PROJECTORS

Designed for the reproduction of speech and music signals at high efficiency where high noise levels exist. The Hypex formula, made famous by JENSEN Hypex projectors, is incorporated in their design giving greatly improved acoustical performance. With the sound distributed over a circle, they are especially suitable for installations where coverage of relatively large areas and suspension from the ceiling are desired. **Model VR-11** is recommended for speech reproduction while **Model VR-241**, of larger size, is intended for speech and music reinforcement. Driver unit has phenolic diaphragm; **VR-241** uses same diaphragm as VH-24 and VH-20; **VR-11** uses same diaphragm as VH-15 and VH-91. **VR-241** is equipped with weatherproof terminal box with connecting cable passing through rubber grommet and leads attached to screw terminals provided. VR-11 has two-conductor rubber-covered cable for connections. Both equipped with heavy eyebolt at top for suspension.


VR-241

SPECIFICATIONS

Model No.	Stock No.	Cut-Off, CPS	Acoust. Path, In.	Coverage Angle Degrees	Power Rating Watts	Voice Coil Imped. Ohms	Diam. In.	Length, In.	Trans.* Core Size	List Price
VR-241	**ST-789**	140	54	360	25	16	25	22	1x1¼	**$98.50**
VR-11	**ST-791**	280	18	360	15	8	11	10⅜	¾x¾	**46.50**

*Not included.

MODEL V-21 DRIVER UNIT

This driver unit incorporates the driver element used in the new Hypex projectors and is electrically and mechanically interchangeable with the former U-20 ST-630 and U-201 ST-732 Driver units. It is designed for replacement service on former Models H-20 ST-726, H-201 ST-733 and H-24 ST-727 Hypex horns. Unit is PM type and equipped with internal screw terminals. Flange is deisgned for ¼" bolt attachment, with three 17/64" holes spaced 120 degrees apart on a radius of 2¾". Voice coil input 16 ohms and power rating 25 watts.

Model V-21 Driver Unit, ST-787................................List Price $36.25

THE "HYPEX" HORN FORMULA

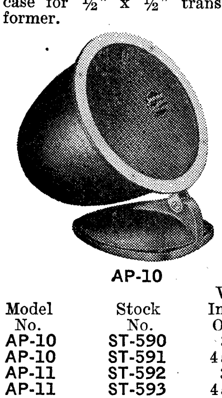
— *An Exclusive Jensen Feature*

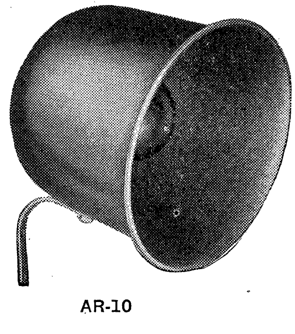
"Hypex" comes from the mathematical term "hyperbolic exponential," which describes the important difference between Jensen projectors and those based on the simple exponential theory. Jensen research discovered a better, more efficient horn formula which maintains effective acoustic loading right down to acoustic cut-off and all Jensen Hypex* Projectors have this exclusive feature for better performance. For the facts on this development and a complete description of horn behavior, write for Technical Monograph No. 5, "Horn-Type Loudspeakers."

Price 25c.

SPEECH MASTER PROJECTORS

Sturdy construction, overall mechanical protection, double dust-proofing, streamline design and exceptional acoustical performance recommend these projectors for paging and intercommunication. PM design. Good talk-back performance in PA systems. Hammered gray finsh; chrome trim. RC 36" cord. Space within case for ½" x ½" transformer.

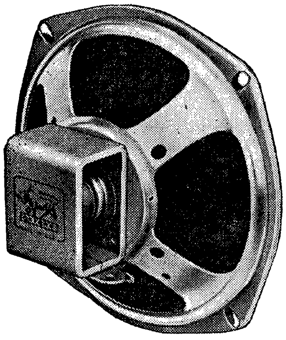

AP-10

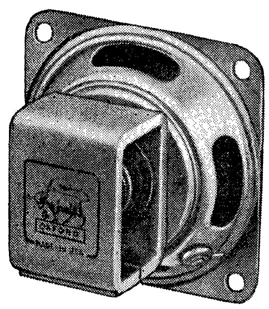

AR-10

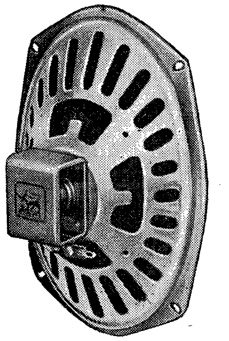
Model No.	Stock No.	V.C. Imped. Ohms	Power Watts	Diam. In.	Depth In.	List Price
AP-10	**ST-590**	3-4	5	5	4½	**$19.30**
AP-10	**ST-591**	45-50	5	5	4½	**20.30**
AP-11	**ST-592**	3-4	5	5	4½	**15.75**
AP-11	**ST-593**	45-50	5	5	4½	**16.75**
AR-10	**ST-643**	3-4	6	10	8	**23.50**
AR-10	**ST-644**	45-50	6	10	8	**24.50**

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

OXFORD Speakers—


For Radio & Television


For Portables


For Auto Radios

PERMANENT MAGNET SPEAKERS— STANDARD REPLACEMENT LINE

SIZE	MODEL NO.	MAG. WT.	LIST PRICE
2"	2AMS	.68 oz.	$ 3.75
2"	2CMS	1.47	4.35
3"	3AMS	.68	3.75
3"	3CMS	1.47	4.35
4"	4AMS	.68	4.00
4"	4BMS	1.00	4.25
4"	4CMS	1.47	4.60
5"	5AMS	.68	4.25
5"	5BMS	1.00	4.50
5"	5CMS	1.47	4.85
5"	5PAMS	.68	4.35
5"	5PBMS	1.00	4.60
5"	5PCMS	1.47	5.00
5¼"	52AMS	.68	4.35
5¼"	52BMS	1.00	4.60
5¼"	52CMS	1.47	5.00
5½"	55CMS	1.47	5.25
6"	6AMS	.68	4.85
6"	6BMS	1.00	5.10
6"	6CMS	1.47	5.50
6"	6CVS	1.47	5.75
6"	6EVS	2.15	6.00
6"	6FOS	3.16	6.85
7"	7CVS	1.47	6.50
8"	8CMS	1.47	6.85
8"	8CVS	1.47	7.10
8"	8EVS	2.15	7.35
8"	8FOS	3.16	8.50
8"	8HBS	4.64	10.00
8"	8JBS	6.80	12.00
10"	10CVS	1.47	8.75
10"	10EVS	2.15	9.50
10"	10FOS	3.16	10.50
10"	10HBS	4.64	12.00
10"	10JBS	6.80	13.50
12"	12CVS	1.47	9.75
12"	12EVS	2.15	10.50
12"	12FOS	3.16	11.50
12"	12HBS	4.64	13.00
12"	12JBS	6.80	14.50
12"	12XMS	22.50	37.50
15"	15XMS	22.50	45.00
4"x6"	46AMS	.68	4.50
4"x6"	46BMS	1.00	4.75
4"x6"	46CMS	1.47	5.25
5"x7"	57CMS	1.47	5.75
5"x7"	57EVS	2.15	6.50
6"x9"	69CVS	1.47	7.10
6"x9"	69EVS	2.15	7.85
6"x9"	69FOS	3.16	9.25

ELECTRO DYNAMIC SPEAKERS— STANDARD REPLACEMENT LINE

SIZE	MODEL NO.	FIELD	LIST PRICE
4"	4V45S	450 Ohm	$ 4.75
5"	5V45S	450	5.00
6"	60A100S	1000	6.00
6"	60A180S	1800	6.00
6"	60A250S	2500	6.00
8"	80A100S	1000	7.50
8"	80A180S	1800	7.50
8"	80A250S	2500	7.50
10"	10E100S	1000	11.00
10"	10E250S	2500	11.00
12"	12E100S	1000	13.50
12"	12E250S	2500	13.50
4"x6"	46V45S	450	5.50

HIGH-FIDELITY SPEAKERS

SIZE	MODEL NO.	MAG. WT.	LIST PRICE
8"	HF8JB	6.8 oz.	$15.00
10"	HF10JB	6.8	17.50
12"	HF12JB	6.8	20.00
12"	HF12LN	14.0	35.00
12"	CO12JB	6.8	35.00

TV REPLACEMENT SPEAKERS

SIZE	MODEL NO.	FIELD	LIST PRICE
5"	5V8S	85	$ 5.00
6"	60A8S	85	6.00
8"	80A8S	85	7.50
4"x6"	46V8S	85	5.50

AUTO REPLACEMENT SPEAKERS

SIZE	MODEL NO.	MAG. WT. or FIELD	LIST PRICE
5"	5CMS	1.47 oz.	$ 4.85
5¼"	52CMS	1.47	5.00
6"	6EVS	2.15	6.00
7"	7EVS	2.15	7.10
7"	7FOS	3.16	8.00
8"	82EVS	2.15	7.50
6"x9"	69EVS	2.15	7.85
6"x9"	69FOS	3.16	9.25
5"	5VO4S	4 Ohm	5.00
5¼"	52VO4S	4	5.25
6"	60AO4S	4	6.00
7"	70AO4S	4	7.25
6"x9"	690AO4S	4	8.00

PUBLIC ADDRESS SPEAKERS

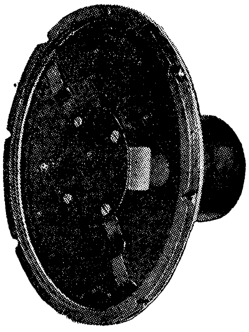
SIZE	MODEL NO.	MAG. WT.	LIST PRICE
8"	8JBS-7	6.80 oz.	$12.50
10"	10JBS-7	6.80	14.00
12"	12JBS-7	6.80	15.00
12"	12XMS-7	22.50	37.50
15"	15XMS-7	22.50	45.00

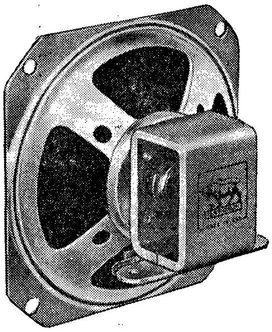
INTERCOM SPEAKERS

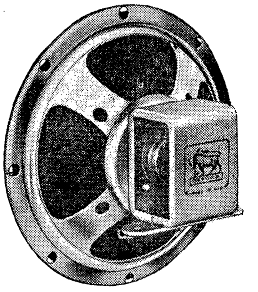
SIZE	MODEL NO.	MAG. WT.	LIST PRICE
3"	3BMXS	1.00 oz.	$ 4.75
4"	4BMXS	1.00	5.00
5"	5BMXS	1.00	5.25

DRIVE-IN THEATRE SPEAKERS

SIZE	MODEL NO.	MAG. WT.	LIST PRICE
4"	4AM65	.68	$ 3.92
4"	4CM13	1.47	5.81
5"	5BA3	.68	4.45
5"	5CM51	1.47	5.32


Coaxial for Hi-Fidelity


For Outdoor Applications


For Intercoms

There is an OXFORD Speaker to meet each requirement.

Preferred for
Original Equipment
Proven for
Replacement!

There is an OXFORD SPEAKER for every need . . . TV, FM, AM, Auto, Public Address, High Fidelity, and Outdoor Applications . . . from 2" to 15" units.

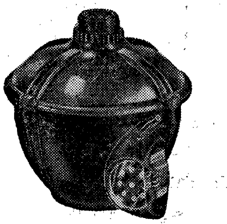
OXFORD ELECTRIC CORPORATION
Chicago 15, Illinois
EXPORT: ROBURN AGENCIES, NEW YORK CITY
IN CANADA: ATLAS RADIO CORP., LTD., TORONTO

University LOUDSPEAKERS

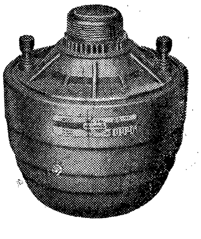
RELIABLE...RUGGED DRIVER UNITS

with these Exclusive Built-in Features

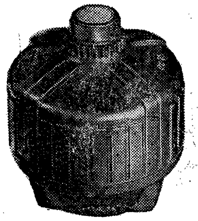
- **W-shaped Alnico 5 magnet results in maximum efficiency by reducing reluctance losses and surface leakage.**
- **Built-in transformers provide installation flexibility to meet any impedance requirement.**
- **Bi-sectional mechanism with foolproof automatic "rim-centered" diaphragm voice coil assembly assures immunity to shock and vibration . . . facilitates field maintenance.**
- **Full selection to meet all power, frequency response, impedance and mechanical requirements.**



MODEL PA-30—Recommended for reproduction of chimes, carillons, organ music. Ideal for rental work, high efficiency, maximum distance penetration. Built-in transformer with various impedances and for 70 V. systems.

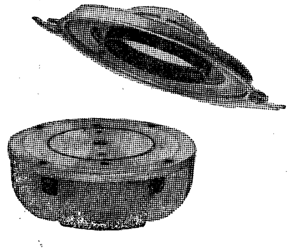


MODEL SA-HF—Meets all PA and industrial requirements. For heavy noise areas, speech or quality music.

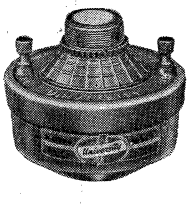


MODEL SA-30 — Completely die-cast aluminum housing makes it a "must" in hazardous locations or rough service. Built-in transformer with various impedances and for 70 V. systems.

BI-SECTIONAL MECHANISMS



Specially tapered, one-piece linen-base phenolic diaphragms are set in an *exclusive aluminum acoustical booster* which applies phase correction at the upper register of the spectrum. This assures exceptionally uniform overall frequency response, and enables the diaphragm/voice coil assembly to *automatically* center in the voice coil gap on the magnet top plate. This exclusive University "rim-centering" technique results in shock-proof permanent voice coil concentricity; means smaller magnetic gap for greater flux density and conversion efficiency.

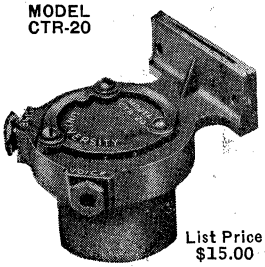


MODEL MA-25 — Fills low cost requirements without compromising quality. Rugged, weatherproof. Highly efficient to 6000 cycles.

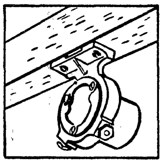
MODEL	PA-30	SA-30	SA-HF	MA-25	T-30
Continuous Power	30 watts	30 watts	25 watts	25 watts	20 watts
Frequency Response	80-10,000 cps.	90-10,000 cps.	90-10,000 cps.	90-6000 cps.	250-15,000 cps.
Voice Coil Impedance	16 ohms	16 ohms	16 ohms	16 ohms	8 ohms
Transformer Impedances	165/250/500/ 1000/2000 ohms	45/165/250/500/ 1000/2000 ohms			
Diameter, Overall	6¾"	5"	4½"	4⅛"	3½"
Length, Overall	6¾"	6¾"	5"	3¾"	3⅞"
Shipping Weight	6 lbs.	5 lbs.	4 lbs.	3½ lbs.	3½ lbs.
LIST PRICE	$50.00	$45.00	$35.00	$27.50	$27.50

WEATHERPROOF LINE MATCHING TRANSFORMERS

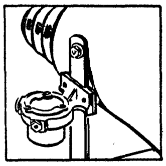
MODEL CTR-20



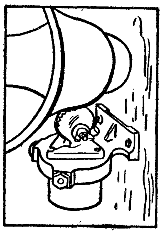
List Price $15.00



Mounted to wall or ceiling.



Clamp to "U" type mounting bracket used on trumpets and radial projectors.



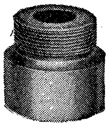
Easy to mount to University Paging speakers.

Designed to afford maximum utility in application and utmost convenience of installation. Since most University Loudspeakers and drivers are capable of response to 10,000 cycles and beyond, these transformers have been engineered to assure perfect performance throughout the entire audio spectrum.

- Versatile—multi-tap primary and secondary windings.
- Rugged, durable—water-tight construction.

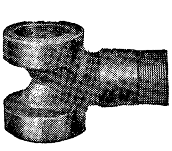
PRIMARY IMP.	45, 500, 1000, 1500, 2000 ohms
SECONDARY IMP.	4-8-16 ohms
POWER HANDLING	capacity 25 watts
SHIPPING WEIGHT	3 lbs.

Model 5420—Same as above, but for indoor use; strap mounting. List Price $6.00



WEA Adapter

Adapts WE and RCA Horns for use with any University driver.
List Price $2.50



2YC Connector—Used with two driver units, provides to 60 watts for any trumpet or projector.
List Price $10.00

For complete product information get your copy of University Loudspeakers TECHNILOG at your local distributor.

LIST PRICES SUBJECT TO TRADE DISCOUNTS

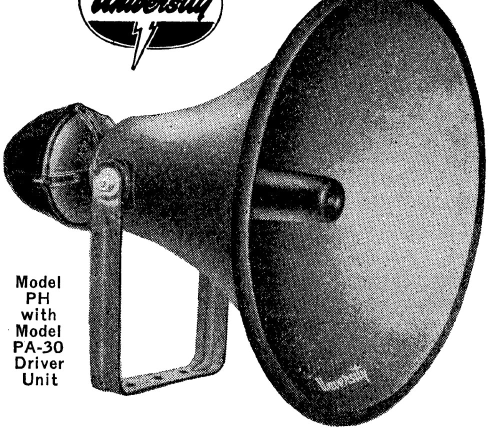
University LOUDSPEAKERS

DIRECTIONAL SOUND PROJECTION — WITH MINIMUM SPACE

Reflex Trumpets

Pioneered by University, the most efficient modern method of sound distribution

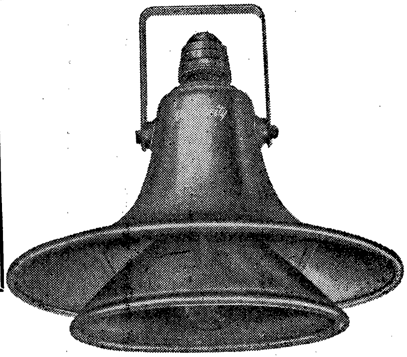
- Economy — Reduces amplifier power requirements.
- Ruggedly constructed — weatherproof.
- Four trumpet sizes to cover every requirement.


Model PH with Model PA-30 Driver Unit

MODEL	GH	LH	PH	SMH
Low Frequency Cutoff	85 cps.	120 cps.	150 cps.	200 cps.
Sound Distribution	65°	75°	85°	95°
Air Column Length	6½ ft.	4½ ft.	3½ ft.	2½ ft.
Bell Diameter	30⅞″	25⅝″	20¼″	16¼″
Horn Length (less driver unit)	27⅞″	19″	15¾″	12″
Shipping Weight (less driver unit)	25 lbs.	20 lbs.	11 lbs.	9 lbs.
LIST PRICE	$65.00	$44.50	$31.00	$26.00

For Your Added Protection . . .

There is more to University quality than meets the eye. **All metals used in the manufacture of University equipment are given a number of *special* treatments prior to and during fabrication to insure life-long protection against destructive elements which may be present in the environment, as well as to maintain the physical and acoustical properties for which they were originally selected. These treatments—plus the *baked* paint finish—serve as further protection against corrosion, and as further proof of UNIVERSITY superiority.**



Radial Reflex Projectors

Uniform Sound in All Directions

- More economical — reduces the total number of loudspeakers required to cover a given area.
- More efficient — driver-driven radial speakers provide as much as 500% greater output than cone speaker radials.
- Versatile — ideal for spacious areas necessitating suspension installation, such as hangers, church towers, etc. Suitable for voice and music.

MODEL	RLH	RPH	RSH
Low Freq. Cutoff	120 cps.	140 cps.	180 cps.
Sound Distrib.	360°	360°	360°
Air Column Lgth.	5 ft.	4 ft.	3 ft.
Bell Diameter	28⅛″	25⅛″	18⅞″
*Overall Height	18½″	14″	11″
*Shipping Weight	27 lbs.	21 lbs.	18 lbs.
LIST PRICE	$59.00	$45.00	$38.50

*Less Driver Unit.

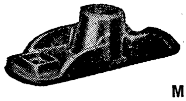
Explosion-Proof Speakers — Designed for Hazardous Duty

Approved by Underwriters' Laboratories for use in locations where flammable liquids, gases, dust and other combustibles are present. Permits use in industries previously denied the advantages of sound, paging and intercom.

Complete with built-in line matching transformer, the University Explosion-Proof speaker line is versatile, ruggedly constructed and compact.

Model 7101 is UL approved for Class I, Groups C and D.

Model 7102 is approved for Class I, Groups C and D, and Class II, Groups E, F and G.



MODEL PMA ADAPTER — For mounting University "U" bracket speakers on standard ½″ pipe. List Price $1.50

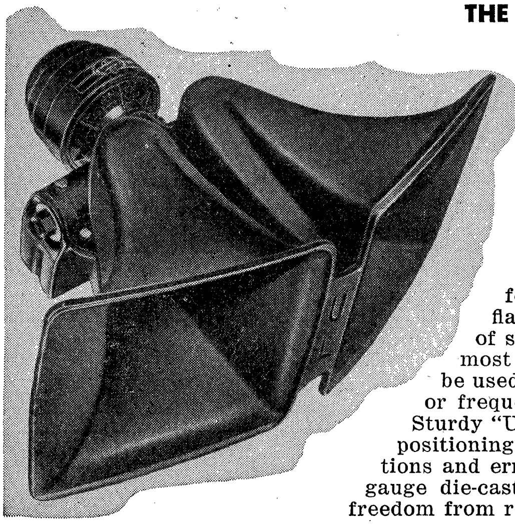
Cont. Power	25 watts	
Voice Coil Impedance	16 ohms	
Transformer Impedances	45, 500, 1,000 1500, 2,000 ohms	
Frequency	200-10,000 cps.	
Dispersion	95°	
Dimensions	19″ length 15¾″ height	
Shipping Weight	25 lbs.	
	7101	7102
LIST PRICE	$125.00	$150.00

For complete product information get your copy of University Loudspeakers TECHNILOG at your local distributor.

University LOUDSPEAKERS

A TRUMPET DESIGN OF AMAZING VERSATILITY WITH SUPERIOR NOISE PENETRATION

THE NEW COBREFLEX - 2



Meets Every Requirement for —
- **Paging and Talk-Back Installations**
- **Fixed or Mobile Systems**
- **Heavy Industry Applications**
- **2 or 3-way hi-fi Systems**

Lifetime Guarantee

Cont. Power	Dependent on University Driver Unit used.
Impedance	
Frequency Res.	
Dispersion	120° x 60°
Dimensions	10¼″ lg. bell 18½″ x 9¼″ mouth
Shipping Weight	11 lbs.
LIST PRICE	**$35.00**

A unique combination of battle-ship construction and swiss watch precision. . . . Features a pair of exponential horns having twin air columns in a **single** assembly—made possible for the first time through the perfection of a "dual exponential flare" design. This advance design provides wide-angle dispersion of sound, concentrating energy in the horizontal plane where it is most needed in covering wide areas efficiently and economically. Can be used with any University driver unit to meet any impedance, power or frequency response. See page C-16 for driver unit listings.

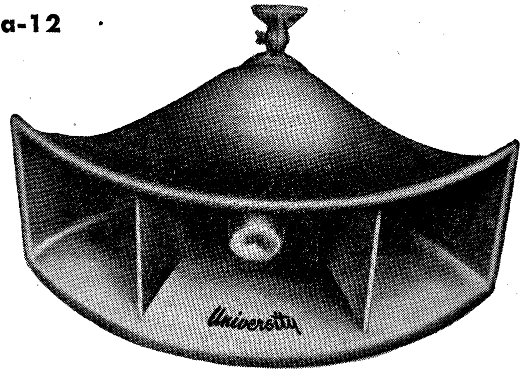
Sturdy "U" bracket with serrated swivel joint permits up to 180° vertical positioning and positive locking. Clever **one-piece** design prevents vibrations and erratic performance by elimination of any separate parts. Heavy gauge die-castings set a new standard in rugged construction and assure freedom from resonant type vibration.

FOR WIDE ANGLE HORIZONTAL DISPERSION . . .

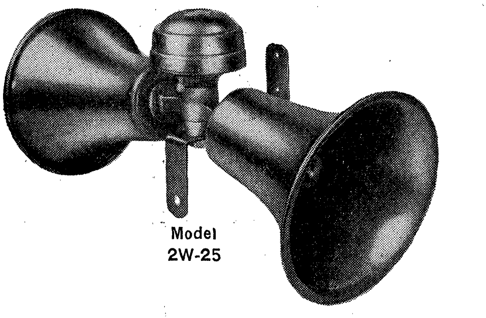
Cobra-12

Maximum Sound Coverage at Minimum Cost

The Cobra-12, sister to the Cobreflex-2, provides moderate power with maximum intelligibility and a dispersion pattern expressly designed for greatest sound distribution in the horizontal plane. Built-in hermetically sealed driver features highest sensitivity for greatest amplifier economy and effective talk-back work. Adjustable swivel mounting bracket directs the sound where it is needed. The result is truly effective coverage over wide areas.



MODEL	Cobra-12	2W-25
Continuous Power	12 watts	25 watts
Impedance	8 ohms	16 ohms
Dispersion	120° x 60°	120° each horn
Frequency	250-10,000 cps.	350-6000 cps
Dimensions	14½″ lg. bell 20″ x 9″ mouth	20½″ lg. bell 8″ dia. mouth
Shipping Weight	8 lbs.	9 lbs.
LIST PRICE	**$45.00** (including built-in driver)	**$48.00** (including driver)



Model
2W-25

Bi-Directional Speaker —

Recommended for two-way applications requiring perfect clarity . . .

A single heavy duty driver unit (supplied) serves both reflexed horns through a carefully designed acoustic coupler. Each horn has a wide 120° sound projection pattern, with the sound projected 10° downward (or 10° outward) so that no energy will be lost in unoccupied space.

- **Covers two large areas with a single driver unit.**
- **Reduces installation and equipment costs.**
- **Versatile bracket arrangement provides 4 different mounting positions.**
- **Built for continuous heavy duty service.**

For complete product information get your copy of University Loudspeakers TECHNILOG at your local distributor.

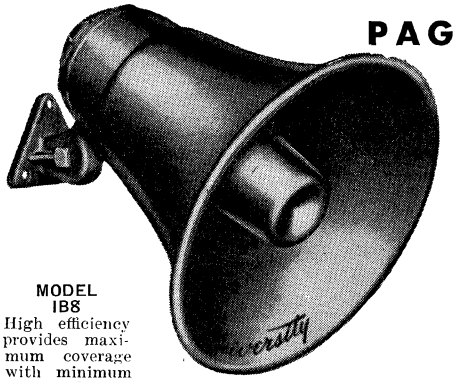
University LOUDSPEAKERS

PAGING AND TALK-BACK SPEAKERS FOR GENERAL APPLICATION

Reproduction with crisp clarity for maximum penetration through areas with high noise density

Check These Features:

- ✓ Famous University Reflex Design
- ✓ Weatherproof, breakdown-proof construction
- ✓ Hermetically sealed driver units
- ✓ Small size — high efficiency

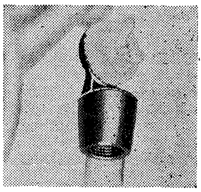


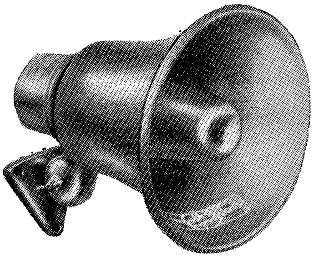
MODEL
IB8

High efficiency provides maximum coverage with minimum power. Also an ideal talk-back speaker because of high sensitivity. Rising frequency characteristics result in exceptional noise penetration. Features high power capacity.

MODEL SPA ADAPTER

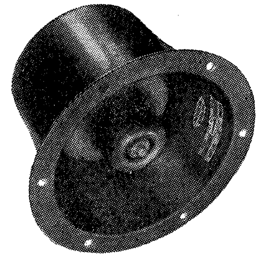
Replaces standard triangular base used on all University paging speakers in order to mount to threaded ½″ pipe. Order separately. **List Price $1.50**





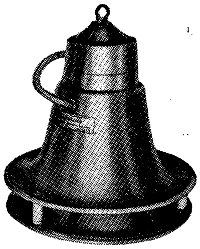
MODEL MIL

For installations requiring concentrated power to cover small areas. High conversion efficiency conserves amplifier power, ideal for low level systems.



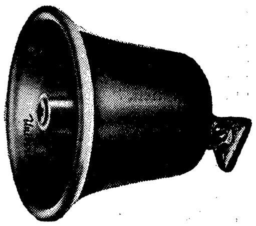
MODEL MIS

Designed for flange or flush mounting in cabinets, walls, ceilings, bulkheads, etc. Ideal for replacement of cone speakers to increase output.



MODEL IBR

Small radial speakers, complete with built-in driver unit. Affords 360° horizontal dispersion resulting in wide coverage with a minimum of speakers.



MODEL CR

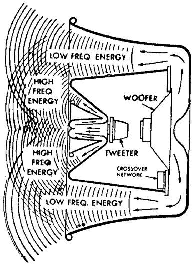
Reflex speaker conservatively rated at 20 watts continuous duty, and featuring built-in driver unit. Excellent tonal balance for music.

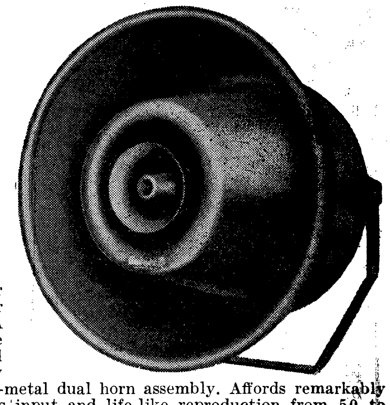
MODEL	IB8	MIL	MIS	IBR	CP
Continuous Power	12 watts	3 watts	3 watts	12 watts	20 watts
Impedances	8 ohms*	8 ohms (45 ohms on order)	8 ohms (45 ohms on order)	8 ohms	16 ohms
Dispersion	90°	120°	150°	360°	90°
Frequency	300-10,000	400-9000	500-9000	300-10,000	250-6000
Dimensions	8½″ dia., 9″ high	6⅜″ dia., 7″ high	3⅞″ deep, 5½″ O.D., 4⅞″ mount. dia.	9¾″ dia., 11″ high	11½″ dia.
Shipping Weight	5 lbs.	4 lbs.	3 lbs.	5 lbs.	9 lbs.
LIST PRICE	$32.50 *4Ω—Order 1B4	$25.00 45Ω $26.25	$21.50 45Ω $22.75	$39.00	$42.00

Wide Range Weatherproof Coaxial System

Model WLC

Designed to simplify indoor and outdoor "high quality" sound installations . . .





Power Capacity	30 watts
Impedance	8 ohms
Response	50-15000 cps.
Dispersion	90°
Diameter	33½″
Depth	20″
Shipping Weight	80 lbs.
LIST PRICE	$250.00

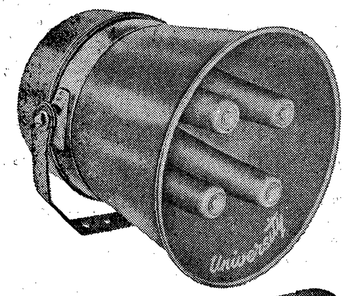
MODEL WLC is the new improved, all-weather coaxial speaker system designed to simplify indoor and outdoor "high quality" sound installations. A complete system comprising a low frequency cone speaker, driver type high frequency reproducer and a 1000 cycle LC crossover network. Completely wired and contained in a compact, heavy gauge all-metal dual horn assembly. Affords remarkably smooth overall response and is capable of 30 watts input and life-like reproduction from 50 to 15,000 cycles. Recommended for bandshells, outdoor movies, auditoriums, dance halls, rinks.

For complete product information get your copy of University Loudspeakers **TECHNILOG** *at your local distributor.*

LIST PRICES SUBJECT TO TRADE DISCOUNTS

University LOUDSPEAKERS

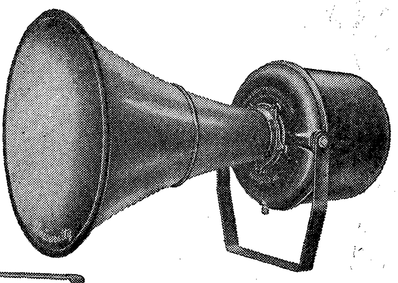
SUPER POWER SOUND PROJECTORS



Powerful force capable of great distances and noise penetration

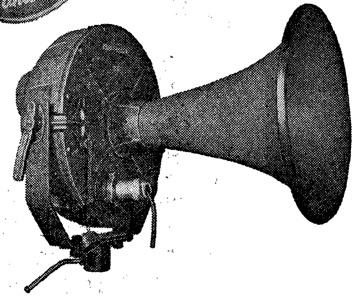
Ideally suited for stadiums, airplane sound casting and for the transmission of chime and organ music from church towers. The perfect answer for civil defense alert and "panic-control" systems.

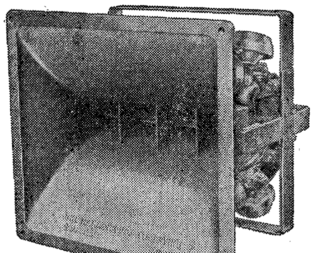
- **Handle tremendous powers—up to 720 watts.**
- **Lightweight—rugged in construction—simple to install.**
- **Foolproof in operation and immune to weather conditions.**



MODEL 4A4 projector uses four 25 watt driver units, each feeding into separate reflexed air columns which combine into a concentrated beam of high intensity sound. Supplied less driver units; use MA-25 or SA-HF.

MODEL B-6 is powered by six driver units feeding into a phase-corrected mixing chamber, and coupled to an exponential horn. Driver units supplied.





MODEL B-12 — Uses 12 special drivers. Ideal for high noise areas and transmitting great distances from a central point. Weatherproof and rugged. "U" mounting bracket and wired driver units included.

MODEL B-24—Newly designed, for super power sound-casting. Compact design and small dimensions permit its use either singly or in clusters to form any desired power or sound distribution pattern. Uses 24 special driver units, which are supplied completely wired.

MODEL	4A4	B-6***	B-12	B-24
Power, Cont.	100 watts	150 watts	300 watts	720 watts
Frequency	200-10,000 cps.*	100-10,000 cps.	100-10,000 cps.	250-6000 cps.**
Impedance	Can be wired for 4, 16, 64 ohms	Supplied unwired; single and multiple inputs from 2 to 125 ohms possible.	Double input 90 ohms each; single input 45-50 ohms total	Supplied completely wired for 10 ohms
Dispersion	80°	80°	80°	90° x 45°
Dimensions (Overall)	18¼″ high 20½″ depth 16⅞″ width	31⅜″ high 56⅝″ depth 31⅜″ (bell diam.)	31⅜″ high 47″ depth 31⅜″ (bell diam.)	22″ high 18⅝″ depth 24″ width
Shipping Weight	30 lbs.	60 lbs.	90 lbs.	120 lbs.
LIST PRICE	**$93.00**	**$542.50**	**$972.50**	**On request**

*When used with SA-HF Driver Units. May be used with MA-25

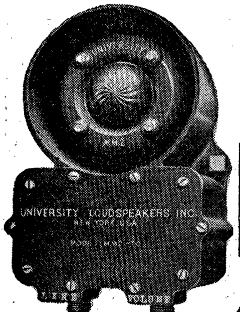
**10,000 cps. drivers available on request at extra cost.

***Available with SA-30 Driver Units on request at extra cost.

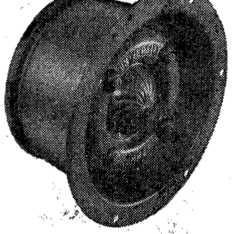
SUBMERGENCE-PROOF SPEAKERS

Immune to salt spray, gases, live steam, fungi and all harmful dirt and dusts.

Designed to U. S. Navy submergence specs . . . provide reliable, uninterrupted service with negligible maintenance under the most gruelling conditions. Numerous commercial and industrial applications: docks, bridges, boiler rooms, mines, railroads, etc.

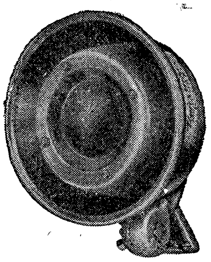


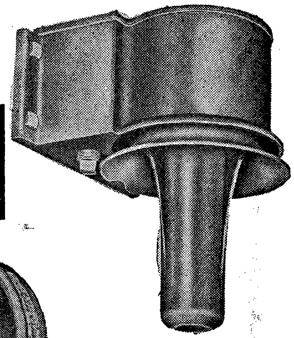
MODEL MM-2TC
Bulkhead-mounted, directional speaker providing a dispersion of 120°. Includes provision for a transformer and attenuator. Accessible from front, with cable entrance and control at bottom. (Also available complete with 5420 transformer and T-pad, Model MM2TC-T.)



MODEL MM-2F
Similar to Model MM-2 but designed for flange mounting. Permits flush mounting in wall, ceiling, bulkheads, dashboards or wherever appearance is important, or projecting objects might cause damage.

MODEL MM-2
A compact speaker with reflex air column and hermetically sealed, built-in driver. Adjustable serrated swivel mounting bracket allows easy installation. Base fits Model CTR-20 weatherproof line matching transformers.





MODEL MSR

Reflexed air column horn for 360° horizontal dispersion. Features completely die-cast aluminum housing and horn, hermetically sealed driver unit. Provides for both line matching transformer and volume control within housing. For wall or bulkhead mounting. (Model MSR-T includes 5420 transformer and T-Pad.)

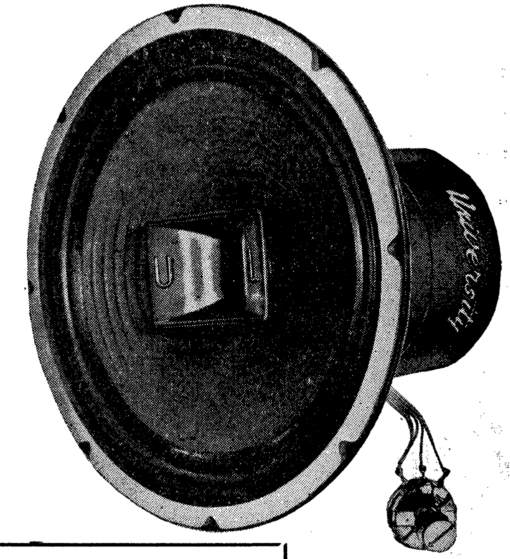
MODEL	MM-2TC	MM-2F	MSR	MM-2
Continuous Power	15 watts	15 watts	15 watts	15 watts
Impedance	16 ohms	16 ohms	16 ohms	16 ohms
Dispersion	120°	150°	360°	150°
Frequency	300-6000 cycles	300-6000 cycles	250-6000 cycles	300-6000 cycles
Dimensions	10″ high 4⅛″ depth 6¼″ wide	7¼″ O.D. 3¾″ depth 6⅝″ mtg. hole dia.	10¾″ high 8¼″ depth 7¾″ wide	6″ O.D. 4¾″ depth
Shipping Weight	9 lbs.	5 lbs.	11 lbs.	5 lbs.
LIST PRICE	**$65.00**	**$40.00**	**$65.00**	**$42.00**

For complete product information get your copy of University Loudspeakers TECHNILOG at your local distributor.

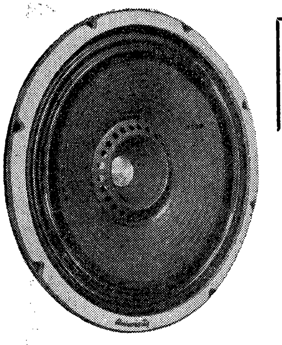
University LOUDSPEAKERS

For Listening Pleasure That Is Performance Proven

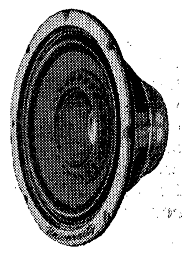
The Dual Range Model 6201 Coaxial System



Now generally acknowledged as the industry's finest value in a high quality, 12" loudspeaker—and for good reason! The 6201 is one of the few true coaxial systems . . . complete with horn type "Tweeter" driven by a separate high efficiency, high frequency driver, plus built-in inductance/capacitance type crossover network complete with variable "balance" control, supplied with 36" of connecting cable and fully wired. A completely engineered package—just connect the two free wires to the amplifier output terminals and presto, the system is ready to give you lifelike, always pleasant reproduction of your favorite musical selection. You can pay more but won't find a better engineered 12" speaker than the popular model 6201.



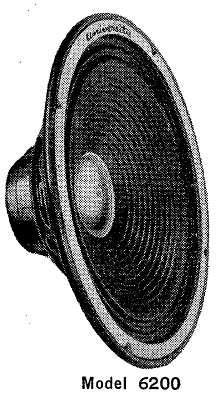
The Diffusicone 8 and 12 — Wide Range Speakers . . . at amazing low cost



University Diffusicone (pat. applied for) speakers bring within every music lovers grasp the endless pleasures of true concert hall quality reproduction without need for undue concern over speaker location. Exclusive "Diffusicone" design results in full fidelity anywhere in the room . . . full undistorted response, without loss of highs at listening points progressively off speaker axis.

MODEL	6201	6200	DIFFUSICONE 8	DIFFUSICONE 12
Response	45-15,000 cps.	45-10,000 cps.	70-13,000 cps. Uniform field pattern	45-13,000 cps. Uniform field pattern
Power Capacity	25 watts continuous	30 watts	25 watts, cont. duty	30 watts, cont. duty
Source Impedance	8 ohms	6-12 ohms	8 ohms	8 ohms
Dimensions	12⅛" dia., 8¼" depth RMA Stand. 12" mounting	12⅛" dia., $4\frac{15}{64}$" depth RMA Stand. 12" mounting	$8\frac{7}{32}$" dia., 3⅜" depth 7⅝", 8 mtg. holes, 8 punched	12⅛" dia., 4¼" depth $11\frac{19}{32}$", 8 mtg. holes, 4 punched
Shipping Weight	10½ lbs.	5¼ lbs.	3½ lbs.	5½ lbs.
LIST PRICE	$75.00	$35.00	$35.00	$45.00

EXTENDED RANGE SPEAKER



Model 6200

Designed for general applications requiring a highly efficient, extended range PM loudspeaker with full-bodied response to 10,000 cycles.

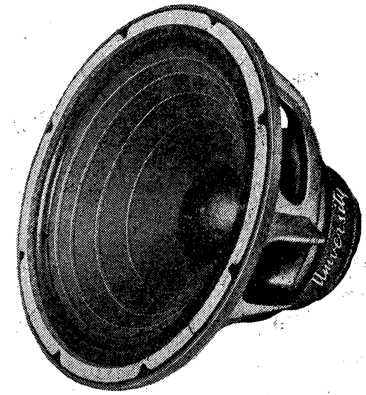
Ideal for improvement of commercial type radio, phono and TV combinations, for high quality P.A. and for sound reinforcement in restaurants, churches, schools, hospitals, stores, etc.

C-15W SUPER 15" WOOFER

At last, a 15" loudspeaker designed not only to provide the acme of attainable perfection in the specific reproduction of low frequencies, but one which defies obsolescence due to impedance matching requirements as speaker systems are altered or expanded.

The C-15W may be used in any 2, 3 or 4-way speaker system utilizing woofer crossover up to 2000 cycles. Amplifier rated to 50 watts may be employed. List **$125.00**

- **DUAL IMPEDANCE RANGE VOICE COIL**—4-8 ohms and 10-16 ohms available at speaker terminals.
- **LONGEST VOICE COIL AXIAL DEPTH**—Coil remains in gap, results in superior conversion efficiency and transient response.



For complete product information get your copy of University Loudspeakers TECHNILOG at your local distributor.

LIST PRICES SUBJECT TO TRADE DISCOUNTS

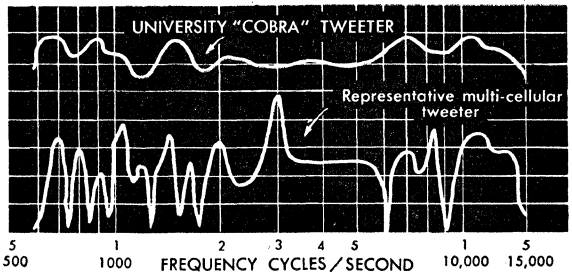
University LOUDSPEAKERS

FOR EXTENDED FREQUENCY RESPONSE
HIGH EFFICIENCY TWEETERS

Exclusive "Reciprocating Flares" principle offers these important performance advantages

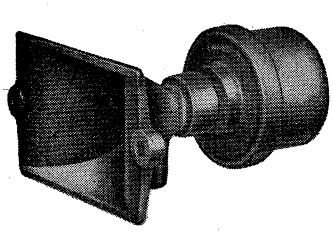
1. Uniformity of response—negligible variation of sound intensity at various positions off speaker axis.

2. True wide angle response with optimum angular distribution of sound—no radical shifts in energy level between vertical and horizontal planes.



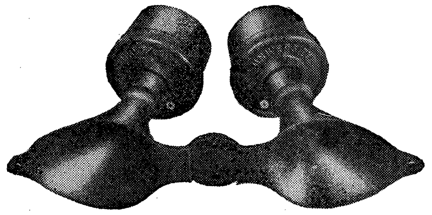
Tests made with same driver on both horns—curves at 45° off axis.

The Curve Tells the Difference



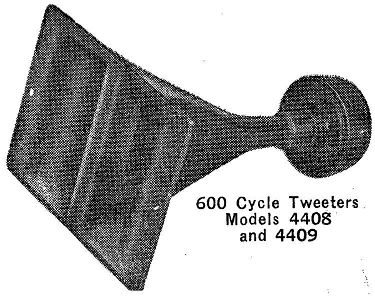
**2000 Cycle Tweeter
Model 4401**

Handles the output of amplifiers up to 25 watts when used with any suitable PM or field excited 8-15 inch cone speaker and proper high pass filter and cross-over network. Exceptional performance at a cost that cannot be ignored.



**Wide Angle
Dual Tweeter
Model 4402**

Electrical and acoustical characteristics make it the most versatile high frequency tweeter available.



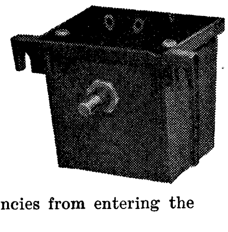
**600 Cycle Tweeters
Models 4408
and 4409**

Professional reproduction for two and three way speaker systems . . . economical wide-range response to the limits of audibility.

MODEL	4401	4402	4408	4409
Response	2000-15,000 cycles	2000-15,000 cycles	600-15,000 cycles	600-15,000 cycles
Impedance	For 6-16 ohm woofers	4-8 ohms and 10-16 ohms	Use with woofer from 6-16 ohms	For 6-16 ohm woofers
Power	Amplifiers up to 25 watts	Amplifiers up to 50 watts	Amplifiers up to 15-20 watts	Amplifiers up to 25-40 watts
Dispersion	90° Horizontal 45° Vertical	120° Horizontal 50° Vertical	120° Horizontal 60° Vertical	120° Horizontal 60° Vertical
Width (overall)	4½"	9½"	7⅜"	7⅜"
Depth (overall)	5$\frac{7}{64}$"	5$\frac{3}{16}$"	11⅜"	10½"
Height (overall)	2⅝"	2⅝"	5$\frac{13}{16}$"	5$\frac{13}{16}$"
Shipping Weight	2 lbs.	4 lbs.	5 lbs.	5 lbs.
LIST PRICE	**$25.00**	**$40.00**	**$30.00**	**$40.00**

University Crossover Networks — Effective . . . Economical . . . Assure Cleaner Reproduction

**Frequency Dividing Networks
Model 4410, 4420**



**High Pass
Filter
Model 4405**

Genuine inductance/capacitance networks which not only prevent low frequencies from entering the tweeter, but also eliminate high frequencies from the woofer circuit.

- Prevents low frequencies from entering the tweeter.
- Eliminates high frequencies from the woofer circuit.

All University Crossover Networks incorporate high-frequency balance control completely wired.

MODEL	4405	4410	4420
Crossover	2000 cycles	600 cycles	2000 cycles
Input Impedance	6-16 ohms	6-16 ohms	6-16 ohms
Height	2$\frac{23}{32}$"	4⅛"	3⅜"
Length	3½"	9¼"	7$\frac{7}{16}$"
Depth	2¼"	3$\frac{5}{16}$"	2$\frac{3}{16}$"
Attenuator	Built-in, Variable	Built-in Variable	Built-in, Variable
Shipping Weight	2 lbs.	4 lbs.	3 lbs.
LIST PRICE	**$10.00**	**$35.00**	**$20.00**

For complete product information get your copy of University Loudspeakers **TECHNILOG** *at your local distributor.*

University LOUDSPEAKERS

SERIES 300 LOUDSPEAKER CORNER ENCLOSURES

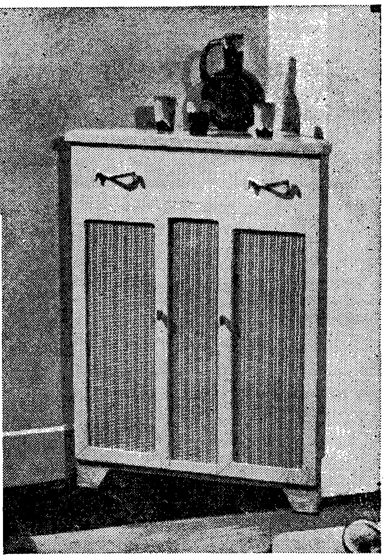
— For wide angle coverage

Engineered by University, the Leader in Acoustics
Styled by River Edge, Furniture Authority

Meet the highest standards of interior styling and sound reproduction. Superior high fidelity reception achieved when used in combination with the University Model 6200, Diffusicone 12, or the Model 6201 coaxial system.

Here are enclosures that treat the ear to the magnificence of well-engineered sound and blend smartly with any existing interior.

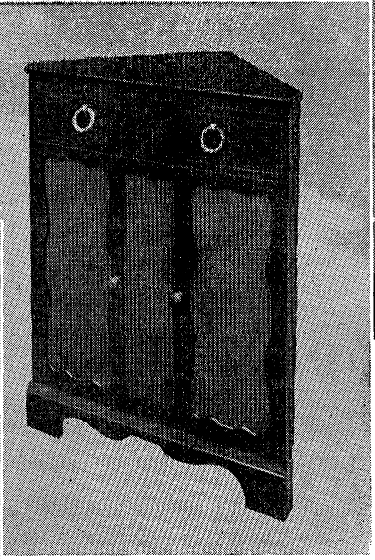
1. The Moderne—Model UR-312—in a choice of Cherry Mahogany, Blond Mahogany or Limed Oak.
2. The Traditional—Model UR-311—in Cherry or Cordovan Mahogany.
3. The Provincial—Model UR-310—available in Maple or Fruitwood.



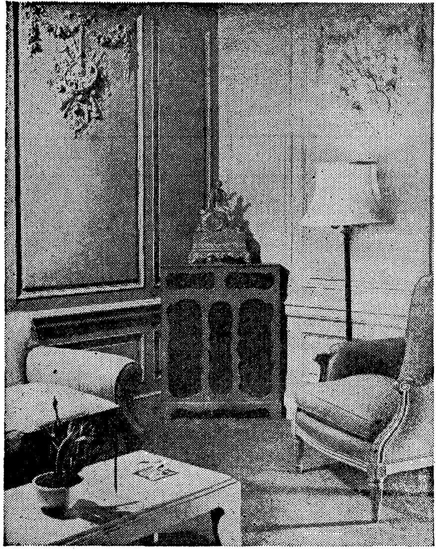
(1)

Height — 37½″
Width — 28½″
Depth — 15¾″
Speaker Opening —
for 12″ speakers

List Price: $107.50
Blond and Oak 10% extra



(2)



(3)

- Full front radiation retains full clarity and brilliance.
- Internal horn arrangement provides high power handling ability and distortion control.
- Low frequency response boosted by incorporation of unique bass reflex device.
- Not simulated, but **genuine** wood finishes . . . fully cured stock hand-rubbed to a beautiful furniture glow.

An Authoritative Manual on Speaker Application and Installation

UNIVERSITY 28-PAGE TECHNILOG

University Loudspeakers
TECHNILOG

Written by sound experts to simplify the work of installation and servicemen to make their sound job easier. In the TECHNILOG you may find the answers to such installation and service problems as —

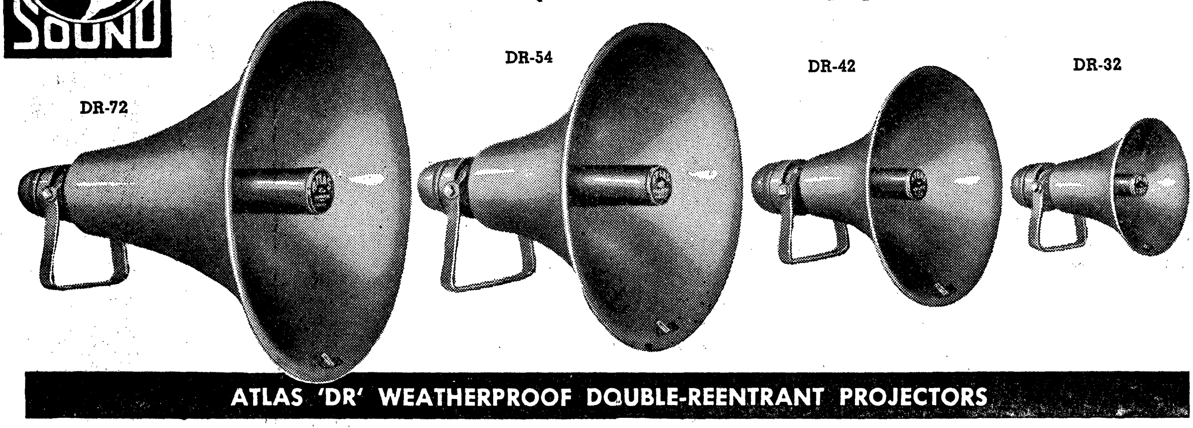
- Selecting the proper loudspeaker system.
- Methods of connecting speakers to the amplifier.
- Impedance matching.
- Impedance matching transformers.
- Effects of mismatch upon power transfer.
- Controlling loudspeaker volume.
- Overload protection of loudspeakers.
- Phasing loudspeakers.
- Reverberation.
- Baffling a cone speaker.

Request your copy from your distributor today!

TECHNILOG is a valuable addition to any technical library and is available to you at no cost.

ATLAS SOUND CORP.

the complete line for every public address need!



ATLAS 'DR' WEATHERPROOF DOUBLE-REENTRANT PROJECTORS

**Non-Resonant • Uniform Response • Sturdy • Stormproof
Compact • Demountable**

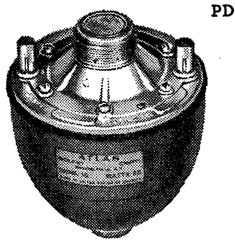
The modified exponential taper developed in Atlas projectors has proved most efficient for overall performance. All acoustical paths are clean and uniform. Reflex turns are smooth and flowing. These important features eliminate turbulence, frequency cancellation and resultant signal distortion. Ruggedly constructed of heavy castings, precision stampings, accurate die castings and uniform metal spinnings. All metal-to-metal surfaces insulated with non-vibratory material. Bell rim dampened and mechanically protected with formed rubber rim. All metals specially processed by chemical and electro-chemical means to impart complete weather-protection. Heavy "U" bracket mountings, securely fastened to main body casting of each model, do not fail even under extreme stress, strain or vibration. 1⅜"-18 thread. For greatest efficiency and low frequency response, the larger size horns are recommended. The smaller horns are excellent where space and cost limitations pertain.

Model	Air Column	Low Frequency	Lgth.	Diam.	List Price
DR-32	2½ ft.	175 c.p.s.	12 in.	14 in.	$26.00
DR-42	3½ ft.	135 c.p.s.	15 in.	21 in.	31.00
DR-54	4½ ft.	105 s.p.s.	18 in.	23 in.	43.00
DR-72	6 ft.	85 c.p.s.	25 in.	31 in.	65.00

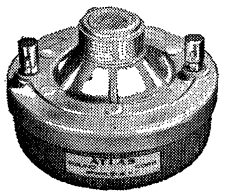
ATLAS SUPER-POWER ALNICO-V-PLUS DRIVER UNITS

All models include Atlas "Alnico-V-Plus" super-efficient magnetic circuit — magnetically shielded, hermetically sealed. One-piece unbreakable, high temperature and fatigue-proof phenolic diaphragm. Deluxe PD-5VT and PD-8VT include built-in "Uni-Match" transformer for universal matching to constant impedance and constant voltage systems. All transformer taps and direct voice coil connections are brought out to waterproof "terminal window" on rear of phenolic unit housing. 1⅜" - 18 thread.

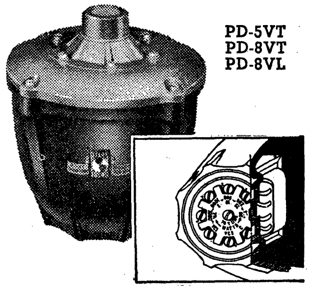
PD-5VH



PD-4V



PD-5VT
PD-8VT
PD-8VL

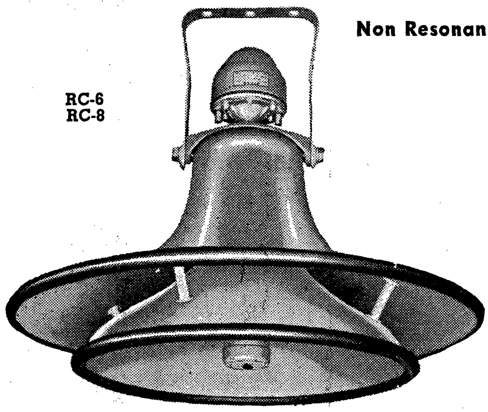


Model	Power	Impedance	Frequency	List
PD-4V	25 watts	16 ohms	90-6000	$27.50
PD-5VH	25 watts	16 ohms	80-9000	35.50
PD-5VT	25 watts	16 ohms*	80-9000	45.00
PD-8VT	30 watts	16 ohms*	80-10,000	50.00
PD-8VL**	30 watts	16 ohms	80-10,000	42.50

*Actual voice coil impedance. "Uni-Match" transformer offers 165, 250, 500, 1000, 2000 ohms and variable 70-volt line connections.
**Identical to Model PD-8VT, but supplied less transformer.

ATLAS RADIAL DRIVER UNIT PROJECTORS

RC-6
RC-8



Non Resonant • Dual Rubber Rims • Uniform 360° Coverage • 100% Stormproof

One of these projects often is more efficient for large and high noise level areas than several ordinary projectors. Both models suited for general speech and music. Improved all-aluminum construction provides smooth, uniform response. Completely stormproof, finished in durable neutral gray enamel. Thread 1⅜"-18. Use of H-2U two-unit adapter doubles power output for single projector high power application.

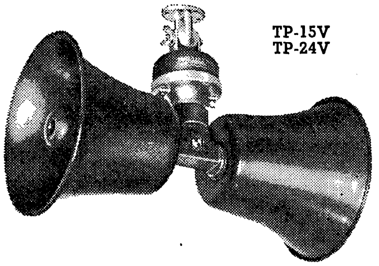
	RC-8	RC-6
Air Column	5 feet	4 feet
Bell Diameter	29"	25"
Overall Ht. (incl. bracket)	26"	21½"
Low Freq. Cutoff	120	150
List (horn only)	$53.50	$43.00

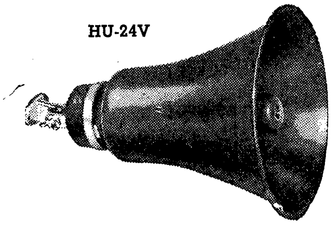
ATLAS SOUND CORP.

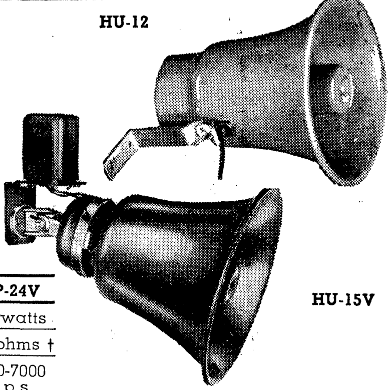
ATLAS — HEARD 'ROUND THE WORLD — SOUND

the complete line for every public address need!

ATLAS NEW ALNICO-V-PLUS PAGING AND TALK-BACK SPEAKERS







Model	HU-12	HU-15V	HU-24V	TP-15V	TP-24V
Power*	5 watts	12 watts	12 watts	12 watts	12 watts
Impedance	8 ohms#	8 ohms †	8 ohms †	8 ohms †	8 ohms †
Frequency	375-9000 c.p.s.	300-7000 c.p.s.	200-7000 c.p.s.	250-7000 c.p.s.	190-7000 c.p.s.
Length	7½ in.	11 in.	14½ in.	15½ in.	22 in.
Diameter	6¼ in.	8½ in.	10 in.	8½ in.	10 in.
Air Column	13½ in.	16½ in.	24 in. ea. side	19½ in. ea. side	27 in. ea. side
List	**$25.00**	**$32.50**	**$35.75**	**$47.50**	**$52.00**

* Given power ratings are conservative and are for continuous input. Peak power ratings may safely exceed this amount by 25%.

#Model HU-12 available in 45 ohms.

† Available in 16 ohms.

These speakers include the newly developed, unbreakable, hermetically sealed driver units using the Alnico V-Plus magnetic circuit. As reproducers, and as microphones in talk-back circuits, they provide a maximum of efficiency. The new ball swivel mounting bracket permits quick and simple directional adjustment in every position, horizontal and vertical. All-aluminum construction, finished in high lustre gray enamel over electro-chemically treated surfaces.

Model HU-12—Subminiature speaker with high intelligibility at minimum input power.

Model HU-15V—Medium-size speaker that withstands considerable input power. Large diaphragm and magnetic assembly similar to those used in the larger Atlas reproducers.

Model HU-24V—Oversize speaker with obvious advantage of longer air column, so that it also reproduces music with excellent results.

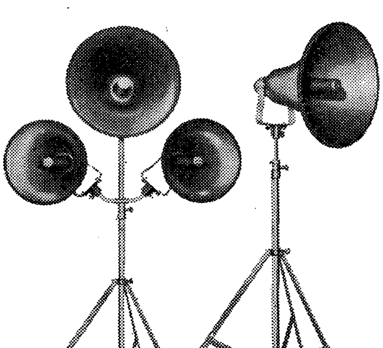
Model TP-15V—Dual speaker ideal for industrial and talk-back uses, often producing two-speaker results from a single unit.

Model TP-24V—Oversize dual speaker with longer air column for added efficiency, especially at the lower frequencies.

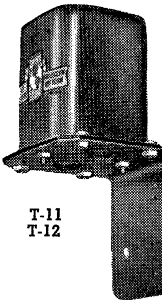
SPEAKER SUPPORT STANDS

SS-2 — Folding legs automatically level on uneven ground. Supports a cluster of speakers even under adverse wind conditions. Double clutch protection against accidental release. Tube assembly and legs are cadmium - plated steel; clutches and locks are machined iron castings. "Easy-off" top fitting permits attachment or removal of projector without tools. Ht. extension 5-10 ft. Wt. 20 lbs. **List $38.00**

HM-2 Horn Mounting Accessory—Permits 3 speakers on SS-2 Stand, and their orientation in any direction. No tools needed for setting up or dismantling. **List Price $14.00**



NEW WEATHERPROOF LINE MATCHING TRANSFORMER

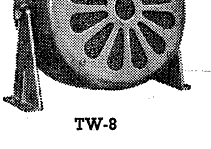


Specifically designed for high efficiency and ease of installation, these new transformers enable the matching of the popular Atlas "TP" and "HU" paging and talk-back speakers to either constant voltage (70-volt line) or constant impedance systems. The transformer taps eliminate the need for complex computations. Protective housings are heavy steel. Double rubber grommets and gaskets protect cable connections entering the housing. Convenient transformer bracket is easily integrated with speaker mounting bracket—no extra fastenings needed. Frequency response assures efficiency over entire range required, with a minimum insertion loss. Power-handling capacity of both models is 12 watts. Finish is in durable gray enamel.

Model T-11—Primary: 500, 1000, 1500, 2000 ohms. Secondary: 4 and 8 ohms. **List Price $8.50**

Model T-12—Primary: 45 ohms. Secondary: 4 and 8 ohms, for matching 40-60 ohm intercom line to 8 ohm speaker. **List Price $8.00**

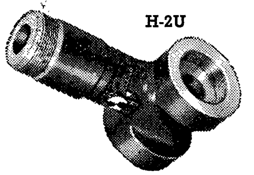
TWO-WAY ENCLOSURE for 8″ Cone Speaker



Speaker's front and back wave are used for good coverage in long corridors and central locations. Adjustable wall or ceiling mounting brackets and speaker mounting screws supplied. Outside diam. 10″, depth 5″.

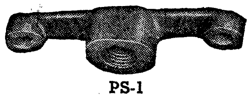
Model TW-8 **List Price $9.00**

TWO UNIT TO ONE PROJECTOR



When it is necessary to obtain the greatest possible power output from a single projector, the H-2U is recommended. It permits the use of 2 driver units with any type of projector. Cast aluminum construction. Threads 1⅜″-18. **List $11.00**

PIPE STANCHION FITTING

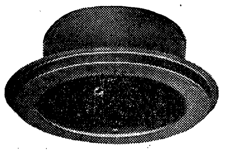


"DR" reentrant or "RC" radial "U" brackets adapted to ¾″ pipe fittings. This steel adapter has holes properly located to match holes in "U" bracket. All mounting bolts supplied. Female ¾″ pipe thread. **List $1.50**

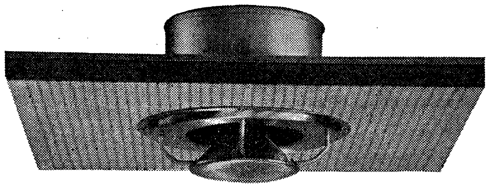
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

"Heard Everywhere"

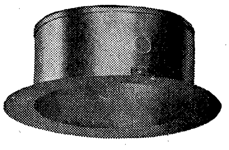
BACK COVER SPEAKER CAN
and Plaster Ring Assembly



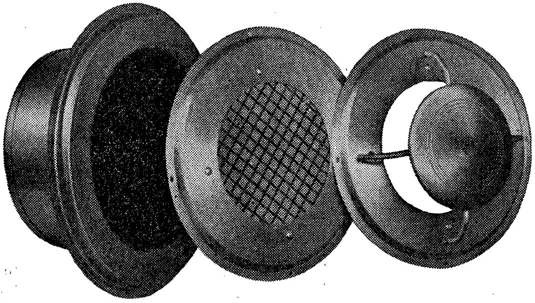
Back Cover Speaker Can and Plaster Ring Assembly



Sectional View of Completed Assembly



Back Cover Speaker Can and Plaster Ring Assembly



Side View of Models as Mounted to Assembly

FOR NEW CONSTRUCTION ONLY

Model No.	List Price	
CP6	**$ 6.85**	for use with Model AL6 and RS6
CP8	**8.50**	for use with Model AL8 and RS8
CP8TL	**9.50**	for use with Model ATL and RGL
CP1012	**11.50**	for use with Model AL10, AL12, and RS12

FEATURES

Reduces installation time.
Furnished with 3/4" knock-outs on all sides.
All mounting hardware including speed nuts furnished.
Prevents dust and mortar from damaging speaker cone.

USES

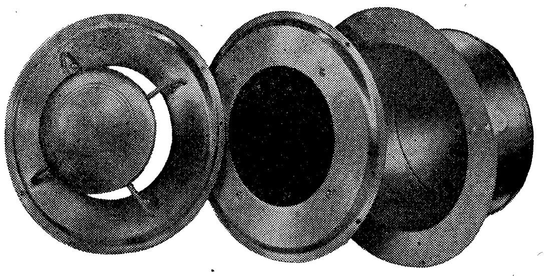
This steel back cover speaker can and plaster ring assembly is used for recessed speakers in new construction or remodeling for complete protection of speaker. It provides a quick and time saving installation, since all mounting hardware to baffle is furnished. Evenly spaced 3/4" knock-outs, so that speaker leads can be brought into assembly at any location.

DIMENSIONS OF MODELS

CP6	7" I.D. x 4"	deep x 12"	O.D.
CP8	8½" I.D. x 4¼"	deep x 12¾"	O.D.
CP8TL	8½" I.D. x 4¼"	deep x 16"	O.D.
CP1012	12½" I.D. x 7"	deep x 17⅞"	O.D.

DESCRIPTION

The steel back speaker can is made of 22 gauge steel. Knock-outs of 3/4" diameter are evenly spaced for convenience in installation work. A 22 gauge steel plaster ring is spot welded to can, and has 90° spaced speaker baffle mounting holes. Plastic roughing compound applied throughout inside of speaker can assembly to prevent metallic resonance. Assembly has also sufficient mounting holes to wall or ceiling.



Side View of Models as Mounted to Assembly

FOR EXISTING CONSTRUCTION AND REMODELING

Model No.	List Price	
CP6X	**$ 6.00**	for use with Model AL6 and RS6
CP8X	**7.50**	for use with Model AL8, CE8L and RS8
CP8TLX	**8.00**	for use with Model ATL and RGL
CP1012X	**10.00**	for use with Model AL10, AL12, RS10 and RS12

FEATURES

Self aligning screw clips and positive screw locking.
Reduces installation time.
Furnished with 3/4 in. knock-outs on all sides.
All mounting hardware including speed nuts furnished.
Prevents dust and mortar from damaging speaker cone.

USES

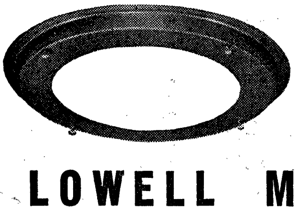
This steel back cover speaker can and plaster ring assembly is used for recessed speakers in new construction or remodeling for complete protection of speaker. It provides a quick and cost saving installation since all mounting hardware to baffle is furnished. Evenly spaced 3/4" knock-outs, so that speaker leads can be brought into assembly at any location.

DIMENSIONS OF MODELS

CP6X	7"	in diameter x 4"	deep
CP8X	8½"	in diameter x 4¼"	deep
CP8TLX	15"	in diameter x 4¼"	deep
CP1012X	16½"	in diameter x 7"	deep

DESCRIPTION

The steel back speaker can is made of 22 gauge steel. Knock-outs of 3/4" diameter are evenly spaced for convenience in installation work. A 22 gauge steel plaster ring is spot welded to can, and has 90° spaced speaker baffle mounting holes. Plastic roughing compound applied throughout inside of speaker can assembly to prevent metallic resonance. Assembly has also sufficient mounting holes to wall or ceiling.



STEEL PLASTER RINGS

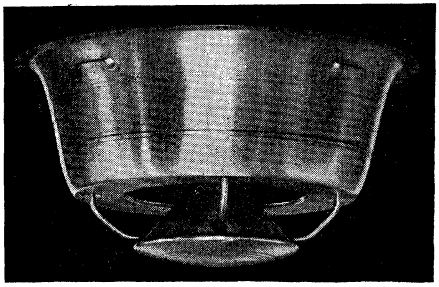
Model No.	List Price	Model No.	List Price
PR6	$2.00	PR8	$2.65

LOWELL MANUFACTURING CO. ST. LOUIS 17, MO. U.S.A.

"Heard Everywhere"

LOWELL FLUSH MOUNTING CEILING BAFFLES

with "floating conical action"



Model Nos.
BL6-A
BL8-A
BL12-A

PATENTED
IN THE U.S.A.
AND CANADA

DIMENSICNS OF VARIOUS MODEL BAFFLES

6" models — 9¾" at top x 4¼" deep.
8" models — 13½" at top x 4⅞" deep.
12" models — 18⅜" at top x 8 " deep.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	List Price
BL6 - A	Flush Mounting	6"	Aluminum	Satin	$13.00
BL8 - A	Flush Mounting	8"	Aluminum	Satin	22.00
BL12-A	Flush Mounting	12"	Aluminum	Satin	27.00

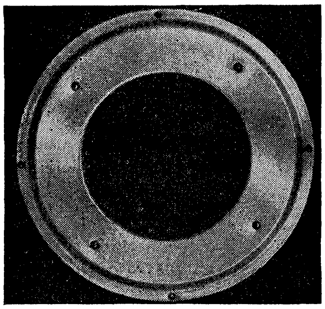
DESCRIPTION OF BAFFLE

The flush mounting ceiling baffle is designed to mount flush to the ceiling quickly by inserting 4 toggle bolts, completely sealing back of housing to the ceiling. This baffle is recommended for normal ceilings. Uniform sound reproduction at 360° giving CONTROLLED SOUND evenly in all directions. Baffle is made of spun metal, of 18 gauge aluminum. Heavy ¾" jute lines interior with louvres on sides for proper pressure relief.

ARCHITECTS' SPECIFICATIONS

This speaker baffle housing contains a half inch flange at top with 4 holes evenly placed for proper mounting to the ceiling. The lower metal cone is mounted to the housing by 4 one-quarter inch formed metal rods having 4 hard rubber grommets preventing metallic resonance. The upper part of the rods are threaded and mount through speaker housing. All hardware furnished complete with each baffle.

recessed wall type directional speaker baffles



Model Nos.
RS6-A
RS8-A
RS12-A

FEATURES

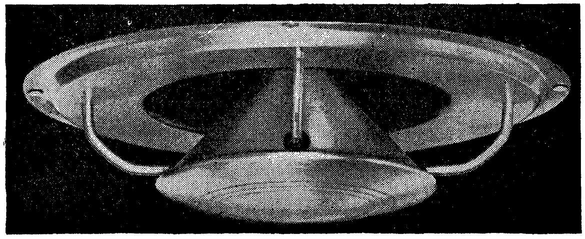
Concealment of speakers.
Easily installed.
Finished to match surroundings.

DESCRIPTION

This speaker trim ring is made of spun metal, 18 gauge aluminum. Flocked metal color grille cloth protects speaker cone — 4 round head screws mounts through housing for mounting speaker. Housing has a depth of ½" and a half inch flange for mounting housing to wall.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	List Price
RS6 - A	Recessed Wall	6"	Aluminum	Satin	$5.00
RS8 - A	Recessed Wall	8"	Aluminum	Satin	5.55
RS12-A	Recessed Wall	12"	Aluminum	Satin	7.60

for low ceilings



Model Nos: AL6-A AL8-A AL12-A

DIMENSIONS OF VARIOUS MODEL BAFFLES

The overall diameter at top of housing flange:
6" model — 9⅝" in diameter, depth ½"
8" model — 11¾" in diameter, depth ½"
12" model — 16½" in diameter, depth 1 "

DESCRIPTION

The false ceiling speaker housing is made of 18 gauge aluminum. Housing is spun metal, having a depth of ½" and a half inch flange for mounting housing to ceiling. The lower metal cone is mounted to the housing by 4 one-quarter inch formed metal rods having 4 hard rubber grommets preventing metallic resonance. The upper part of the rods are threaded and mount through speaker housing. All hardware furnished complete with each baffle. The sound coverage of this baffle is approximately 360°.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	Price
AL6 - A	False Ceiling	6"	Aluminum	Satin	$7.50
AL8 - A	False Ceiling	8"	Aluminum	Satin	12.15
AL12-A	False Ceiling	12"	Aluminum	Satin	15.30

WRITE FOR FURTHER DETAILS ON VARIOUS COLORED LACQUERS AVAILABLE

LOWELL MANUFACTURING CO. ST. LOUIS 17, MO. U.S.A.

STEPHENS
TRU SONIC

SPEAKER SYSTEMS
FOR THEATRE AND HOME

500-D DIRECT DRIVE AMPLIFIER
FINEST AMPLIFIER BUILT—NO OUTPUT TRANSFORMER

500 D AMPLIFIER

List Price $184.00

- Frequency response ±¼ db 20-70,000 c.p.s. • Full 20 watts of audio
- Distortion is less than ½ of one per cent • Phase shift—less than 15° at 20 c.p.s.

(Above figures are a true picture at full output of 20 watts.)

Here's the first amplifier to successfully eliminate the output transformer. All distortion introduced by transformers is eliminated. Great clarity of tone is noticeable at once. Hum and noise are at a minimum. Frequency response is ±¼ db 20-70,000 c.p.s., achieved with far less phase shift than can be obtained with a transformer . . . especially on the low end. Matching Stephens Tru Sonic speakers with 500 ohm v.c. impedance designed as companion units for the 500 D Amplifier are shown on adjoining page.

CHARACTERISTICS—ELECTRICAL

POWER SUPPLY: 117 V. AC 50-60 c.p.s. 1.2 amps. 140 va full output.
INPUT: 0.1 megohm. One side ground.
VOLTAGE GAIN: 47 db
OUTPUT: Impedance: 500 ohms. 5 ohms at 1000 c.p.s. (apparent) 100 ohms at 20 c.p.s. (apparent). Level: 100 V. rms across 500 ohms, 20 watts.

CHARACTERISTICS—PHYSICAL

DIMENSIONS: 7¾" wide by 15¼" long by 7" high.
WEIGHT: 27 lbs.
POWER: Permanently attached 6-foot cord.

CABINETS AND RECOMMENDED SYSTEMS

MODEL 610 800 CYCLE TWO-WAY SYSTEM. Has 105LX 15" low frequency speaker, 108A high frequency driver, 814H 1x4 Horn, 800X-2 high pass filter mounted in a lowboy blonde or mahogany cabinet 20" deep x 36" wide x 29½" high.............. **List Price 16 ohm $375.00, 500 ohm $388.00**

MODEL 615 800 CYCLE TWO-WAY SYSTEM. Model 103LX 15" low frequency speaker, 108A high frequency driver, 824H 2x4 horn, 800X crossover and high frequency attenuator. Mounted in a blonde or mahogany cabinet 19" deep x 28¼" wide x 36" high........**List Price 16 ohm $422.00, 500 ohm $435.00**

MODEL 617 800 CYCLE TWO-WAY SYSTEM. Model 103LX 15" low frequency speaker, 108A high frequency driver, 824H 2x4 horn, 800X crossover and high frequency attenuator. Silver hammertone or natural hardwood cabinet 20¼" deep x 26" wide x 36" high.....**List Price 16 ohm $375.00, 500 ohm $388.00**

MODEL 612 15" FULL RANGE SYSTEM. Contains 102FR Speaker 16 or 500 ohms, blonde or mahogany cabinet 17" deep x 24" wide x 34½" high.
List Price 16 ohm $238.00, 500 ohm $246.00

MODEL 618 800 CYCLE TWO-WAY SYSTEM. Two 103LX 15" low frequency speakers, 108A high frequency driver, 824H 2x4 horn, 800X crossover network and high frequency attenuator. Silver hammertone or natural hardwood cabinet 24½" deep x 42½" wide x 36" high.. ....**List Price 16 ohm $552.00**
500 ohm $573.00

MODEL 620 12" FULL RANGE SYSTEM. Contains model 112FR speaker 8 to 16 ohm. Blonde or Mahogany cabinet 14" deep x 21" wide x 29½" high.
List Price 16 ohm $146.00, 500 ohm $154.00

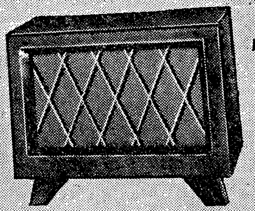
MODEL 622 12" FULL RANGE SYSTEM. Contains Model 112FR speaker. 8 to 16 ohms. Blonde or Mahogany cabinet 18" deep x 27½" wide x 29½" high.
List Price 16 ohm $146.00
500 ohm $154.00

MODEL 626 TWO-WAY COAXIAL SYSTEM. 206AX 15" Coaxial speaker, 2 voice coils, 7½ lb. Alnico V magnet. Blonde or Mahogany cabinet 21" deep x 32" wide x 32" high.. ....**List Price 16 ohm $326.00, 500 ohm $339.00**

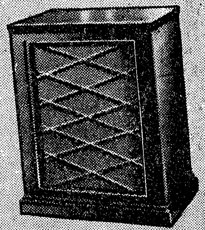
OTHER COMBINATIONS ARE AVAILABLE

CABINETS ONLY

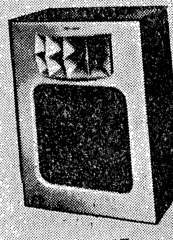
MODEL 610 cabinet only—**List Price**..........................	$172.00
MODEL 612 cabinet only—**List Price**..........................	$144.00
MODEL 615 cabinet only—**List Price**..........................	$175.00
MODEL 617 sold only as complete unit.	......
MODEL 618 cabinet only—**List Price**..........................	$215.00
MODEL 620 cabinet only—**List Price**..........................	$104.00
MODEL 622 cabinet only—**List Price**..........................	$104.00
MODEL 626 cabinet only—**List Price**..........................	$160.00



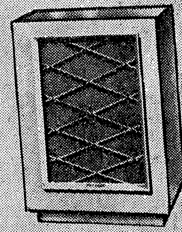
MODEL 610



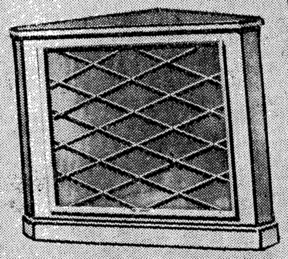
MODEL 615



MODEL 617



MODEL 612



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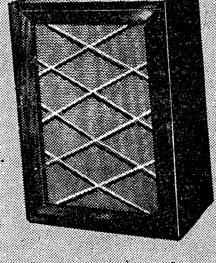

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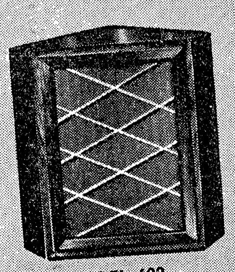

MODEL 622
MODEL 626

STEPHENS MANUFACTURING CORPORATION
CULVER CITY, CALIFORNIA

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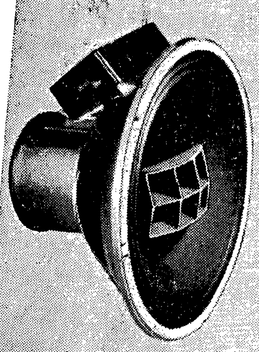
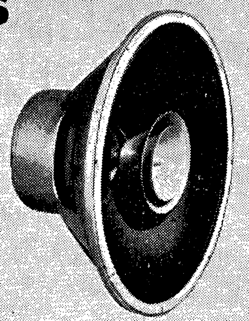
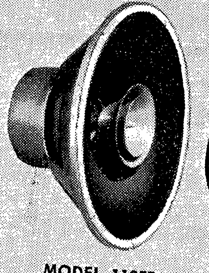
STEPHENS TRU SONIC SPEAKER SYSTEMS

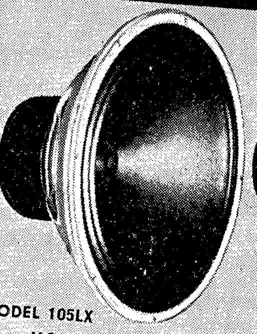
FOR THEATRE AND HOME

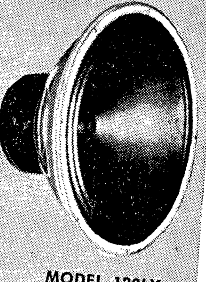
SPEAKERS

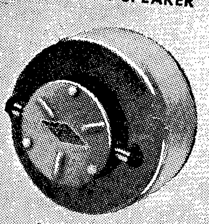

MODEL 206-AX
COAXIAL SPEAKER

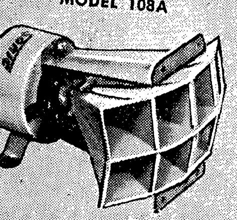

MODEL 101FR
MODEL 102FR

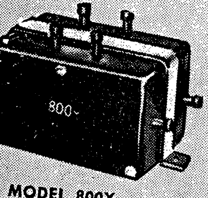

MODEL 112FR


MODEL 105LX
MODEL 103LX

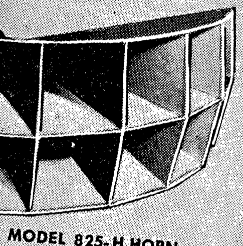

MODEL 120LX


MODEL 216
MODEL P-35
MODEL 108A


MODEL 214



MODEL 800X


MODEL 825-H HORN

16 OHM		500 OHM					OVERALL DIMENSIONS		
TYPE	LIST PRICE	TYPE	LIST PRICE	VOICE COIL DIAMETER	TYPE SPEAKER	MAGNET WEIGHT	DIA.	DEPTH	WEIGHT
206AX	$166.00	5206AX	$179.00	2″ LF 1½″ HF	COAXIAL	7½ lbs.	15¼″	10″	31 lbs.
102FR	94.00	5102FR	102.00	2″	FULL RANGE	4¼ lbs.	15¼″	8½″	27 lbs.
101FR	78.00	5101FR	86.00	2″	FULL RANGE	2½ lbs.	15¼″	7½″	25 lbs.
112FR	42.00	5112FR	50.00	2″	FULL RANGE	1½ lbs.	12¼″	5½″	11 lbs.
103LX	90.00	5103LX	98.00	2″	LOW FREQUENCY	4¼ lbs.	15¼″	8½″	27 lbs.
105LX	74.00	5105LX	82.00	2″	LOW FREQUENCY	2½ lbs.	15¼″	7½″	25 lbs.
120LX	42.00	5120LX	50.00	2″	LOW FREQUENCY	1½ lbs.	12¼″	5½″	11 lbs.
P-35	130.00	P-535	138.00	2½″	HIGH FREQUENCY	4¼ lbs.	7″	4⅝″	22 lbs.
216	84.00	5216	89.00	1½″	HIGH FREQUENCY	1½ lbs.	5″	3¾″	6½ lbs
108A	62.00	5108A	67.00	1½″	HIGH FREQUENCY	1½ lbs.	5″	3¾″	6½ lbs
214*	44.00	16 ohms only for use with 5000 c.p.s. high pass filter		1″	ULTRA HIGH FREQUENCY	14 oz.	6⅛″ x 3¼″	7¼″	7 lbs.
*500 ohm matching transformer for use with Model 214..........List Price $5.00									
409	212.00	800 CYCLE TWO WAY SYSTEM. Model 105LX Low Frequency Speaker, 108A High Frequency Driver, 814-H Horn, 800x-2 High Pass Filter mounted on a flat board baffle.							

CROSSOVER NETWORKS

	List Price
MODEL 800X CROSSOVER 800 c.p.s. 16 ohm input and output....................	$40.00
MODEL 5800X CROSSOVER 800 c.p.s. 500 ohm input and output....................	40.00
MODEL 600X CROSSOVER 600 c.p.s. 16 ohm input and output......................	60.00
MODEL 5600X CROSSOVER 600 c.p.s. 500 ohm input and output....................	60.00
MODEL 400X CROSSOVER 400 c.p.s. 16 ohm input and output......................	84.00
MODEL 5400X CROSSOVER 400 c.p.s. 500 ohm input and output....................	84.00
MODEL 800X-2 HIGH PASS FILTER NETWORK, 800 c.p.s. 16 ohm input and output....	28.00
MODEL 5000X-2 HIGH PASS FILTER NETWORK, 5000 c.p.s. 16 ohm input and output...	16.00

STANDARD HORNS

MODEL 814H 1x4 HORN. 800 c.p.s. cutoff. Takes Model 108A high frequency driver. List Price $28.00

MODEL 824H 2x4 HORN. 800 c.p.s. cutoff. Takes Model 108A high frequency driver. List Price, $49.00

MODEL 825H 2x5 HORN. 800 c.p.s. cutoff. Takes Model 108A high frequency driver. List Price, $62.00

MODEL 826H 2x6 HORN. 800 c.p.s. cutoff. Takes Model 108A high frequency driver. List Price, $68.00

MODEL 625H 2x5 HORN. 600 c.p.s. cutoff. Takes Model P-35 high frequency driver. List Price $101.00

MODEL 425H 2x5 HORN. 400 c.p.s. cutoff. Takes Model P-35 high frequency driver. List Price, $182.00

MODEL 436H 3x6 HORN. 400 c.p.s. cutoff. Y throat to accommodate two Model P-35 high frequency drivers..List Price, $308.00

STEPHENS MANUFACTURING CORPORATION
CULVER CITY, CALIFORNIA

U. C. P., Inc.

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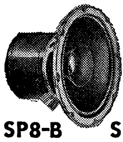
NO FINER CHOICE THAN *HIGH-FIDELITY*

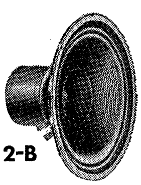
Electro-Voice SPEAKERS

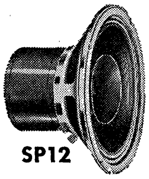
DRIVERS • HORNS • CROSSOVERS

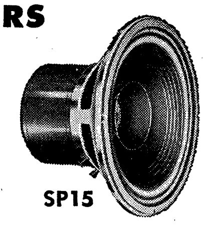
Research-Engineered Wide-Range

RADAX COAXIAL SPEAKERS


SP8-B


SP12-B


SP12


SP15

Discovery of the *E-V RADAX* Principle provides an *economical* and *super-efficient* method of utilizing two disparate coaxially mounted cones to divide the audio spectrum . . . while both operate from only a single voice coil.

Built-in mechanical crossover from the low-frequency cone to the high-frequency propagator ("*Whizzer*") permits design of each cone for optimum response. This provides a true coaxial two-way speaker system that assures clean, sparkling wide-range reproduction.

Frames are extra sturdy. Both speaker cones are moisture inhibited.

Model SP8-B. Radax Super-Eight. 8-inch coaxial speaker. 15-20 watts. Response 35-13,000 cps. ±6 db. 8 ohms impedance. Crossover, 6000 cps. 1 lb. Alnico V magnet. 8¼″ diam., 7″ baffle openings. 4⅜″ depth behind mtg. panel. Shpg. wt. 8½ lbs.

List Price........................ $47.50

Model SP12-B. Radax Twelve. 12-inch coaxial speaker. 15-20 watts. Response 30-13,000 cps. ±6 db. 8 ohms impedance. Crossover. 4500 cps. 1 lb. Alnico V magnet. 12⅛″ diam., 11″ baffle opening. 5¾″ depth behind mtg. panel. Shpg. wt. 9½ lbs.

List Price........................ $49.50

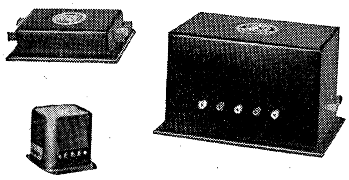
Model SP12. Radax Super-Twelve. 12-inch coaxial speaker. 25 watts. Response 30-13,000 cps. ±5 db. 16 ohms impedance. Crossover, 4000 cps. 3 lb. Alnico V magnet. 12 3/16″ diam., 11″ baffle opening, 7½″ depth behind mtg. panel. Shpg. wt. 26 lbs.

List Price........................ $95.00

Model SP15. Radax Super-Fifteen. 15-inch coaxial speaker. 30 watts. Response 30-13,000 cps. ±5 db. 16 ohms impedance. Crossover, 3000 cps. 5¼ lb. Alnico V magnet. 15⅛″ diam., 13½″ baffle opening, 9″ depth behind mtg. panel. Shpg. wt. 44 lbs.

List Price........................ $130.00

CROSSOVERS



All EV Crossovers use high Q air core coils. Insertion loss less than ½ db, phase rotation 270° (135° in X-825-1) attenuation 12 db per octave in ½ section, 6 db. per octave in ¼ section crossovers.

Model X-825-1 Crossover as used in EV 108 system full M-Derived ¼ section. 3 db loss point, 3500 cps. Impedances 16 ohms in and out. Size 5″ x 7″ x 2″. Shipping weight 3 lbs.

List Price........................$30.00

Model X-8-1 Crossover. Full ½ section M-Derived. 3 db loss point, 800 cps. Impedances 16 ohms in and out. Size 4⅝″ x 8¼″ x 5½″. Shipping weight 6 lbs.

List Price........................$50.00

Model X-6-1 Crossover. Full M-Derived ½ section. 3 db loss point, 600 cps. Impedances 16 ohms in and out. Non-metallic container measures 4 11/16″ x 9¼″ x 6″. Shipping wt. 7 lbs.

List Price........................$60.00

Model X-4-1 Crossover. Full ½ section M-Derived. 3 db loss point, 400 cps. Impedances 16 ohms in and out. Nonmetallic container size 4¾″ x 10″ x 8″. Shipping weight 10½ lbs.

List Price........................$75.00

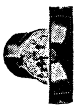
Model X-2635-1 4-Way Crossover. Full M-Derived half sections. 3 db loss points, 200, 600, and 3500 cps. Impedances 16 ohms in and out. Non-metallic container size 4¾″ x 10″ x 8″. Shipping weight 11 lbs.

List Price........................$120.00

Model X-36-1 Crossover. Recommended for use with T-35 driver. Full M-Derived ½ section. 3 db loss point, 3500 cps. Impedances 16 ohms in and out. Metal case: 3 7/16″ x 3⅝″ x 4 7/16″. Shipping weight 1½ lbs.

List Price........................$14.00

H. F. HORNS



T-35 *Super Sonax* VERY HIGH FREQUENCY DRIVER

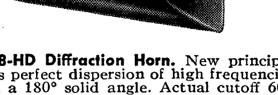
At least one more octave of Silky Highs. For any system up to 40 watts. Response: 3500 cps. to beyond range of audibility. Polar pattern: 180° dispersion. Impedance 16 ohms. Cutoff of diffraction horn 1500 cps. RTMA Rating 56 db. Horn size 4½″ long x 1¼″ wide. Pot size 2 5/16″ diam. 3⅜″ deep overall. Easily installed in a few minutes to add thrilling new highs to your present system. Net weight 2 lbs.

List Price........................$55.00

AT-37 Level Control. 16 ohm L pad. For use with Model T-35. Adjusts output level to individual taste.

List Price........................$6.00

H. F. DIFFRACTION HORN



Model 8-HD Diffraction Horn. New principle provides perfect dispersion of high frequencies through a 180° solid angle. Actual cutoff 600 cps., crossover 800 cps., eliminating cutoff disturbances. Made of Fiberglas. For T-10 or T-25 driver. 3⅜″ h, 14¼″ w, 7½″ d. Mounting hardware kit AK-1 included. Shpg. wt. 2 lbs.

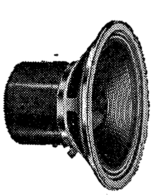
List Price........................$27.00

Model 6-HD Diffraction Horn. For systems utilizing 600 cps. crossover. Horn designed with actual 400 cps. cutoff; prevents response disturbances associated with operation too near actual cutoff point. Diffraction principle effects 180° dispersion. 3½″ high, 19¾″ wide, 12″ deep. For T-10 and T-25 drivers. Shipping weight 3 lbs. Mounting hardware kit AK-2 included.

List Price........................$35.00

New, modern concepts in 2, 3 and 4-way high fidelity speaker systems bring true *Dynamic Realism* within reach of all! Unique new *E-V RADAX* principle of high-frequency propagation and dispersion . . . heavier "pound rated" magnets for more driving power and generous distortion damping factors . . . separate 2, 3 and 4-way reproducing systems for the home . . . acoustically-correct Klipsch licensed* folded corner horn speaker enclosures with authentic furniture styling . . . these and other E-V exclusives create a totally new experience in the enjoyment of sound reproduction!

LOW FREQUENCY DRIVERS



Model 12W-1. 12-inch L. F. Driver. Resonance 57 cps. 3 lb. Alnico V. magnet. 15-20 watts. 16 ohms impedance. 12⅛″ diam., 11″ max. baffle opening. 7½″ depth behind mounting panel. Shipping wt. 27 lbs.

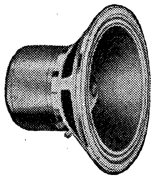
List Price............$95.00

Model 12W-2. Same as 12W-1 but with 8 ohms impedance.

Model 12WK. Same as 12W-1 but 3.2 ohms dc (for Klipsch "K" type baffles) 16 ohms nominal impedance.

Model 12BW. 1. 12-inch L.F. Driver. As used in EV 108 System. 1 lb. Alnico V magnet. 15-20 watts. 16 ohms impedance. 12¼″ diam., 11″ baffle opening, 6¾″ depth behind mtg. panel. Shipping wt. 10 lbs.

List Price............$49.50

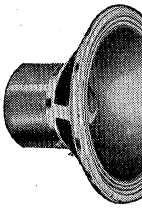


Model 15W-1. 15-inch L. F. Driver. Resonance 37 cps. 5¼ lb. Alnico V magnet. 20-30 watts. 16 ohms impedance. 15⅛″ diam., 13½″ maximum baffle opening. 9″ depth behind mounting panel. Shipping wt. 45 lbs.

List Price..........$130.00

Model 15W-2. Same as 15W-1 but with 8 ohms impedance.

Model 15WK. Same as 15W-1 but 3.2 ohms dc, 32 cps. resonance (for Klipsch "K" type baffles). 16 ohms nominal impedance.



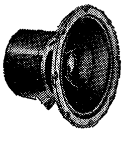
Model 18W-1. 18-inch L.F. Driver. Resonance 27-30 cps. 5¼ lb. Alnico V magnet. 20-30 watts. 16 ohms impedance. 18¼″ diam., 16½″ max. baffle opening, 10″ depth behind mtg. panel. Shipping wt. 45 lbs.

List Price..........$150.00

Model 18W-2. Same as 18W-1 but with 8 ohms impedance.

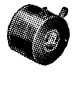
Model 18WK. Same as 18W-1 but 3.2 ohms dc, 22-24 cps. resonance (for Klipsch "K" type baffles). 16 ohms nominal impedance.

HIGH FREQUENCY DRIVERS



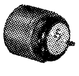
Model SP8-BT. Super Tweeter. 15-20 watts. Frequency range ±6 db to 17,000 cps. 8 ohms impedance 1 lb. Alnico V magnet. 8¼″ diam., 7″ baffle opening, 5⅛″ depth behind mtg. panel. Shipping wt. 8½ lbs.

List Price..................$47.50



Model T-10. H.F. Driver. 20 watts. Response, ±5 db 400-13,000 cps. Impedance 16 ohms. 1 lb. Alnico V magnet. 4½″ diam., 3½″ deep. Throat diam. ⅞″. Shipping wt. 13 lbs.

List Price..................$67.50



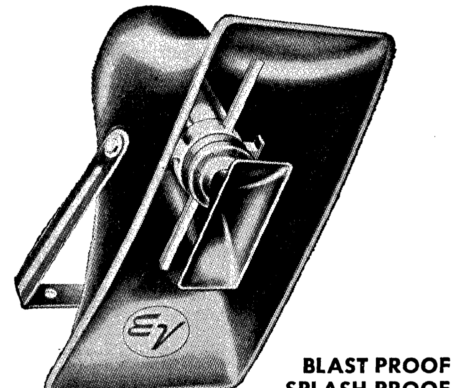
Model T-25. H.F. Driver. 20-30 watts. Response ± 5 db. 400-13,000 cps. Impedance 16 ohms. 1¾ lb. Alnico V magnet. 5″ diam. 4¼″ deep. Throat diam. ⅞″. Shipping wt. 17 lbs.

List Price..................$95.00

*Klipsch licensed Pat. No. 2310243 and No. 2373692.

NO FINER CHOICE THAN

Electro-Voice CDP COMPOUND DIFFRACTION PROJECTOR*



BLAST PROOF
SPLASH PROOF
WEATHER PROOF
INDESTRUCTIBLE

*Patent Pending

Public Address Loudspeaker System

for perfect

VOICE PENETRATION AND FULL RANGE MUSICASTING

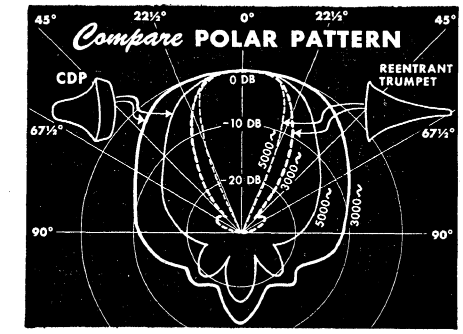
The CDP Compound Diffraction Projector* provides a loudspeaker system so advanced in concept—so efficient in performance—that there is no basis for comparison with conventional P.A. reentrant horns. The EV CDP works in the same manner as an optical slit. When the slit width is of a shorter dimension than the wave length of the sound it passes, the sound energy is highly dispersed in the direction of this short dimension. Polar response of the CDP is phenomenal.

An increase in efficiency of three db over multi-cellular horns is achieved with better dispersion. There is no pinpointing effect since there are no cells to beam the sound path. Elimination of multiple throats at the driver mouth permits greater high-frequency efficiency as compared to multi-cellular horns. The direct path and optimum throat dimension of the CDP also gives these advantages over the reentrant horn. Greater transfer efficiency, smooth extended high-frequency response also result from this development.

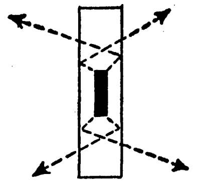
The EV Model 848 CDP provides peak-free response ±5 db to 10,000 cps—delivers 2½ octaves more musical range than usual P.A. units of even larger size. Speech articulation index is at least 20% superior. Polar distribution pattern exceeds 120°. The EV Model 848 utilizes two coaxially mounted horns working from opposite sides of a single diaphragm. Each horn is designed for optimum reproduction within its own range. Low end response is augmented by 100 c.p.s. horn taper, which insures at least one-half octave added bass over that possible from larger conventional P.A. horns.

The CDP bell and diaphragm are fabricated of molded Fiberglass. Other parts are die-cast zinc and steel treated against corrosion. The voice coil is edgewise wound copper ribbon on a duralumin form. Edgewise winding puts 30% more conductor in the gap, raising the efficiency 20%. In EV tests the CDP driver has been subjected to months of continuous operation under 30 watts of power at 60 cycles AC without failure for any reason whatsoever. Should it become necessary, the diaphragm is easily replaced in a moment. Silver contacts eliminate the need for soldering operations.

The EV CDP, with its higher sensitivity and power handling on a basis of distributed signal, provides superior coverage of the listening area with fewer units and at far lower cost. The EV CDP unit is weather-proof, splash and blast proof, and virtually indestructible. It represents something so entirely new in Public Address efficiency and fidelity that it is indeed hard to believe such reproduction is possible.

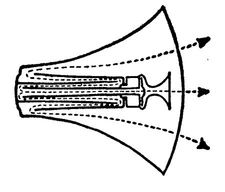


DIFFRACTION PRINCIPLE

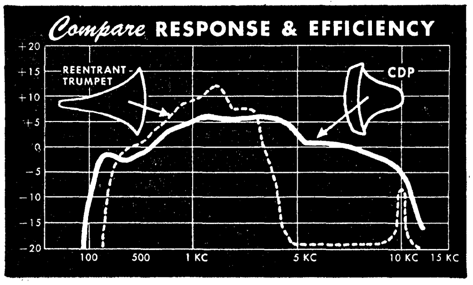


Uses the new acoustic application of optical slit diffraction for perfected smooth sound dispersion virtually independent of frequency.

COAXIAL HORNS



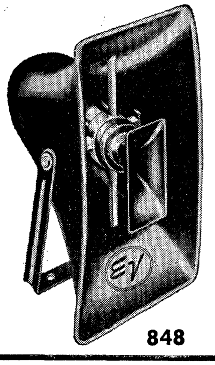
CDP utilizes two coaxially mounted diffraction horns working from both sides of a single diaphragm. Each horn is designed for optimum air loading and reproduction within its own range.



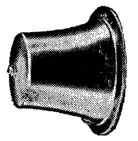
ELECTRO-VOICE MODEL 848 COMPOUND DIFFRACTION PROJECTOR*

Conservatively rated at 25 watts. Nominal impedance is 16 ohms. The attractive neutral gray color is molded right into the bell material, which is impervious to acids, alkalies and most solvents. Hang up bracket has two mounting positions. Projector may be installed horizontally, or vertically for augmented dispersion. Dimensions at mouth: 10½" wide, 20½" high. Overall depth 20". Shipping weight 17 lbs.

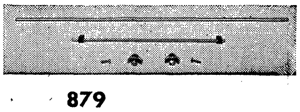
List Price..$59.00



848



876, 877
878



879

ACCESSORIES

25 Watt Line Matching Transformer Model 876. In protective case for mounting on rear of Model 848 System. Primary taps for 25, 10, 5, and 2.5 watts with 70-volt line. Impedance taps of 45, 200, 500, 1000 and 2000 ohms. Transformer bypasses frequencies below Model 848 Horn cutoff. Case extends 3½" behind Projector when mounted. 5¼" maximum diameter. Shipping weight, 4 lbs.

List Price.................$15.00

Line Matching Transformer Model 877. Same as Model 876, but with added full-range thermal bimetallic relay for maximum protection against overload. Size: same as Model 876. Shipping weight, 4 lbs.

List Price.................$17.50

Bass and Thermal Overload Protector Model 878. Prevents distortion and excessive diaphragm excursion due to frequencies below Model 848 Horn cutoff. Automatically reduces power to driver when 25 watt limit is exceeded. Mounted in case similar to Model 876 Transformer. Shipping weight, 4 lbs.

List Price.................$12.50

Joining Kit Model 879. Required for fastening multiple projectors together in any array; use one joining kit Model 879, for each additional horn. Shipping weight, 1 lb.

List Price.................$1.75

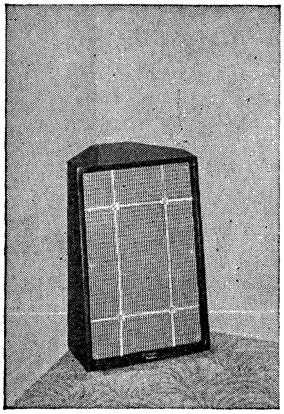
NO FINER CHOICE THAN

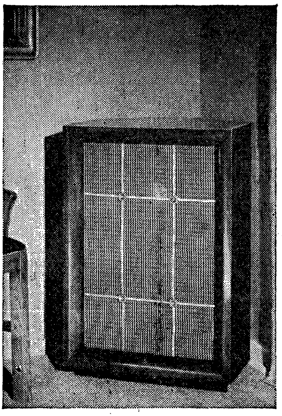
Electro-Voice

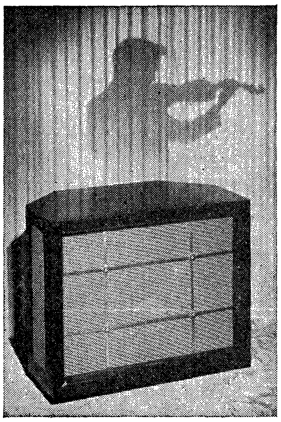
HI-FI FOLDED CORNER HORN

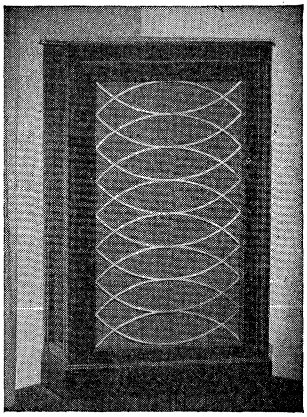
ENCLOSURES

AND SPEAKER SYSTEMS


THE BARONET


THE ARISTOCRAT


THE REGENCY


THE PATRICIAN

KLIPSCH-LICENSED FOLDED-HORN CORNER ENCLOSURES

New Concepts in Compact Corner Cabinets Provide Extended Bass Range with Remarkable Purity and Efficiency!

Utilizing the Klipsch principle, E-V design extends the lows, enhances the highs. Employs the walls of the room as an extension of the exponential horn air load—assures at least one full octave of added bass range with unprecedented efficiency—no boominess. Provides direct front radiation of higher frequencies. Gives smoother, cleaner over-all musical balance. Increases power handling capacity of any speaker. Authentically styled in fine veneers with lustrous hand-rubbed finish. Fits beautifully in any room.

The BARONET. Designed for EV or other 8" speaker. Response down to 35 cps. Conservative modern design with graceful sloping front. Hand rubbed hardwood veneers. Easily portable—can be used anywhere. Dimensions: 22⅞" high, 14½" wide and 13¾" deep. Shipping weight 24 lbs.

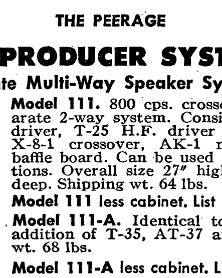
Mahogany cabinet only—List Price........................$65.00
Blonde cabinet only—List Price............................$69.00

The ARISTOCRAT. Designed for EV or any full range 12" speaker or EV separate 2 or 3 way systems, without modifications. Unusually smooth reproduction down to 35 cps. Selected mahogany veneers. Grill in brushed brass finish. Size: 29⅝" high, 19" wide and 16⁵⁄₁₆" deep. Shipping weight 45 lbs.

Mahogany cabinet only—List Price.......................$110.00
Blonde cabinet only—List Price...........................$120.00

The REGENCY. For EV or other 15" coaxial speaker, or EV 2 or 3 way systems, without modifications. Has integrally "built-in corner". Can be used in corner or against flat wall. Laboratory response flat ± 5 db. down to 30 cps. Selected mahogany veneers. Grill in brushed brass finish. Size: 28⅝" high, 33½" wide and 19" deep. Shipping weight 77 lbs.

Mahogany cabinet only—List Price.......................$200.00
Blonde cabinet only—List Price...........................$215.00


THE PEERAGE

THE PATRICIAN 4-WAY SYSTEM

Complete 4-way speaker system in custom-crafted corner cabinet for very finest in reproduction. Divides audio spectrum between four drivers, each specifically designed for distortion-free fidelity. Includes EV 18WK 18" L.F. driver, EV 12W-1 12" L.F. driver, EV T-25 H.F. driver with 6HD horn, EV T-35 Super Tweeter, AT-37 H.F. Level Control and EV X-2635-1 4-way crossover. Crossover frequencies 200, 600 and 3500 cps. Entire system wired and installed in elegant cabinet of selected woods and beautiful inlays. Heirloom finish in exquisite hand-rubbed mahogany. Cabinet is 60" high, 41" wide, 30" deep. Shpg. wt. 400 lbs.

Mahogany or Blonde—List Price.......$1212.50

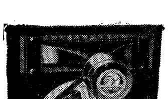
THE PEERAGE

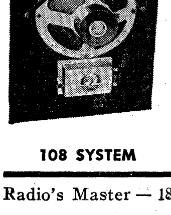
EQUIPMENT CONSOLE. A beautiful and practical console designed to house any combination of the popularly known tuners, amplifiers and record changers. Simple, graceful styling harmonizes with EV speaker enclosures and lends itself to any contemporary setting. Supplied with accurate list of all tuner, amplifier and changer combinations which can be installed. Cabinet size: 29⅝" high, 20½" wide and 18¾" deep. Shipping weight 50 lbs.

Mahogany cabinet only—List Price...... $160.00
Blonde cabinet only—List Price......... $170.00

COMPLETE AUDIO REPRODUCER SYSTEMS

Including Enclosure and Separate Multi-Way Speaker Systems


ARISTOCRAT II


108 SYSTEM

WITH 12" L.F. DRIVER

ARISTOCRAT I. Includes EV Model 108 2-way Speaker System. Completely wired and installed in ARISTOCRAT folded-horn corner cabinet enclosure. Cabinet size: 29½" high, 19" wide, 16½" deep. Shipping wt. 59 lbs.

Complete in Mahogany. List Price.... $299.00
Complete in Blonde. List Price....... $309.00

ARISTOCRAT II. Includes EV Model 111 DeLuxe 800 cps. Separate 2-way speaker system. Completely wired and installed in ARISTOCRAT folded-horn corner cabinet enclosure. Size: 29½" high, 19" wide, 16½" deep. Shipping wt. 79 lbs.

Complete in Mahogany. List Price.... $392.00
Complete in Blonde. List Price....... $402.00

ARISTOCRAT III. Identical to ARISTOCRAT II except with addition of T-35, AT-37 and X-36. Shipping wt. 81 lbs.

Complete in Mahogany. List Price.... $467.00
Complete in Blonde. List Price....... $477.00

Model 108. 800 cps. Crossover. Separate 2-way system. Consists of 12BW-1 L.F. driver, T-10 H.F. driver with 8-HD horn, X-825-1 crossover, AK-1 mounting kit and baffle board. Can be used in custom installations. Size 27" high, 18" wide, 12½" deep overall. Shipping wt. 39 lbs.

Model 108 less cabinet. List Price.... $184.00

Model 111. 800 cps. crossover. DeLuxe separate 2-way system. Consists of 12W-1 L.F. driver, T-25 H.F. driver with 8-HD horn, X-8-1 crossover, AK-1 mounting kit and baffle board. Can be used in custom installations. Overall size 27" high, 18" wide, 13½" deep. Shipping wt. 64 lbs.

Model 111 less cabinet. List Price.... $277.00

Model 111-A. Identical to 111 except with addition of T-35, AT-37 and X-36. Shipping wt. 68 lbs.

Model 111-A less cabinet. List Price..$352.00

WITH 15" L. F. DRIVER

REGENCY II. Includes Model 114-A separate 2-way system. Completely wired and installed in REGENCY enclosure. Shipping wt. 126 lbs.

Complete in Mahogany. List Price.....$517.00
Complete in Blonde. List Price.......$532.00

REGENCY III. Includes EV 114-B 3-way system completely wired and installed in REGENCY enclosure. Shipping wt. 130 lbs.

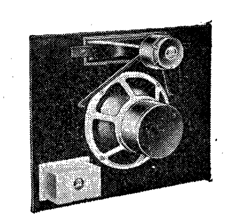
Complete in Mahogany. List Price.... $592.00
Complete in Blonde. List Price....... $607.00

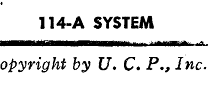
Model 114-A. 800 cps. crossover. Separate 2-way system. Consists of 15W-1 L.F. driver, T-25 H.F. driver with 8HD horn and X8-1 crossover, AK-1 mounting kit and baffle board. Size: 26" high, 32½" wide, 13½" deep. Shipping wt. 86 lbs.

Model 114-A less cabinet. List Price..$312.00

Model 114-B. Identical to 114-A except with addition of T-35, AT-37 and X-36. Shipping wt. 90 lbs.

Model 114-B less cabinet. List Price..$387.00


REGENCY III


114-A SYSTEM

Jim Lansing

JAMES B. LANSING SOUND, INC.
LOS ANGELES
CALIFORNIA

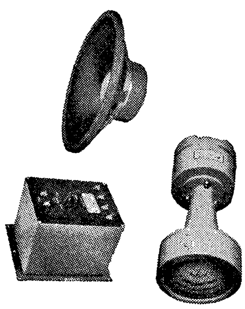
GENERAL PURPOSE EXTENDED RANGE SINGLE SPEAKER SPECIFICATIONS

	D-130 - 15″	D-131 - 12″	D-208 - 8″
Power Input	25 Watts	20 Watts	12 Watts
Impedance (Nominal)	16 Ohms	16 Ohms	8 Ohms
Outside Diameter	15 3/16″	12 1/8″	8 1/4″
Depth	5 5/8″	5″	2 7/8″
Field	Perm. Mag.	Perm. Mag.	Perm. Mag.
V. C. Diameter	4″	4″	2″
Shipping Weight	23 pounds	22 pounds	6 pounds
List Price	**$110.00**	**$105.00**	**$38.00**

Jim Lansing general purpose speakers have large Alnico V Permanent Magnets, edge-wound ribbon voice coils, aluminum high frequency center diaphragm vented to the rear to eliminate nonlinear compression effects, heavy, rigid aluminum frames, and 4″ diameter voice coils.

COMPLETE TWO-WAY SYSTEM KITS

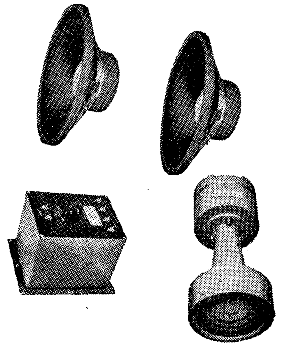
The D001 and D050 speaker systems can be purchased as a kit for installation in your own cabinet or for built-in installations.



D001—2 unit, 2-way sytem for use in #32, 33, 34, 35 Jim Lansing Enclosures.

1-130A	15″ low frequency unit
1-175 DLH	high frequency driver and horn-lens assembly
1-N1200	dividing network
Shipping weight	42 pounds

List Price $357.50

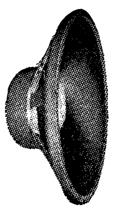


D050—3 unit, 2-way system for use in #31, 32, 33, 35 Jim Lansing Enclosures.

2-130B	15″ low frequency units
1-175 DLH	high frequency driver and horn-lens assembly
1-N1200	dividing network
Shipping weight	65 pounds

List Price $470.00

SPEAKER SYSTEM COMPONENTS



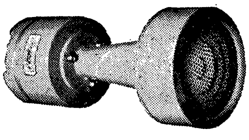
Low frequencv unit — 15″

130A used with D001 system — Voice coil impedance 16 ohms.

130B used with D050 system — Voice coil impedance 32 ohms.

Power input	25 watts
Voice coil diameter	4″
Outside diameter	15 3/16″
Depth	5 5/8″
Shipping weight	23 pounds

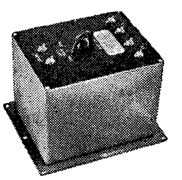
List Price $112.50



Complete high frequency driver, horn and lens assembly 175 DLH

Power input	25 watts above 1200 c.p.s.
Nominal impedance	16 ohms
Field	permanent magnet
Distribution	90° solid angle
Index of refraction	1.3
Horn throat	1″ diameter
Mounting hole diameter	5 3/8″
Overall length	11 1/2″
Shipping weight	12 pounds

List Price $190.00



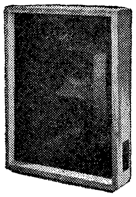
Dividing network

N1200 used with both D001 and D050 systems. 3 position, high frequency attenuation switch: flat (-6DB), medium (-3DB), maximum (ODB).

Input impedance	16 ohms
Output impedance	16 ohms
Cross over	1200 c.p.s.
Attenuation	12 DB per octave
Shipping weight	7 pounds

List Price $55.00

ENCLOSURES All Jim Lansing enclosures are furnished separately, or with systems factory installed. Enclosures to be used with Jim Lansing General Purpose Speakers must be ordered separately and will be shipped separately. All enclosures are available in Magohany, Prima Vera Blond or Utility Gray finishes. Prices listed below are for mahogany only. Weights listed are for enclosures only.

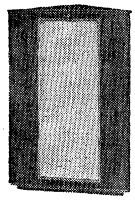


31 Front Exponential Horn Enclosure

For use with the 050 system only.

Height	49″
Depth	28″
Front Width	37 1/2″
Shipping Wt.	157 lbs.

Mahogany, enclosure only
List Price $400.00

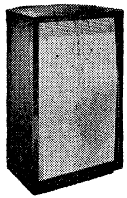


33 Corner Reflex Enclosure

For use with the 050 and 001 systems, or the D130 and D131 General Purpose Speakers.

Height	49′
Depth	17″
Front Width	35″
Shipping Wt.	96 lbs.

Mahogany, enclosure only
List Price $180.00

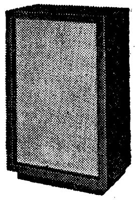


34 Folded Rear Exponential Horn Enclosure for flat wall or corner

For use with the 001 system or the D130 or D131 General Purpose Speakers.

Height	39 3/4″
Depth	22 1/2″
Front Width	23 3/4″
Shipping Wt.	111 lbs.

Mahogany, enclosure only
List Price $195.00

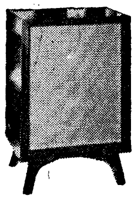


35 Console Reflex Enclosure

For use with the 050 or 001 systems, or the D130 or D131 General Purpose Speakers.

Height	38 1/2″
Depth	16″
Front Width	23 7/8″
Shipping Wt.	85 lbs.

Mahogany, enclosure only
List Price $150.00



36 General Purpose Reflex Enclosure

For use with the D208, D130 or D131 General Purpose Speakers.

Height	29 1/2″
Height without legs	23 3/4″
Depth	15 7/8″
Front Width	19 3/8″
Shipping Wt.	48 lbs.

Mahogany, enclosure only
List Price $70.50

First in fine sound

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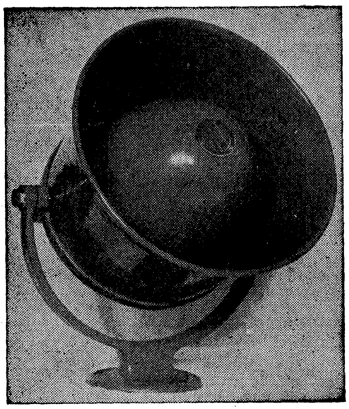
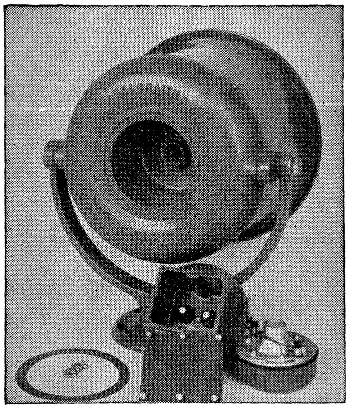
C. C. GALBRAITH & SON
ELECTRIC CORP.

Galbraith Reproducers and Amplifiers, while designed primarily for installation aboard ship, are especially suitable for use on docks, in shipyards, and other locations where exposed to extremes of varying temperatures and difficult moisture conditions.

15" HIGH POWERED MARINE REPRODUCER E-27, 544 Alt.-1



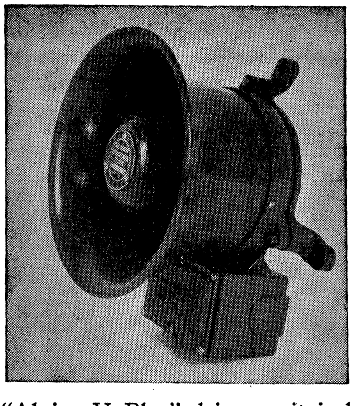


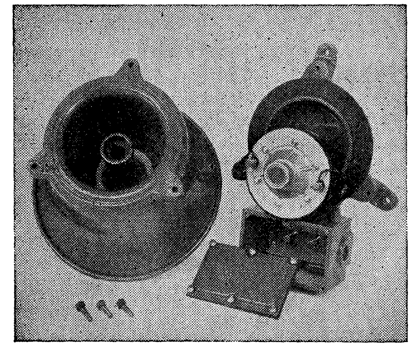
Approved by the U.S. Coast Guard (161,004) for installation on inspected merchant vessels when used with approved loudspeaker system. It is a double re-entrant type of horn approximately 15" in diameter x 11" in depth, consisting of bronze castings and brass spinnings. The high powered "Alnico V Plus" Driver unit is located within the base casting, held in position by the one piece, cast bronze, Junction Box with sealing flange. The Junction Box is drilled and tapped for ½" I.P.S. stuffing gland. Hermetic sealed feed-through terminals prevent any entrance of moisture to the driver unit compartment. Spring type terminals on driver unit and in Junction Box permit easy connection.

The Adjustable Mounting Bracket, No. E-27, 546, allows easy adjustment for directing speaker to cover the proper area, and permits quick replacement of the Driver Unit when necessary.

List Price $210.00

GALBRAITH ELECTRIC ANNOUNCES THE DEVELOPMENT OF A NEW COAST GUARD APPROVED 10" MEDIUM POWER MARINE TYPE REPRODUCER





Approved by the U.S. Coast Guard (JJ/161,004) for installation on inspected merchant vessels when used with approved loudspeaker systems. This marine reproducer is a double re-entrant type of horn approximately 10" in diameter and 8" in depth. It is constructed of special salt water corrosion-resistant aluminum alloy castings and spinnings. All surfaces are alodine treated followed by zinc chromate primer and finished with a durable baked gray enamel. The high powered "Alnico V Plus" driver unit is located within a one-piece casting consisting of base plate and junction box and is held in position by the dome-shaped casting forming the horn proper. A neoprene gasket clamped between these two castings provides the seal necessary to exclude all moisture. This permits the speaker to be used in any location even on the exposed weather decks. The junction box is drilled and tapped for ½" I.P.S. stuffing gland. Hermetic sealed feed-through leads prevent any entrance of moisture to the driver unit voice coil chamber. Spring type terminals on driver unit and in junction box permit easy connection.

This speaker is suitable for direct bulkhead mounting as its simple design permits quick replacement of the driver unit without removing the speaker from the bulkhead or disconnecting the ship's wiring.

List Price $75.00

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

utah

THE SPEAKER THAT SPEAKS FOR ITSELF

RADIO PRODUCTS CO., INC.

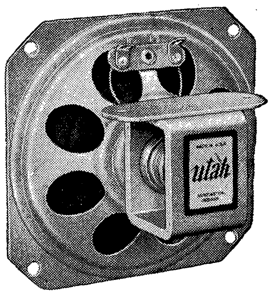
HUNTINGTON, INDIANA

A WHOLLY OWNED SUBSIDIARY OF NEWPORT STEEL CORPORATION

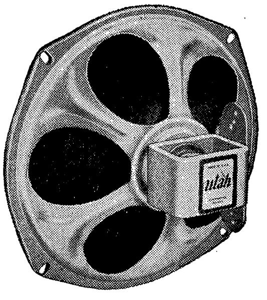
STANDARD PERMANENT MAGNET GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
3"	SP3A	3-4	9/16	2-4	.68	3/4	12	$3.95
3"	SP3B	3-4	9/16	2-4	1.00	3/4	12	4.10
3"	SP3C	3-4	9/16	2-4	1.47	3/4	12	4.45
4"	SP4A	3-4	9/16	2-4	.68	3/4	12	3.95
4"	SP4B	3-4	9/16	2-4	1.00	3/4	12	4.35
4"	SP4C	3-4	9/16	2-4	1.47	1	12	4.60
5"	SP5A	3-4	9/16	2-4	.68	3/4	12	4.10
5"	SP5B	3-4	9/16	2-4	1.00	3/4	12	4.45
5"	SP5C	3-4	9/16	2-4	1.47	1	12	4.90
6"	SP6B	3-4	9/16	2-4	1.00	1 1/2	8	4.90
6"	SP6C	3-4	9/16	2-4	1.47	1 1/2	8	5.30
6"	SP6D	3-4	3/4	4-9	1.47	1 1/2	8	5.40
6"	SP6E	3-4	3/4	4-9	2.15	1 1/2	8	5.90
6"	SP6F	3-4	3/4	4-9	3.16	1 1/2	8	6.65
7 1/2"	SP8D	3-4	3/4	4-9	1.47	1 3/4	6	6.95
7 1/2"	SP8E	3-4	3/4	4-9	2.15	1 3/4	6	7.25
7 1/2"	SP8F	3-4	3/4	4-9	3.16	2	6	8.55
7 1/2"	SP8G	3-4	1	6-12	3.16	2 1/2	6	8.90
7 1/2"	SP8H	3-4	1	6-12	4.64	2 1/2	6	9.25
7 1/2"	SP8J	3-4	1	6-12	6.80	2 3/4	6	9.55
8"	SP8K	8	1 1/4	12-20	6.80	3 1/4	6	9.75
8"	SP8L	8	1 1/4	12-20	10.00	4	6	10.00
10"	SP10D	3-4	3/4	4-9	1.47	3 3/4	1	9.45
10"	SP10F	3-4	3/4	4-9	3.16	3 3/4	1	10.35
10"	SP10G	3-4	1	6-12	3.16	4	1	10.95
10"	SP10H	3-4	1	6-12	4.64	4	1	11.60
10"	SP10J	3-4	1	6-12	6.80	4 1/4	1	13.35
10"	SP10L	8	1 1/4	12-20	10.00	5 1/4	1	14.50
12"	SP12G	3-4	1	6-12	3.16	4 3/4	1	11.25
12"	SP12H	3-4	1	6-12	4.64	4 3/4	1	12.75
12"	SP12J	3-4	1	6-12	6.80	4 3/4	1	14.55
12"	SP12K	8	1 1/4	12-20	6.80	5 1/2	1	16.50
12"	SP12L	8	1 1/4	12-20	10.00	6	1	18.00

All speakers 3", 4", 5", and 6" have universal mounting brackets featuring Utah's exclusive angle mounting.



SP4A

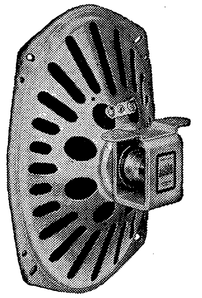


SP8D

OVAL PERMANENT MAGNET GROUP

PM SPEAKERS

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
4" x 6"	SP46B	3-4	9/16	2-4	1.00	1 1/4	8	$4.70
4" x 6"	SP46C	3-4	9/16	2-4	1.47	1 1/4	8	5.20
5" x 7"	SP57C	3-4	9/16	2-4	1.47	1 1/4	6	5.75
5" x 7"	SP57E	3-4	3/4	4-9	2.15	1 1/2	6	6.50
5" x 7"	SP57F	3-4	3/4	4-9	3.16	1 1/2	6	6.95
6" x 9"	SP69D	3-4	3/4	4-9	1.47	1 3/4	6	7.40
6" x 9"	SP69E	3-4	3/4	4-9	2.15	1 3/4	6	8.15
6" x 9"	SP69F	3-4	3/4	4-9	3.16	2	6	9.00
6" x 9"	SP69H	3-4	1	6-12	4.64	2 1/2	6	9.95

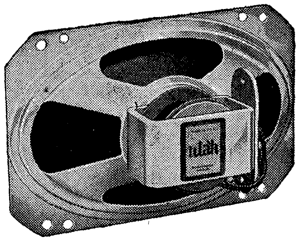


SP69D

OVAL ELECTRO-MAGNETIC GROUP

EM SPEAKERS

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Resistance Ohms	Shipping Weight Pounds	Standard Pack	List Price
4" x 6"	SE4645	3-4	9/16	2-4	450	1 1/2	8	$5.25
4" x 6"	SE4610	3-4	9/16	2-4	1000	1 1/2	8	5.30
4" x 6"	SE4618	3-4	9/16	2-4	1800	1 1/2	8	5.35
4" x 6"	SE4625	3-4	9/16	2-4	2500	1 1/2	8	5.40
5" x 7"	SE5745	3-4	3/4	4-9	450	2	6	5.90
5" x 7"	SE5710	3-4	3/4	4-9	1000	2	6	6.00
5" x 7"	SE5718	3-4	3/4	4-9	1800	2	6	6.00
5" x 7"	SE5725	3-4	3/4	4-9	2500	2	6	6.10
6" x 9"	SE6945	3-4	3/4	4-9	450	2	6	7.35
6" x 9"	SE6910	3-4	3/4	4-9	1000	2	6	7.40
6" x 9"	SE6918	3-4	3/4	4-9	1800	2	6	7.40
6" x 9"	SE6925	3-4	3/4	4-9	2500	2	6	7.50



SE4645

THE SPEAKER THAT SPEAKS FOR ITSELF

RADIO PRODUCTS CO., INC.

HUNTINGTON, INDIANA

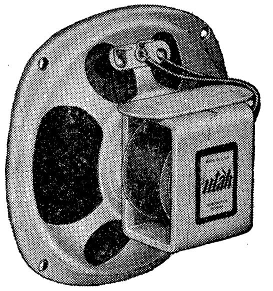
A WHOLLY OWNED SUBSIDIARY OF NEWPORT STEEL CORPORATION

STANDARD ELECTRO-MAGNETIC GROUP

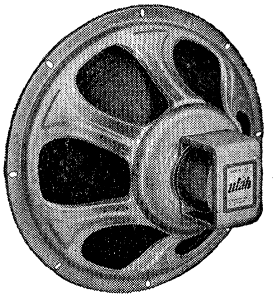
Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Strength Ohms	Shipping Weight Pounds	Standard Pack	List Price
3″	SE345	3-4	9/16	2-4	450	1	12	$4.30
3″	SE310	3-4	9/16	2-4	1000	1	12	4.35
3″	SE318	3-4	9/16	2-4	1800#	1	12	4.35
3″	SE325	3-4	9/16	2-4	2500	1	12	4.40
4″	SE445	3-4	9/16	2-4	450	1	12	4.35
4″	SE410	3-4	9/16	2-4	1000	1	12	4.35
4″	SE418	3-4	9/16	2-4	1800#	1	12	4.40
4″	SE425	3-4	9/16	2-4	2500	1	12	4.45
5″	SE545	3-4	9/16	2-4	450	1 1/4	12	4.50
5″	SE510	3-4	9/16	2-4	1000	1 1/4	12	4.55
5″	SE518	3-4	9/16	2-4	1800#	1 1/4	12	4.55
5″	SE525	3-4	9/16	2-4	2500	1 1/4	12	4.60
6″	SE645	3-4	3/4	4-9	450	2	8	5.40
6″	SE610	3-4	3/4	4-9	1000	2	8	5.45
6″	SE618	3-4	3/4	4-9	1800#	2	8	5.50
6″	SE625	3-4	3/4	4-9	2500	2	8	5.50
7 1/2″	SE810	3-4	3/4	4-9	1000	2 1/4	6	6.65
7 1/2″	SE818	3-4	3/4	4-9	1800#	2 1/4	6	6.70
7 1/2″	SE825	3-4	3/4	4-9	2500	2 1/4	6	6.75
10″	SE1010	3-4	1	6-12	1000	4 1/2	1	10.40
10″	SE1015	3-4	1	6-12	1500	4 1/2	1	10.45
10″	SE1025	3-4	1	6-12	2500	4 1/2	1	10.45
12″	SE1210	3-4	1	6-12	1000	6	1	12.75
12″	SE1215	3-4	1	6-12	1500	6	1	12.80
12″	SE1225	3-4	1	6-12	2500	6	1	12.80
15″	SE1510	8	1 1/2	20-30	1000	15 3/4	1	22.50
15″	SE1515	8	1 1/2	20-30	1500	15 3/4	1	23.00
15″	SE1525	8	1 1/2	20-30	2500	15 3/4	1	24.50

Note: # tapped at 300 ohms.

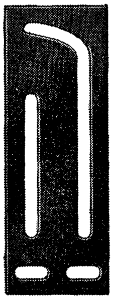
3″, 4″, 5″, and 6″ speakers equipped with Utah's exclusive universal mounting bracket which features angle mounting.



SE545



SE1215



Universal Mounting Bracket

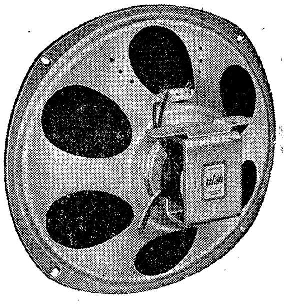
TELEVISION ELECTRO-MAGNETIC GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Resistance Ohms	Shipping Weight Pounds	Standard Pack	List Price
5″	SE5T6	3-4	9/16	2-4	62	1 1/4	12	$4.50
5″	SE5T10	3-4	9/16	2-4	100	1 1/4	12	4.60
6″	SE6T6	3-4	3/4	5-7	62	2	8	5.25
6″	SE6T10	3-4	3/4	5-7	100	2	8	5.30
10″	SE10T6	3-4	3/4	4-9	62	2 3/4	1	10.30
10″	SE10T10	3-4	3/4	4-9	100	2 3/4	1	10.35
4″ x 6″	SE46T6	3-4	9/16	2-4	62	1 1/4	8	5.30
4″ x 6″	SE46T10	3-4	9/16	2-4	100	1 1/4	8	5.40
6″ x 9″	SE69T6	3-4	3/4	4-9	62	2 1/2	6	7.30
6″ x 9″	SE69T10	3-4	3/4	4-9	100	2 1/2	6	7.35

For a complete listing of permanent magnet speakers, see Standard Group in this advertisement, which are also applicable for television. 5″ and 6″ models are equipped with Utah's exclusive universal mounting bracket which features angle mounting.

1. Write for catalog.
2. Utah member R.T.M.A.
3. All Utah speakers manufactured within limits of the R.T.M.A. code.
4. Each speaker completely dustproofed.
5. Each speaker cadmium plated.
6. Outdoor speakers cadmium plated AND finished in Royal Blue Enamel.
7. Wide range, public address, and co-axial models cadmium plated AND finished in gold hammered lacquer.
8. Pot covers standard on all FM, PA, WR and co-axial models.
9. Immediate delivery on all models.
10. International distribution (Rocke). Jobbers in each major city.
11. 2″, 3″, 4″, 5″, and 6″ speakers with universal mounting brackets.
12. Each EM speaker complete with humbucking coil.

Nationally advertised—all speakers have transformer mounting facilities.



SE10T6

THE SPEAKER THAT SPEAKS FOR ITSELF

utah

RADIO PRODUCTS CO., INC.

HUNTINGTON, INDIANA

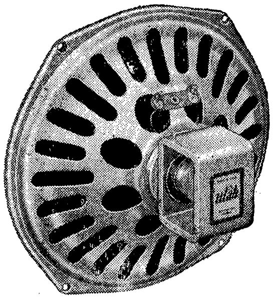
A WHOLLY OWNED SUBSIDIARY OF NEWPORT STEEL CORPORATION

AUTO SPEAKER GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Magnet Wt. or Field Ohms	Ship. Wt. Lbs.	Standard Pack	List Price
5″	SE5Y6	3-4	9/16	2-4	4 ohms	1 1/4	12	$4.50
5 1/4″	SE5S6	3-4	3/4	2-4	4 ohms	2	12	4.60
6 1/4″	SE6S6	3-4	3/4	4-9	4 ohms	2	8	5.50
7″	SE7Y6A*	3-4	3/4	4-9	4 ohms	2	6	6.50
7″	SE7Y6	3-4	3/4	4-9	4 ohms	2	6	6.50
7 1/2″	SE7Z6	3-4	3/4	4-9	4 ohms	2	6	6.50
6″ x 9″	SE69Y6	3-4	3/4	4-9	4 ohms	2 1/2	6	7.25
6″ x 9″	SP69D	3-4	3/4	4-9	1.47 oz.	1 3/4	6	7.40
5 1/4″	SP5DA	3-4	3/4	2-4	1.47 oz.	1 1/2	12	5.25
6 1/4″	SP6EA	3-4	3/4	4-9	2.15 oz.	1 3/4	8	6.10
7″	SP7EA	3-4	3/4	4-9	2.15 oz.	1 3/4	6	8.45
7″	SP7DAA*	3-4	3/4	4-9	1.47 oz.	1 3/4	6	7.20

*Pot rotated 90 degrees.

For rear deck auto kits see separate listing, or write for full particulars.

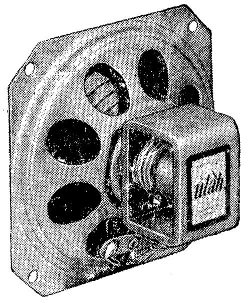


SP7DA

OUTDOOR SPEAKER GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
4″	SP4CO	3-4	9/16	2-4	1.47	1	12	$4.95
5″	SP5CO	3-4	9/16	2-4	1.47	1	12	5.10
6″	SP6EO	3-4	1	4-9	2.15	1 3/4	8	6.00

Cadmium plated and finished in brilliant blue enamel for added protection.



SP4CO

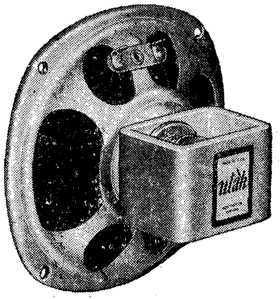
WIDE RANGE SPEAKER GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
8″	SP8JW	8	1	6-12	6.80	3	6	$10.75
12″	SP12JW	8	1	6-12	6.80	6	1	16.95
12″	SP12LW	8	1 1/4	12-20	10.00	6 1/4	1	20.50

Cadmium plated and finished in gold lacquer.

PUBLIC ADDRESS SPEAKER GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
12″	SP12M	8	1 1/4	15-25	14.70	7	1	$24.50
12″	SP12P	8	1 1/2	20-30	21.50	7 1/2	1	32.50
15″	SP15P	8	1 1/2	20-30	21.50	10	1	39.50
15″	SP15R	8	2	30-40	31.80	10 1/2	1	69.50



A5FI

CO-AXIAL SPEAKER GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
12″	CSP12J3	8	1	10	6.80	10	1	$28.50
15″	CSP15P5	8	1 1/2	15	21.50	15	1	55.00

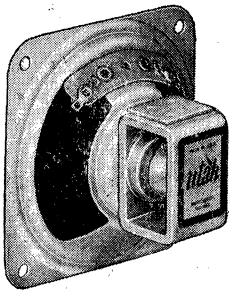
Cadmium plated and finished in gold lacquer.

AIRCRAFT INTER-COMMUNICATION SPEAKER GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Magnet Wt. or Field Ohms	Ship. Wt. Lbs.	Standard Pack	List Price
5″	A5FI	3-4	3/4	4-9	3.16 oz.	1 1/4	12	$7.75

INTER-COMMUNICATION SPEAKER GROUP

Group Size	Model Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
3″	SP3AI	45	9/16	2-4	.68	3/4	12	$4.15
4″	SP4AI	45	9/16	2-4	.68	3/4	12	4.20
5″	SP5AI	45	9/16	2-4	.68	3/4	12	4.35



SP3AI

NEW UTONE WALL BAFFLES

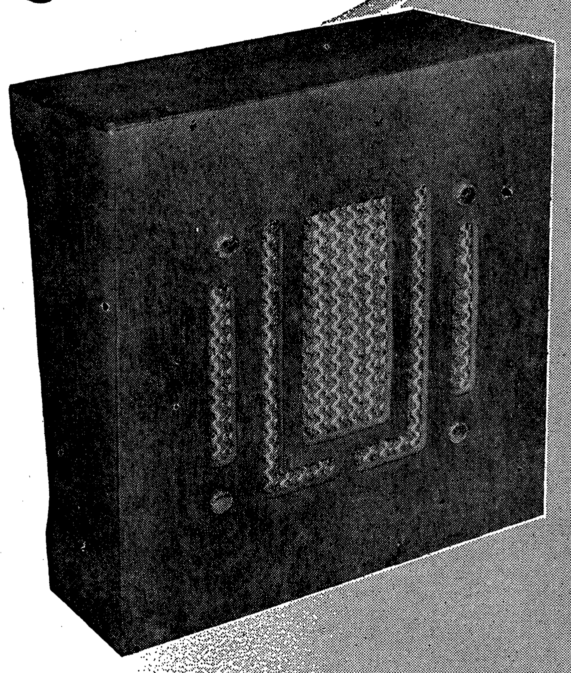
utah

RADIO PRODUCTS CO., INC.

HUNTINGTON, INDIANA

A WHOLLY OWNED SUBSIDIARY OF NEWPORT STEEL CORPORATION

Built to sell!



New *utone* Wall Baffles by Utah.
6", 8", 10", and 12" models.

Baffles that compliment the interior of any restaurant, church, recreation room, tavern, factory . . . . wherever speaker housing is needed.

Designed and engineered by the sound engineers of Utah Radio Products Company, Inc., leading speaker manufacturers for more than 30 years.

Three Beautiful Finishes to Choose from:

- Mahogany Finish—in red or brown
- Futuristic Blonde Finish
- All Sizes Available in Natural Wood—Unfinished.

These make *utone* your most profitable Wall Baffle

SPEAKER SIZE	RED MAHOGANY FINISH		BROWN MAHOGANY FINISH		FUTURISTIC BLONDE		NATURAL WOOD UNFINISHED	
	Model No.	Price	Model No.	Price	Model No.	Price	Model No.	Price
6 Inch	RM-6	$4.95	BM-6	$4.95	BB-6	$4.95	NW-6	$4.45
8 Inch	RM-8	5.95	BM-8	5.95	BB-8	5.95	NW-8	5.35
10 Inch	RM-10	7.50	BM-10	7.50	BB-10	7.50	NW-10	6.75
12 Inch	RM-12	9.50	BM-12	9.50	BB-12	9.50	NW-12	8.55

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

NEW BUD METAL SPEAKER ENCLOSURES

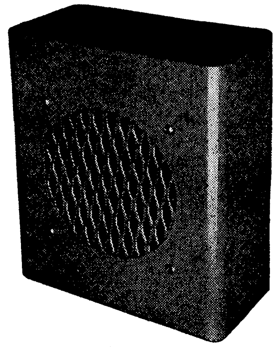
Here, at last is a line of metal speaker enclosures that are outstanding in design and performance. They are handsomely finished in silver grey hammertone, provide lifetime durability and are acoustically perfect.

These metal speaker enclosures are ideal for many locations such as hospitals, auditoriums, schools, restaurants, factories, department stores, railroad stations, airports, out-door theatres and any other place where a speaker is used.

LOOK AT ALL THESE ADVANTAGES

- ACOUSTICALLY PERFECT because they are treated with a special sound-deadening compound to eliminate metallic resonant sounds.
- ALL-DIRECTIONAL MOUNTING permits adjustability of speaker in any vertical or horizontal position. Can be attached to wall or ceiling.
- LIFETIME DURABILITY since there is no danger of warping, cracking or splitting—which are hazards of wood speaker baffles.
- 2-WAY SOUND arises from bi-lateral feature which permits sound to come from both the front and back of the enclosure.
- FULL SIZE RANGE—Enclosures available to accommodate 4", 5", 5½", 6" 8", 10" and 12" speakers.
- ECONOMY assured by our large-scale manufacturing operation. Prices are relatively low in comparison with advantages provided.

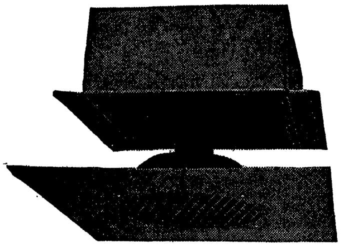
UNIVERSAL SPEAKER ENCLOSURES



CS-2240

Catalog Number	Speaker Size	Height	Width	Depth	Finish	Dealer Cost
CS-2240	4" or 5"	7 ¼"	6¾"	3 15/32"	Silver Grey Hammertone	**$3.60**
CS-2241	5", 5½", 6"	8 ¼"	7½"	4"	Silver Grey Hammertone	**4.14**
CS-2242	6" or 8"	10 37/64"	9½"	5 1/16"	Silver Grey Hammertone	**7.50**
CS-2243	10" or 12"	15 1/32"	13½"	7 13/64"	Silver Grey Hammertone	**9.60**
CS-2270	4" or 5"	7 ¼"	6¾"	3 15/32"	Primer only	**3.45**
CS-2271	5", 5½", 6"	8 ½"	7½"	4"	Primer only	**3.90**
CS-2272	6" or 8"	10 37/64"	9½"	5 1/16"	Primer only	**7.20**
CS-2273	10" or 12"	15 1/32"	13½"	7 13/64"	Primer only	**9.15**

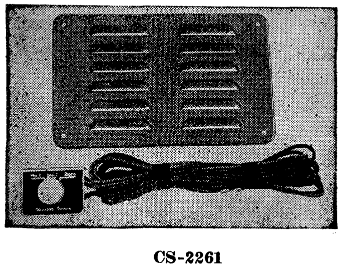
RECESSED CEILING AND WALL ENCLOSURE



CS-2244

This metal speaker enclosure is designed for recessing in the wall or ceiling where a projecting speaker would be liable to damage or where an unbroken wall or ceiling surface is desirable. The same quality features and advantages are found in this model as are prevalent in CS-2240. It is acoustically perfect, has lifetime durability and its price is low in comparison with advantages provided. Its size will accommodate an 8" speaker. The grille plate is finished in silver grey hammertone or with a primer coat that can be painted to match the surrounding decorations.

Cat. No.	Speaker Size	**Type**	Height	Width	Depth		Dealer Cost
CS-2244	8"	Housing with Grille	14"	14"	4 1/16"	Silver Grey Hammertone grille plate-primer finish on housing	**$9.00**
			Housing Dim. 10"x10"x4"				
CS-2274	8"	Housing with Grille	14"	14"	4 1/16"	Primer coat throughout	**8.85**
			Housing Dim. 10"x10"x4"				
CS-2245		Grille Plate only	14"	14"	1/16"	Grey Hammertone Finish	**1.80**
CS-2275		Grille Plate only	14"	14"	1/16"	Grey Primer Coat	**1.68**

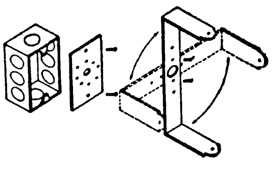


CS-2261

REAR SEAT SPEAKER GRILLE

To protect the speakers that are now being installed on the deck behind the rear seat of many automobiles, we have designed a beautiful metal grille. Designed to cover standard sizes of speakers used in this location. It is furnished with wire, selector switch and switch mounting bracket. The finish is in beautiful silver grey hammertone to harmonize with the car interior.

Catalog Number	Plate Size	Dealer Cost
CS-2260	3/16"x9"x5½"	**$1.80**
CS-2261	Consists of CS-2260 plus switch bracket and wire	**3.00**



ADJUSTABLE MOUNTING BRACKET

This makes possible an adjustable feature. By use of the bracket in conjunction with the speaker housing you can adjust the case to any angle in a horizontal position. Notice the hole in the bracket which will pass a piece of ½" conduit. This permits any of the speaker housings to be suspended from the ceiling.

OUTLET BOX COVER PLATE

This cover plate for an electrical outlet box enables the adjustable bracket to be mounted to the outlet box. When used in conjunction with the ajustable bracket, movement in all horizontal and vertical directions is possible.

Catalog Number		Dealer Cost
AB-2250	Adjustable bracket for CS-2240	**$1.14**
AB-2251	Adjustable bracket for CS-2241	**1.14**
AB-2252	Adjustable bracket for CS-2242	**1.41**
AB-2253	Adjustable bracket for CS-2243	**1.65**
CP-2255	Outlet Box Cover Plate 4¼" x 2¾"	**.75**

Write for Bulletin SE-153 on Speaker Enclosures

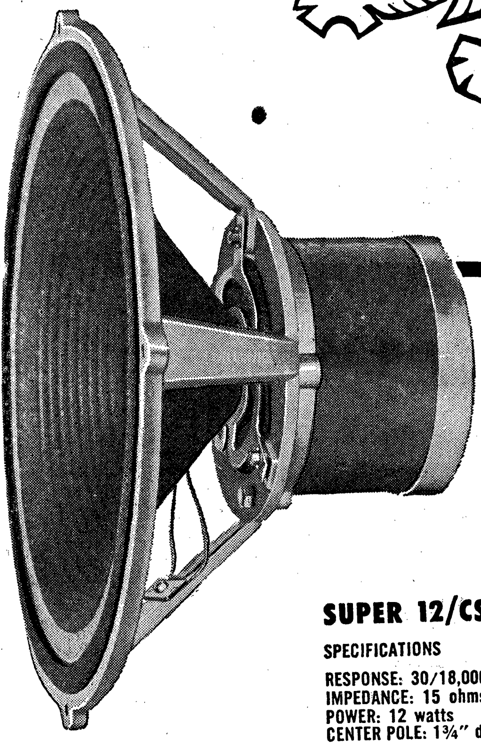
Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

Britain's Finest Loudspeakers

Wharfedale

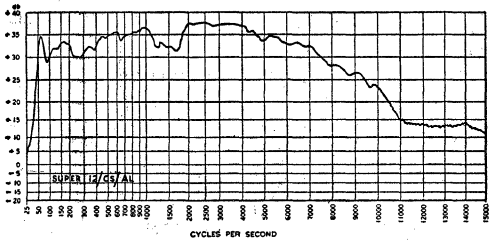
Despite their modest price, all Wharfedale Speakers are fitted with cast chassis resulting in greater rigidity, less resonance and better air loading. All models except the 8" Bronze have cloth suspension cones which improve transient response by adding dissipation to the edge of the cone, with reduced reflection of the flexural waves. This type of cone suspension also reduces the bass resonances of the speaker unit, resulting in a more level impedance curve and improves the transient or decay element. Such refined quality of reproduction is only available with Wharfedale cloth suspension.



Warmly received by quality enthusiasts, the Super 12/CS/AL has a remarkably level response between 30 and 18,000 cycles when adequately baffled. Cloth suspension and low cone resonance reduces transient distortion to an absolute minimum and eliminates irritating "boom" associated with stiffly suspended cones. Critical listeners will hear the true bass which is so seldom heard. Wharfedale's exclusive cone and carefully wound aluminum voice coil achieve amazingly clean highs, without introducing peaks in the upper middle register.

The high quality of this speaker is uniformly maintained in production since it does not rely on subsidiary diaphragm resonances, which can cause intermodulation distortion. The Super 12/CS/AL *has proved superior to many more expensive* combinations in general listening quality and pleasing sound.

SUPER 12/CS/AL RESPONSE CURVE



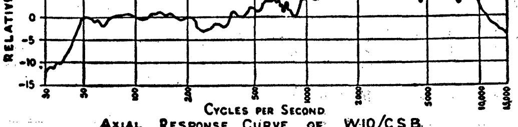
SUPER 12/CS/AL

SPECIFICATIONS

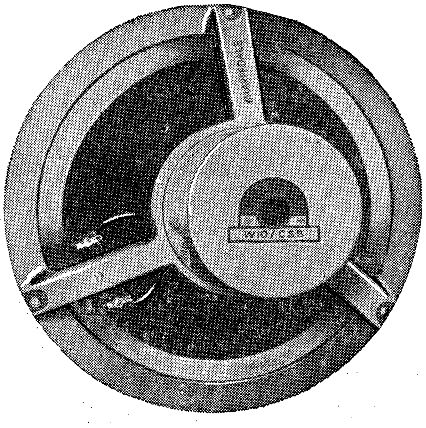
RESPONSE: 30/18,000 c.p.s.
IMPEDANCE: 15 ohms
POWER: 12 watts
CENTER POLE: 1¾" dia.
CONE RESONANCE: 35/45 c.p.s.
WEIGHT: 18¼ lbs.
FLUX DENSITY: 17,000 lines
TOTAL FLUX: 190,000 lines

This speaker has been designed specially for the average sized room where loud volume is often irritating. It requires little power to give the refined quality of which it is capable. The cloth suspended cone of the W10/CSB has truly remarkable ability to reach maximum quality at low levels. This speaker also makes an excellent tweeter in a two-way speaker system and maintains highs that are clean and brilliant without being penetrating.

W10/C.S.B. RESPONSE CURVE



AXIAL RESPONSE CURVE OF W10/CSB.
LEVEL 1 VOLT AT 400~



W10/CSB

SPECIFICATIONS

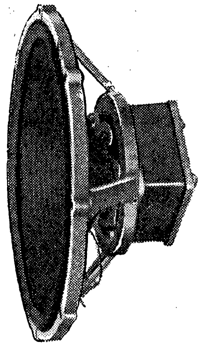
RESPONSE: 30/18,000 c.p.s.
IMPEDANCE: 15 ohms
POWER: 8 watts
CONE RESONANCE: 50/60 c.p.s.
WEIGHT: 9 lbs.
FLUX DENSITY: 14,000 lines
TOTAL FLUX: 74,000 lines

BRITISH INDUSTRIES CORPORATION • NEW YORK 13, N. Y.

Wharfedale

Built by Wharfedale Wireless Works under the direction of G. A. Briggs, world-renowned sound engineer.

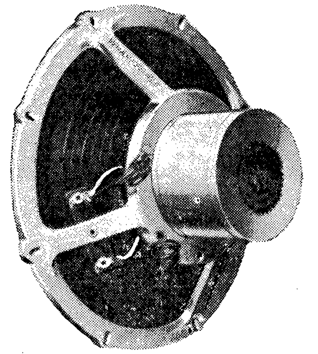
8" BRONZE



SPECIFICATIONS
IMPEDANCE: 15 ohms
POWER: 5 watts
WEIGHT: 3¼ lbs.
FLUX DENSITY: 10,000 lines
TOTAL FLUX: 39,500 lines

This is the finest 8" speaker available in its price range and good enough for use in acoustic chambers. High quality performance is due to the high flux and open, die cast chassis.

SUPER 8/CS/AL

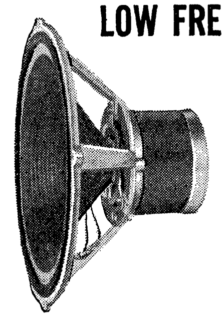


SPECIFICATIONS
RESPONSE: 50/15,000 c.p.s.
IMPEDANCE: 15 ohms
POWER: 5 watts
CONE RESONANCE: 60/65 c.p.s.
FLUX DENSITY: 13,000 lines
TOTAL FLUX: 54,000 lines

Suitable for bass reflex cabinets, or for use as a treble unit in a two-way speaker system. This cloth suspended cone has a bakelized apex for wide response and achieves a refined quality that would not normally be associated with a speaker of this size.

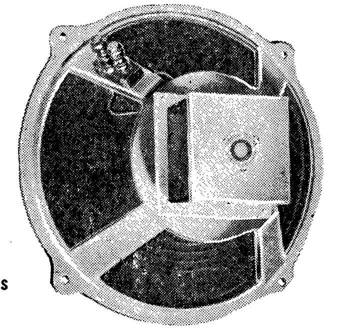
LOW FREQUENCY DRIVERS

W12/CS



SPECIFICATIONS
IMPEDANCE: 15 ohms
POWER: 10 watts
WEIGHT: 12 lbs.
CONE RESONANCE: 40/50 c.p.s.
FLUX DENSITY: 13,000 lines
TOTAL FLUX: 145,000 lines

W15/CS



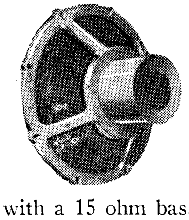
SPECIFICATIONS
IMPEDANCE: 15 ohms
POWER: 20 watts
WEIGHT: 17 lbs.
CONE RESONANCE: 30/35 c.p.s.
FLUX DENSITY: 13,500 lines
TOTAL FLUX: 180,000

These units give clean bass down to 25/35 cycles without frequency doubling, with reasonable air loading. Ideal speakers for two-way systems. Again, low transient distortion and smooth response are made possible only by exclusive Wharfedale cloth suspension.

New!

G. A. BRIGGS' LATEST ACHIEVEMENT:

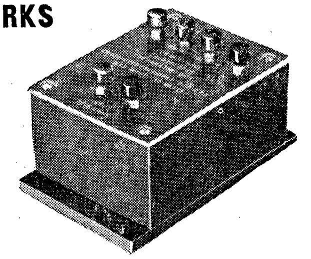
THE SUPER 5 TREBLE SPEAKER



This efficient tweeter features a small, bakelized cone for wide diffusion; and a high flux magnet for high frequency reproduction. Flux density, 13,000 lines. Aluminum voice coil, 10 ohms, suitable for use with a 15 ohm bass unit and a 3,000 cycle crossover network. Die cast chassis. Cloth suspension. Effective range 3,000 to 20,000 c.p.s. The chassis is supplied with plywood mounting board 8" x 8" with the correct 3½" diameter, aperture, which is the effective cone diameter.

May be used with an existing two-speaker system with 1,000 cycle crossover network by connecting in parallel with the existing treble unit, with 0.5 mfd. condenser in series with the voice coil of the Super 5 Treble Speaker.

CROSSOVER NETWORKS



and treble between two (or three) loudspeakers at low impedance and thus eliminate distortion of the treble by modulation from the bass.

1,000 cycle
Impedance: 7-16 ohms
Attenuation: 6 to 9 db per octave
Maximum input: 30 watts

3,000 cycle
Impedance: 7-16 ohms
Attenuation: 6 to 9 db per octave
Maximum input: 30 watts

3-Way
(Crossover frequencies 800 and 500 cycles)
Impedance: 7-16 ohms
Attenuation: 12 db per octave
Maximum input: 30 watts

BOOKS BY
A. G. BRIGGS
- Loudspeakers
- Amplifiers
- Sound Reproduction
- Pianos, Pianists and Sonics

BRITISH INDUSTRIES CORPORATION • NEW YORK 13, N. Y.

Cinaudagraph Speakers

CINAUDAGRAPH CO., 7334 N. CLARK ST., CHICAGO 26, ILL.

FIELD COIL MODELS

A complete line of high quality speakers for every use requiring a field coil unit. Each model listed is dustproof, of all-welded construction, and equipped with hum bucking coils or slugs. Suitable for both professional and amateur use, these Cinaudagraph speakers have splendid tone and long-life characteristics. Matching transformers listed below. New Cinaudagraph Universal Mounting Bracket supplied at no charge with each speaker 6″ and under, permits easy installation in all receivers.

REPLACEMENT SPEAKERS

SIZE	MODEL	FIELD COIL		VOICE COIL		
		Resist.	Watts	Imped.	Dia.	Watts
3½″	F3B2	450	3	3.2	9/16″	1.5
4″	F4B2	450	3	3.2	9/16″	2.
	F4B3	1,000	3	3.2	9/16″	2.
	F4B4	1,800†	3	3.2	9/16″	2.
	F4B6	2,750	3	3.2	9/16″	2.
	F4B60	60	3	3.2	9/16″	2.
4″ x 6″	F46B2	450	3	3.2	9/16″	2.5
	F46B60	60	3	3.2	9/16″	2.5
	F46B100	100	3	3.2	9/16″	2.5
	F46B3	1,000	3	3.2	9/16″	2.5
	F46B24	1,800	3	3.2	9/16″	2.5
5″ Round	F5B1	6-volt	3	3.2	9/16″	2.5
	F5B2	450	3	3.2	9/16″	2.5
	F5B3	1,000	3	3.2	9/16″	2.5
	F5B6	2,750	3	3.2	9/16″	2.5
	F5B60	60	3	3.2	9/16″	2.5
5″ Pin Cush.	F51B1	6-volt	3	3.2	9/16″	2.5
	F51B2	450	3	3.2	9/16″	2.5
	F51B3	1,000	3	3.2	9/16″	2.5
	F51B24	1,800	3	3.2	9/16″	2.5
	F51B6	2,750	3	3.2	9/16″	2.5
5¼″ Pin Cush.	F53B1	6-volt	3	3.2	9/16″	3.
5″ x 7″	F57D2	450	4	3.2	¾″	5.
	F57D3	1,000	4	3.2	¾″	5.
	F57D4	1,800†	4	3.2	¾″	5.
6″	F6B1	6-volt	3	3.2	9/16″	3.
	F6B2	450	3	3.2	9/16″	3.
	F6B3	1,000	3	3.2	9/16″	3.
	F6B24	1,800	3	3.2	9/16″	3.
	F6B6	2,750	3	3.2	9/16″	3.
6″ x 9″	F69D11	6-volt	4	3.2	¾″	6.
	F69D2	450	4	3.2	¾″	6.
	F69D3	1,000	4	3.2	¾″	6.
	F69D4	1,800†	4	3.2	¾″	6.
7″	F7D11	6-volt	4	3.2	¾″	6.
	*F7D11A	6-volt	4	3.2	¾″	6.
7½″	F75D1	6-volt	4	3.2	¾″	6.
8″	F8D3	1,000	4	3.2	¾″	6.
	F8D4	1,800†	4	3.2	¾″	6.
	F8D5	2,500	4	3.2	¾″	6.
	F8H8	600	8	8.	1″	8.
	F8H3	1,000	8	8.	1″	8.
	F8H24	1,800	8	8.	1″	8.
	F8H5	2,500	8	8.	1″	8.
10″	F10H8	600	8	8.	1″	9.
	F10H3	1,000	8	8.	1″	9.
	F10H24	1,800	8	8.	1″	9.
	F10H5	2,500	8	8.	1″	9.
12″	F12H8	600	8	8.	1″	10.
	F12H3	1,000	8	8.	1″	10.
	F12H24	1,800	8	8.	1″	10.
	F12H5	2,500	8	8.	1″	10.

*Pot rotated 90 degrees. †T300.

TV REPLACEMENT SPEAKERS

SIZE	MODEL	FIELD COIL		VOICE COIL		
		Resist.	Watts	Imped.	Dia.	Watts
4″	F4B60 TV	60	3	3.2	9/16″	2.
4″ x 6″	F46B60 TV	60	3	3.2	9/16″	2.5
	F46B100 TV	100	3	3.2	9/16″	2.5
5″	F5B60 TV	60	3	3.2	9/16″	2.5

AUTO REPLACEMENT SPEAKERS

SIZE	MODEL	FIELD COIL		VOICE COIL		
		Resist.	Watts	Imped.	Dia.	Watts
5″ Round	F5B1	6-volt	3	3.2	9/16″	2.5
5″ Pin Cush.	F51B1	6-volt	3	3.2	9/16″	2.5
5¼″ Pin Cush.	F53B1	6-volt	3	3.2	9/16″	3.
6″ Pin Cush.	F6B1	6-volt	3	3.2	9/16″	3.
6″ x 9″	F69D11	6-volt	4	3.2	¾″	6.
7″ Pin Cush.	F7D11	6-volt	4	3.2	¾″	6.
	*F7D11A	6-volt	4	3.2	¾″	6.
7½″ Pin Cush.	F75D1	6-volt	4	3.2	¾″	6.

TRANSFORMERS

These transformers are conservatively rated, efficient, and match tubes most commonly used.

Transformers are not included in the list price of Cinaudagraph speakers, and must be ordered separately. All Cinaudagraph speakers, however, have provision for easy transformer installation.

ADJUSTABLE IMPEDANCE

½″ x ½″	12A3UL	***Line to 3.2 ohm V.C.
	12A3U	*Plate to 3.2 ohm V.C.
⅝″ x ⅝″	58A3U	*Plate to 3.2 ohm V.C.
¾″ x ¾″	34A8U	**Plate to 8. ohm V.C.
	34A8UL	***Line to 8. ohm V.C.
⅞″ x ⅞″	78A8UL	***Line to 8. ohm V.C.

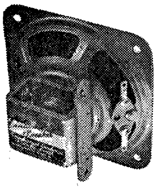
*Plate impedances of 2000, 4500, 7000 and 10,000 ohms (No C.T.).

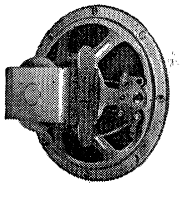
**Plate impedances of 3000, 5000, 6600, 7000, 10,000 ohms (All C.T.).

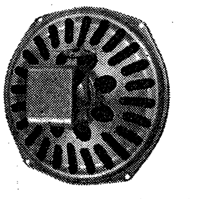
***Line impedances of 2000, 1500, 1000 and 500 ohms (No C.T.).

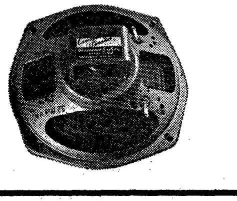
FIXED IMPEDANCE

½″ x ½″	12A73	7000 ohms to 3.2 ohm V.C.
	12A43	4000 ohms to 3.2 ohm V.C.
	12A23	2000 ohms to 3.2 ohm V.C.
	12A53L	500 ohms to 3.2 ohm V.C.
⅝″ x ⅝″	58A83	8000 ohms to 3.2 ohm V.C.
¾″ x ¾″	34C53C	5000 ohms C.T. to 3.2 ohm V.C.
	34A53	5000 ohms to 3.2 ohm V.C.









Cinaudagraph Speakers

CINAUDAGRAPH CO., 7334 N. CLARK ST., CHICAGO 26, ILL.

PERMANENT MAGNET MODELS

Use Alnico 5 magnets for greatly improved performance without size or weight increase. Magnets soldered in place for long, trouble-free service. Speakers dust-proof and of all-welded construction; voice coil forms are not affected by moisture or temperature variation. Matching transformers listed on next page. Universal Mounting Bracket supplied with each speaker 6" and under.

REPLACEMENT SPEAKERS

SIZE	MODEL	Magnet Alnico 5	VOICE COIL Imped.	VOICE COIL Diam.	VOICE COIL Watts
2"	P2A1	.68 oz.	3.2	9/16"	1.
	P2C1	1.47	3.2	9/16"	1.5
3½"	P3A1	.68	3.2	9/16"	2.
	P3C2	1.47	3.2	9/16"	2.5
4"	P4A1	.68	3.2	9/16"	3.
	P4C1	1.47	3.2	9/16"	3.5
4" x 6"	P46A1	.68	3.2	9/16"	3.5
	P46C1	1.47	3.2	9/16"	4.
5"	P5A1	.68	3.2	9/16"	3.5
	*P51A1	.68	3.2	9/16"	3.5
	P5C1	1.47	3.2	9/16"	4.
	*P51C1	1.47	3.2	9/16"	4.
	P52F1	3.16	3.2	¾"	5.
5¼"	P53A1	.68	3.2	9/16"	4.
	P53C1	1.47	3.2	9/16"	4.5
5" x 7"	P57C1	1.47	3.2	9/16"	5.
	P57F1	3.16	3.2	¾"	6.
6"	P6A1	.68	3.2	9/16"	4.
	P6C1	1.47	3.2	9/16"	4.5
	P6F1	3.16	3.2	¾"	5.
6" x 9"	P69F2	3.16	3.2	¾"	8.
	P69H2	4.64	3.2	1"	9.
7"	P7E2	2.15	3.2	¾"	6.
	**P7E2A	2.15	3.2	¾"	6.
	P7G2	3.16	3.2	1"	8.
	P7H2	4.64	3.2	1"	9.
7½"	P75F1	3.16	3.2	¾"	7.
	P75H1	4.64	3.2	1"	9.
8"	P8D1	1.47	3.2	¾"	7.
	P8G1	3.16	8.	1"	8.
	P8G2	3.16	3.2	1"	8.
	P8H1	4.64	8.	1"	10.
10"	P10G1	3.16	8.	1"	9.
	P10H1	4.64	8.	1"	10.
	P10J1	6.8	8.	1"	12.
12"	P12G1	3.16	8.	1"	10.
	P12H1	4.64	8.	1"	12.
	P12J1	6.8	8.	1"	14.

*Pincushion basket.
**Pot rotated 90 degrees.

PUBLIC ADDRESS SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
6"	P6F1	3.16	3.2	¾"	5-8
	P6H1	4.64	3.2	1"	6-9
	P6J1	6.8	8.	1"	8-10
8"	P8H1	4.64	8.	1"	8-11
	P8J1	6.8	8.	1"	9-12
	*P8L1	10.	8.	1¼"	10-14
10"	P10H1	4.64	8.	1"	9-11
	P10J1	6.8	8.	1"	10-12
	P10L1	10.	8.	1¼"	12-18
12"	P12L1	10.	8.	1¼"	14-20
	P12P1	21.5	8.	1½"	20-30
	P12R1	35.	8.	2"	25-35
15"	P15L1	10.	8.	1¼"	16-20
	P15P1	21.5	8.	1½"	20-30
	P15R1	35.	8.	2"	25-35

*Waterproofed cone and voice coil.

AUTO REPLACEMENT SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
5" Round	P5C1	1.47	3.2	9/16"	3.5
	P52F1	3.16	3.2	¾"	5.
5¼" Pin Cush.	P53C1	1.47	3.2	9/16"	4.
6½" Pin Cush.	P6F1	3.16	3.2	¾"	5.
6" x 9"	P69F2	3.16	3.2	¾"	6.
7" Pin Cush.	P7E2	2.15	3.2	¾"	5.
	*P7E2A	2.15	3.2	¾"	5.
7½" Pin Cush.	P75F1	3.16	3.2	¾"	6.

*Pot rotated 90 degrees.

INTERCOMMUNICATION SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
3½" Square	P3A21	.68	45.	9/16"	1.5
4" Square	P4A21	.68	45.	9/16"	2.
5" Pin Cush.	P51A21	.68	45.	9/16"	3.

CINAXIAL SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
12"	CIN-12A	4.64	8.	1"	10.
15"	CIN-15B	10.	8.	1¼"	15.
	CIN-15C	21.5	8.	1½"	18.
3"	*TW3C1	1.47	8.	9/16"	2.
5"	†TW52F1	3.16	16.	¾"	5.

*High frequency speaker only, as used in CIN-12A (requires 2 mfd. paper condenser in series with voice coil).

†High frequency speaker only, as used in CIN-15B and CIN-15C (requires 2 mfd. paper condenser in series with voice coil).

ALL-WEATHER SPEAKERS

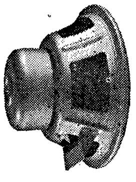
SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
4"	P4CO	1.47	3.2	9/16"	2.5
5"	P5CO	1.47	3.2	9/16"	3.5

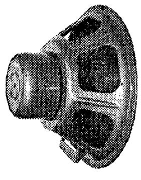
TV REPLACEMENT SPEAKERS

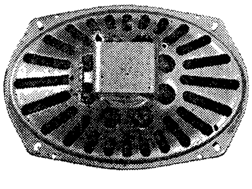
SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
5" x 7"	P57FTV	3.16	3.2	¾"	6.
6" x 9"	P69FTV	3.16	3.2	¾"	6.

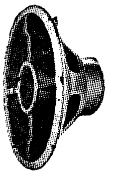
EXTENDED RANGE SPEAKERS

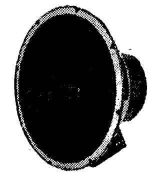
SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
8"	P8JHF1	6.8 oz.	8.	1"	7.
12"	P12JHF1	6.8	8.	1"	10.











Smith-Nathaniel BALDWIN SPEAKERS

Smith-Baldwin speakers are critically engineered. They are built of the finest and best material that is humanly possible to procure. They are individually packaged in colorful and attractive cartons and together with their high quality will spell bigger speaker-dollar sales for you.

PERMANENT MAGNET MODELS

This series will be found to be suited for replacements for home-constructors and inter-communication systems where costs and trouble-free operation are a serious consideration.

REPLACEMENT SPEAKERS

Size	Model	Magnet Alnico V	Voice Coil Imped.	Voice Coil Diam.	Watts
3″	P3AR1	.68 oz.	3-4	½″	1.5
3½″	P3AR1	.68	3-4	½″	1.5
3½″	P3AS2	1.00	45	½″	1.5
3½″	P3AS3	1.47	3-4	9/16″	2.
4″	P4AR1	.68	3-4	½″	1.5
4″	P4AS2	1.00	45	½″	2.
4″	P4AS3	1.47	3-4	9/16″	2.5
5″	P5AR1	.68	3-4	½″	3.
5″	P5AS2	1.00	45	½″	3.
5″	P5AS3	1.47	3-4	9/16″	3.5
5¼″ Pin Cush.	P5QAS3	1.47	3-4	9/16″	3.5
6½″ Pin Cush.	P6AR1	.68	3-4	½″	3.
6½″ Pin Cush.	P6AS2	1.00	3-4	9/16″	3.25
6½″ Pin Cush.	P6AS3	1.47	3-4	9/16″	3.5

Size	Model	Magnet Alnico V	Voice Coil Imped.	Voice Coil Diam.	Watts
6½″ Pin Cush.	P6CR5	2.15	3-4	¾″	4.
6½″ Pin Cush.	P6R6	3.16	3-4	¾″	5.
6½″ Pin Cush.	P60X8	4.64	3-4	1 ″	6.
6½″ Pin Cush.	P6Sun9	6.8	6-8	1 ″	8.
8″	P8CR5	2.15	3-4	¾″	6.
8″	P8R6	3.16	3-4	¾″	7.
8″	P80X8	4.64	6-8	1 ″	8.
8″	P8Sun9	6.8	6-8	1 ″	10.
10″	P10R6	3.16	6-8	¾″	8.
10″	P100X8	4.64	6-8	1 ″	9.
10″	P10Sun9	6.8	6-8	1 ″	10.
12″	P12R6	3.16	6-8	¾″	9.
12″	P120X8	4.64	6-8	1 ″	10.
12″	P12Sun9	6.8	6-8	1 ″	12.

HIGH FIDELITY SPEAKERS

Size	Model	Magnet Alnico V	Voice Coil Imped.	Voice Coil Diam.	Watts
8″	P8Sun10	10 oz.	6-8	1 ″	9.
10″	P10Sun10	10	6-8	1 ″	10.
12″	P12Sun10	10	6-8	1 ″	12.
15″	P15Sun10	10	6-8	1 ″	15.
12″	P12RM15	15 oz.	6-8	1¼″	14.
15″	P15RM15	15	6-8	1¼″	16.
12″	P12RM26	26.6 oz.	6-8	1½″	16.
15″	P15RM26	26.6	6-8	1½″	18.

OVALS

Size	Model	Magnet Alnico V	Voice Coil Imped.	Voice Coil Diam.	Watts
4″ x 6″	P46AS1	.68 oz.	3-4	½″	3.
4″ x 6″	P46AS3	1.47	3-4	9/16″	3.5
5″ x 7″	P57AS3	1.47	3-4	9/16″	4.
5″ x 7″	P57CR5	2.15	3-4	¾″	5.
6″ x 9″	P69R5	2.15	3-4	¾″	6.
6″ x 9″	P690X6	3.16	3-4	¾″	7.

RING MAGNET ALNICO III

Size	Model	Magnet Alnico V	Voice Coil Imped.	Voice Coil Diam.	Watts
8″	P8-32	32 oz.	6-8	1 ″	8.
10″	P10-32	32	6-8	1 ″	10.
12″	P12-32	32	6-8	1 ″	12.

COAXIAL SPEAKERS

Size	Model	Magnet Alnico V	Voice Coil Imped.	Voice Coil Diam.	Watts
12″	P12C08	4.64 oz.	8	1 ″	10.
12″	P12C09	10.	8	1 ″	12.
15″	P15C09	10.	8	1½″	14.
15″	P15CORM26	26.	8	1½″	22.

WEATHEROID SPEAKERS

Size	Model	Magnet Alnico V	Voice Coil Imped.	Voice Coil Diam.	Watts
4″	P4AS3W	1.47 oz.	3-4	9/16″	2.5
5″	P5AS3W	1.47	3-4	9/16″	2.5
6½″ Pin Cush.	P6CRJW	2.15	3-4	¾″	4.
4″ x 6″	P46AS3W	1.47	3-4	9/16″	3.5

FIELD COIL MODELS

ALL SPEAKERS ARE DUST-PROOFED

ALL FIELD COIL MODELS ARE EQUIPPED WITH BUCKING COILS OR "HUM SLUGS"

REPLACEMENT SPEAKERS

Size	Model	Field Coil Re-sistance	Field Coil Watts	Voice Coil Imped.	Voice Coil Diam.	Watts
3½″	E3NT45	450	4.	3-4	9/16″	2.
4″	E4NT45	450	4.	3-4	9/16″	2.
4″	E4NT10	1000	4.	3-4	9/16″	2.
4″	E4NT18	1800	4.	3-4	9/16″	2.
4″	E4NT27	2750	4.	3-4	9/16″	2.
4″ x 6″	E46NT45	450	4.	3-4	9/16″	2.5
4″ x 6″	E46NT10	1000	4.	3-4	9/16″	2.5
4″ x 6″	E46NT18	1800	4.	3-4	9/16″	2.5
5″	E5V6NT	6 Volt	4.	3-4	9/16″	2.5
5″	E5NT45	450	4.	3-4	9/16″	2.5
5″	E5NT10	1000	4.	3-4	9/16″	2.5
5″	E5NT18	1800	4.	3-4	9/16″	2.5
5″	E5NT27	2750	4.	3-4	9/16″	2.5
6″ pin	E6V6NT	6 Volt	4.	3-4	9/16″	3.
6″ pin	E6NT45	450	4.	3-4	9/16″	3.
6″ pin	E6NT10	1000	4.	3-4	9/16″	3.

Size	Model	Field Coil Re-sistance	Field Coil Watts	Voice Coil Imped.	Voice Coil Diam.	Watts
6″ pin	E6NT18	1800	4.	3-4	9/16″	3.
6″ pin	E6NT27	2750	4.	3-4	9/16″	3.
6″ x 9″	E69V6CR	6 Volt	4.5	3-4	¾″	6.
6″ x 9″	E69CR18	1800	4.5	3-4	¾″	6.
8″	E8RP10	1000	4.5	3-4	¾″	6.
8″	E8RP18	1800	4.5	3-4	¾″	6.
8″	E8RP25	2500	4.5	3-4	¾″	6.
8″	E80X10	1000	8.5	6-8	1 ″	8.
8″	E80X25	2500	8.5	6-8	1 ″	8.
10″	E100X75	750	8.5	6-8	1 ″	9.
10″	E100X18	1800	8.5	6-8	1 ″	9.
10″	E100X25	2500	8.5	6-8	1 ″	9.
12″	E120X10	1000	8.5	6-8	1 ″	10.
12″	E120X18	1800	8.5	6-8	1 ″	10.
12″	E120X25	2500	8.5	6-8	1 ″	10.

CONSOLIDATED RADIO PRODUCTS CO.

CHICAGO 10, ILLINOIS

WRIGHT *Verified Speakers*

The second separate and rigid inspection which each speaker receives after it has been manufactured, makes it possible to replace any defective speaker with a new one. This enables the distributor to immediately give his customer a new speaker from stock when a defective unit is returned.

SPEAKERS, GRILLES, BAFFLES, CABINETS

Model Number	Speaker Size	Watts Output	Alnico 5 Magnet Wt.	V. C. Impd.	List Price
NP-468	4"	4	.68 oz.	3.5 ohms	$3.75
NP-510	5"	5	1.00 "	3.5 "	4.20
NP-515	5"	6	1.47 "	3.5 "	4.60
NP-610	6"	6	1.00 "	3.5 "	4.80
NP-615	6"	6	1.47 "	3.5 "	5.15

All these speakers will accommodate our versatile mounting brackets, but the brackets are *not* included at the above prices. Please order them separately.

AMB — Adjustable Mounting Bracket........ **.25c**

NP-832	8"	8	3.16 oz.	3.5 ohms	$ 8.50
NP-8680	8"	12	6.8 "	8 "	12.00

These 8" speakers are exceptional units, as tests will prove. Used with the 10-P Flush Mounting Grille or the B-1965 Harmonic Baffle they insure a splendid, satisfactory installation that will always be a good advertisement for additional business. The NP-832 also makes a fine replacement speaker for a full-console radio or TV set.

NP-1232	12"	8	3.16 oz.	3.5 ohms	$11.00

A perfect replacement speaker for a Full-console Radio or Television Receiver where a 12" unit is used. Also very good for light sound installations.

NP-1268	12"	14	6.8 oz.	8 ohms	$14.50

The many years that this 12" speaker has been used in all types of installations shows what the sound engineers think of it.

NOP-631	6x9"	9	3.16 oz.	3.5 ohms	$9.00
NOP-521	5x7"	6	2.15 "	3.5 "	6.50

All the above prices include the Government Tax

Model B-1965 Wright Harmonic Baffle	$12.00
Model B-1965-832 Baffle with NP-832 Speaker	19.50
Model B-1965-8680 Baffle with NP-8680 Speaker	21.75
Model M Cabinet	$ 9.20
Model M-615 Cabinet with NP-615 6" Speaker	14.25
Model T-6 Cabinet	$15.00
Model T-6-615 Cabinet with NP-615 Speaker	19.85
Model T-6-615-SW Cabinet with NP-615 and Switch	22.85
Model 10-PC Flush Mounting Grille	$ 4.00
Model 10-PC-832 Grille with NP-832 Speaker	11.50
Model 10-PC-8680 Grille with NP-8680 Speaker	14.50
Model 10-PCW Grille and Wall Box	11.00
Model 10-PCW-832 Grille, Wall Box and NP-832	18.50
Model 10-PCW-8680 Grille, Wall Box and NP-8680	21.50
Model 108-WGB Grille and Wall Box	$22.00
Model 108-WGB-832 Grille and Wall Box with NP-832	29.50
Model 108-WGB-8680 Grille and Wall Box with NP-8680	32.50
Model 12-A Grille for a 12" Speaker	$12.50
Model 12-A-1232 Grille and NP-1232 Speaker	22.50
Model 12-A-1268 Grille and NP-1268 Speaker	24.50

Model M Cabinet — Outside diameter 6¾" — Depth 3¼". Inside diameter at front 6⅝". Four holes for mounting 6" speaker. Made of strong aluminum it can be used indoors or outside. Louvers front and back make it suitable for two way paging. Gives sufficient baffle for music. Can be used as is or painted............**List Price $6.25**

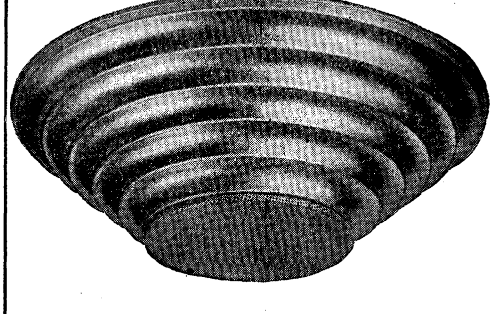
Model B-1965 Harmonic Baffle — These Dome like ceiling baffles with their silvery finish are pleasing to the eye. They are excellent for Paging, Singing, or Orchestral reproduction. For the best results use the NP-8680 8" speakers........**List Price $10.95**

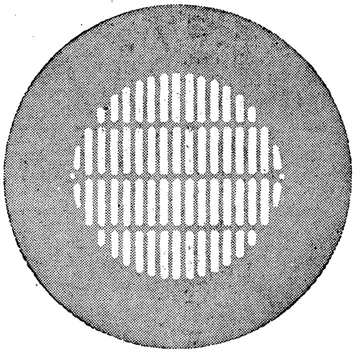
Model 10-PC Flush Mounting Grille — Chrome Plated.

Model 10-PB Flush Mounting Grille — Bonderized and Prime Coated for Painting. These Grilles are an item that the Sound Engineers have wanted for a long time as they mount flush they used the entire wall or ceiling as a baffle. Used with either the NP-832 or NP-8680 speakers these grilles will make a satisfactory, well finished sound installation........**List Price $4.00**

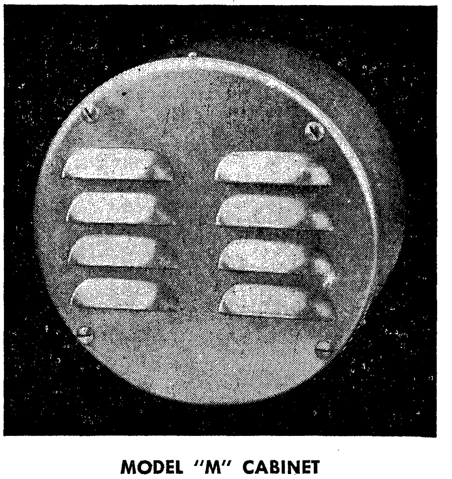
For Full Detailed Information Write for Catalog PC-No. 100

WRIGHT HARMONIC BAFFLE





MODEL 10-P
Flush Mounting Grille



MODEL "M" CABINET

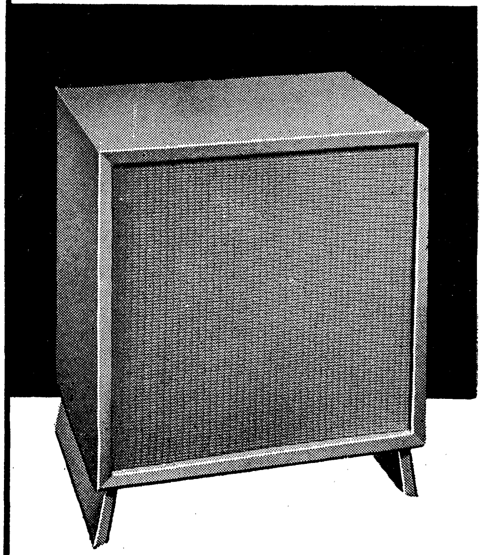
REMARKABLE!
INEXPENSIVE!
SMALL-SIZE!

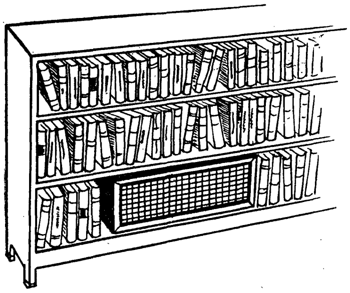
R-J SPEAKER ENCLOSURES

(Patent Pending)

Maximum Bass – Minimum Space!

Use it with ANY loudspeaker!





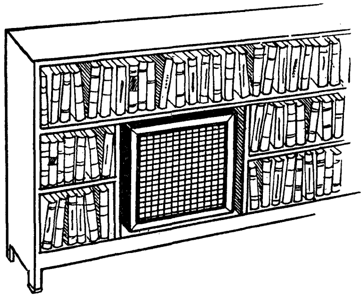
SINGLE SHELF MODEL

NO. S-8-U
(For 8" Speaker)
To fit in bookcase. Finish sanded, unpainted 11" high x 10" deep x 23½" long.

VERSATILITY 3 basic designs, combining finest performance with maximum decorative possibilities in the home

FLOOR MODEL

NO. F-15-M
(For 15" Speaker, Mahogany)
NO. F-15-B
(For 15" Speaker, Blonde)
NO. F-15-U
(Exactly same as above, but with unfinished surface).
NO. F-12-M
(For 12" Speaker, Mahogany)
NO. F-12-B
(For 12" Speaker, Blonde)
Beautiful, hand rubbed Mahogany or Blonde finish. 20" high x 20" long x 16" deep, plus legs.
NO. F-12-U
(Exactly same as above, but with unfinished surface).



DOUBLE SHELF MODEL

NO. S-12-U
(For 12" Speaker)
To fit in bookcase. Finish sanded, unpainted 24" high x 21" long x 10" deep.

R-J ENCLOSURES WILL OUTPERFORM ORDINARY ENCLOSURES MORE THAN THREE TIMES THEIR SIZE!

Hearing is believing! Now available for the first time, R-J Speaker Enclosures have established an entirely new trend in audio design with thrilling performance from any loudspeaker in a cabinet only slightly larger than the speaker itself. R-J Enclosures are simple, flexible, low in price, and particularly adaptable in rooms where space must be conserved. Up to now cumbersome, costly speaker enclosures have been tolerated because their size was considered essential for good bass performance. This inconvenience has now been effectively overcome by the R-J construction principle, which has received the approbation of thousands of critical listeners with outstanding results. Long before R-J Speaker Enclosures were commercially available, enthusiastic comments and inquiries were received from every part of the world, from home listeners, critics, and broadcast stations alike. Listeners were fascinated equally by the outstanding performance of R-J Enclosures and by their decorative possibilities.

The R-J Enclosure will permit the user to realize the full potential of any speaker with which it is used. Even the most inexpensive speakers will perform at their best in an R-J housing. With a well-designed speaker, an R-J Enclosure offers clean, smooth bass fundamentals, without peaks, down to low organ pedal notes. Distorting cabinet resonances are completely eliminated.

Remarkable though its bass performance may be, the R-J Enclosure is equally impressive in its unobstructed direct radiation of high frequencies. Excellent acoustic loading affords best reproduction of transients.

R-J Speaker Enclosures also offer the advantages of unusual versatility. Fine furniture construction is used throughout, suited in appearance to any room decor. Enclosures are expertly built of heavy, top-quality genuine Mahogany or Korina veneers, in fine, long lasting hand-rubbed dark or blonde finish. Special models are available with surfaces sanded but unfinished, to fit the shelves of bookcases and other similar installations. Cut-outs fit all standard loudspeakers, which may be installed quickly and simply without special tools.

R-J AUDIO PRODUCTS INC. 164 DUANE STREET, NEW YORK 13, N. Y.

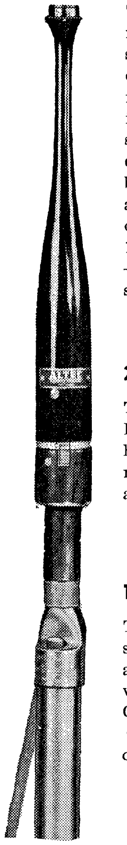
microphones

ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.

21B MICROPHONE



The 21B Microphone provides a new standard for frequency response and dynamic range in quality microphones. The 21B is a condenser microphone and, in addition to its miniature size and superb quality, is **omnidirectional**, shock proof, blast proof, and free from angular discrimination. Frequency response: 20 through 15,000 cps. Output level: —48 dbm re 1 milliwatt for a sound field of 10 dynes/cm^2.

21B and 150A BASE

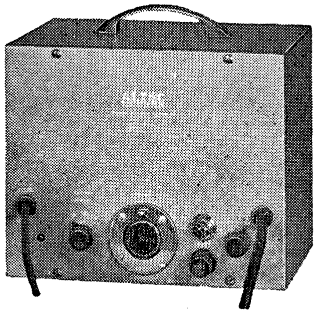
The 21B is used on the 150A Base as a stand, suspension, or hand microphone. Small size makes it ideal for stage, TV, and motion pictures.

Net Price: $90.00

152A CABLE SET

This cable set is designed for stand mounting of the 21B and 150A Base. It is equipped with 8 pin Cannon connectors. Connector at 150A Base has ⅝″-27 thread. Length with connectors: 25 ft.

Net Price: $30.00

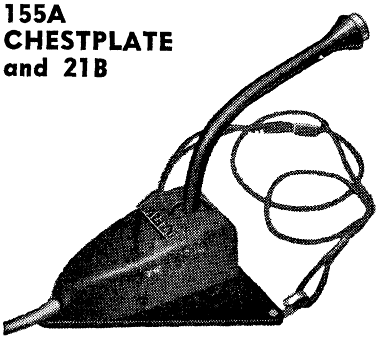


P-518A POWER SUPPLY

The P-518A Power Supply provides the necessary voltage for the 21B microphone and the impedance matching tube in the 150A Base, or the 155A Chestplate. This power supply is necessary to operate the microphone into an amplifier not specifically designed to receive it. The P-518A is a portable unit. Output impedance: 30, 250, 500 ohms. Power requirements: 117 V, 60 cycles A.C. Dimensions: 7½″ x 8¼″ x 6″.

Net Price: $110.00

155A CHESTPLATE and 21B



The 21B on the 155A Chestplate is the ideal instrument for the active lecturer or announcer. It hangs around the neck and places the microphone near the lips, leaving the hands free. 25 feet of cable is permanently attached to the 155A Chestplate.

Net Price: $120.00

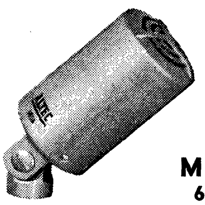
CARDIOID MICROPHONE*

639A and 639B

Ideal for broadcast or public address, these cardioid microphones with ribbon and dynamic elements provide the best possible pick-up under varying, difficult conditions. High quality three-way (639A) and six-way (639B) directivity patterns are quickly selected by turning a screw. Each embodies a dynamic moving coil type pressure element. Impedance average 40 ohms. Power output level: —56 dbm (iodynes/cm^2). Frequency response: 40-10,000 cps.

LIST PRICE	
639A	$236.00
639B	$236.00

*Distributed by Graybar Electric Co.



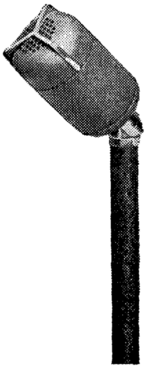
DYNAMIC MICROPHONE

660A and 660B

A dynamic microphone of broadcast quality and exceptional ruggedness and dependability. Equipped with ⅝″ x 27 swivel head. Ideal for public address, paging and broadcast use.

Frequency response: 40-10,000 cps.
Power output level:
—57 dbm (10 dynes/cm^2).
Impedance: 660A—30 ohms.
660B—30, 150, 20,000 ohms.

NET PRICE	
660A	$45.00
660B	$52.00



DYNAMIC MICROPHONE*

633A and 633C

This rugged, dependable high-quality microphone for public address, sound distribution system, or broadcasting, affords both non-directional and semi-directional performance.

Frequency response: 40-15,000 cps.
(633A) Impedance: 30 ohms.
(633C) Impedance: 30, 150-250 ohms.
Power output level:
—57 dbm (10 dynes/cm^2).

LIST PRICE	
633A	$83.10
633C	$91.50

*Distributed by Graybar Electric Co.

Microphone Accessories*

Items	List Price
8B Attachment	$10.65
9A Attachment	6.45
11A Attachment	18.15
22C Floor Stand	20.70
23A Desk Stand	10.00
24A Desk Stand	7.65
311A Plug	12.50
422A Jack	8.70
712A Adapter	3.30
713A Adapter	3.20
10994 Adapter	4.50

*Distributed by Graybar Electric Co.

THE ASTATIC CORPORATION

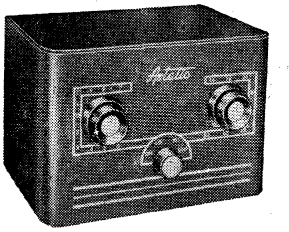
KNOWN THE WORLD OVER

CONNEAUT OHIO

tv converters and boosters, microphones

MODEL CB-1

● Combination UHF converter and VHF booster. Provides continuous tuning throughout the new UHF channels (14 through 83). Consists of two tuned preselectors, a 6T4 or 6AF4 UHF oscillator and a 1N82 silicon diode mixer. Converter changes UHF TV channel to either channel 5 or 6 in VHF frequency. VHF amplification (channels 5 or 6) is obtained with the circuits of the well known low-noise, high-gain Astatic CT-1 Booster which are incorporated. Switching and tuning is provided to permit using the VHF amplifier circuits as a VHF Booster only, on all the VHF television channels. This booster circuit is a two stage, neutralized push-pull amplifier using a 6J6 driving a 6BQ7A grounded grid amplifier. The CB-1 easily connects to TV receiver with standard 300 ohm leads. Terminal board on rear of chassis has connections for both UHF and VHF antenna and lines to the receiver. Operates on 110-120 V., 60 cycle AC, 30 watts.

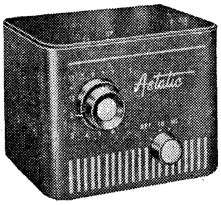


Housed in attractive metal cabinet, finished in brown Hammerlin with gold trim, 9″ x 6″ x 5¾″. Shipping weight, 6½ lbs.

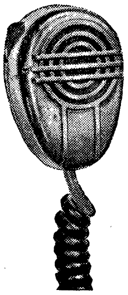
Model	Code	List Price
CB-1	ASXES	$59.50

MODEL CT-1

● New, two-stage VHF Booster providing greatly improved picture quality. Bandwidth over 7 megacycles on all VHF channels. The Scanafar features a neutralized 6J6 driving a push-pull dual triode grounded grid circuit. Balanced, cascaded circuit provides added signal strength with low noise level. Controls: Channel Selector and 3-position switch (Booster Off, Low Band, High Band). Has input and output connections for 72 or 300 ohm transmission lines. Housed in attractive metal cabinet finished in brown Hammerlin with gold trim, 6½″ x 4¾″ x 4⅞″ deep. Complete with tubes and selenium rectifier. For operation from 110-120 volts, 60 cycle AC. Shipping Weight, 5 lbs.



Model	Code	List Price
CT-1	ASAMC	$35.00



CARBON MODEL 10M5

● For mobile applications, ship-to-shore communication, multitude of other uses. Unparalleled high sensitivity among carbon mikes, designed for greater ruggedness and convenience in use. Ideal response for speech clarity: 100 to 4500 c.p.s. range. Double-pole, single-throw switch, with relay and microphone circuits normally open (press-to-talk), adapts easily to wide variety of circuits. Four-conductor, self-coiling cable: retracted length, 12 inches; extended length, five feet. Coiled spring cable protector. Surface mounting wall, panel or dash hang-up bracket. Grey Hammerlin finish, die-cast housing.

Model	Code	List Price
10M5	ASUNM	$29.50

CRYSTAL MODEL D-104

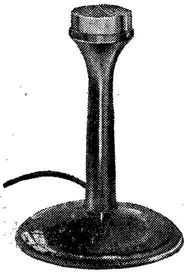
● For close talking applications, such as radio amateur communications and similar uses. With high output level approximately —45 db, it possesses definitely reduced R.F. feed-back tendencies. Yoke-driven, bridge-mounted Graphoil crystal element with METALSEAL protection against moisture or dryness, shock-proof mounting and barometric compensation. Speech range frequency response from 30 to 7,500, rising 500 to 4,000 c.p.s. Chrome finish. Standard equipment includes interchangeable plug and connector, spring cable protector, 5′ shielded cable.

	List Price
D-104—Code ASUPA	$24.60
G-D-104—Code ASVAX, with G-Stand	37.65
D-104-S—Code ASUPB, with S-Switch	27.35

CERAMIC MODEL D-104-C

● Duplicate of Crystal Model except for employment of ceramic element, which is immune to extremes of temperature and humidity. Performance comparable except for slightly lower output of approximately —58 db.

	List Price
D-104-C —Code ASUPC	$24.60
G-D-104-C—Code ASVAW	37.65
D-104-C-S—Code ASUQZ, with S-Switch	27.35



CRYSTAL MODEL 54M3

● High output (—51 db) and smooth, distortion-free quality performance at modest cost. Miniature size and attractive new styling look the quality instrument part for recorder, PA, conference and other uses. Response (30 to 10,000 c.p.s.) is flat to 1,000 with gradual rise to 6,000 c.p.s. Non-directional when locked in base, as illustrated. Die cast housing with dark chocolate brown enamel finish; stamped metal grille with gold plate finish. Gold finish base adaptor has pin to lock handle to removable base with half-turn, is threaded to fit standard floor stands. Standard equipment: base with rubber feet, 5′ shielded cable and protector.

Model	Code	List Price
54M3	ASUOZ	$12.75

"DYNABAR" UNIDIRECTIONAL DYNAMIC

● New Astatic development, unparalleled in over-all smoothness of response and high quality performance. Exclusive sintered metal method of acoustic phase shifting provides superior, uniform directional characteristics—front to back pickup differential of approximately 15 db, dead to sound from rear for practical purposes. Has multi-impedance transformer and impedance selector switch providing operating impedances of 50, 200, 500 and HZ. Dynamic element floated in rubber against shock. Output level, —54 db; range, 40 to 10,000 c.p.s. 18′ shielded 2-conductor cable, detachable cable connector. With or without off-on switch (hinge ferrule strengthened with S-Switch housing a built-in, fixed part of the ferrule).

Model	Code	List Price
DR-11	HSVFJ	$68.00
DR-11S*	ASVFL	69.50

*With Off-On Switch.

"SYNABAR" UNIDIRECTIONAL CRYSTAL

● Special sintered metal cancels out 15 db front to back, making this professional-class unit, for practical purposes, dead to sound from rear. Has excellent frequency range, 50 to 10,000 c.p.s., PLUS a Response Selector switch to provide choice of ideal pick-up characteristics for either crisp voice or general voice and music. Crystal element has special METALSEAL protection against moisture or dryness. Output level is —54 db, high impedance. Satin chrome finish. 18′ single-conductor shielded cable, with or without off-on switch. Recommended for highest quality reproduction and elimination of extraneous noise, in a wide variety of modern applications.

Model	List Price
DR-10	$37.25
DR-10-S*	39.95

NOTE: All microphone output ratings based on a reference level of one volt per microbar.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

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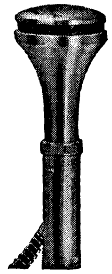
microphones

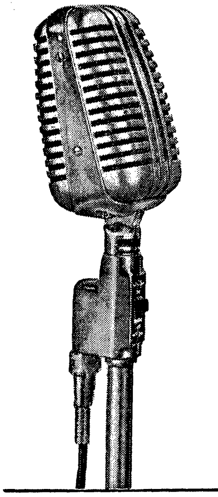
CRYSTAL MODEL DK-1



- New non-directional unit for studio and public address, featuring reduced size and design established primarily to allow unobstructed, least detracting view of performer. Brushed chrome finish contributes to this purpose by reducing distracting light reflections and glare. Excellent frequency range, with rising characteristics between 2,000 and 5,000 c.p.s. Output level is approximately —55 db. Crystal element has moisture-proof coating. Includes 10 ft. rubber covered, shielded single conductor cable. Available with off-on switch (SC-11) at $2.70 extra.

	List Price
DK-1—Code ASURV	$22.00

The WR-SERIES

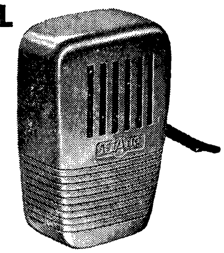


- The WR-Series, Multi-Unit Microphones, are highly recommended for studio, public address and high quality recording purposes. Substantially flat frequency response up to 10,000 cycles. Due to their special interior assembly design, the WR-Series Microphones are practically transparent to sound waves and cannot be acoustically overloaded. Model WR-20 may be used on cable up to 100 ft. with negligible loss of output and Model WR-40 is more than able to handle cable twice this length. Output level —56 db. Finish, bright chrome with satin chrome grille. Cable length, 15 ft. Add $2.70 for models with off-on switch, as shown.

	List Price
WR-20—Code ASVGZ	$32.30
WR-40—Code ASVAL	43.25

(Available with Off-On Switch or G-Stand)

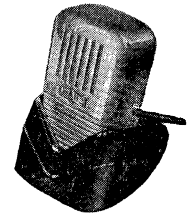
"CARDINAL" CRYSTAL



- A sparkling gold finish, low-cost beauty with performance comparable to high-priced units. All-purpose microphone (see accessory list). Lifts from its streamlined, dark brown plastic desk stand for hand use. Wide range response, adaptable to standard AC or DC circuits, with 10′ cable Output level approximately —52 db.

	List Price
CX —Substantially flat—(Microphone only) Code ASAOA	$9.75
CX-1—Rising characteristics— Code ASAPZ	9.75

"CARDINAL" DYNAMIC



- Duplicate of Model CX in appearance, but equipped with dynamic unit.

	List Price (Microphone only)
CDH—(High Impedance) Code ASAOF	$24.50

"CARDINAL" CERAMIC

- Duplicate of Model CX in appearance, but employing ceramic element, which is immune to extremes of temperature and humidity. Equipped with 5′ cable. Output approximately —62 db.

	List Price (Microphone only)
CC —Substantially flat—Code ASAPU	$8.95
CC-1—Rising characteristics—Code ASAPT	8.95

"CARDINAL" ACCESSORIES

- "Cardinal" plastic desk base, **$1.00**; any model available with off-on switch, **$1.50** extra; hang-up hook, **$0.25**; stand adapter, **$0.35**.

"VELVET VOICE" CRYSTAL

- Here is a convertible type Crystal Microphone, providing ultra-smooth, velvety soft, wide range response, that may be used as desk, hand or floor stand microphone, to meet practically every microphone need. Beautiful gold finish housing and handle; bright chrome grille; brown baked enamel, detachable base; 10′ shielded cable. Output level approximately —52 db. Two models: Model 200 with smooth, even frequency response characteristics from 30 to 10,000 c.p.s.; Model 241, with similar range but rising characteristics between 1500 and 5500 c.p.s. for added brilliance in speech range.

(Without Switch)	List Price
200—Code ASUVA	$13.95
241—Code ASUVC	13.95
(With Off-On Switch)	
200-S—Code ASUVB	15.00
241-S—Code ASUVD	15.00

"VELVET VOICE" DYNAMIC

- This microphone is identical with Model 200, in appearance, but is equipped with a dynamic unit. Semi-directional. Exceptionally high output level of High Impedance Model, approximately —50 db. Frequency response, 30 to 10,000 c.p.s.

(Without Switch)	List Price
VDL —(50 ohms)—Code ASANA	$19.95
VDH*—(High Impedance)—Code ASAND	27.50

*High impedance model only available with ON-OFF switch, **$1.40** extra.

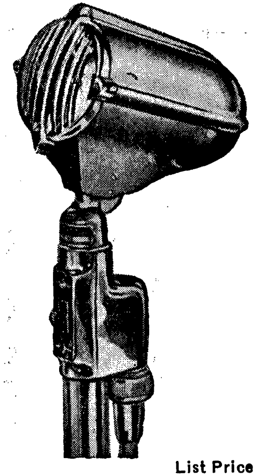
"VELVET VOICE" CERAMIC

- Also identical in appearance with Model 200, but employing the amazing, new piezoelectric ceramic element. Recommended where high temperatures and humidity are service factors. Equipped with 5′ cable. Output level approximately —62 db. Frequency response 30 to 10,000 c.p.s.

	List Price
VC —(5 Meg.)—Substantially flat—Code ASAQR	$13.15
VC1—(5 Meg.)—Rising characteristics—Code ASAQP	13.15

Available with On-Off switch at $1.05 extra

The DYNAMIC



- Three models—50 ohm impedance, high impedance or multi-impedance, the latter having a multi-impedance transformer and impedance selector switch to provide choice of 50, 200 and 500 ohms or high impedances. A semi-directional, all purpose dynamic microphone incorporating a unitary moving coil system, and carefully proportioned acoustic circuit to highly damp the natural resonance of the moving system and provide a response characteristic substantially flat from 50 to 7,000 cycles. Output level DN-HZ approximately —55 db. The "DN" design employs all features necessary for wide applicability, including Astatic's tilting-head, swivel mount, permitting semi- or non-directional positions. Opalescent gray and bright chrome finish. High- or multi-impedance models only are available with Type SC-11 Off-On Switch (as illustrated) at $2.75 extra. 10-ft. shielded cable.

	List Price
DN-50—(50 ohms)—Code ASVNJ	$21.90
DN-HZ—(High impedance)—Code ASVNG	29.50
DN-MZ—(Multi-impedance)—Code ASVNL	39.75

(All models available with G-Stand at $13.00 extra.)

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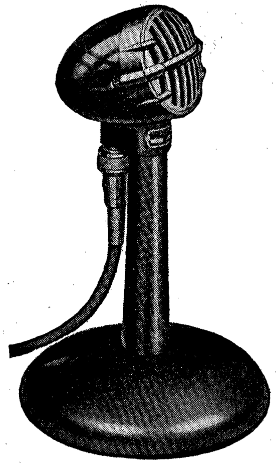
microphones and stands

The JT-SERIES CRYSTAL & CERAMIC



● Because of their wide range of usefulness, excellent performance and low price, Astatic JT-Series Microphones are used extensively for amateur, public address and home recording. JT-Series Microphones are available in both wide and voice range models and, in addition to standard equipment, are furnished complete with concentric cable connector, convenient wood handle, interlocking metal base. Crystal model has 10′ cable; ceramic, 5′. Wood handle may be removed and microphone used on floor stand. Crystal models' output level, —52 db, provides ample reserve for use with high gain amplifiers. Ceramic models' output approximately —62 db. Opalescent gray with bright chrome grille.

		List Price
JT-30	—Substantially flat—Code ASVLG	$16.95
JT-40	—Rising characteristics —Code **ASVLD**	16.95
***JT-30-C**	—Substantially flat—Code ASVLF	16.15
***JT-40-C**	—Rising characteristics —Code ASVLC	16.15

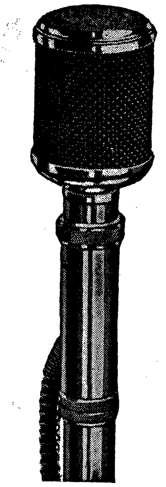
*Ceramic Models.

LAPEL TYPE MODEL L-1

● This very small dual-diaphragm crystal microphone was developed to meet especially difficult pickup conditions. Equipment includes lapel-type spring clip and over-shoulder cord to permit wide latitude of movement. Output level —62 db. Frequency response uniform from 30 to 10,000 c.p.s. Finish, black, oxidized. Furnished with 15′ cable.

	List Price
Model L-1—Code ASUSN	$27.35

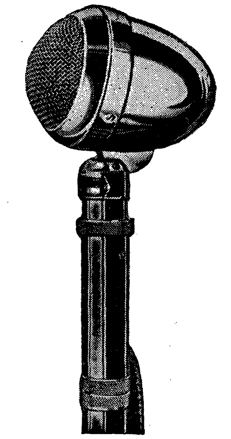
MODEL K-2



● Because of its smooth, undistorted reproduction and the fact that it cannot be acoustically overloaded, Astatic Model K-2 Crystal Microphone is favored and extensively used. In this model, Astatic provides a small size, dual-diaphragm type crystal microphone for studio use, recording, dance bands, public address installations and general applications where quality performance is required. With dual crystal unit design, Model K-2 has twice the capacitance of the usual crystal microphone and correspondingly longer cable lengths may be used. Standard equipment includes plug and socket connector and 15′ cable. Output level —62 db. Bright chrome finish.

	List Price
K-2 —Code ASURX	$30.10
K-2-S—Code ASURW, with S-Switch	32.85
GK-2—Code ASUZA, with G-Stand	43.10

CRYSTAL MODEL T-3



● Definitely established by long and continued popularity, Model T-3 Crystal Microphone is highly practical for many and varied applications. Its use is suggested for studio set-ups, with amateur rigs, intercommunicating systems, public address installations and for high-class recording purposes. Crystal element has special METALSEAL protection against moisture or dryness. Microphone head may be tilted with ease on unique swivel mounting and pickup pattern made semi- or non-directional, as desired. Output level —52 db. Frequency response substantially uniform from 30 to 10,000 cycles. Equipped with interchangeable **plug and socket connector and 15 ft.** cable. All chrome finish.

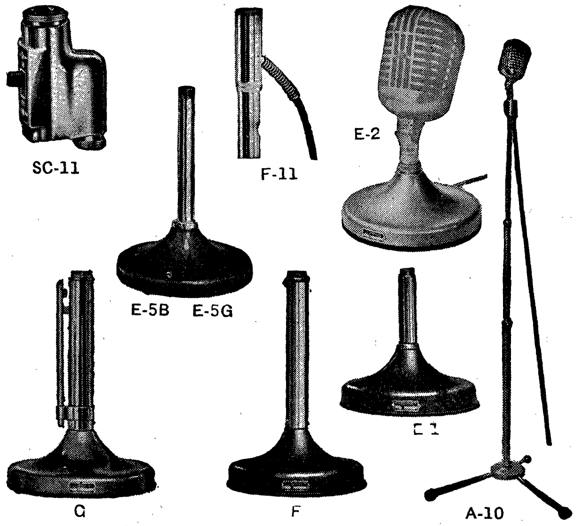
	List Price
T-3 —Code ASVCX	$27.35
T-3-S—Code ASVCW, with S-Switch	30.10
GT-3—Code ASUZD, with G-Stand	40.40

CERAMIC MODEL T-3-C

● Duplicate of Model T-3 except for employment of heat and moisture-immune ceramic element. Output level —62 db with 5′ cable.

	List Price
T-3-C —Code ASVCU	$25.55
T-3-C-S—Code ASVCT, with S Switch	28.30

MICROPHONE STANDS, SWITCH CONNECTORS AND ADAPTERS



MODEL	FINISH	HEIGHT	LIST PRICE
A-10—Floor	Chrome & Gray	2′ to 6′	$10.00
G—(Grip-to-Talk)	Chrome & Gray	8¼″	18.50
F—Desk	Chrome & Gray	8¼″	10.00
E-1—Desk	Chrome & Gray	5½″	5.40
E-5B—Desk	Chrome & Brown	8″	5.40
E-5G—Desk	Chrome & Gray	8″	5.40
F-11—Adapter	Chrome		4.75
SC-11—Switch Connector	Chrome		6.00
E-2—Desk Stand	Chrome & Gray	2⅝″	7.00

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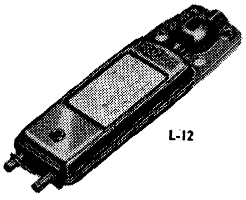
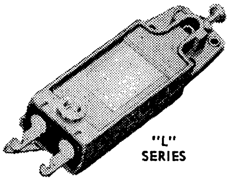
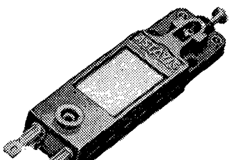
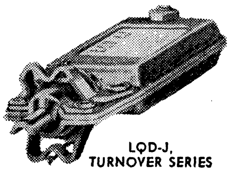
PICKUP CARTRIDGES AND NEEDLES




"L" SERIES


"L" AND "PN" TYPES


LQD-J, TURNOVER SERIES

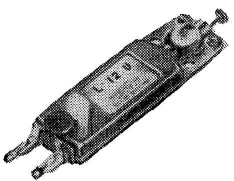
CARTRIDGES FOR SLOW-SPEED AND STANDARD 78 RPM RECORDS

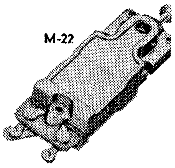
Model	Element Type	List Price	Minimum Needle Pressure	Output Voltage 1000 c.p.s. 1.0 Meg. Load	Frequency Range c.p.s.	Needle Type*	For Record	Approx. Net Wt. in Grams	Code
14L3-AG	Crystal	$ 7.00	10 gr.	2.8†† 2.4†	50-4,000	R	33-1/3, 45 and 78 RPM	9	ASXEX
14L3-D	Crystal	8.50	10 gr.	2.8†† 2.4†	50-4,000	R	33-1/3, 45 and 78 RPM	9	ASXEW
15L3-AG	Crystal	7.00	10 gr.	4.0†† 3.5†	50-5,000	R	33-1/3, 45 and 78 RPM	9	ASXEV
15L3-D	Crystal	8.50	10 gr	4.0†† 3.5†	50-4,000	R	33-1/3, 45 and 78 RPM	9	ASXEU
16L3	Crystal	6.00	16 gr.	6.2†† 4.0†	50-5,000	Not Incl.	33-1/3, 45 and 78 RPM	8	ASXET
401-A	Crystal	5.00	2¾ oz.	1.4††	50-4,500	Optional	Replacement for RCA	27	ASWTA
402-M	Ceramic	6.90	12 gr.	0.7††	50-10,000	G-78(M)	Replacement for Admiral 78 RPM Snap-in Cartridge—Part No. A1372	8	ASWZN
403-J	Crystal	7.50	Special replacement kit consisting of CAC-78-J Cartridge with necessary adapter plate and screws to replace RCA Part 70338, 70339 and 72551 silent sapphire cartridges.						ASWUZ
AC-AG-J	Crystal	6.50	6 gr.	1.0††	50-10,000	A-AG(J)**	33-1/3, 45 and 78 RPM	5	ASWYH
AC-C-AG-J	Ceramic	6.50	6 gr.	0.4††	50-6,000	A-AG(J)**	33-1/3, 45 and 78 RPM	5	ASWTL
AC-C-J	Ceramic	6.50	5 gr.	0.4†	50-6,000	A-1(J)	33-1/3 and 45 RPM	5	ASWTN
AC-C-78-J	Ceramic	6.50	6 gr.	0.4††	50-6,000	A-3(J)	78 RPM	5	ASWTM
ACD-C-J	Ceramic	9.50	6 gr.	0.4† 0.4††	50-5,000	A-1(J) A-3(J)	(Dual Needle) 33-1/3, 45 and 78 RPM	5	ASWTK
ACD-C-1J	Ceramic	9.50	(Same as ACD-C-J except equipped with spindle for turnover knob. Replacement cartridge for ACD-C-2J assembly.)					7	ASWTJ
ACD-C-2J	Ceramic	10.00	(Same as ACD-C-J except equipped with complete assembly turnover and knob.)					16	ASWTI
ACD-J	Crystal	9.50	6 gr.	1.0† 1.0††	50-6,000	A-1(J) A-3(J)	(Dual Needle) 33-1/3, 45 and 78 RPM	5	ASWYL
ACD-1J	Crystal	9.50	(Same as ACD-J except equipped with spindle for turnover knob. Replacement cartridge for ACD-2J assembly.)					7	ASWYF
ACD-2J	Crystal	10.00	(Same as ACD-J except equipped with turnover bracket and knob.)					16	ASWYE
AC-J	Crystal	6.50	5 gr.	1.0†	50-10,000	A-1(J)	33-1/3 and 45 RPM	5	ASWYJ
AC-78-J	Crystal	6.50	6 gr.	1.0††	50-10,000	A-3(J)	78 RPM	5	ASWYN
AC-R-J	Crystal	8.90	(Same as AC-J except equipped with special mounting bracket with .456" mounting hole centers.) Replacement for RCA Part 76257.					5	ASWYO
B-2	Crystal	5.55	2¾ oz.	2.5††	50-4,000	Optional	78 RPM	26 26	ASWHJ ASWHH

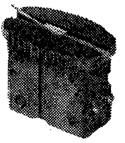
*"J" stands for Sapphire Tip, "M" for Precious Metal Tip.
**ALL-GROOVE needle tip of special design and size to play 33-1/3, 45 and 78 RPM Records.
***With Diamond Stylus at $31.00.

†RCA 12-5-31-V Test Record or Equivalent.
††Audio-tone 78-1 Test Record.

NOTE. Cartridge type B also available with PN Crystal upon request.


L-12-U, DUAL-OUTPUT, REMOVABLE CONDENSER HARNESS, UNIVERSAL TYPE



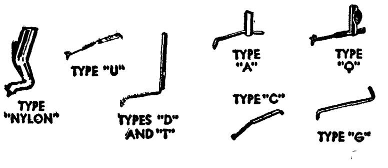

"U"

REPLACEMENT NEEDLES

Type	LIST PRICE			Tip Size	For Cartridge Types
	Diamond (X)	Sapphire (J)	Osmium (M)		
A-1		$2.50	$1.50	1-mil	AC, ACD Series
A-3		2.50	1.50	3-mil	AC-78, ACD Series
A-AG		2.50	1.50	AG*	AC-AG
D		None	1.50	3-mil	LT-4D
D-33		None	1.50	1-mil	LT-4D
D-AG		None	1.50	AG*	LT-4-AG
G		2.50		1-mil	GC Series
G-78		2.50		3-mil	GC-78 Series, 402-M
G-AG		2.50		AG*	GC-AG
Nylon		2.50		3-mil	Nylon Series
Q	$25.00	2.50	1.50	3-mil	CAC-78, CAC-D, LQD
Q-33	25.00	2.50	1.50	1-mil	CAC, CAC-D, CQ, LQD
Q-AG		2.50	1.50	AG*	CAC-AG
R		None	1.50	1-mil	14 L3, 15L3 Series
R-78		None	1.50	3-mil	14L3D, 15 L3D Series
R-AG		None	1.50	AG*	14L3-AG, 15L3-AG Series
T		None	1.50	3-mil	LT1-M, LT2-M, LT3-M
T-33		None	1.50	1-mil	LT-33
U		2.50	1.50	1-mil	U Series
U-78		2.50	1.50	3-mil	U-78 Series
M-5**		5.25	3.25	1-mil	MD-5
M-6**		5.25	3.25	3-mil	MD-6

*ALL-GROOVE Needle Tip of Special Design and Size to Play 33-1/3, 45 and 78 RPM Records.

**Card with two matched needles.



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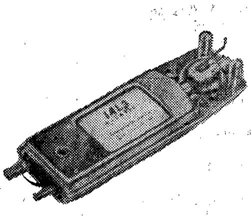
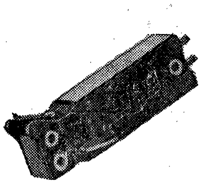
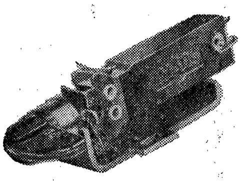
PICKUP CARTRIDGES, RECORDING HEADS



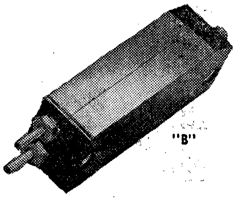
14, 15 AND 16L-3 TYPES. EXTRA-HIGH OUTPUT SERIES



AC-J, SMOOTH RESPONSE SERIES



ACD-J, TURNOVER VERSION OF AC SERIES



"B"

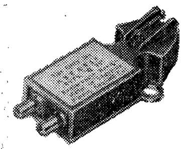
CARTRIDGES FOR SLOW-SPEED AND STANDARD 78 RPM RECORDS

Model	Element Type	List Price	Minimum Needle Pressure	Output Voltage 1000 c.p.s. 1.0 Meg. Load	Frequency Range c.p.s.	Needle Type*	For Record	Approx. Net Wt. in Grams	Code
CAC-AG-J	Crystal	7.50	10 gr.	1.35††	30-11,000	Q-AG(J)**	33-1/3, 45 and 78 RPM	5	ASWZX
CAC-D-J	Crystal	$10.50	10 gr.	0.7† 0.8††	30-11,000	Q-33(J) Q(J)	33-1/3, 45 and 78 RPM	28	ASXDJ
CAC-J	Crystal	7.50***	6 gr	1.0†	30-11,000	Q-33(J)	33-1/3 and 45 RPM	5	ASWZZ
CAC-78-J	Crystal	7.50***	10 gr	1.35††	30-11,000	Q(J)	78 RPM	5	ASWZY
CAC-W-J	Crystal	7.50***	(Same as CAC-J except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)					5	ASWYB
CAC-78-W-J	Crystal	7.50***	(Same as CAC-78-J except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)					5	ASWYA
GC-AG-J	Ceramic	7.40	8 gr.	0.7††	50-10,000	G-AG(J)**	33-1/3, 45 and 78 RPM	5	ASWZM
GC-J	Ceramic	7.40	6 gr.	0.55†	50-10,000	G(J)	33-1/3 and 45 RPM	5	ASWZK
GC-78-J	Ceramic	7.40	12 gr.	0.7††	50-10,000	G-78(J)	78 RPM	5	ASWZI
L-12	Crystal	5.00	1 oz.	4.0††	50-5,000	Optional	78 RPM	19	ASWSG
L-29	Crystal	6.00	10 gr	3.0††	50-5,000	Not included	33-1/3, 45 and 78 RPM	8	ASWTS
L-78	PN Crystal	11.15	(Special P.N. Crystal Cartridge for Seeburg Record Changers)				78 RPM	28	ASWWO
L-26A	Crystal	5.00	2¾ oz.	1.4††	50-4,500	Optional	78 RPM	30	ASWVZ
L-40A	Crystal	5.00	1¼ oz.	0.6††	50-4,500	Optional	78 RPM	30	ASWUA
L-70A	Crystal	5.55	1¼ oz.	1.0††	50-4,000	Optional	78 RPM	28	ASWVT
L-72A	Crystal	6.65	1¼ oz.	3.5††	50-4,000	Optional	78 RPM	28	ASWVL
L-74A	PN Crystal	10.00	1½ oz.	1.4††	50-4,000	Optional	78 RPM	28	ASWVD
L-82A	Crystal	5.55	1½ oz.	3.5††	50-5,000	Optional	78 RPM	28	ASWSJ
L-92A	Crystal	6.00	1 oz.	2.25††	50-7,000	Optional	78 RPM	19	ASWTR
LQD-J	Crystal	9.50	8 gr.	1.0† 1.0††	50-7,000 Roll-off at 3,500	Q-33(J) Q(J)	(Dual Needle) 33-1/3, 45 and 78 RPM	8	ASXAL
LQD-1J	Crystal	9.50	(Same as LQD-J except equipped with needle guards and spindle for turnover knob.)					9	ASXAM
LQD-1JB	Crystal	10.00	(Same as LQD-J except equipped with complete turnover assembly and knob.)					22	ASWYR
LT-4AG	Crystal	7.00	8 gr	2.0††	50-5,000	D-AG(M)**	33-1/3, 45 and 78 RPM	8	ASXBX
L-12-U	Crystal	5.50	1 oz.	1.25†† or 4.0	50-5,000	Optional	78 RPM	19	ASWSF
M-22	Crystal	5.55	2¾ oz.	2.9††	50-6,500	Optional	78 RPM	21	ASWJM
PT	Crystal	5.00	1 oz.	1.4††	50-10,000 Roll-off at 3,000	Not included	Replacement for Philco Parts—35-2671, 35-2671-1	27	ASWTB
U-J	Crystal	8.90	5 gr	0.5†	30-10,000	U(J)	33-1/3 and 45 RPM	4	ASXAT
U-78-J	Crystal	8.90	5 gr.	0.5††	30-10,000	U-78(J)	78 RPM	4	ASWZG

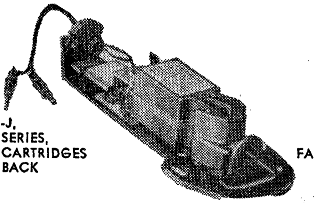
*"J" stands for Sapphire Tip, "M" for Precious Metal Tip.
**ALL-GROOVE needle tip of special design and size to play 33-1/3, 45 and 78 RPM Records.
***With Diamond Stylus at $31.00.

†RCA 12-5-31-V Test Record or Equivalent.
††Audio-tone 78-1 Test Record.

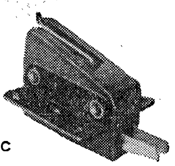
NOTE: Cartridge type B also available with PN Crystal upon request.



CAC-J, FAMOUS INTERNALLY EQUALIZED SERIES



CAC-D-J, TURNOVER SERIES, TWO COMPLETE CARTRIDGES BACK TO BACK

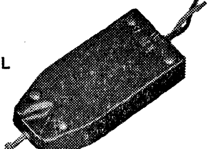


GC-J, FAMOUS CERAMIC SERIES

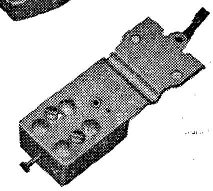
RECORDING HEADS

Model	Type	Maximum Recording Voltage	Useful Upper Limit	Finish	Dimensions	Net Weight	Code	List Price
X-26	Crystal	150 V. RMS	6,000 c.p.s.		1⅜"x⅝"x3¼"	5½ oz.	ASXMI	$12.80
M-41-8 (8 Ohms)	Magnetic	3 V. RMS	7,000 c.p.s.	Dark Brown Enamel	1⅜"x11/16"x3¾"	3½ oz.	ASXMF	12.80
M-41-500 (500 Ohms)	Magnetic	30 V. RMS	7,000 c.p.s.		1⅜"x11/16"x3¾"	3½ oz.	ASXME	12.80

MODEL X-26



MODEL M-41



THE ASTATIC CORPORATION

KNOWN THE WORLD OVER

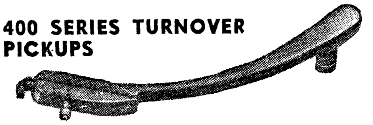
CONNEAUT OHIO

phonograph pickups

MODEL 7 CRYSTAL TURNOVER PICKUPS

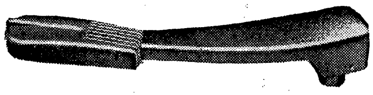
● Model 7-CAC-D employs revolutionary new Astatic "Twin CAC" turnover cartridge, two complete cartridge assemblies back to back on a common plate. See cartridge description, following page, for sensational performance qualities. Pickup model 7-D employs Astatic's popular "smooth response cartridge," the tiny ACD turnover. Cast aluminum arm design affords minimum tracking error and balanced groove sidewall pressure, resulting in reduced tracking distortion and longer record and needle life. Cartridge rotates in improved snap-action turnover mechanism. Light brown Hammerlin finish.

400 SERIES TURNOVER PICKUPS



● Famous Astatic Studio Master "400", notable for tracking excellence, low needle talk. Gracefully curved, cast aluminum arm in light brown Hammerlin finish. Model 400-CAC-D employs revolutionary new Astatic "Twin CAC" turnover cartridge, two complete cartridge assemblies back to back on a common plate. Model 400-D employs Astatic's popular "smooth response cartridge," the tiny ACD turnover.
Model 400-CAC uses the CAC-J Crystal Cartridge with single sapphire stylus of one mil tip-radius. Impartial experts have singled out the CAC-J as the ultimate for long-playing transcription performance.

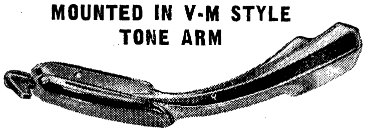
MODEL P SERIES PICKUPS



● Handsomely curved new arm design assuring every performance advantage at amazingly low price. Model P-29 employs L-29 Crystal Cartridge, notable for high output, affording excellent results with standard phonograph amplifiers where other cartridges are unsatisfactory. Model P-12 Pickup uses L-12 Crystal Cartridge for full professional performances at bedrock price. Model P-GC is the ceramic version of this fine new pickup series. Model P-CAC employs the famous CAC-J Crystal Cartridge, internally equalized for ideal frequency response. Model P-LT-4AG has the LT-4AG Crystal Cartridge, a new high-output, low-cost unit employing the type "D-AG" needle.

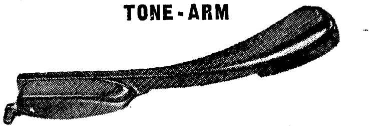
PICKUPS FOR SPECIAL APPLICATIONS

MODEL 9-D—TURNOVER ASSEMBLY AND "TWIN CAC" CARTRIDGE, MOUNTED IN V-M STYLE TONE ARM



● Replaces the entire tone arm—easily, quickly, with only a screwdriver—for thrilling perfection in quality of reproduction on all record types. Simple instructions with each unit. Sapphire needle on slow-speed side, osmium on 78 RPM side. For V-M Models 920, 950, 955, 970, 971, 975, 980, 985.

MODEL 8-D—TURNOVER ASSEMBLY AND DOUBLE-NEEDLE CARTRIDGE, MOUNTED IN WEBSTER-CHICAGO TONE-ARM



● Offers improved quality of reproduction for all record types. Installation is the easiest and speediest job of its type . . . you replace entire tone arm. No alterations to record changer . . . all you need is a screwdriver. Simple instructions with each unit. FOR WEBSTER-CHICAGO CHANGER MODELS: 246, 256, 255, 262, 264, 346, 356, 355, 362, 357, 364.

PICKUPS FOR SLOW-SPEED AND STANDARD 78 RPM RECORDS

Model	List Price	Finish	Cartridge Used*	Element Type	Stylus	For Record		Cable Length**	Shipping Weight	Code
						Size	Speed			
7-CAC-D	$16.40	Light Brown Hammerlin	CAC-D-J	Crystal	Precious Metal† Sapphire†	7-10-12"	All	13"	2 lbs.	ASXHT
7-D	15.90		ACD	Crystal	Precious Metal† Sapphire†	7-10-12"		13"	12 ozs.	ASXHV
8-D	11.50	Brown Plastic	(Special for Webster-Chicago Record Changers)			7-10-12"		2"	12 ozs.	ASXHW
9-D	11.50	Brown Plastic	CAC-D-J	(Special for V-M Record Changers)		7-10-12"		2"	12 ozs.	ASXHX
400-CAC-D	25.50	Light Brown Hammerlin	CAC-D-J	Crystal	Precious Metal† Sapphire†	10-12-16"		24"	1 lb. 8 ozs.	ASBCU
400-D	25.00		ACD-2	Crystal	Precious Metal† Sapphire†	10-12-16"		24"	1 lb. 8 ozs.	ASDCN
400-CAC	25.00	Opalescent Grey Hammerlin	CAC-J	Crystal	Sapphire	10-12-16"	Slow	24"	1 lb. 8 ozs.	ASBCT
P-29	8.00	Opalescent Grey Hammerlin	L-29	Crystal	Not Included	7-10-12"	All	13"	1 lb.	ASXDC
P-12	6.00	Dark Brown Hammerlin	L-12	Crystal	Not Included	7-10-12"	78 RPM	13"	1 lb.	ASXDB
P-GC	10.75	Opalescent Grey Hammerlin	GC-J	Ceramic	Sapphire	7-10-12"	All	13"	1 lb.	ASXDA
P-CAC	10.75	Opalescent Grey Hammerlin	CAC-J	Crystal	Sapphire	7-10-12"	All	13"	1 lb.	ASXEZ
P-LT-4AG	9.50	Opalescent Grey Hammerlin	LT-4AG	Crystal	Precious Metal	7-10-12"	All	13"	1 lb.	ASXEY

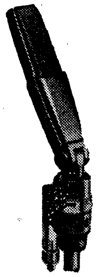
†Precious metal stylus tip on 3-mil 78 RPM side. Sapphire stylus tip on 1-mil 45 and 33-1/3 RPM side.

*FOR PERFORMANCE DATA SEE CARTRIDGE CHART

**Super-Flexible, Single Conductor, Shielded

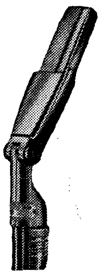
SHURE GRADIENT' AND DYNAMIC MICROPHONES

BI-DIRECTIONAL GRADIENT' MICROPHONES



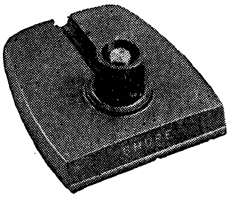
Model "300" Broadcast

These rugged, high-fidelity, multi-impedance microphones meet the *most critical* applications of television, radio broadcasting, professional recording, and highest-quality general purpose uses! The Gradients provide a bi-directional pickup pattern—permitting greater performer freedom (performers can stand at a 73% greater *distance from the microphone!)* The "300" and "315" pick up voice and music from front and back—are "dead" at the sides. They reduce reverberation and the pickup of distracting random noises by 66%! Model "300" is specially designed to meet the *exacting requirements of TV, radio broadcasting, and recording*—with a frequency response of 40 to 15,000 c.p.s. Has a special "Grayje" non-reflecting finish. The "300" has a "Voice-Music" switch, vibration-isolation unit, and a Cannon XL connector. Model "315" is similar to the "300"—with a response of 50 to 12,000 c.p.s. Permits the sound system to operate at a level *almost 6db higher than is possible with omni-directional microphones!* It is finished in rich, soft chrome.



Model "315" General Purpose

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59.5 db below 1 Milliwatt per 10 microbar signal
M—150-250 ohms	60.0 db below 1 Milliwatt per 10 microbar signal
H—High	59.5 db below 1 volt per microbar



Model S33
Broadcast Desk Stand for Model "300"
List Price: $15.00

MODEL	LIST PRICE
"300"	$125.00
"315"	$ 75.00

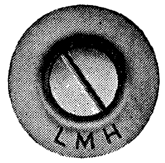
UNIDIRECTIONAL DYNAMIC MICROPHONES

"Small Broadcast" Model 556S

The "Small Unidynes" are the largest selling mcirophones throughout the world! They are the only small-sized, unidirectional, moving-coil dynamic microphones made; therefore they are the ideal microphones for high-quality applications where *maximum operating efficiency is a "must," yet small size is desired.* A sturdy construction provides immunity of the moving coil system to abnormal atmospheric conditions and severe mechanical shock. Model "55S" is highly recommended for fine-quality public address; theater-stage sound systems; recording and remote broadcasting. Is widely used for fixed station use in the police, fire, and transportation services. Model "556S" is recommended for studio broadcasting, television use, and professional recording. Has Cannon XL connector and vibration-isolation unit. *Both models reduce the pickup of random noise energy by 67%;* have smooth response from 40 to 15,000 c.p.s.; are supplied with a 20-ft., high quality cable and plug assembly.

"Small Unidyne" Model 55S (General Purpose)

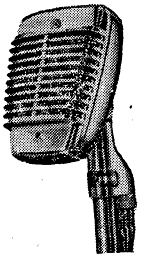
IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59.4 db below 1 Milwatt per 10 microbar signal
M—150-250 ohms	60.1 db below 1 Milliwatt per 10 microbar signal
H—High	60.5 db below 1 volt per microbar



Multi-Impedance Switch on Models "55S", "556S", "51" "300", "315"

MODEL	LIST PRICE
556S	$100.00
55S	$ 72.50

MULTI-IMPEDANCE HIGH OUTPUT DYNAMIC



Model "51" Sonodyne

MODEL "51" SONODYNE

The "Sonodyne" is ideal for all general purposes, including public address, wire and tape recording, and similar applications. It is widely used by bands, instrumentalists, and professional recording artists because of its outstanding reproduction of both voice and music. Wide-spread usage by home users of tape recorders indicates that the "Sonodyne" is the ideal high-quality, moderately-priced replacement for the conventional microphone supplied with tape recorders. Has built-in receptacle and a 15-ft., two-conductor shielded cable with microphone plug attached. Finished in rich satin chrome. List Price: $45.00

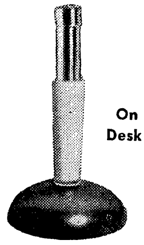
IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	53.0 db below 1 Milliwatt for 10 Microbar signal
M—150-250 ohms	52.5 db below 1 Milliwatt for 10 Microbar signal
H—High	52.0 db below 1 volt per Microbar

CRYSTAL MICROPHONES SHURE

THE NEW "SLIM-X" OMNI-DIRECTIONAL MICROPHONE

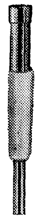
FOR:

- **Low Cost P.A. Systems**
- **Home Recording**
- **Hams**
- **General Purpose**



On S38 Desk Stand

On S38 Desk Stand (With A25 Swivel)



On Floor Stand

In the Hand

The new "777" Slim-X Microphones are rugged little microphones weighing only 6 ounces! They are designed for good-quality voice and music reproduction. Their versatility and "hand-ability" make them ideal for use by lecturers, announcers, instructors, and Hams; for audience participation shows; carnivals; panel and quiz shows; and use with home-recorders. When mounted on either cradle or swivel, the "777'" can be removed in a flash (no tools necessary)—simply by lifting it out of the holder. This makes it an ideal "walk-around" hand-held microphone.

TECHNICAL INFORMATION: Smooth frequency response—50 to 10,000 c.p.s.; special-sealed crystal element—for long operating life; high impedance; 7' single-conductor cable, disconnect type. *Dimensions:* (Microphone only) Length, 4½"; Diameter, 1". *Finish:* Rich satin chrome overall.

ACCESSORIES FOR "777"

MODEL S38 STAND is a heavy die-cast base. Includes metal screw machine stud for connecting microphone adaptor to stand base.
Model: S38 List Price: $3.00

MODEL A25 SWIVEL ADAPTOR features a long-life, high-quality swivel connector. Is lined with a long-life nylon sleeve—for noise-free and scratch-free insertion and removal of microphone.
Model: A25 List Price: $5.00

Model	Output	List Price
777	—58db	18.95
777S With Switch	—58db	20.95

(Price includes cradle for mounting on stand.)

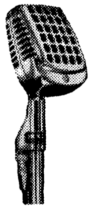


Fig. A

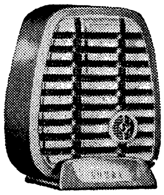


Fig. B

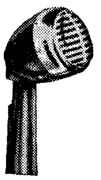


Fig. C

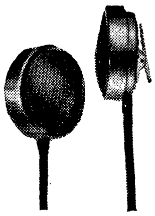


Fig. D

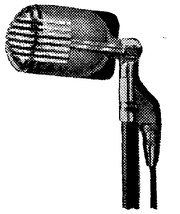


Fig. E

"MONOPLEX" (Fig. A)

The *only* Super-Cardioid Crystal Microphone made—far superior to conventional Crystal Microphones! Excellent for high-quality public address, communications, recording, and similar applications. The *737A* operates under adverse conditions of background noise and reverberation—where a conventional microphone would be practically useless! Reduces pickup of random sound by 73%! Moisture-proofed "Metal Seal" crystal for long operating life. Case pivots at rear, can be pointed toward desired sound or upwards for horizontal plane pickup. Has 15 ft. shielded cable. Rich satin chrome finish. High impedance.

MODEL	OUTPUT	LIST PRICE
737A	54.0 db below 1 volt per microbar	$39.75

Microbar=one dyne per sq. cm.

THE "REX" (Fig. B)

Its low price makes this hand-held microphone a natural for "Hams" and low-cost public address systems. A rugged unit designed for high speech intelligibility. Saves extra costs, as it needs no desk stand! Has a broad base, complete with stand adapter for mounting on floor stand. Sits firmly on a table top without tipping over. Die cast case. Frequency response 60 to 9,000 c.p.s. 5' shielded cable. Beautiful Bergundy-red metallic finish. Only 2⅔" wide, 3¼" high, 1⅛" thick. High impedance.

MODEL	OUTPUT LEVEL	LIST PRICE
710A	50 db below 1 volt per microbar	$10.95
710S (with switch)	50 db below 1 volt per microbar	$12.95

Microbar=one dyne per sq. cm.

MODEL 707A (Fig. C)

Ideal for low-cost P.A. systems, amateur 'phone transmitters and similar applications. Good-quality performance at low cost. Has typical semi-directional pickup. Has 7 ft. shielded cable. High impedance. Pearl Gray case with rich satin chrome finish on front grille. Diameter 2⅜".

MODEL	OUTPUT	LIST PRICE
707A	51.0 db below 1 volt per microbar	$15.50

Microbar=one dyne per sq. cm.

LAPEL MICROPHONE (Fig. D)

Specially designed unit widely used by lecturers, instructors, speakers, etc. High speech intelligibility. Response from 40 to 6,000 c.p.s. 1⅞" diameter. Has lapel clip. 20-foot shielded single-conductor cable.

MODEL	OUTPUT LEVEL	LIST PRICE
76B	-57db	$27.00

STRATOLINER (Fig. E)

An expensive-looking crystal microphone at moderate cost. Wide-range response for good reproduction of either voice or music. Placed horizontally, the 708A is semi-directional; used vertically it becomes non-directional. Swivel permits 90° tilting of microphone. 7 ft. shielded cable and plug assembly. High impedance. Pearl Gray finish.

MODEL	OUTPUT LEVEL	LIST PRICE
708A	51.0 db below 1 volt per microbar	$27.50

Microbar=one dyne per sq. cm.

SHURE CONTROLLED RELUCTANCE MICROPHONES & MAGNETIC TAPE AND WIRE RECORDING HEADS

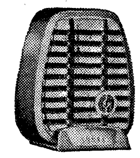


Fig. A

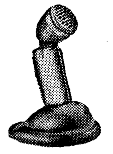


Fig. B

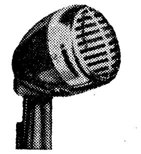


Fig. C

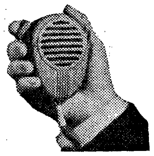


Fig. D

THE "HERCULES" (Fig. A)

Provides the ruggedness, clear reproduction, and high output needed for Public Address, Communications, and Recording—AT AN AMAZINGLY LOW PRICE! Ideal for general-purpose use in tropical countries and all coastal areas where humidity is a problem. Ideal for either Indoor or Outdoor use. Fits snugly in the hand, sits firmly on a desk. Supplied with adapter for mounting on floor stand. High impedance. Frequency response is 100 to 7,000 c.p.s. 5′ shielded cable. Green metallic finish. Die-cast case.

MODEL	OUTPUT LEVEL	LIST PRICE
510C	52.5 db below 1 volt per microbar	$15.00
510S (with switch)	52.5 db below 1 volt per microbar	$17.00

THE "DISPATCHER" (Fig. B)

Handles the most severe field requirements of paging and dispatching systems. Supplied with 7 feet of 2-conductor shielded cable. Is wired to operate microphone and relay circuits. Used by police, taxi-cab, railroad, airport, bus, truck dispatch offices. High Impedance.

MODEL	OUTPUT LEVEL	LIST PRICE
520SL	52.5 db below 1 volt per microbar	$35.00

THE "GREEN BULLET" (Fig. C)

Provide quality music and speech reprodutcion at low cost. It is practically immune to the effects of high temperatures and humidity. Features: high output, good response, high impedance, and rugged construction. Has a beautiful metallic green finish with a satin chrome grille. Response is 100 to 7,000 c.p.s. 7′ single-conductor shielded cable. High Impedance.

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
520	52.5 db below 1 volt per microbar	High	$17.50
520B	51 db below 1 milliwatt per 10 microbars	150-250 ohms	$17.50

THE "RANGER" (Fig. D)

Ideal for outdoor public address, mobile communications, ham, audience participation shows, etc. High speech intelligibility. Heavy-duty, push-to-talk switch for maximum operating life. Model 505C furnished with 5′ three-conductor shielded cable. Model 505B has four-conductor cable. Response is 100 to 9,000 c.p.s.

MODEL	OUTPUT LEVEL	IMPEDANCE	LIST PRICE
505B	47.0 db below 1 milliwatt per 10 microbar signal	150-250 ohms	$27.50
505C	50.5 db below 1 volt per microbar	High	$27.50

MAGNETIC RECORDING HEAD LISTING

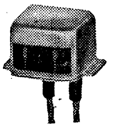


Fig. A

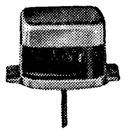


Fig. B

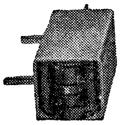


Fig. C

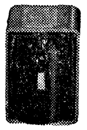


Fig. D

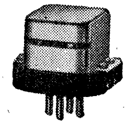


Fig. E

MODEL	ILLUSTR.	LIST PR.	DESCRIPTION
812	Fig. E	15.00	Wire Recording Head.
815	Fig. A	13.50	Upper track recording. Low impedance record-playback coil.
815H	Fig. A	13.50	Upper track recording. High impedance record-playback coil.
816	Fig. B	10.50	Upper track recording. High impedance record-playback coil.
817	Fig. C	7.50	.093″ record track width. Low impedance record-playback coil.
TR5	Fig. A	13.50	Upper track recording. (Replace with Model 815.)
TR5A	Fig. A	15.50	Upper track recording with special mounting bracket. Cinch Plug attached.
TR5B	Fig. A	15.00	Upper track recording with 14-inch completely insulated leads. Cinch Plug attached.
TR5D	Fig. A	14.50	Upper track recording. Cinch Plug attached.
TR5H	Fig. A	14.00	Upper track recording with special leads.
TR5K	Fig. A	14.50	Upper track recording. Cinch Plug attached.
TR5L	Fig. A	13.50	Upper track recording. Special record-playback coil impedance.
TR6	Fig. B	10.50	Lower track recording. Low impedance record-playback coil.
TR6A	Fig. B	10.50	Upper track recording. Low impedance record-playback coil.
TR6B	Fig. B	11.50	Lower track recording with special mounting bracket. Low impedance record-playback coil.
TR6C	Fig. B	10.50	Upper track recording. (Replace with Model 816.)
TR6E	Fig. B	11.00	Upper track recording with special leads.
TR6G	Fig. B	10.50	Lower track recording.
TR6H	Fig. B	10.50	Upper track recording. Low impedance record-playback coil.
TR6J	Fig. B	11.00	Upper track recording with special leads.
TR15	Not Illustr.	7.50	Special Assembly.
TR16	Fig. C	7.50	.093″ record track width. High impedance record-playback coil.
TR16A	Fig. C	7.50	.093″ record track width. (Replace with Model 817.)
TR16B	Fig. C	8.50	.093″ record track width with mounting bracket. Low impedance record-playback coil.
TE2	Fig. D	6.00	Erase head.
TE2A	Fig. D	7.00	Erase head with mounting bracket.

COMMUNICATIONS MICROPHONES AND ACCESSORIES SHURE

COILED CORD SETS

Standard Copper Coiled Cord with trimmed and tinned leads. Used in "CB" and "100" Series Microphones.
Model: C15C Code: RUCOR List Price: **$5.75**

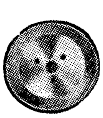
Tinsel Coiled Cord with Amphenol MC4M Connector for use with General Electric equipment.
Model: C16C Code: RUCAG List Price: **$8.75**

Tinsel Coiled Cord with spade lugs for use in Motorola equipment.
Model: C17C Code: RUCAJ List Price: **$7.25**

Standard Coiled Cord with Amphenol MC4M Connector for use with Motorola equipment.
Model: **C18C** List Price: **$7.25**

Tinsel Coiled Cord with Amphenol MC4M Connector for use with Motorola equipment.
Model: **C19C** List Price: **$8.75**

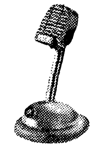
CARBON MICROPHONE CARTRIDGE


Model R10

Rugged microphone cartridge replacement for "CB", "100", and "120" Series Carbon Microphones. Furnished with necessary mounting hardware and complete installation instructions. Direct replacement for the cartridge used in the Models 101A, 101B, 101C, 102A, 102B, 102C, 120, CB10, CB10B, CB10C, SB10E, CB11, CB11B, CB12, CB12A, CB12B, CB12C, CB12D, CB12E, CB14, CB14A, CB15, CB15B, CB15C, CB15D, CB15F, CB20, CB162, 91A27 carbon microphones.
Model: **R10** List Price: **$8.00**

MICROPHONE ASSEMBLY

A Controlled Reluctance Microphone and Desk Stand Assembly—ideal for fixed-station used in all types of communications work. Has a built-in switch for controlling both the microphone circuit and an external relay or control circuit. Replacement for Mfrs. Model No. CR84.
Model 510MD List Price: **$35.00**


Model 510MD

MODEL "100" SERIES CARBON MICROPHONES

Used around the world for police, taxi, bus, truck, and commercial applications — *more than all other makes combined!* Rugged unit with clear, crisp voice response and high output. Heavy duty switch for push-to-talk performance. Furnished with bracket for wall mounting, plus coiled-cord cable. Adopted as standard microphone by G.E., Link, Motorola, R.C.A. for 2-way radio communications equipment. Output level: 5db below 1 volt for 100 microbar speech signal.

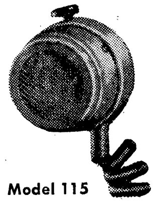
REPLACEMENT CHART

MODELS MANUFACTURERS	REPLACEMENT MODEL
CB10, CB10B, CB10C, CB10D, CB15, CB15D,	**101C**
CB10E	**101E**
CB12, CB12A, CB12C, CB12D	**102C**
CB12E	**102E**
CB15F	**103**

Model	Cable	Switch Arrangement	List Price
101C	Standard Coiled Cord 11″ retracted; 5′ extended	Two Wire Relay Switch normally open. (No microphone switch)	**$27.50**
101E	Tinsel Coiled Cord 11″ retracted; 5′ extended with Amphenol MC4M Connector		**$32.50**
102C	Standard Coiled Cord 11″ retracted; 5′ extended	Relay normally open. Microphone switch normally open.	**$27.50**
102E	Tinsel Coiled Cord 11″ retracted; 5′ extended with spade lugs		**$30.00**
103	Standard Coiled Cord 11″ retracted; 5′ extended with Amphenol MC4M Connector	Two Wire Relay Switch normally open. (No microphone switch)	**$29.00**

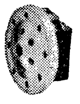
"PACK MICROPHONE

Designed for use with small portable and mobile transmitters. Only 2″ in diameter and 1½″ thick. Has 3-conductor coiled cord, metal-spring strain relief, and Push-to-Talk switch. Has same operating characteristics as "100 Series" Carbon Microphones. Replacement for Mfrs. Model Nos. CB20, CB21.
Model 115 List Price: **$28.50**

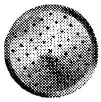

Model 115

SWITCHES AND ACCESSORIES

MICROPHONE REPLACEMENT CARTRIDGES


CONTROLLED RELUCTANCE

Model R5

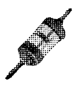

CRYSTAL

Model R7

Controlled Reluctance. Ideal for the replacement of Crystal Cartridges in Shure cases of the Model 707A and 708A Series, where heat and humidity are a problem. Also replaces cartridges in other mfrs. models of similar design, where space permits. Supplied with rubber mounting ring and installation instructions in English and Spanish.
Model: R5 List Price: **$10.00**

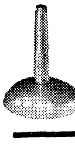
Model R7 Crystal Microphone. Available for service installation as a replacement for the cartridges in the Shure Crystal Microphones of the 707A and 708A Series, and other microphones of similar design. High output—48db below 1 volt per microbar. Cartridge supplied with rubber mounting rings and installation instructions.
Model: R7 List Price: **$7.75**

CABLE-TYPE TRANSFORMER


Model A86A

Model A86A is a high quality, cable-type transformer, ideal for matching low-impedance microphone lines to high-impedance amplifier inputs (matches 35-50 and 150-250 ohm microphones of high impedance). 2-foot cable.
Model: A86A List Price: **$16.00**

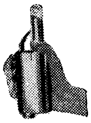
TAKE-APART STAND


Model S34B

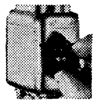
Model S34B. Handy low-cost stand for desk or hand use. One twist of handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base, wood handle.
Model S34B List Price: **$3.00**

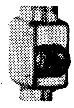
"GRIP-TO-TALK SLIDE-TO-LOCK" SWITCH

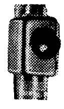
Heavy-Duty Switch withstands the most severe field requirements of paging and dispatching systems. Ideal for Police, Taxi-Cab, Railroad, Airport, Bus, Truck, and all emergency communications work. Can be used with Shure connector-type crystal, dynamic and carbon microphones of any impedance. Fits handily on Shure S36A Desk Stand. Rich satin chrome finish.
Model: A88A List Price: 11.75


Model A88A

ON-OFF PRESS-TO-TALK SWITCHES





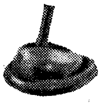


Model A83B. Rotary-type "On-Off" switch. Quickly attached to any cable-connector type Shure microphone.
Model: A83B List Price: **$6.50**

Model A84B. Momentary Press-to-Talk "On-Off" switch.
Model: A84B List Price: **$7.50**

Model A85C. Momentary Press-to-Talk Relay-Type Switch.
Model: A85C List Price: **$10.75**

MODERN DESK STAND


Model S36A

Model S36A. Streamlined Desk Mount fits all Shure connector-type microphones. Adapter provided for mounting other type microphones. Ideal for use with A88A.
Model: S36A List Price **$5.50**

CRYSTAL AND CERAMIC PICKUP CARTRIDGES SHURE

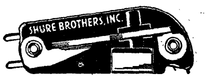


Fig. A
"Direct Drive"

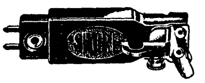


Fig. B
"Vertical Drive"

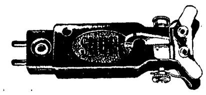


Fig. C
"Vertical Drive"

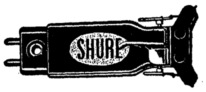


Fig. D
"Simple Mount"

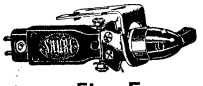


Fig. E
"Vertical Drive"
With
Turnover Mechanism

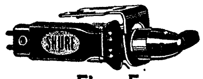


Fig. F
"Simple Mount"
With
Turnover Mechanism

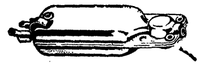


Fig. G
"Lever Type"

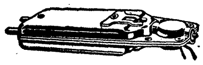


Fig. H
"Cutter Cartridge"

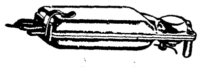


Fig. J
"Muted Stylus"

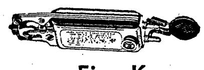


Fig. K
"Dual Voltage"

FINE GROOVE CARTRIDGES FOR 33⅓, 45 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.
W21F*	Fig. B	Crystal	$7.75	1.5V	6 grams	10,000 c.p.s.	4½ grams	A63MG
W31AR	Fig. A	Crystal	6.50	2.1V	7 grams	7,500 c.p.s.	5½ grams	A53MG
WC31AR	Fig. A	Ceramic	6.50	.65V	7 grams	7,500 c.p.s.	5½ grams	A53MG
W53MG	Fig. G	Crystal	8.50	1.3V	6 grams	8,500 c.p.s.	12 grams	A64MG

TURNOVER CARTRIDGES FOR 33⅓, 45, AND 78 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.	
				MG	STD				MG	STD.
W22A	Fig. C	Crystal	$10.50	1.2V	1.4V	8 grams	10,000 c.p.s.	4½ grams	A65MG	A61A
W22AB	Fig. C	Crystal	9.50	1.2V	1.4V	8 grams	10,000 c.p.s.	4½ grams	A65MG	A62A
W22AB-T	Fig. E	Crystal	10.00	1.2V	1.4V	8 grams	10,000 c.p.s.	12½ grams	A65MG	A62A
WC24	Fig. D	Ceramic	8.75	0.6V	0.6V	8 grams	7,000 c.p.s.	4½ grams	A53MG	A52A
WC24-T	Fig. F	Ceramic	9.25	0.6V	0.6V	8 grams	7,000 c.p.s.	12½ grams	A53MG	A52A

ALL PURPOSE SINGLE NEEDLE CARTRIDGES FOR 33⅓, 45, 78 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.
				MG	STD.				
W26A	Fig. B	Crystal	$8.50	.87V	1.0V	8 grams	8,000 c.p.s.	4½ grams	A67U
W26B	Fig. B	Crystal	7.50	.87V	1.0V	8 grams	8,000 c.p.s.	4½ grams	A66U
W36B	Fig. A	Crystal	6.50	2.3V	2.5V	9 grams	7,000 c.p.s.	5½ grams	A56U
WC36B	Fig. A	Ceramic	6.50	.6V	.7V	9 grams	7,000 c.p.s.	5½ grams	A56U
W66B	Fig. J	Crystal	7.00	2.0V	2.3V	8 grams	4,500 c.p.s.	12 grams	A66U

STANDARD CARTRIDGES FOR 78 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.
W23B	Fig. B	Crystal	$7.75	1.1V	6 grams	8,000 c.p.s.	4½ grams	A62A
WC33B	Fig. A	Ceramic	6.50	.75V	9 grams	7,000 c.p.s	5½ grams	A52A
W42B	Fig. G	Crystal	4.45	1.3V	1 oz.	5,000 c.p.s.	25 grams	None
W42BH*†	Fig. K	Crystal	4.95	1.5V or 3.75V	1⅛ oz.	5,000 c.p.s.	25 grams	None
W42H	Fig. G	Crystal	4.45	3.5V	1 oz.	5,000 c.p.s.	25 grams	None
W56A	Fig. G	Crystal	6.65	4.3V	1⅛ oz.	6,000 c.p.s.	12 grams	None
W56N**	Fig. H	Crystal	8.50	4.3V	1 oz.	10,000 c.p.s.	12 grams	A68D
W57A	Fig. G	Crystal	5.55	1.6V	¾ oz.	6,000 c.p.s	12 grams	None
W58A	Fig. G	Crystal	5.55	1.6V	1 oz.	6,000 c.p.s	25 grams	None
W58HS***	Fig. G	Humi-Seal Crystal	6.55	1.6V	1 oz.	6,000 c.p.s	25 grams	None
W59A	Fig. G	Crystal	5.55	2.5V	1 oz.	6,000 c.p.s	25 grams	None
W60A	Fig. J	Crystal	8.50	1.6V	1 oz.	4,500 c.p.s	12 grams	A61A
W60B	Fig. J	Crystal	7.50	1.6V	1 oz.	4,500 c.p.s	12 grams	A62A
W60HS***	Fig. J	Humi-Seal Crystal	8.50	1.8V	1 oz.	4,500 c.p.s	25 grams	A62A
W61B	Fig. J	Crystal	7.50	1.6V	1 oz.	4,500 c.p.s	25 grams	A62A

*With .453 Mount for Oak Changer.
**Cutter-Cartridge for Wilcox-Gay "Recordette." Equipped with bifurcated needle.
***"Humi-Seal" Metal Wrapped Rochelle Salt Crystal Ideal for Tropical Areas.
*†Dual Voltage Cartridge 1.5V output with condenser; 3.75V output without condenser.

SHURE CRYSTAL PHONOGRAPH PICKUPS AND NEEDLES

PHONOGRAPH PICKUPS

Like the popular Shure Cartridges, each Shure Phonograph Pickup has been designed to meet specific requirements. There is at least one model for each type of reproduction desired — standard (78 RPM), fine-groove (33⅓ and 45 RPM), or single-needle "All Purpose" and dual-needle "Turnover" for playing all types of records. Each tone arm is scientifically curved and balanced for faithful tracking, and designed to emphasize the best qualities of the cartridge with which it is equipped.

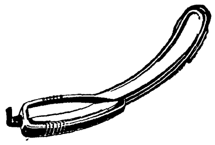


Fig. A

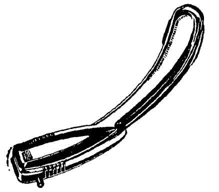


Fig. B

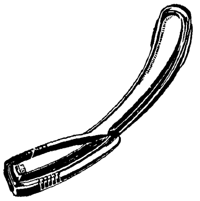


Fig. C

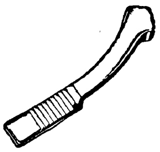


Fig. D

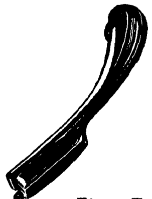


Fig. E

STANDARD FOR 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL	NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER
92H	Fig. D	$5.50	3.5V	1 oz.	5000 c.p.s.	W42H	None
93A	Fig. C	7.50	1.6V	1⅛ oz.	6000 c.p.s.	W57A	None
96A	Fig. C	8.50	4.3V	1⅛ oz.	6000 c.p.s.	W56A	None
900HS*	Fig. B	11.50	1.8V	1⅛ oz.	4500 c.p.s.	W60HS*	A62A

TURNOVER FOR 33⅓, 45, 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	
			MG	STD.				MG	STD.
901D	Fig. A	$16.25	1.2V	1.4V	7 grams	10,000 c.p.s.	W22AB	A65MG	A62A

SINGLE-NEEDLE ALL-PURPOSE FOR 33⅓, 45, 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER
			MG	STD.				
92U	Fig. D	$9.75	2.0V	2.3V	8 grams	4500 c.p.s.	W66B	A66U

FINE-GROOVE FOR 33⅓, 45 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL	NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER
902MG	Fig. B	$10.50	2.0V	10 grams	7500 c.p.s.	W31AR	A53MG

SHURE PICKUP FOR "WEBSTER-CHICAGO" THREE SPEED CHANGERS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	
			MG	STD.				MG	STD.
920W	Fig. E	$11.50	1.2V	1.4V	6 grams	10,000 c.p.s.	W22AB	A65MG	A62A

*"Humi-Seal" Metal Wrapped Moisture Proofed Rochelle Salt Crystal for Use in Tropical Areas.

PHONOGRAPH PICKUP NEEDLES

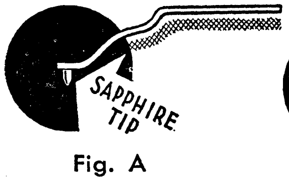


Fig. A

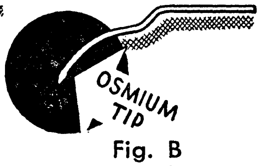


Fig. B

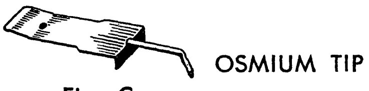


Fig. C

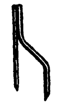


Fig. D

MODEL	ILLUSTRATION	DESCRIPTION	LIST PRICE	CODE
A52A	Fig. C	Std. Osmium	$1.50	RUGEM
A53MG	Fig. C	MG Osmium	1.50	RUGES
A56U	Fig. C	All Purpose Osmium Unipoint	1.50	RUGEP
A61A	Fig. A	Std. Sapphire†	2.50	RUZAN
A62A	Fig. B	Std. Osmium	1.50	RUZAP
A63MG	Fig. B	MG Osmium	1.50	RUGAZ
A64MG*		MG Osmium	2.00	RUZAS
A65MG	Fig. A	MG Sapphire†	2.50	RUGAY
A66U	Fig. B	All Purpose Osmium Unipoint	1.50	RUZIK
A67U	Fig. A	All Purpose Sapphire Unipoint†	2.50	RUZIN
A68D	Fig. D	Osm. Playback Needle —Stelite Cutting Stylus	2.50	RUGIM

*Standard Bent Shaft Needle Not Illustrated.

Crystal and Ceramic Cartridges manufactured under Shure Patents and Patents Pending. Licensed by the Brush Development Co.

†High-quality commercial-type synthesized sapphire specially designed for long operating life.

NO FINER CHOICE THAN

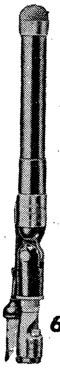
Electro-Voice

RESEARCH-ENGINEERED

MICROPHONES

for TV • BROADCASTING • RECORDING • P.A. • COMMUNICATIONS

HIGH-FIDELITY TV-BROADCAST DYNAMICS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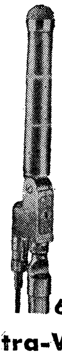
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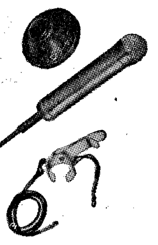
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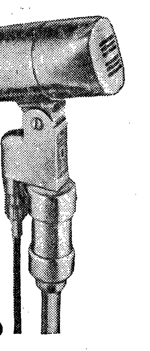
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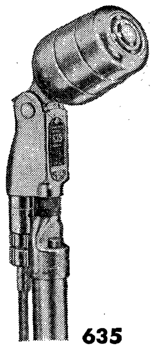

635

Ultra-Wide-Range, Flat Response! High Output! Rugged, Versatile! Laboratory Calibrated!

Proved in studio and remote use on network and local telecasts and broadcasts. Exclusive, long-life *Acoustalloy* diaphragm and highly efficient magnetic structure assure ultra-wide-range high fidelity response. High output level gives excellent signal to noise ratio. Omnidirectional, becoming slightly directive at extremely high frequencies. Close tolerances and individual laboratory control guarantee uniformity. Ideal for audience participation, applause pick-up, recording and high quality public address . . . for individual or group pick-up of voice and music indoors and outdoors.

Model 655 Slim-Trim TV Dynamic. Frequency response 40-15,000 cps. Output level -55 db. *Pop-proof* head stops blasts. Can be used on stand, in hand or on boom. Easily concealed in studio props. *Acoustalloy* diaphragm. Impedance 250 ohms; easily changed to 50 ohms. Cannon UA-3 connector. Has ½" pipe thread. ⅝"—27 adapter furnished. Black anodized finish. Size with swivel 11⅜" long, $1\frac{1}{16}$" diameter, 18′ cable. Net wt. 11 oz.

List Price........................$200.00

Model 654 Slim-Trim Broadcast Dynamic. Frequency response 50-13,000 cps. Output level —55 db. Recessed selector provides 50 or 250 ohms impedance. Pop-proof head. *Acoustalloy* diaphragm. Black enameled finish. Cannon XL-3 connector. ⅝"—27 thread. 18′ cable. Size: 10" long with stud, $1\frac{1}{16}$" diameter. Net wt. 15½ oz.

List Price........................$95.00

Model 646 New Lavalier Dynamic. Remarkably small, versatile. For chest, desk or hand use. Rubber desk stand, neck cord and support clips supplied. Frequency response 40-15,000 cps. Output level —57 db. Choice of either 50, 150, 250 ohms impedance. *Acoustalloy* diaphragm. Omnidirectional pattern. Magnetic circuit uses precision ground Alnico V magnetic iron. Gray anodized finish. 30′ cable. Size 5¾" long, 1" diameter. Net wt. 8 oz.

List Price........................$140.00

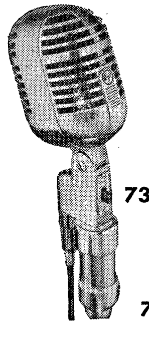
Model 650 Broadcast Dynamic. Uniform frequency response 40-15,000 cps., Output level −48 db. Dual-type external shock mount. Recessed impedance selector switch gives 50 or 250 ohms. Tiltable head. Pressure cast case, finished in durable Satin Chromium. *Acoustalloy* diaphragm. Cannon XL-3 connector. ⅝"-27 stand coupler. 18 ft. broadcast type cable. Size: 2¼" x 4⅝" x 5¼" including stud. Shock mount is 1½" x 3⅞". Net wt., including shock mount, 3 lbs.

List Price......................$150.00

Model 635 Broadcast Dynamic. Meets exacting requirements of TV and Broadcast service. Compact, rugged, versatile—used in studios and on remotes, on a stand or in the hand, indoors and out. Uniform Response 40-15,000 cps. ±2.5 db. Output level − 55 db. 50-250 ohms impedance selector. *Acoustalloy* diaphragm. Head tilts through 90° arc. ⅝"-27 thread. Cannon XL-3 connector. Satin Chromium finish. 18 ft. broadcast-type cable. Size 2" x 4¼" x 4½". Net wt., 1½ lbs.

List Price........................ $75.00

CARDIOID UNIDIRECTIONAL MIKES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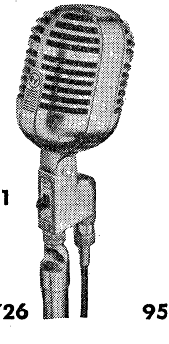
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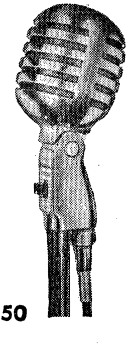

950

Overcome Background Noise, Stop Feedback, Improve Pick-up

E-V Mechanophase* Principle provides wide-angle front pick-up—dead at rear. Solves difficult sound pick-up problems—assures finer, clearer reproduction of voice and music—simplifies microphone and speaker placement—increases pick-up range—permits higher volume levels. Tiltable head. Satin Chromium finish. ⅝"-27 thread. 18 ft. cable. Size, less shock mount, 2½" x 3½" x 9". Net wt., 2½ lbs.

Model'731 Dynamic (Cardyne II). Flat response 40-10,000 cps. Output level —52 db Dual-type external shock mount. High-Low impedance selector. Cannon XL-3 connector. "On-Off" switch (optional).

List Price......................... $95.00

Model 726 Dynamic (Cardyne I). Frequency response, 60-8,000 cps. Output level —55 db. High-Low impedance selector, MC-3 type connector. "On-Off" switch.

List Price......................... $75.00

Model 950 Cardax Crystal. First High level cardioid crystal microphone with *Dual Frequency Response*—Flat for high fidelity sound pick-up (output −57 db) or rising characteristic for extra crispness of speech (output −50 db). Fully enclosed Metal Seal crystal. Built-in cable connector. "On-Off" Switch. Size 2½" x 2⅞" x 6¼", including stud. Net wt., 1¾ lbs.

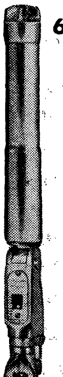
*E-V Pat. 2,627,558.

List Price.........................$42.50

All E-V Dynamic Microphones are now phased to facilitate multiple microphone installations

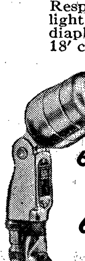
E-V DYNAMIC, DIFFERENTIAL* AND CRYSTAL MICROPHONES

SLIMAIR


636

Model 636 "Slimair." Dynamic for P.A. Exceptionally fine for P.A. recording and general use. Response 60-13,000 cps. Output —55db. *Acoustalloy* diaphragm. *Pop proof* head. Alnico V. omnidirectional. Wide pickup range. On-off switch optional. Satin chrome finish. Swivel head. MC-4 connector. ⅝"—27 thread. 18′ cable. Size 10¼" long including stud. $1\frac{1}{16}$" diameter. Net weight 15 oz. Choice of high or low Z by changing one wire in connector.

List Price.................................$70.00

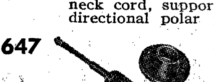

630

Model 630 High Fidelity, High Output Dynamic. Brilliant, general purpose dynamic, famous for quality at modest cost. Response 60-11,000 cps. Output level —55 db. Compact, light weight, unaffected by heat and humidity. *Acoustalloy* diaphragm. Swivel head. Satin chrome finish. On-off switch. 18′ cable. Available in 50, 250 ohms or Hi-Z. Size 2" x 4¾" x 4½". Net wt. 1½ lbs.

List Price........................$47.00

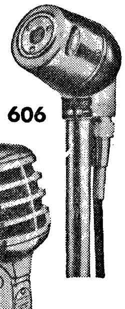
Model 630-A. Same as 630 except has 6 ft. cable, no connector. Has switch for relay control.

List Price........................$47.00


647

Model 647 New P. A. Lavalier Dynamic. Small, rugged, versatile. For chest, desk or hand use, indoors and outdoors. Supplied with desk stand, neck cord, support clips and 18′ cord. Omnidirectional polar pattern. Response 60-13,000 cps. at—57 db level. Available in 150 ohms or Hi-Z. Precision ground Alnico V magnetic parts. *Acoustalloy* diaphragm. Black anodized finish. Microphone 4½" long. 1" diameter. Net wt. 4 oz. Rubber desk stand 4" diameter, 1" high.

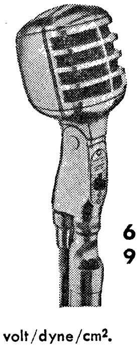
List Price..........$80.00


606

Model 606 Differential* Dynamic. Close-talking, noise-cancelling microphone. Used in airport control towers, police dispatching, close-talking public address and high noise industrial applications. Response substantially flat, 100-6,000 cps. Output measured at ½" —55 db. *Acoustalloy* diaphragm. Head at 22° fixed tilt. ⅝"-27 thread. Built-in cable connector. Satin Chromium finish. Size 2" x 3¼" x 2½" incl. stud. Net wt., 12 oz. Available in Hi-Z, 50 or 250 ohms impedance. Low impedances not balanced to ground.

(*Patent No. 2,350,010.)

Model 606-20. With 18 ft. cable. List $45.00


611
911

E-V "Mercury" Model 611 Dynamic. For economical public address systems, home recorders, Ham rigs, other uses. Smooth response 70-8000 cps. Output —55 db. Non-directional. *Acoustalloy* diaphragm. Tiltable head. "On-Off" switch. Built-in cable connector. ⅝"-27 thread. Satin Chromium finish. Available in Hi-Z, 50, 150 and 250 ohms impedance. Size 2⅜" x 3⅛" x 6¼" incl. stud. Net wt. 2 lbs.

Model 611-8. With 6 ft. cable. List $35.50
Model 611-20. With 18 ft. cable. List $37.50

E-V "Mercury" Model 911 Crystal. Same smart design and fine performance as Model 611. Response 70-8000 cps. Output —50 db. Metal Seal Crystal. High imp. Net wt. 1½ lbs.

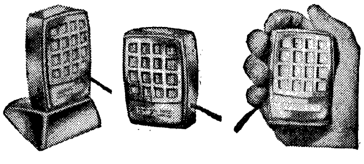
Model 911-8. With 6 ft. cable. List $25.50
Model 911-20. With 18 ft. cable. List $27.50

Reference Level: Low Impedance Dynamic Microphones 6mw/10 dynes/cm^2; Crystal, Ceramic and Carbon Microphones: 1 volt/dyne/cm^2.

NO FINER CHOICE THAN RESEARCH-ENGINEERED

Electro-Voice MICROPHONES

STANDS AND ACCESSORIES



Multi-Purpose CENTURY

Most popular microphone ever produced! Incomparable for all low-cost applications. Hundreds of thousands in use for public address, paging, recording, amateur communications. Can be used in any position—in hand, on table, on stand or overhead. Excellent frequency response. High output level. Essentially non-directional, becoming directive at higher frequencies. Highest purity pressure cast case finished in rich, durable Satin Chromium. Rugged, light weight. Size 3″ x 2 3/16″ x 1″. Furnished with ⅝″-27 thread stand adapter.

Model 915 "Century" Crystal. High capacity, moisture sealed crystal. Smooth response 60-7,000 cps. Output —50 db. High impedance. AC-DC insulated. 5 ft. cable. Net wt., 6 oz.

List Price........................... $11.25

Model 915-S. Same with slide-to-talk switch.

List Price........................... $13.00

Model 715 "Century" Ceramic. Moisture-proof ceramic generating element. AC-DC insulated. Smooth response 80-7000 cps. Output —59 db. High impedance. 5 ft. cable. Net wt., 6 oz.

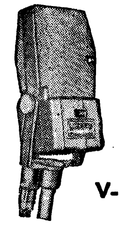
List Price...........................$11.25

Model 615 "Century" Dynamic. Has exclusive, long-lasting E-V *Acoustalloy* diaphragm. Withstands extreme temperature, humidity, corrosive effects of salt air, and severe mechanical shocks. Smooth response 80-7000 cps. Output —55 db. Choice of high impedance or 50 ohms. Low impedance not balanced to ground. 5 ft. cable. Net wt., 8 oz.

List Price........................... $19.50

Model 415. Reclining Desk Stand. Mounts Century at 15° tilt. Satin Chrome finish. Size 2⅝″ x 2¾″ x 1″. Net wt., 4 oz.

List Price............................ $1.70



High Fidelity, High Output Bi-Directional VELOCITY

Model V-2A. Superb pickup and reproduction of voice and music has made these microphones favorites over the years. Advanced design now brings Dynamic advantages to Velocity performance. Response is smooth, peak-free over the wide range of 40-10,000 cps. Output level —58 db. Zero pickup at sides, top and bottom. Excellent for individual or group work in public address, broadcasting, recording. Proper placement and tilting reduce feedback and random noise. *Acoustalloy* diaphragm. Choice of 50, 250 ohms or Hi-Z. Reflection free housing. Internal shock absorber. Locking cradle. ON-OFF switch. ⅝″-27 thread. 18′ cable. Size 3½″ x 2¾″ x 8″, including stud. Net wt. 2½ lbs.

List Price..........................$65.00

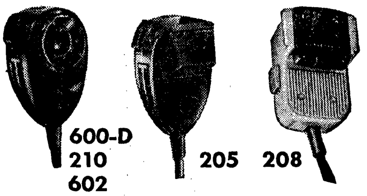
Model 602 Differential Dynamic*. Similar to 600-D but close-talking, noise cancelling differential. Output measured at ¼″ —55db. Press to talk switch. 5′ cable. Choice of 50, 250 ohms or Hi-Z. Shipping weight 1 lb.

List Price............................$49.50

Model 208 Differential Carbon*. Single button, noise-cancelling carbon. Output —50db. Articulation 88% under 115 db ambient noise. Blastproof, shock resistant. Panel mounting bracket. Press to talk switch. Size 2¼″ x 1½″ x 1⅛″. Shipping weight 1 lb.

List Price.............................$16.50

*Pat. No. 2,350,010



E-V MOBIL-MIKES

All E-V microphones described below incorporate a press-to-talk switch for microphone and relay control. Frequency response is substantially flat and free from peaks. Uniform response to all voice frequencies provides higher articulation and more usable power level.

Model 600-D Dynamic Mobile-Mike. Lightweight, hand held, extra-rugged. Output, —55 db. *Acoustalloy* diaphragm. Press-to-talk switch. Size, 2¼″ x 2″ x 4″. Black phenolic case with mounting bracket. 5 ft. cable. Choice of high or low impedance. Shipping weight 1 lb.

List Price.........................$38.50

Model 600-DL. With switch lock. List...$40.00

Model 210 Carbon. Similar to Model 600-D, but single-button carbon. Gives high intelligibility speech transmission. Substantially flat response. Output—50 db. Press-to-talk switch controls relay. 5 ft. cable. Shpg. wt. 1 lb.

List Price......................... $28.50

Model 210KK with coiled cord. List Price.$32.50

(*Also available in exact replacement models for Motorola, RCA, G.E. and similar mobile equipment*)

Only Electro-Voice can offer you noise-cancelling, Differential microphones. By the Differential principle, ambient or distant sound is fed into dual apertures in correct phase relationship to provide virtually complete cancellation.

Model 205 Differential* Carbon. Close-talking, noise cancelling single-button. Maximum intelligibility under high ambient noise. Blast-proof, waterproof, shock resistant. Output measured at ¼″ —50 db. Black phenolic case. Push to talk switch. With mounting bracket. 5′ cord. Size 2¼″ x 2¼″ x 4″. Shipping weight 1 lb.

List Price..........................$38.50

Model 205KK with coiled cord. List Price..$42.50

ELECTRO-VOICE FLOOR AND DESK STANDS

Model 425 Deluxe Floor Stand

Remarkably light in weight, yet very stable. Red button at top of shaft gives one-hand height control from 37″ to 66″. Locks automatically on release. Shaft can be rotated without any adjustment device. Unique locking-type adjustable legs permit stand to be placed flush against wall or speaker's table. Easy to assemble or take apart. Folds into small, compact package. Modern die-cast base. 3-leg spread 17″. Satin Chromium finish. Net wt., 7½ lbs.

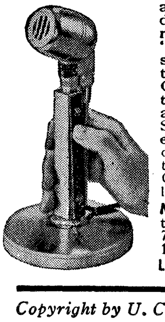
List Price................ $27.50

Model 430 Utility Floor Stand

Similar to Model 425, but with button control on lower section for height adjustment from 36″ to 65″. 3-leg spread 17″. One bolt assembly. Gray finish. Extension shaft in Satin Chromium. Net wt. 7½ lbs.

List Price............$17.00

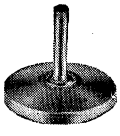
Touch-to-Talk Stand



Fits *any* microphone with standard ⅝″-27 thread! Specially-designed, lever-type switch for relay operation or microphone "On-Off"—closes or opens instantly, or locks in "talk" position, with light finger-tip action. Gives easy "*Break-in*" operation in communications, public address, paging, dispatching. Switch is self-contained unit, easily removable from the round die-cast base. Single-pole double-throw. Stand finished in Satin Chromium. Gray plastic switch lever and red locking button.

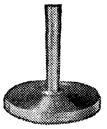
Model 428. "Break-in" Touch-to-Talk Stand with switch. Ht., 7″. Base diam., 5⅛″. Net wt., 1¾ lb.

List Price............ $16.00



Model 423-A Desk Stand. Sturdy, smartly styled, round die-cast base, 5⅛″ diam. Rests firmly. Rich Satin Chromium finish. Rubber base buttons. ⅝″-27 thread. Choice of 3″ or 5″ matching stem riser. Net wt., 1 lb.

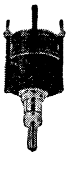
List Price.................... $4.50



Model 427-A Desk Stand. Attractive, round die-cast base rests stably on desk or table. 5″ stem riser. Satin Chrome finish. Standard ⅝″-27 thread. Base diam. 4⅝″. Net wt., ⅝ lb.

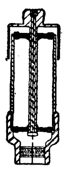
List Price.................... $3.50

Low Impedance Microphone-to-Grid Matching Transformer



Model 502. Transformer windings have low distributed capacity and are amply shielded against inductive hum by a shield inside a pressure cast case. Designed for mounting on amplifier chassis or in series with the microphone line. Designed for 50, 250 and 500 ohms—to Hi-Z. Broadcast fidelity. Response 40-20,000 cps ±1 db, for speech or music. MC-4 input connector.

List Price...................$15.00



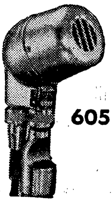
Model 345 Shock Mount. Dual-type external shock mount prevents reproduction of external shocks and stand vibrations. Permits tilting microphone head. ⅝″-27 thread. Easily attached or removed. Satin Chromium finish. Size 1½″ x 3⅞″. Net wt. 10 oz.

List Price.................... $13.00

Model 335 Blast Filter. Acoustically treated, scientifically curved grille stops wind and breath blasts in dynamic microphones. Does not affect frequency response. Easily fits over head of E-V Models 630, 635 and 605 Microphones. Satin Chromium finish.

List Price.........................$5.50

Model 605 Durable Dynamic

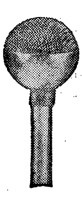


For dependable, low-cost general-purpose use. Substantially flat response, 65-7,500 cps. Output level −55 db. Non-directional, becoming directive at higher frequencies. *Acoustalloy* diaphragm. Head at 22° fixed tilt. Built-in cable connector. Satin Chromium finish. Available in Hi-Z, 50 or 250 ohms impedance. Low impedances not balanced to ground. Wt., 12 oz.

Model 605-8. With 6 ft. cable. List................. $27.50

Model 605-20. With 18 ft. cable. List................. $29.50

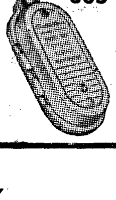
Model 920 "Spherex" Crystal



Fine quality all-direction pickup for conferences, round table discussions, home recording and public address. Substantially flat frequency response, 60-7000 cps. Output level —50 db. Omnidirectional polar pattern. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Lustrous Satin Chrome finish. ⅝″-27 thread. Diameter 2¼″. Net wt., 8 oz.

Model 920-20. With 18 ft. cable List................ $22.50

Model 805 Contact Microphone



For guitar, banjo, mandolin, violin or any vibrating musical instrument. Increases natural sound volume, enriches tonal effects. High impedance. Crystal sealed against moisture and acoustic feedback. Chromium finish. 15 ft. cable. Net wt. 2 oz.

List Price............ $19.75

NO FINER CHOICE THAN

Electro-Voice

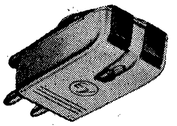
MODERN PHONO-PICKUP

CARTRIDGES

FOR ALL 3 SPEEDS

STOCK ONLY 6 BASIC PREFERRED TYPES★ TO MAKE OVER 92% OF ALL CARTRIDGE REPLACEMENTS

CARTRIDGES FOR 78 R.P.M.

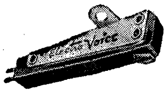


Model 12 Crystal. The most versatile 78 r.p.m. replacement. Replaces over 80% of cartridges in use. Medium voltage output is ideal for most phono combinations. Weighs 1/5 ounce. Tracks perfectly with less needle force. Ideal for "in stock" cartridges for general replacement. Output, 2 volts. Supplied with E-V Snap-In Holder and mounting hardware. For standard ½" hole centers, RCA 13/16" mounting or Webster-Electric side mounting cartridges.

Model 12, with O-3 Osmium needle. List....$7.50

PREFERRED ★

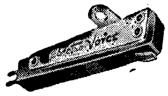
Model 12-S, with S-3 Sapphire needle. List..$8.50



Model 32 Crystal. The 78 r.p.m. cartridge that provides the longest record life, lowest needle talk and greatest stylus life. Ideal for record enthusiasts with valuable libraries of 78 r.p.m. records. Frequency response comparable to wide range magnetics. Output 1 volt, useable in most radio-phono combinations. Standard ½" mounting. Uses E-V whisker-type needle.

Model 32, with O-3 Osmium needle. List....$6.50

Model 32-S, with S-3 Sapphire needle. List..$7.50

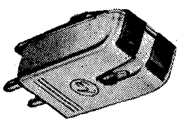


Model 42 Ceramic. The Model 42 cartridge utilizes a ceramic generating element for complete moisture protection. Long-lasting in extremely hot, humid climates. Output is .8 volt. Inherently, ceramic elements have a lower output than crystal elements. Purchasers should be advised to turn set gain control to higher level than normally used with crystal cartridges. Mounting bracket of Model 42 drilled for mounting in tone arms with either ½".

Model 42, with O-3 Osmium needle. List....$6.50

Model 42-S, with S-3 Sapphire needle. List..$7.50

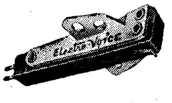
CARTRIDGES FOR 45 and 33⅓ R.P.M.



Model 14 Crystal. The E-V Model 14 cartridge gets *all* the music from the extended range fine groove records. Response follows professional standards . . . is free from peaks and distortion that mar wide range response. Range *guaranteed* 50 to 15,000 cps. ± 2½ db. A truly high fidelity phono-cartridge that requires no expensive preamplifier or equalizer. Output, 1 volt. Uses E-V 1-mil, whisker-type needle.

Model 14, with O-1 Osmium needle. List....$7.50

Model 14-S, with S-1 Sapphire needle. List..$8.50

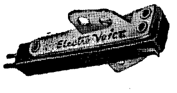


Model 34 Crystal. The high compliance-to-voltage output ratio of this cartridge makes it a superb replacement for 45 and 33⅓ r.p.m. players. Reproduction is fuller yet needle tracks with whisker touch in record grooves. Records sound better and last longer. Output, 1.25 volts, slightly higher output than average fine groove cartridge. Mounting bracket has ½" and ⅝" hole centers. Makes ideal replacement in RCA-type "45" changers and in Columbia 33⅓ "LP" player. Uses E-V whisker-type 1-mil needle.

PREFERRED ★

Model 34, with O-1 Osmium needle. List.....$6.50

Model 34-S, with S-1 Sapphire needle. List...$7.50



Model 44 Ceramic. Model 44 utilizes a ceramic generating element for complete moisture protection. Makes an ideal, long lasting replacement in hot, humid climates. Output is .5 volt. Ceramic elements are inherently lower in output than crystal elements. Purchasers should be advised to turn volume control higher than normally used with crystal cartridges. Model 44 mounts in tone arms with either ½" or ⅝" hole centers.

Model 44, with O-1 Osmium needle. List....$6.50

Model 44-S, with S-1 Sapphire needle. List..$7.50

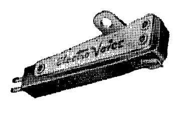
ELECTRO-VOICE REPLACEMENT NEEDLES

MODEL	TYPE AND APPLICATION	LIST PRICE
O-3	Single-Tip .003" Osmium for Models 12, 32, 42, 96, 96-T	$1.50
S-3	Single-Tip .003" Sapphire for Models 12, 32, 42, 96, 96-T	2.50
O-2	Single-Tip .0023" Osmium for Models 33, 43	1.50
S-2	Single-Tip .0023" Sapphire for Models 33, 43	2.50
O-1	Single-Tip .001" Osmium for Models 14, 34, 44, 96, 96-T	1.50
S-1	Single-Tip .001" Sapphire for Models 14, 34, 44, 96, 96-T	2.50
SO-13	Twin-Tip .001" Sapphire-.003" Osmium for Models 16 & 16-TT	3.00
O-13	Twin-Tip .001" Osmium-.003" Osmium for Models 16 & 16-TT	2.50

Model 10 (not listed here) takes same needle as Models 12, 14 or 16.
Model 30 (not listed here) takes same needle as Models 32, 33 or 34.

*®Brush Development Co.

CARTRIDGES FOR 78, 45, 33⅓ R.P.M.

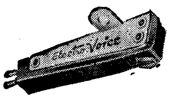


Model 33 Crystal. Utilizes a specially designed all-purpose needle which plays all three speeds with a single tip. Simplifies operation of multi-speed changers. Tracks well in all grooves. 2.3 mil tip reduces record wear over other types of all-purpose needles. Output 1 volt on microgroove, 1.8 volts on 78 r.p.m. records. Mounting bracket has ½" hole spacing for wide adaptability and ease of installation. Uses E-V whisker-type 2.3 mil needle.

Model 33, with O-2 Osmium needle. List....$6.50

PREFERRED ★

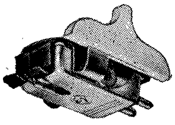
Model 33-S, with S-2 Sapphire needle. List..$7.50



Model 43 Ceramic. Model 43 utilizes a specially designed all-purpose needle which plays all three speeds with a single tip. Ceramic generating element assures complete moisture protection. Ideal replacement for multi-speed changers in hot, humid climates. Output is .5 to .8 volt. It is an inherent characteristic of ceramic elements to have a lower output than crystal elements. Purchasers should be advised to turn set volume control higher than normally used with crystal cartridges. Mounting bracket has two sets of mounting holes spaced at ½" and ⅝" centers for wide adaptability in installation.

Model 43, with O-2 Osmium needle. List....$6.50

Model 43-S, with S-3 Sapphire needle. List..$7.50



Model 16-TT Crystal TWIN TILT. The Twin-Tilt Cartridge with a one-piece, twin-tip needle will play all types of records . . . 78, 45 and 33⅓ r.p.m. without weight change. The Model 16-TT is complete with Tilt mechanism. Merely tilt the selector handle to select the 1-mil or 3-mil needle tip . . . for slow or fast speed records. Output, 1-volt on each tip. Excellent for Webster-Chicago changers. With Osmium 3-mil tip and Sapphire 1-mil tip on single E-V silent, whisker-type stylus.

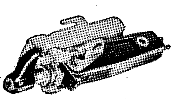
Model 16-TT, List Price..................**$10.00**

Model 16-OTT. Same as Model 16-TT above but with Osmium 3-mil and Osmium 1-mil tips.
List Price.............................**$9.50**

PREFERRED ★

Model 16. Cartridge only, without Tilt mechanism, but with Osmium 3-mil tip and Sapphire 1-mil tip, for exact replacement of units already installed.
List Price.............................**$9.00**

Model 16-O. Same as Model 16, but with Osmium 3-mil and Osmium 1-mil tips.
List Price.............................**$8.50**



Model 96-T Crystal TURNOVER. Popular Turnover type cartridge with separate needles for fast and slow speed records. The two needles are completely isolated from one another allowing correct frequency response on each. "Free" needle does not cause distortion. Output, 1 volt on each needle, ample for all turnover replacements. Positive-acting turnover mechanism prevents needle set-down error. Mounting plate supplied for LQD type cartridges. Complete with 3-mil Osmium needle, O-3, and 1-mil Sapphire needle, S-1.

Model 96-T. List Price..................**$10.00**

PREFERRED ★

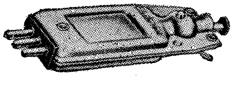
Model 96. Same but without turnover harness for installation in existing mechanism.
List Price.............................**$9.00**

Model 46-T Ceramic Turnover. Utilizes a ceramic generating element for absolute moisture protection. Unique design gives minimum output of .8 volts. Can be directly substituted for crystal cartridge in most applications. Incorporates all construction features of 96-T.

Model 46-T. List Price...**$10.00**

Model 46. Same but without turnover harness for installation in existing mechanism.
List Price...**$9.00**

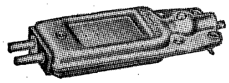
WITHOUT NEEDLE



Model 60 Crystal DUO-VOLT. This Bimorph* Crystal Cartridge permits easy selection of high or medium output for the job. Just connect leads to the two outer terminals for 4 volts output or to the center terminal and one outer terminal for 2 volts. No soldering. No accessories to attach or remove. Uses any standard 3-mil, 1-mil, or all-purpose needle. ½" mounting hole centers. Aluminum case. Ideal for varied replacement needs.

PREFERRED ★

Model 60. Less needle. List Price..........**$4.95**



Model 50 Crystal. Bimorph high level cartridge, supplied without needle. Can be used with any standard 1-mil, 3-mil or all-purpose tip replacement needle. Output level with straight shank is 5 volts; with compliant needle, 3½ volts. Excellent replacement in record players with low gain amplifiers and in single play phonographs. Aluminum case.

Model 50. Less needle. List Price..........**$4.50**

THE TURNER 80

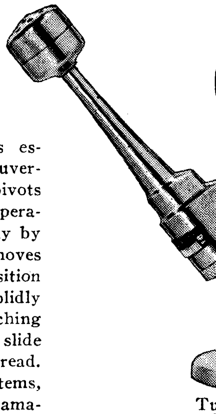
A POPULAR, POWERFUL PERFORMER!

THE TURNER MODEL 80 fills a long felt need for a smaller, less conspicuous microphone of high quality. Turner Engineers have developed in the Model 80 one of the most beautiful, serviceable and versatile crystal microphones of all time. The slender, graceful Model 80 is so tiny you can hide it in your palm, yet it is a big performer within its frequency range of 80 to 7000 c.p.s. Level, about —58 db. The case of die-cast zinc alloy, satin chrome plated — total weight, 5 ozs. A 7-ft. attached single conductor shielded cable is included. High quality Bimorph moisture sealed crystal is blast and mechanical shock proofed.

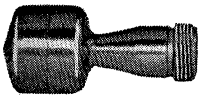
Model 80. (does not include stand) List Price $15.95

THE C-4 STAND shown at right, was especially designed to give maximum maneuverability to the Model 80 Microphone. It pivots the microphone in a 135° arc for any operational angle. It holds the microphone firmly by the unique, positive action hinge, yet moves smoothly and easily to any desired position without adjustment. The C-4 Stand is solidly built of die-cast zinc overlaid with matching satin chrome plate. It will not tip or slide with the weight of the cord. Has ⅝"—27 thread. Use with wire recorders, public address systems, pulpits, office and factory call systems, amateur operations and other similar uses.

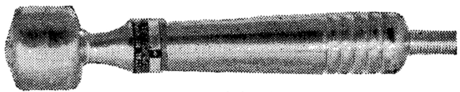
Model C-4 Matching Stand......List Price $5.75



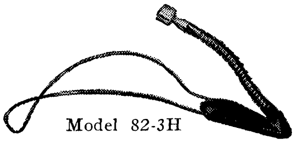
Turner 80
on C-4 Stand.



Model 81



Model 83



Model 82-3H

MODEL 81 — Smaller than the Model 80, the Model 81 pictured here has a PC1M Amphenol connector attached. Same technical specifications as Model 80. Excellent for built-in applications, sound reinforcers, dictograph and detective work.

Model 81 ....List Price $13.95

(Available with 7 foot removable cable set at extra cost. Also available with Amphenol microphone switch Model 75-MC1S at extra cost.)

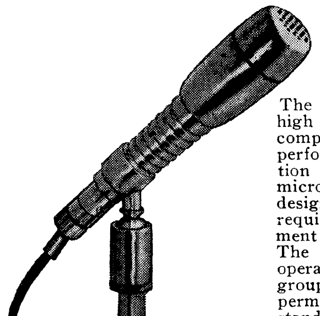
MODEL 83 — As a hand microphone, the Model 83 is perfectly balanced, can be concealed in your palm, slipped into your pocket. Its design, high output and fine response characteristics make it a natural for paging systems, parking lots, home recording, dictating machines and dozens of other applications. Same technical specifications as Model 80. Model 83 with 7 foot attached single conductor shielded cable.

Model 83 ....List Price $15.95

MODEL 82-3H — Nowhere is the diminutive size of this completely new microphone more sharply evident than when adapted for use with the famous Turner "Third Hand." Pictured above the "Third Hand" slips over your head in a jiffy and holds microphone close to your mouth for excellent volume without feedback. Ideal for window demonstrations, carnival and sideshow work and switchboard operators. Same technical specifications as Model 80. 20 foot attached single conductor shielded cable.

Model 82-3H complete with "Third Hand." ....List Price $22.75

BROADCAST DYNAMIC MICROPHONES



THE TURNER ARISTOCRAT, 50D

The Turner Aristocrat is an ultra wide range, high fidelity dynamic microphone. It offers a completely new conception of high quality performance with the most realistic reproduction of voice and music yet attained with microphones of its type. Advanced circuit design with high output dynamic generator requires no closely associated auxiliary equipment for outstanding results.

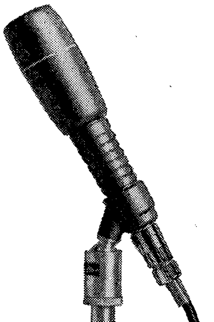
The Aristocrat is essentially non-directional in operation — equally effective for individual or group pickups. The unique ball swivel coupler permits almost instantaneous change from stand to hand use and vice versa. Use the Aristocrat anywhere, indoors or out — on stand, in hand, suspended, or concealed in stage settings. Use the Aristocrat everywhere that performance of the very highest quality is demanded.

Model 50D. Complete with ball swivel coupler and cable set (stand illustrated not included)........List Price $150.00

The 51D

This new dynamic microphone, handsomely finished in rich umber grey, offers exceptionally high quality performance at a new lost cost. No closely associated auxiliary equipment required.

Model 51D. Complete with ball swivel coupler and cable set (stand illustrated not included) List Price $85.00



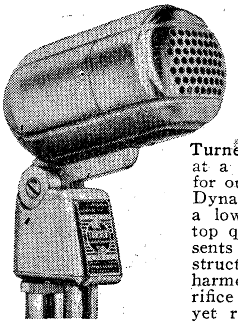
SPECIFICATIONS 50D

FREQUENCY RESPONSE: 50 to 15,000 c.p.s. flat within ±2½ db.
OUTPUT LEVEL: 56 db below 1 volt/dyne/sq. cm. at high impedance.
IMPEDANCE: Choice of 50, 200, 500 ohms or high impedance (25,000 ohms) connected for balanced line output.
POLAR PATTERN: Essentially non-directional in any position.
TRANSFORMER: Magnetically shielded for minimum hum pickup.
DIAPHRAGM: Specially designed aluminum alloy.
CASE: All metal. Satin chrome finish.
MOUNTING: Ball and swivel type, tilts in any direction. Standard ⅝"—27 thread.
DIMENSIONS: 1⅝" maximum diameter; 6½" long (less cable connector).
WEIGHT: 16 ounces (less cable).
CABLE: 20 ft., high quality two conductor shielded cable with Cannon quick-disconnect plug.

SPECIFICATIONS 51D

FREQUENCY RESPONSE: 60 to 13,000 c.p.s. substantially flat.
OUTPUT LEVEL: 58 db below 1 volt/dyne/sq. cm. at high impedance.
IMPEDANCE: Choice of 50, 200, 500 ohms or high impedance (25,000 ohms) connected for balanced line output.
POLAR PATTERN: Essentially non-directional in any position.
TRANSFORMER: Magnetically shielded for minimum hum pickup.
DIAPHRAGM: Special aluminum alloy.
CASE: All metal, rich umber grey finish.
MOUNTING: Ball and swivel type, tilts in any direction. Standard ⅝"—27 thread.
DIMENSIONS: 1⅝" maximum diameter, 6½" long (less cable connector).
WEIGHT: 16 oz. (less cable).
CABLE: 12 foot high quality two conductor shielded cable with Cannon quick-disconnect plug.

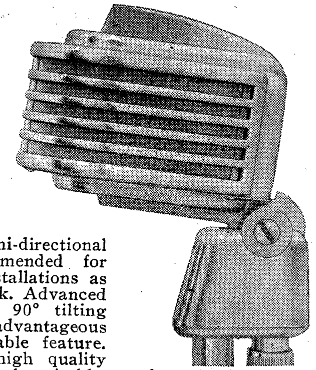
THE TURNER COMPANY, CEDAR RAPIDS, IOWA



Outstanding Value Among Broadcast Microphones!

Turner Model 211 High Quality Dynamic at a New Low Price. Precision engineered for outstanding performance, the Turner 211 Dynamic Microphone is now available at a lower price than ever before. Always a top quality microphone, the 211 now represents even greater value. Unique diaphragm structure of the 211 results in extremely low harmonic and phase distortion without sacrifice of high output level. A sensitive unit, yet ruggedly built for dependable use indoors or out under the most difficult acoustic and climatic conditions. Withstands rough handling. For quality recording, P.A., sound systems and broadcast work, including FM. **LEVEL:** 54 db below 1 volt/dyne/sq. cm. at high impedance. **RESPONSE:** 50-10,000 c.p.s. Equipped with 90° tilting head, balanced line output connection, and 20 ft. 2-conductor, heavy duty removable cable set. Satin chrome finish. 50 ohms, 200 ohms, 500 ohms or high impedance.

Model 211	**List Price $37.50**

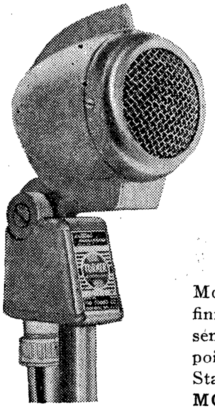


Model 34X Crystal Microphone

Attractive, high fidelity, semi-directional crystal unit. Highly recommended for studio and public address installations as well as quality recording work. Advanced engineering design with full 90° tilting head permits tilting to most advantageous position. Quick removable cable feature. The Model 34X utilizes a high quality Bimorph moisture sealed crystal — is blast and mechanical shock proofed. Use indoors or out. Satin chrome finish. **LEVEL:** —52 db. **RESPONSE:** 60-10,000 c.p.s. Complete with 20 ft. removable cable set.

Model 34X	**List Price $29.00**
Model S-34X with slide on-off switch	**List Price $31.50**

TURNER QUALITY, ALL PURPOSE, CRYSTAL OR DYNAMIC MICROPHONES



15 Years a Favorite the World Over!

Model 22X Crystal 22D Dynamic

Accurate pickup and faithful reproduction have made these units the most popular general purpose microphones on the market. Used by amateurs, paging and call systems, home recording, and general sound work indoors and out. Modern styling and rich satin chrome finish. Full 90° tilting head for semi- or non-directional (microphone pointed straight up) operation. Standard ⅝"—27 coupler mounting. MODEL 22X CRYSTAL has high quality humidity protected crystal in mechanical shock proofed mounting. **LEVEL:** —52 db. **RESPONSE:** 60-9,000 c.p.s. Complete with 7 ft. removable cable set.

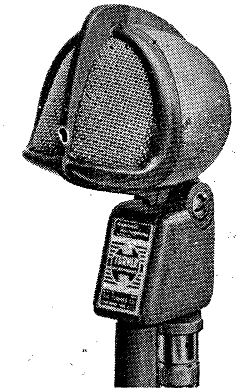
Model 22X	**List Price $22.50**
Model S-22X with slide on-off switch	**List Price $25.00**

MODEL 22D DYNAMIC features high quality Alnico magnets in high level dynamic circuit. **LEVEL:** —54 db at high impedance. **RESPONSE:** 100-9,000 c.p.s. 7 ft. removable cable set. Available in 50, 200, 500 ohms or high impedance.

Model 22D	**List Price $27.25**
Model S-22D with slide on-off switch	**List Price $29.75**

Engineered with Turner Precision —

Model 25X Crystal Model 25D Dynamic



Exceptionally smooth response over a wide range of frequencies. Striking, modern case finished in rich two-tone umber grey with chrome plated grille. Full 90° tilting head for semi- or non-directional operation. Complete with 20 ft. removable cable set. Standard ⅝"—27 coupler mounting.

MODEL 25X CRYSTAL — Genuine Bimorph, high quality, moisture sealed crystal, mechanically isolated. Built for hard usage indoors or out. **LEVEL:** —52 db. **RESPONSE:** 50-9,000 c.p.s.

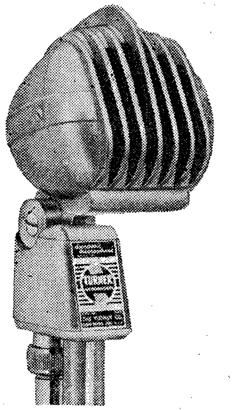
Model 25X	**List Price $27.50**
Model S-25X. With slide on-off switch	**List Price $30.00**
Model P-25X. With push-to-talk button switch	**List Price $30.00**

Polished chrome finish at $2.50 list additional.

MODEL 25D DYNAMIC — High flux Alnico V magnet together with a specially designed moving coil system and acoustic network gives outstanding efficiency and performance. **LEVEL:** —54 db at high impedance. **RESPONSE:** 50-10,000 c.p.s. High impedance wired single ended (single conductor shielded cable); 30, 200 or 500 ohms wired for balanced line (two conductor shielded cable).

Model 25D	**List Price $40.00**
Model S-25D. With slide on-off switch	**List Price $42.50**
Model P-25D. With push-to-talk-button switch	**List Price $42.50**

Polished chrome finish at $2.50 list additional.



High Performance! Eye Appeal! Moderate Cost!

Model 33X Crystal • Model 33D Dynamic

These high fidelity, all purpose units combine high output with smooth response over a wide frequency range. Excellent speech and music reproduction. Streamlined case design with rich satin chrome finish. 90° tilting head permits semi- or non-directional operation. Removable cable feature allows quick interchange of cables.

MODEL 33X CRYSTAL has high quality 2-element moisture sealed crystal and mechanical shock proofing. **LEVEL:** —52 db. **RESPONSE:** 60-9,000 c.p.s. Complete with 20 ft. removable cable set.

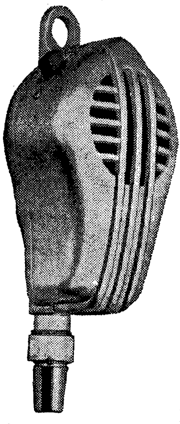
Model 33X	**List Price $24.50**
Model S-33X with slide on-off switch	**List Price $27.00**

MODEL 33D DYNAMIC — Smooth, high level dynamic circuit. Alnico magnets. **LEVEL:** —54 db at high impedance. **RESPONSE:** 100-9,000 c.p.s. Complete with 20 ft. removable cable set. High impedance wired single ended (single conductor shielded cable). 50, 200 or 500 ohm wired for balanced line (two conductor shielded cable).

Model 33D	**List Price $29.00**
Model S-33D with slide on-off switch	**List Price $31.50**

TURN TO TURNER FOR "SOUND PERFORMANCE"

MODERN — CONVENIENT TURNER HAND-HELD MICROPHONES



Multi-Purpose Microphone
The Turner "Han-D"

Model 9R Carbon
Model 9D Dynamic
Model 9X Crystal

One of the handiest and most useful microphones made. Hang it, hold it, or mount on any standard floor or desk stand. Standard 5/8"—27 thread mounting. Balanced to fit the hand. Especially engineered for maximum response to voice, "Han-D" also delivers smooth, natural response to music pickups. Ideal for stage, paging, public address, amateur, mobile and traveling mike broadcasting. Will not blast from close speaking. Die-cast alloy case. Satin chrome finish.

MODEL 9R CARBON — Recommended for use with mobile equipment and ham operation. With positive contact slide switch for on-off microphone control. 7 ft. two conductor cable. LEVEL: approximately —43db. RESPONSE: 200-4,000 c.p.s. with rising characteristics for maximum intelligibility. 200 ohms nominal impedance.

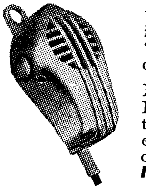
Model 9R .... **List Price $23.50**

MODEL 9D DYNAMIC — Recommended for more severe service conditions and extremes of climate and temperature. LEVEL: —52 db at high impedance. RESPONSE: 150-7,000 c.p.s. Complete with removable 7 ft. single conductor shielded cable set. 50, 200, 500 ohms or high impedance furnished standard with positive contact slide switch.*

Model 9D .... **List Price $28.50**

MODEL 9X CRYSTAL — Equipped with high quality, shock mounted, humidity protected crystal for indoor or outdoor use. LEVEL: —52 db. RESPONSE: 60-7,000 c.p.s. Complete with 7 ft. single conductor shielded cable set and positive contact slide switch.*

Model 9X .... **List Price $23.50**



*Also available with either heavy duty, non-locking, push-to-talk switch at same price (specify: "With H.D. push-talk switch") or without switch of any kind. (Write for details.)

MODEL SR9R—Same technical specifications as Model 9R above. Equipped with two circuit, push-to-talk switch for on-off microphone control and external relay circuit. With 7 ft. four conductor cable.

Model SR9R .... **List Price $28.00**

Popular • Low Cost • Lightweight

Model 20X Crystal • Model 20D Dynamic Model 20R Carbon

Use for all fields of applications where low cost is a factor. Rugged die-cast metal case is finished in bronze metalustre. Equipped with hook ring for hanging. SIZE: 6½" x 2-3/16" x 1-5/32" overall.

MODEL 20X CRYSTAL — A high impedance microphone with —52 db output. RESPONSE: 70-7000 c.p.s. 7 ft. attached single conductor cable fully shielded. Weight less cable: 9 oz.

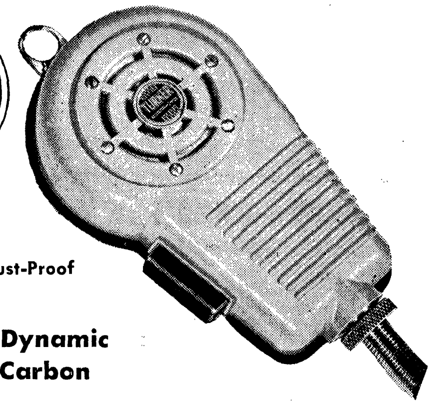
Model 20X .... **List Price $12.85**

MODEL S20X with push-to-talk switch having slide-lock feature. Switch connected in microphone circuit, normally open.
List Price $14.85

MODEL SR-20X with push-to-talk switch having slide-lock feature. Switch normally open, connected to two cable conductors independent of microphone circuit for relay control.
List Price $17.85

MODEL 20D DYNAMIC—Recommended for more severe service conditions and extremes of climate and temperature. Either high impedance or 30 ohms available, please specify. OUTPUT LEVEL: —52 db at high impedance. RESPONSE: 100-7000 c.p.s. 7 ft. attached single conductor cable fully shielded. Weight less cable, 12 oz.

Model 20D .... **List Price $16.85**



Rugged
Dependable
Watertight • Dust-Proof
Corrosion-Proof

Model 70D Dynamic
Model 70R Carbon

Can take extraordinary punishment without affecting its clear, crisp voice response and high output. For industrial uses where dust and corrosion render the average microphone useless in a short time; shipboard, military, fire department, carnival and athletic field uses in which the 70 remains unaffected by water in any form — rainfall, mist, steam or total immersion. Heavy duty push-to-talk switch. Hook for hanging or bracket for wall mounting (specify choice). Complete with 7 ft. attached cable, 2 conductor shielded for low impedances, single conductor shielded for high impedance. Quotations on request for either model furnished with Koiled Kord to meet your specifications.

SPECIFICATIONS
MODEL 70D DYNAMIC

FREQUENCY RESPONSE: 200 to 5,000 c.p.s. with slightly rising characteristic for maximum speech intelligibility.

OUTPUT LEVEL: — 52 db.

IMPEDANCE: Choice of 50, 200 or 500 ohms connected for balanced line, or high impedance with single ended output.

DIAPHRAGM: Special heavy duty for maximum ruggedness and resistance to abuse. Aluminum alloy.

CASE: Zinc die cast alloy. Zinc chromate primer and baked on light grey equipment enamel finish over Iridite processed base.

SWITCH: Push-to-talk switch, normally open.

DIMENSIONS: 2½" x 1-9/16" x 4½" overall.

WEIGHT: Less cable, 15 oz.

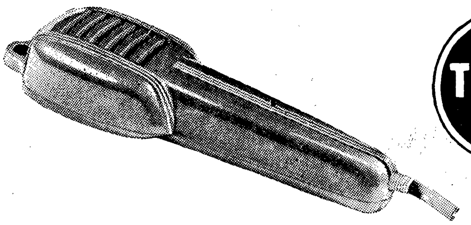
MOUNTING: Hook for hanging or with bracket for wall mounting.

Model 70D .... **List Price $42.50**

MODEL 70R CARBON

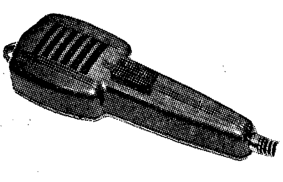
Same as for 70D except with high quality carbon cartridge giving excellent articulation and intelligibility for speech.
DC RESISTANCE: 200 ohms, nominal.
OUTPUT LEVEL: —42 db.

Model 70R .... **List Price $38.50**



MODEL S20D with push-to-talk switch having slide-lock feature. Switch connected in microphone circuit, normally open.
List Price $18.85

MODEL SR-20D with push-to-talk switch having slide-lock feature. Switch, normally open, connected to two cable conductors independent of microphone circuit for relay control.
List Price $21.85



MODEL 20R CARBON — Has best response curve for highest articulation and intelligibility and low distortion. Excellent speech reproduction. OUTPUT LEVEL: —43 db. DC resistance of 200 ohms nominal. ½ volt developed by normal speech. RESPONSE: 200-4000 c.p.s. 48" two conductor unshielded cable included. Weight less cable, 10 oz.

Model 20R single button carbon
List Price $12.85

MODEL S20R with push-to-talk switch having slide-lock feature. Switch connected in microphone circuit, normally open. 48" two conductor unshielded cable included.
List Price $14.85

MODEL SR-20R with push-to-talk switch having slide-lock feature. DPST switch, normally open, controls both microphone circuit and independent relay circuit. 48" four conductor unshielded cable.
List Price $17.85

TURN TO TURNER FOR "SOUND PERFORMANCE"

RUGGED TURNER DYNAMIC MICROPHONES

Microphones BY TURNER

U9S
Illustrated

UNFAILING DEPENDABILITY IN ANY CLIMATE OR TEMPERATURE . . .

Famous Turner Model 99

Professional in appearance and performance. Smooth response not affected by heat, cold or humidity. Has adjustable saddle ⅝"—27 mounting. Semi- or non-directional operation. For announcing and mobile public address systems, paging systems, communications, recording machines, etc. Gunmetal metalustre finish. LEVEL: —52 db at high impedance. RESPONSE: 80-9,000 c.p.s. 20 ft. removable single conductor shielded cable set. 50, 200, 500 ohms or high impedance.

Model 99 .... List Price $36.00

For studio results under critical conditions.

Model 999 Balanced Line Dynamic

Same professional appearance as Model 99. Voice coil and transformer leads are insulated from ground and microphone case. Line is balanced to ground. Gunmetal metalustre finish. LEVEL: —52 db at high impedance. RESPONSE: 80-9,000 c.p.s. With 3 pin polarized locking connector and 20 ft. balanced line low capacity cable. 50, 200, 500 ohms or high impedance.

Model 999 .... List Price $39.50

Four impedances at your fingertips

Model U9S Multi-Impedance Dynamic

50, 200, 500 ohms or high impedance — get it quickly with the turn of the switch on the Turner U9S Dynamic. Same precision engineering and rugged construction as the Model 999 with built-in tapped multi-impedance transformer and switch. Dependable at all impedances and frequencies. Gunmetal metalustre finish. LEVEL: —52 db at high impedance. RESPONSE: 80-9,000 c.p.s. Complete with 20 ft. balanced line removable cable set.

Model U9S .... List Price $42.50

Turner Model 87

Velocity Microphone
High Fidelity • Bi-Directional
Multi-Impedance

MODEL 87 — A unit engineered with single element ribbon supported in the field of an Alnico V magnet for maximum sensitivity. Thorough shielding excludes hum pickup. The Model 87 has a bi-directional pickup pattern with exceptionally smooth response from 80-8,000 c.p.s. LEVEL: —62 db at high impedance. Built-in impedance switch gives selection of 50, 200, 500 ohms or high impedance output. Universal swivel mounting, ⅝"—27 thread. Finished in dark umber grey with bright chromium screen. Complete with 20 ft. two conductor balanced line shielded cable.

Model 87 .... List Price $49.85

Model 77

The Turner
"Tru-Cardioid"

MODEL 77—The Turner "Tru-Cardioid" is a super-cardioid type microphone employing a combination of dynamic and velocity generators. "Tru-Cardioid" pickup pattern practically eliminates feedback, audience and background noise. Has wide range pickup at front and a sharply attenuated output at rear with approximately 15 db discrimination between front and rear at all frequencies. RESPONSE: 70-10,000 c.p.s. LEVEL: —62 db at high impedance. Built-in impedance selector switch gives choice of 50, 200, 500 ohms or high impedance output. 90° tilting head, ⅝"—27 mounting. Finished in dark umber grey with polished chromium screen. Complete with 20 ft. removable two conductor shielded cable set.

Model 77 .... List Price $79.50

TURN TO TURNER FOR "SOUND PERFORMANCE"

ON SET OFF
TUNING
MEGACYCLES

TECHNICAL SPECIFICATIONS

Simplified continuous tuning of all TV channels from 2 to 13 (54 to 216 mc.) with one knob.
Three position control switch turns on TV set only, the TV set and Booster, or shuts off both set and Booster.
Cascode circuit for extremely low noise level.
Gain: 20 db on low channels (2 to 6). 12 to 14 db on high channels (7 to 13).
Bandwidth: Adequate at all channels.
Adaptable to 300 ohm balanced or 75 ohm coaxial lines.
Fully shielded chassis.
Power consumption: 6 watts, 105-120 volts, 50-60 cycles, a.c.
Dimensions: 8" x 6" x 6".
Weight: 4½ lbs.
Model TV-2 Booster .... **List Price $57.50**

TURNER

BRIGHTER, SHARPER

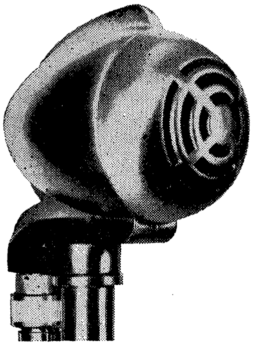
TV RECEPTION

With the TURNER Model TV-2 Television Booster

Amplifies TV, FM, Aviation and Mobile Radio Signals. Designed for beauty, as well as outstanding performance, the Turner Model TV-2 is the most beautiful signal booster that ever graced the top of a television set. The rich mahogany plastic cabinet is a handsome and fitting enclosure for the superior circuitry which produces brighter, sharper pictures — even in extreme fringe areas! The high quality cascode circuit, first used by Turner, reduces noise and snow to a minimum, stabilizes the picture . . . makes viewing a real pleasure. Your careful comparison of the Turner with other boosters is invited. You'll find the TV-2 has no peer!

TURNER *Challengers*

Inexpensive Microphones for General Sound Work



Turner L40 Lapel Microphone

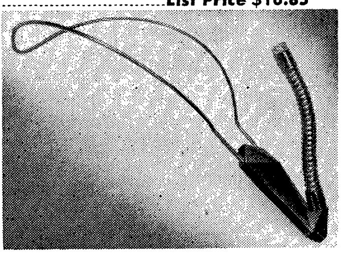
Small, lightweight and inconspicuous, the L40 can be worn in the lapel, used with the 3H or concealed. Highest quality Bimorph, moisture sealed crystal produces high signal level. Engineered for crisp, clear speech reproduction. Chest sounds damped out. Used for built-in applications, public address, recording and as sound reinforcers. Also used for dictographic and detective work. Alligator clip may be used to secure unit to clothing. Satin chrome finish. **Level:** 52 db below 1 volt/dyne/sq. cm. **Response:** 50-8,000 c.p.s. With 20 ft. attached cable.
Model L40 .... **List Price $25.00**

With Third Hand — L40-3H Slips over neck in a jiffy. Ideal for mobile sound work and call systems where operator needs both hands free. Indispensable for demonstrators.
Model L40-3H .... **List Price $30.00**

Priced within the range of almost every user, Turner Challengers offer performance, quality and appearance usually found in microphones listing at twice their low cost. Engineered with substantially flat response and high output level, they give clear cut reproduction of voice and music. Truly economical!

Model BX Crystal—For recording, P.A. and amateur work. Brown Metalustre finish. **Level:** —52 db. **Response:** 60-6,000 c.p.s. Complete with 7 ft. attached cable.
Model BX .... **List Price $11.75**

Model BD Dynamic — Same appearance and finish as BX. Equipped with dynamic cartridge. Works equally well indoors or out. **Level:** —52 db at high impedance. **Response:** 100-6,000 c.p.s. Complete with 7 ft. attached cable. 50, 200, 500 ohms or high impedance.
Model BD .... **List Price $16.85**



Famous Turner "Third Hand"

Slips over your head in a jiffy and holds microphone close to your mouth, where you get excellent volume without feedback. As natural to wear as a necktie and lets you use both hands elsewhere. Stays out of your line of vision. Talk close without craning your neck. Cuts down background noises. Can be used with long line as traveling microphone. Ideal for window demonstrations, etc Has 6¾" flexible gooseneck; ⅝"—27 thread. Black enamel finish. Recommended for use with Turner microphones as they will not blast from close speaking.
Model 3H .... **List Price $5.00**

Model CX Crystal — Satin chrome finish. 7 ft. removable cable set. Standard ⅝"—27 thread mounting. **Level:** —52 db. **Response:** 60-7,000 c.p.s.
Model CX .... **List Price $16.25**

Model CD Dynamic — Same style and finish as CX. High Quality magnets. 7 ft. removable cable set. **Level:** —52 db at high impedance. **Response:** 100-7,000 c.p.s. 50, 200, 500 ohms or high impedance.
Model CD .... **List Price $20.75**

For Hand, Stand or Desk Use

Competitor

Model 60X Crystal — Good quality speech reproduction at low cost. For amateurs, P.A. and paging systems. Two-ply, torsional, moisture sealed crystal circuit has aluminum diaphragm, shock proof mounting, wind and blast proofed. Attractive die-cast alloy case is finished in baked-on peach enamel. Furnished with standard ⅝"—27 thread for stand mounting. **Level:** —52 db. **Response:** 70-7,000 c.p.s. 6 ft. attached single conductor shielded fabric covered cable. Anchored firmly to case with Heyco strain relief bushing. **Dimensions:** 3-7/16" high x 2⅜" wide x 1-11/32" thick. Weight, 10 oz.
Model 60X .... **List Price $10.85**
Model S60X. Same as 60X but with on-off slide switch. **List Price $12.85**

THE TURNER COMPANY, CEDAR RAPIDS, IOWA

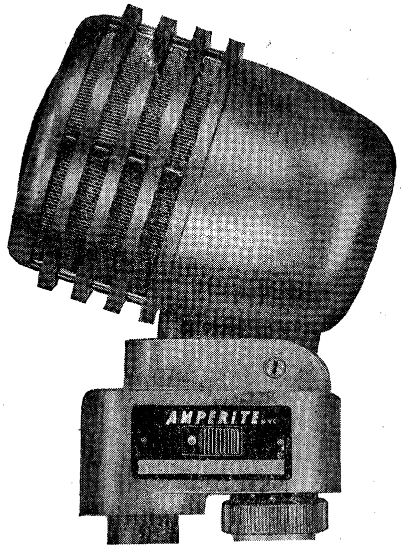
VELOCITY **AMPERITE** MICROPHONES

PREFERRED BY LEADING P. A. MEN THE WORLD OVER

The Finest Cardioid Dynamic!

P.G.
PRESSURE GRADIENT
DYNAMIC

You can actually hear the difference!



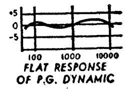
•UNI-DIRECTIONAL
NEW SUPERIOR ELIPSOID PICKUP PATTERN

•ELIMINATES FEEDBACK
TROUBLE BECAUSE IT HAS LOWEST FEED BACK POINT OF ALL DIAPHRAGM TYPE MICROPHONES

•FLAT RESPONSE. FREE FROM ANNOYING PEAKS, GIVING STUDIO QUALITY REPRODUCTION

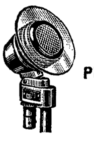
The P.G. diaphragm follows air particle velocity where amplitude is a **GRADIENT** of the **PRESSURE.** In ordinary dynamics amplitude is restricted from following air particle velocity. The **P.G. DYNAMIC** is a radical improvement in this type of microphone. You can actually hear the difference. Case is designed according to modern acoustic principles. Rugged, not affected by temperature, altitude or humidity. **Has unusually high output.**

ELIPSOID
PICKUP
PATTERN



Model PGH —hi-imp. } **$32.00**
Model PGL —50 ohms } **List**

Output .... —55 db
Freq. Resp. .... 40-10000 CPS
Cable Length .... 25, ft.
Finish .... Chrome
Switch .... Yes
Cable Connector .... Yes
Stand Thread 5/8-27
Shipping Weight .... 2½ lbs.



PLASTIC BAFFLE FOR P.G. DYNAMIC

Increases output of the microphone 4 db. Especially useful when performer is at distance of 12″ or more. Excellent for picking up entire stage, bands, etc. Snaps into place.

Model PG .... List $1.50

AMPERITE MICROPHONE STANDS—SPECIFICATIONS

Model	Description	Base Wt.	Base Spread	Height Range	Thread	List Gunmetal or Chrome	Ship. Wt.
DS-M	Comb. Desk & Banquet	6 lb.	7½″	16″-24″	5/8-27″	$12.00	11 lb.
DS	Desk only	6 lb.	7½″	3″	5/8-27″ & ½″ P.	6.00	11 lb.

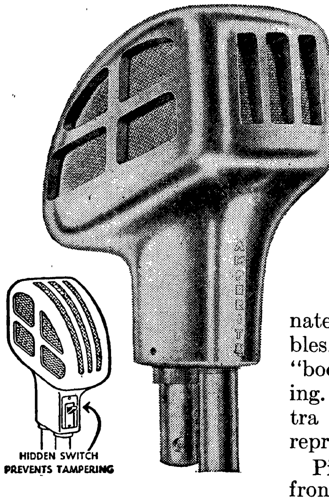
VELOCITY AMPERITE MICROPHONES

PREFERRED BY LEADING P. A. MEN THE WORLD OVER

New AMPERITE STUDIO "Ribbon" MICROPHONE

MODELS R80H-R80L

A "Blastproof Velocity" Eliminates Feedback Troubles



The Finest in Microphones regardless of Price

Reproduction is of the very highest type. Excellent for broadcasting, recording and public address. Eliminates feedback troubles. Will not become "boomy" on close talking. An entire orchestra can be faithfully reproduced.

Pick-up angle 120° front and back with practically no frequency discrimination. In spite of the wide pick-up angle, feedback is reduced to a minimum.

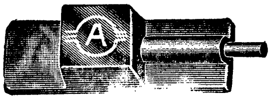
Not affected by temperature, altitude or humidity. Will operate under any climatic conditions—indoors or outdoors. Not affected by wind.

Frequency range 40-14,000 cps. Output —56 db. Complete with switch (optional), cable connector and 25′ cable. Finish—Chrome. Stand. thread, Standard ⅝″-27.

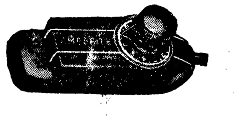
Model	List
R80L—200 ohms output	$80.00
R80H—High impedance	80.00

50 ohms available. Shipping Weight 10 lbs.

AMPERITE KONTAK MIKE FOR MUSICAL INSTRUMENTS



(Model SKH)



(Model KKH)

Gives natural reinforcement without peaks. Easily attached without tools. Will operate with either low or high-gain amplifiers. Frequency response 40 to 9000 cps. Output, —40 db.

Shipping Weight 2 lbs.

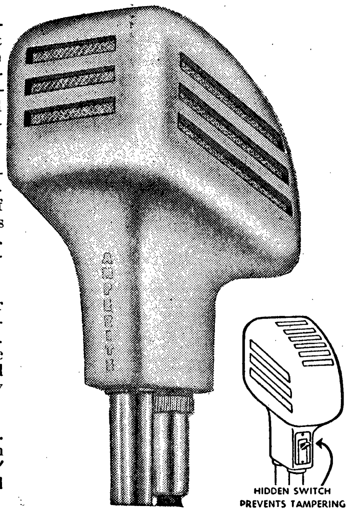
Model SKH—Hi-impedance	List $12.00
Model KKH—With Hand Volume Control	List 18.00
Model KF —Foot Pedal Only	List 18.00

Low impedance available in model SKH at same price.

New "RIBBON MICROPHONE," RBHG—RBLG

Automatically Adjusted for Close or Distant Pick-Up

A "Blastproof" Velocity



Studio reproduction — low feedback. A "ribbon" microphone that brings broadcast quality within everyone's reach. **Perfectly natural reproduction on close talking—you can even shout into it.** Will also faithfully reproduce an entire orchestra.

Pick up angle front and back—120° with practically no frequency discrimination. In spite of wide pick-up angle—feedback is reduced to an absolute minimum. Low feed back is due to flat response of the microphone.

Excellent for studio—P. A. or recording. Not affected by temperature, altitude or humidity. Can be used under all climatic conditions, and will withstand rough handling. Not affected by wind.

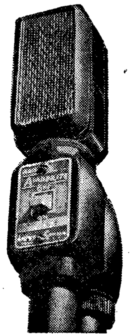
Frequency range 50-11,000 cps. Output —62 db. Complete with switch, cable connector, and 25′ cable. Finish — Chrome. Stand thread—Standard ⅝″—27.

	List
Model RBHG—High impedance	$42.00
Model RBLG—200 ohms output	42.00

50 ohms available. Shipping Weight 8 lbs.

COMPACT VELOCITY, ACH—ACL

The smallest complete velocity ever made



Compact—yet a complete Amperite "Ribbon" Microphone including transformer, switch and cable connector. Recommended wherever a compact microphone is a necessity. Can be used either as a hand microphone or on a stand. Frequency range 120 to 8,000 cps. Output —65 db.

Complete with switch—cable connector—12′ cable. Stand thread—Standard ⅝″-27.

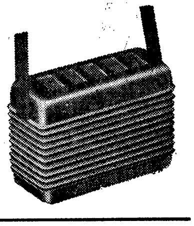
	List
Model ACH—High impedance	$32.00
Model ACL—200 ohms output	32.00

50 ohms available

Shipping Weight 5 lbs.

Amperite 7JH—7JL VELOCITY MICROPHONE

"Lapel" Type

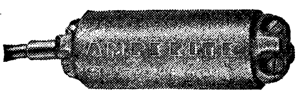


Reproduction is so perfect—you can hardly tell a microphone is working. Free from annoying peaks or mechanical reproduction. Output does not change with any position of the head. It can be concealed in clothing. Will operate under all climatic conditions. Unusually low feedback. Frequency range 60-7,000 cps. Output: —63 db. Cable length 25′. Rubber case.

Model 7JH—High impedance	List $32.00
Model 7JL—200 ohms output	List 32.00

50 ohms available. Shipping Weight 3 lbs.

Model LGP—Input Transformer (Cable Type)



Enables the use of low impedance microphones and cable lengths up to 5,000′ with amplifiers having high impedance input. Special shielding eliminates hum pick-up. Can be used with 25, 50, or 200 ohm microphones. Output connects directly into high impedance input of amplifier.

Standard grade recommended for speech. Laboratory grade for music.

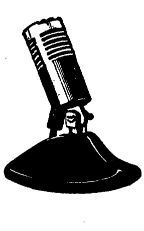
Model LGP—Lab—40 to 14,000 cps.	List 10.00

Shipping Weight 3 lbs.

American FULL VISION MICROPHONES

DR 330

RIBBON and DYNAMIC CARDIOID



FREQUENCY RESPONSE: 40-15,000 c.p.s., plus or minus 2.5 db.

OUTPUT LEVEL: —86 db. for 50 ohms impedance (0 db = 1 volt/dyne/cm²).

POLAR PATTERN: True cardioid. Easily and quickly changed to bi-directional ribbon only, or omni-directional dynamic only.

IMPEDANCE: Easily and quickly changed to 50, 150 or 250 ohms.

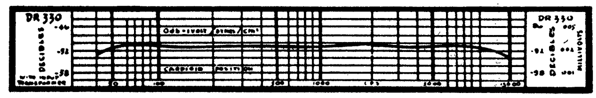
CONNECTOR: Cannon XL-3-11 "latch-lock" connector.

CABLE: 25 ft. two-conductor shielded rubber covered.

STAND COUPLING: ⅝"-27 thread on combination swivel and "slide-lock."

DIMENSIONS: Ht. 6 ins., dia. 2 ins., wt. 20 ozs.

LIST PRICE: Code; REBID **$250.00**



DR 331

RIBBON BI-DIRECTIONAL

FREQUENCY RESPONSE: 50-8000 c.p.s., plus or minus 3.0 db.

OUTPUT LEVEL: —55 db for high impedance (0 db = 1 volt/dyne/cm²).

POLAR PATTERN: True velocity bi-directional.

IMPEDANCE: Easily and quickly changed to low (30-50) med. (250) or high (40,000) ohms.

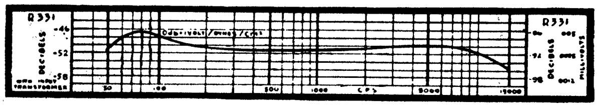
CONNECTOR: Cannon XL-3-11 "latch-lock" connector.

CABLE: 25 ft. single-connector shielded rubber covered.

STAND COUPLING: ⅝"-27 thread on comb. swivel and "slide-lock."

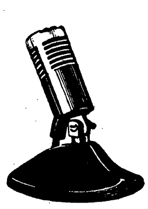
DIMENSIONS: Ht. 6 ins., dia. 2 ins., wt. 20 ozs.

LIST PRICE: Code: DYRIB **$75.00**



DR 332

RIBBON and DYNAMIC CARDIOID



FREQUENCY RESPONSE: 50-8,000 c.p.s., plus or minus 5.0 db.

OUTPUT LEVEL: —53 db for high impedance (0 db = 1 volt/dyne/cm²).

POLAR PATTERN: True cardioid.

IMPEDANCE: Easily and quickly changed to low (30-50), med. (250) or high (40,000) ohms.

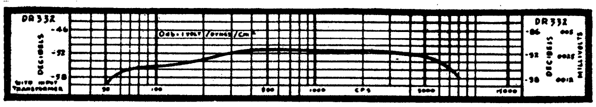
CONNECTOR: Cannon XL-3-11 "latch-lock" connector.

CABLE: 25 ft. single-connector shielded rubber covered.

STAND COUPLING: ⅝"-27 thread on combination swivel and "slide-lock."

DIMENSIONS: Ht. 6 ins., dia. 2 ins., wt. 20 ozs.

LIST PRICE: Code; BIRIB **$85.00**



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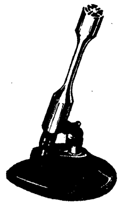
D 33

DYNAMIC OMNI-DIRECTIONAL



FREQUENCY RESPONSE: 40-15,000 c.p.s., plus or minus 2.5 db.

OUTPUT LEVEL: —86 db for 30-50 ohms impedance (0 db = 1 volt/dyne/cm²).

IMPEDANCE: Easily and quickly changed to 30-50 or 250 ohms.

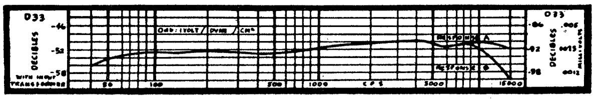
CONNECTOR: Cannon XL-3-11 "latch-lock" connector.

CABLE: 25 ft. two-conductor shielded rubber covered.

STAND COUPLING: ⅝"-27 thread on combination swivel and "slide-lock."

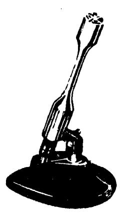
DIMENSIONS: Ht. 8¼ ins., dia. 1 in., wt. 7 ozs.

LIST PRICE: Code; DOING **$125.00**



D 22

DYNAMIC OMNI-DIRECTIONAL



FREQUENCY RESPONSE: 100-8000 c.p.s., plus or minus 5.0 db.

OUTPUT LEVEL: —52 db for high impedance (0 db = 1 volt/dyne/cm²).

IMPEDANCE: Easily and quickly changed to low (30-50) or high (40,000) ohms.

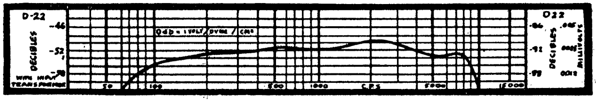
CONNECTOR: Cannon XL-3-11 "latch-lock" connector.

CABLE: 25 ft. single conductor shielded rubber covered.

STAND COUPLING: ⅝"-27 thread on combination swivel and "slide-lock."

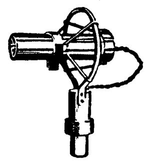
DIMENSIONS: Ht. 8¼ ins., dia. 1 in., wt. 7 ozs.

LIST PRICE: Code; doall **$75.00**



D 44

DYNAMIC OMNI-DIRECTIONAL



FREQUENCY RESPONSE: 50-15,000 c.p.s., plus or minus 2.5 db.

OUTPUT LEVEL: —88 db, 50 ohms impedance (0 db = 1 volt/dyne/cm²).

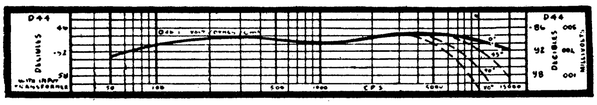
IMPEDANCE: 50 ohms.

CONNECTOR: American APF-1

COUPLING: Microphone terminated in male part of connector. Female part of connector has ring-lock ferrule for convenient diconnect. Coupling ⅝"-27 internal thread for installation on fish pole or boom.

DIMENSIONS: Ht. 6¾ ins., mic. unit 3⅝ ins., wt. 7 ozs.

LIST PRICE: Code; dixie **$225.00**



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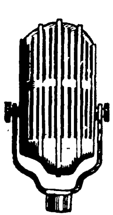
American FULL VISION MICROPHONES

D9AT

DYNAMIC UNI-DIRECTIONAL



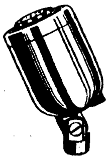
FREQUENCY RESPONSE: 100-7,000 c.p.s.
OUTPUT LEVEL:—54 db for high impedance
(0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 or 500 ohms available)
CONNECTOR: Cannon XL-3-11 "latch-lock."
CABLE: 25 ft. single-conductor shielded rubber covered.
STAND COUPLING: ⅝"-27 thread.
DIMENSIONS: Ht. 7 ins., breadth 2½ ins., wt. 2½ lbs.

LIST PRICE: Code; HIWEL........................ $45.00

D9A LOW 50 LIST PRICE: Code; LOWEL........................ $42.00

D8T

DYNAMIC OMNI-DIRECTIONAL



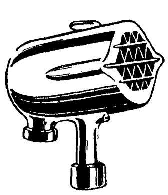
FREQUENCY RESPONSE: Substantially flat 100-6,000 c.p.s.
OUTPUT LEVEL: —56 db (0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 or 500 ohms available).
CONNECTOR: Amphenol MC-1M.
CABLE: 12½ ft. single-conductor shielded rubber covered.
STAND COUPLING: ⅝"-27 thread on swivel.
DIMENSIONS: Ht. 3¼ ins., dia. 2 ins., wt. 13 ozs.

LIST PRICE: Code; DATAH........................ $30.00

D8 LOW 50 LIST PRICE: Code; DATAL........................ $27.00

D7T

DYNAMIC OMNI-DIRECTIONAL



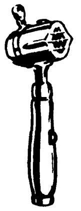
FREQUENCY RESPONSE: Substantially flat.
OUTPUT LEVEL: —57 db for high impedance
(0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 to 500 ohms available).
CONNECTOR: MC-1M Amphenol.
CABLE: 12½ ft. single-conductor shielded rubber covered with Amphenol female fitting, loose end.
STAND COUPLING: ⅝"-27 thread
DIMENSIONS: Ht. 2½ ins., dia. 1½ in., wt. 8½ ozs.

LIST PRICE: Code; DISET........................ $27.00

D7 LOW 50 LIST PRICE: Code; DISEV........................ $24.00

D7TS

DYNAMIC OMNI-DIRECTIONAL SLIDE SWITCH



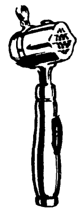
FREQUENCY RESPONSE: Substantially flat.
OUTPUT LEVEL: —57 db. for high impedance
(0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 or 500 ohms available).
CABLE: 6 ft. single-conductor shielded rubber covered, loose end.
DIMENSIONS: Ht. 8 ins., dia. 1½ ins., wt. 14 ozs.

LIST PRICE: Code; DIAHT........................ $30.00

D7S LOW 50 LIST PRICE: Code; DIAHL........................ $27.00

D7TP

DYNAMIC OMNI-DIRECTIONAL PRESS TO TALK SWITCH



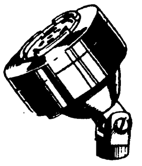
FREQUENCY RESPONSE: Substantially flat.
OUTPUT LEVEL: —57 db. for high impedance
(0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 or 500 ohms available).
CABLE: 6 ft. single-conductor shielded rubber covered, loose end.
DIMENSIONS: Ht. 8 ins., dia. 1½ ins., wt. 10½ ozs.

LIST PRICE: Code; DIMAT........................ $31.00

D7P LOW 50 LIST PRICE: Code; DIMAR........................ $28.00

D6T

DYNAMIC OMNI-DIRECTIONAL



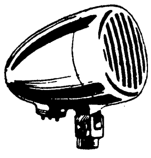
FREQUENCY RESPONSE: 100-6,000 c.p.s.
OUTPUT LEVEL: —54 db for high impedance
(0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 or 500 ohms available).
CONNECTOR: Amphenol MC-1M.
CABLE: 25 ft. single-conductor shielded rubber covered.
STAND COUPLING: ⅝"-27 thread on swivel.
DIMENSIONS: Ht. 3¾ ins., dia. 2½ ins., wt. 1¾ lbs.

LIST PRICE: Code; DIXIT........................ $33.00

D6 LOW 50 LIST PRICE: Code; DIXIX........................ $30.00

D5T

DYNAMIC SEMI-DIRECTIONAL



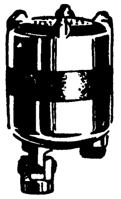
FREQUENCY RESPONSE: 50-6,000 c.p.s.
OUTPUT LEVEL: —52 db for high impedance
(0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 or 500 ohms available).
CONNECTOR: Cannon XL-3-11.
CABLE: 25 ft. single-conductor shielded rubber covered.
STAND COUPLING: ⅝"-27 thread on swivel.
DIMENSIONS: Ht. 3½ ins., dia 2½ ins., wt. 1½ lbs.

LIST PRICE: Code; DYHIM........................ $39.00

D5 LOW 50 LIST PRICE: Code; DYLOM........................ $33.00

D4T

DYNAMIC OMNI-DIRECTIONAL



FREQUENCY RESPONSE: 60-7,500 c.p.s.
OUTPUT LEVEL: —56 db for high impedance
(0 db=1 volt/dyne/cm^2).
IMPEDANCE: 38,000 ohms. (200 or 500 ohms available).
CONNECTOR: Amphenol MC-1M.
CABLE: 12½ ft. single-conductor shielded rubber covered.
STAND COUPLING: ⅝"-27 thread on swivel.
DIMENSIONS: Ht. 4 ins., dia 2 ins., wt. 10½ ozs.

LIST PRICE: Code; DFORT........................ $24.00

D4 LOW 50 LIST PRICE: Code; DEFOR........................ $21.50

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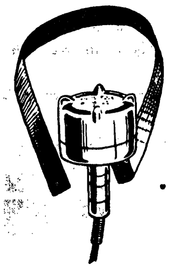
D4G

DYNAMIC LECTURERS MICROPHONE

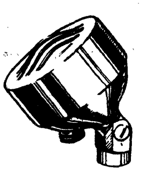


FREQUENCY RESPONSE: 100-4,000 c.p.s.
OUTPUT LEVEL: —86 db for low impedance (0 db = 1 volt/dyne/cm²).
IMPEDANCE: 50 ohms.
CONNECTOR: Cannon XL-3-11 "latch-lock."
CABLE: 25 ft. two-conductor shielded rubber covered.
DIMENSIONS: Wt. 12 ozs., complete.
LIST PRICE: Code; MICRO.................... **$35.00**

D4GT Hi. LIST PRICE: Code; GETEE **$37.50**

C6

CRYSTAL SEMI and NON-DIRECTIONAL



FREQUENCY RESPONSE: 100-6,000 c.p.s.
OUTPUT LEVEL: —55 db (0 db = 1 volt/dyne/cm²).
IMPEDANCE: High.
CONNECTOR: Amphenol. MC-1M.
CABLE: 6 ft. single-conductor shielded rubber covered.
STAND COUPLING: ⅝"-27 thread on swivel.
DIMENSIONS: Ht. 3 ins., dia. 2⅜ ins., wt. 8 ozs.
LIST PRICE: Code; CESIX.................... **$18.00**

C7H

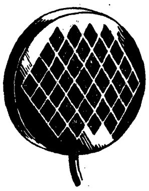
CRYSTAL MICROPHONE

FREQUENCY RESPONSE: 50-6,000 c.p.s.
OUTPUT LEVEL: —55 db. (0 db = 1 volt/dyne/cm²).
IMPEDANCE: High.
CONNECTOR: Amphenol MC-1M.
CABLE: 12½ ft. single-conductor shielded rubber covered.
STAND COUPLING: ⅝"-27 thread on swivel.
DIMENSIONS: Length 3½ ins., dia. 2½ ins., wt. 15 ozs.
LIST PRICE: Code; CSEVN.................... **$24.50**

C7L LOW 50 LIST PRICE: Code; CSEVL.................... **$29.00**

CL2

CRYSTAL LAPEL MICROPHONE

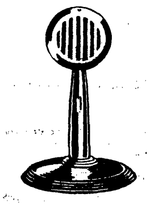


FREQUENCY RESPONSE: 50-5,000 c.p.s.
OUTPUT LEVEL: —55 db. (0 db = 1 volt/dyne/cm²).
IMPEDANCE: High.
CABLE: 25 ft. single-conductor shielded plastic covered.
DIMENSIONS: Dia. 2¼ ins., depth ⅜ in., wt. 6¼ ozs.
LIST PRICE: Code; LATAL.................... **$27.25**

CL3 35 Ft. LIST PRICE: Code; LATAT.................... **$28.45**

RC

CRYSTAL MICROPHONE

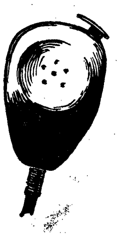


FREQUENCY RESPONSE: 50-6,000 c.p.s.
OUTPUT LEVEL: —55 db. (0 db = 1 volt/dyne/cm²).
IMPEDANCE: High.
CABLE: 7 ft. single-conductor shielded rubber covered.
STAND COUPLING: Base easily removed by half turn of bayonet lock for use as hand microphone. Handle has ⅝"-27 ext. thread, microphone unit ⅝"-27 int. thread for mounting on floor stand.
DIMENSIONS: Ht. 10 ins., wt. 1 lb.
LIST PRICE: Code; ARCEE.................... **$10.90**

RCS SWITCH LIST PRICE: Code; ARCEX.................... **$13.50**

CHK

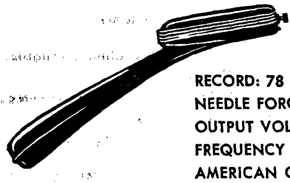
HAND-HELD CARBON MICROPHONE



FREQUENCY RESPONSE: 300-4,000 C.P.S., rising characteristic.
OUTPUT LEVEL: —20 db down for one volt for normal speech.
IMPEDENCE: 40 ohms.
CABLE: 5 feet extended Koiled-Kord 3-conductor, rubber covered.
DIMENSIONS: Weighs 8½ oz. with cable.
LIST PRICE: Code; KARBO.................... **$27.50**

J1

PHONOGRAPH PICKUP



RECORD: 78 RPM.
NEEDLE FORCE: 1¼ ounces.
OUTPUT VOLTAGE: 3 volts.
FREQUENCY RANGE: 50-8,000 c.p.s.
AMERICAN CARTRIDGE USED: CR1A (no needle).
LIST PRICE: Code; JADED.................... **$6.00**

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J3

LIGHTWEIGHT PHONOGRAPH PICKUP

RECORD: Long playing and 78 RPM.
NEEDLE FORCE: 6 grams.
OUTPUT VOLTAGE: 1 volt.
FREQUENCY RANGE: 50-6,000 c.p.s.
AMERICAN CARTRIDGE USED: CR5, CR6 or CR7 which includes Osmium or Sapphire tip needle. Specify cartridge and needle required.
LIST PRICE: Code; JUBAL.................... **$8.00**

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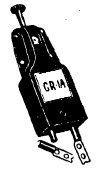
American MICROPHONE CO., 370 SOUTH FAIR OAKS AVE., PASADENA 1, CALIFORNIA

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

American CRYSTAL CARTRIDGES

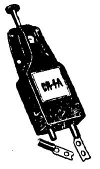
CR1A 78 RPM



NEEDLE FORCE: 1¼ ounces.
OUTPUT VOLTAGE: 3 volts.
FREQUENCY RANGE: 50-8,000 c.p.s.
WEIGHT: 17 grams.
NEEDLE TYPE: Optional (Not supplied).
LIST PRICE: Code; CINCH.................. **$4.00**

CR1A cartridges feature the exclusive American designed "Torque-Limit" needle chuck. Prevents chuck moving when tension or pressure is applied to the needle screw, insuring needle socket remaining centrally located in the cartridge, and guaranteeing excellent needle point compliance. Best operation is obtained with offset needles using Sapphire or precious metal tip.

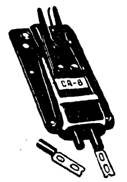
CR4A 78 RPM



NEEDLE FORCE: 1¼ ounces.
OUTPUT VOLTAGE: 3½ volts.
FREQUENCY RANGE: 50-8,000 c.p.s.
WEIGHT: 17 grams.
NEEDLE TYPE: Optional (Not supplied).
LIST PRICE: Code; CLASP.................. **$6.50**

The CR4A cartridge representing a desirable combination of high output together with wide frequency range, makes this a most desirable unit. Also features the exclusive American designed "Torque-Limit" needle chuck.

CR6 78 RPM

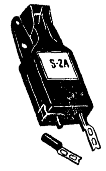


NEEDLE FORCE: 8 grams.
OUTPUT VOLTAGE: 1.1 volts.
FREQUENCY RANGE: 50-6,000 c.p.s.
WEIGHT: 5 grams.
NEEDLE TYPE: Three mil radius Osmium tip needle supplied.
LIST PRICE: Code; CUPAY................ **$6.50**

CR6S 78 RPM.
Same as above with Sapphire tip.
LIST PRICE: Code; CUPAN................ **$6.50**

The CR6 cartridge using a three mil radius Osmium tipped or Sapphire tipped stylus is an exceptionally light weight unit for replacement in 78 RPM record players where required.

S2A 78 RPM

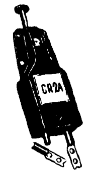


NEEDLE FORCE: 1 ounce.
OUTPUT VOLTAGE: 1 volt.
FREQUENCY RANGE: 50-6,000 c.p.s.
WEIGHT: 17 grams.
NEEDLE TYPE: 3 mil radius Osmium tip needle supplied.
LIST PRICE: Code; DELTA.................. **$6.50**

The S2A cartridge has rolled-off high frequency response for pleasant listening to all types of recordings and transcriptions. The reduction of surface noises restores old albums of favorite records to new usefulness.

Licensed under Patents of the Brush Development Co.

CR2A 78 RPM



NEEDLE FORCE: 1⅛ ounces.
OUTPUT VOLTAGE: 1½ volts.
FREQUENCY RANGE: 50-7,000 c.p.s.
WEIGHT: 17 grams.
NEEDLE TYPE: Optional (Not supplied).
LIST PRICE: Code; CIVIC.................. **$4.00**

CR2A cartridges feature the exclusive American designed "Torque-Limit" needle chuck. Prevents chuck moving when tension or pressure is applied to the needle screw, insuring needle socket remaining centrally located in the cartridge, and guaranteeing excellent needle point compliance. Best operation is obtained with offset needles using Sapphire or precious metal tip.

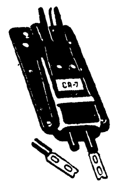
CR5 LONG PLAYING 33⅓ and 45 RPM

NEEDLE FORCE: 6 grams.
OUTPUT VOLTAGE: 1 volt.
FREQUENCY RANGE: 50-6,000 c.p.s.
WEIGHT: 5 grams.
NEEDLE TYPE: One mil radius Osmium tip needle supplied.
LIST PRICE: Code; CABAL............. **$6.00**

CR5S LONG PLAYING 33⅓ and 45 RPM.
Same as above with Sapphire tip.
LIST PRICE: Code; CADAN............. **$6.50**

The CR5 cartridge using one mil radius Osmium tipped stylus is highly recommended for replacement in most 33⅓ and 45 RPM record players.

CR7 COMBINATION 33⅓, 45, and 78 RPM

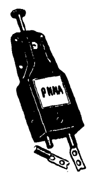


NEEDLE FORCE: 8 grams.
OUTPUT VOLTAGE: 1 volt.
FREQUENCY RANGE: 50-6,000 c.p.s.
WEIGHT: 5 grams.
NEEDLE TYPE: .0017 mil radius Osmium tip supplied.
LIST PRICE: Code; CADET.................. **$6.50**

CR7S COMBINATION 33⅓, 45 and 78 RPM.
Same as above with Sapphire tip.
LIST PRICE: Code; CADER................ **$6.50**

The CR7 cartridge is equipped with a combination Osmium tip stylus that will play both 78 RPM and microgroove records. Sapphire tip stylus available.

PNMA 78 RPM



NEEDLE FORCE: 1¼ ounces.
OUTPUT VOLTAGE: 1 volt.
FREQUENCY RANGE: 50-5,000 c.p.s.
WEIGHT: 17 grams.
NEEDLE TYPE: Optional (Not supplied).
LIST PRICE: Code; CRESS.................. **$8.00**

The PNMA cartridge is designed for use in extreme temperature and humidity conditions. Crystal element is moisture-resistant, sealed in a metal jacket, and will withstand temperatures to 200 degrees Fahrenheit.

FOR BEST RESULTS: PNMA cartridges should be terminated into a load resistor of 5 megohms or higher. Low capacity cable from cartridge to amplifier input should be used, and should be as short as possible.

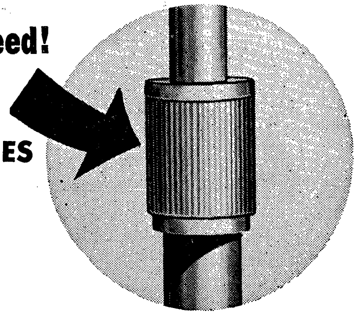
Licensed under Patents of Western Electric Co., Inc.

American MICROPHONE CO., 370 SOUTH FAIR OAKS AVE., PASADENA 1, CALIFORNIA

ATLAS SOUND CORP.

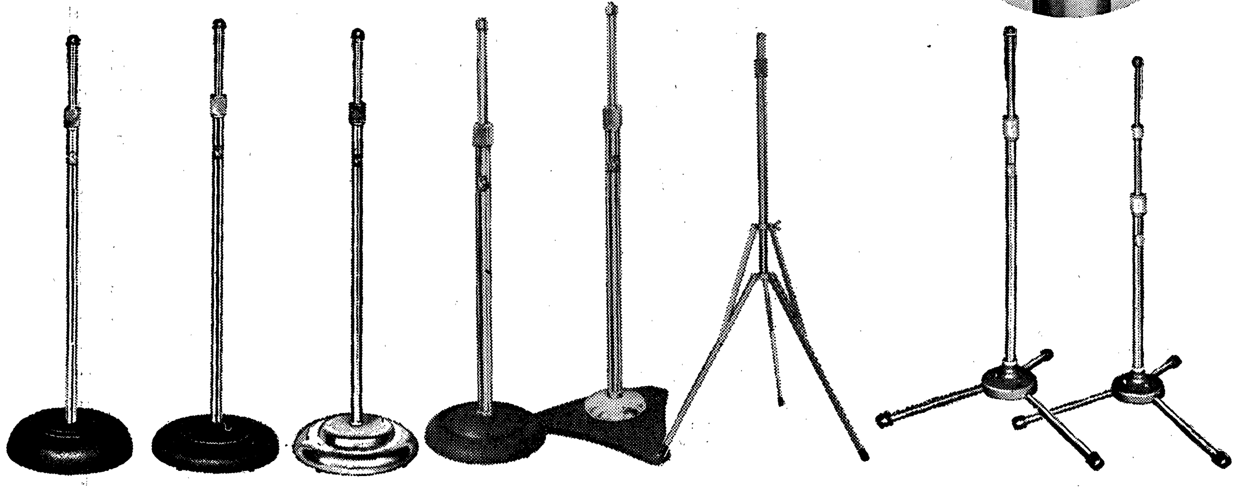
the complete line for every public address need!

ATLAS MICROPHONE STANDS



featuring SPECIAL FULL-GRIP VELVET ACTION CLUTCHES
maximum STABILITY, QUIET EASE AND WEAR

*MS-25 features SAFETY AIR-LOCK CUSHION



MS-10C **Leader**

MS-12C **Standard**

MS-11C **Standard DeLuxe**

MS-20 **Professional**

MS-25 **Studio DeLuxe**

CS-1 **Collapsible**

CS-32 **2-piece Demountable**

CS-33 **3-piece Demountable**

The "Full-Grip" Clutch offers an extended length clutch body, permitting a secure, full-hand grip. The clutch mechanism is inner-lined with a wear-proof bakelite locking collet which grips without jamming, slipping, or sudden dropping. All bases are functionally designed to offer maximum stability for a given base weight. The maximum base mass is located at the outer periphery of the casting where the concentrated weight is most useful. All bases include self-leveling, shock-absorbent base pads, plus three additional "anti-tip" points located between the base pads. The complete tube assemblies of all models are "super-chrome" plated, assuring "life-time" wear. All models terminate in a ⅝"-27 carefully machined thread.

MODEL	Weight	Base Finish	Tube Finish	Height Adjust.	Base Diam.	LIST PRICE
MS-10C	9 lbs.	Gray Shrivel	Full Chrome	35" to 64"	10"	**$ 9.75**
MS-12C	12 lbs.	Gray Shrivel	Full Chrome	35" to 65"	10"	**10.50**
MS-11C	12 lbs.	Full Chrome	Full Chrome	35" to 65"	10"	**13.00**
†MS-20	15 lbs.	Gray Shrivel	Full Chrome	42" to 72"	12"	**15.50**
†MS-25	24 lbs.	Chrome & Gray Shrivel	Full Chrome	42" to 72"	17"	**21.50**
§CS-1	5 lbs.	Cadmium Plated	Full Chrome	23" to 62"	Collapsible	**16.00**
***CS-32**	4 lbs.	Chrome & Gray	Full Chrome	36" to 64"	Demountable	**10.25**
***CS-33**	3 lbs.	Hammerloid	Full Chrome	26" to 64"	Demountable	**11.75**

*Each stand is individually packed complete in a single carton.

†The MS-20 and MS-24 use large diameter, oversize, telescoping brass tube assemblies (⅞" telescoping tube — 1⅛" base tube) resulting in a handsome and fine-appearing stand that supplements the professional appearance of large-size high quality microphones.

§Collapsible to a minimum overall length of 23 inches.

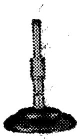
*SAFETY AIR-LOCK CUSHION

Sensational new Atlas feature that prevents accidental or sudden slippage of telescoping section. This section is always "cushioned on air," and the controlled escapement allows only a slow, smooth, quiet collapse of stand.

ADJUSTABLE BANQUET STAND

Features "Full-Grip Velvet-Action" adjustment. Tube and base handsome super-chrome finished. Adjustable 18"-32". Base diameter 8". Wt. 5 lbs.

Model TS-6 **List Price $9.00**

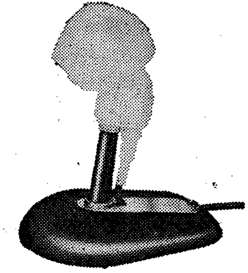


'VELVET ACTION' DESK STAND

DS-5 and DS-7 Desk Stands—Same fine finish and workmanship as floor models. Adjustable DS-7 has heavy duty ⅝" and ⅞" tubing. Felt base pads included. Base diameter 6", gray shrivel finish; tube chromium plated.

Model	Adj. Height	List Price
DS-5	Fixed 6"	**$3.00**
DS-7	8" to 13"	**5.00**

MODEL DS-10—"The Streamliner"



Modern — Attractive — Functional
Stable!

Compliments appearance of any mike. Conceals mike cable in slot beneath center section of chromium trim and directs it out at rear of base. Adequate space under base for installation of "on-off" or "press-to-talk" switch.

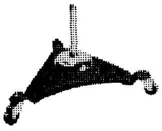
Model DS-10 **List Price $5.00**

ATLAS SOUND CORP.

the complete line for every public address need!

BS-36W Mobile Model — Identical to BS-36 but features DeLuxe base having ball-bearing hard-rnubber swivel castors that permit entire stand to be wheeled about.

List Price $67.50



PROFESSIONAL BOOM STAND

New model! All advantages of "Floating Action" and "Safety Air-Lock Cushion" that prevents accidental slippage. All parts "Velvet Smooth" in operation. Boom easily removable to use upright as a conventional floor stand. Gyromatic swivel joint assures mike always hangs in proper position. **Specifications:** Boom length 72" (more extension addable). Adjustable vertical extension 48"-72". Base diam. 17". Tubular sections super-chrome plated. Modernistic base finished in chrome and gun metal shrivel.. "Snap On" hangers furnished to hold mike cable to boom section. Ship. wt. 33 lbs.

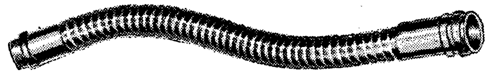
List Price $60.00

'SNAP ON' MICROPHONE ATTACHMENT

Permits any mike to be attached to or removed from any floor stand — instantly, safely, without on-and-off threading. SO-1 is ball-bearing spring sleeve attachment: one section is attached to mike, other section is permanently fastened to stand.

Model SO-1 **List Price $2.75**

FLEXIBLE GOOSE NECK



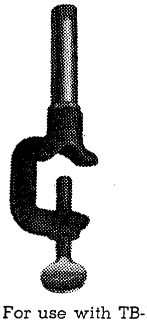
Attachable to any mike stand or fixture. Ends have 5/8"-27 male and female threads. GN-13 is 13" long; GN-19 is 19" long. Finished in polished chrome.

Model GN-13—List Price $2.75 **Model GN-19—List Price $3.75**

'BABY BOOM' ATTACHMENT

Easily attached to any mike stand and locked in any position. Also effectively used with bracket clamps BC-1 and SK-1. Boom length 32", chrome plated. Castings in gun metal shrivel. 5/8"-27 threads. Ship. wt. ?? lbs.

Model BB-1 **List Price $7.50**



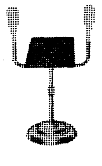
SKY HOOK

Answers many mike positioning problems. Fastens securely to ledges, round pipes, stanchions*. Has 5/8"-27 thread for any mike. Can also be used in combination with SW-1, GN-13, etc. Casting finish, gun metal shrivel; 3" long tube, chrome.

*Excellent for attaching an extra mike to a conventional floor stand.

Model SK-1 **List Price $3.50**

TS-7 BANQUET STAND (Only)

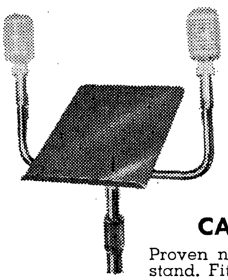


For use with TB-1. Heavy base, 10" diam. All parts super-chrome plated. Adjustable tube assembly. Easily placed on and moved along speaker's table. Ship. wt. 11 lbs.

Model TS-7 **List Price $10.00**

DUPLEX MIKE MOUNT

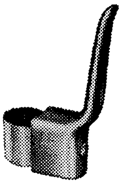
With Desk Attachment



Permits use of 2 mikes on any single stand. Reduces "off mike" possibility. Desk attachment and mike support arms detachable. Thus one mike alone may be used—to one side or rear of desk. Finished in chrome and cadmium. Moulded composition desk, 9" x 11". Ship wt. 2½ lbs.

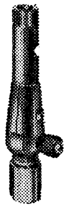
TB-1 **List $10.00**

CABLE HANGER →



Proven necessity on every mike stand. Fits all tubes, 7/8" to 1¼" diam.; attached and removed by 1 screw. All parts chrome finish.

Model CH-1 **List Price $3.00**

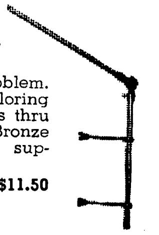


← GYROMATIC SWIVEL

Permits any mike to be adjusted and locked into any angle on any floor or desk stand. Also useful with SK-1, BC-1, etc. Precision die castings, super-chrome finish. 4½" long. 5/8"-27 male and female threads.

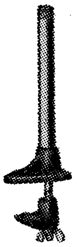
Model SW-1 **List Price $4.00**

BOOM BRACKET KIT →



Solves almost any mike placement problem. Set screw assembly enables tailoring bracket to any size. Mike cable feeds thru support arm and adjustable elbow. Bronze enamel finish. Main tubes 22" long; support tubes 5" long.

Model US-1 **List Price $11.50**

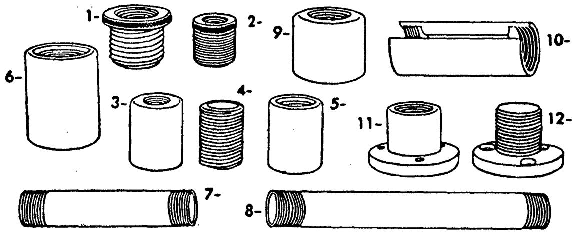


← BRACKET CLAMP

Very versatile. Usable with BB-1, GN-13, etc. Clamp can be removed and top flange screwed or bolted into position. Chrome tube 6" long. 5/8"-27 thread.

Model BC-1 **List Price $3.50**

MICROPHONE ADAPTORS & FITTINGS



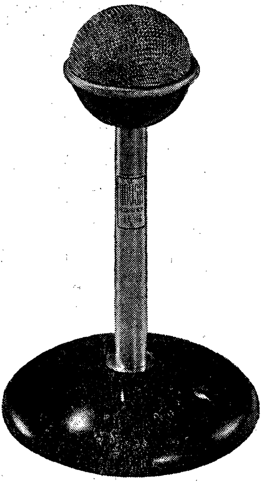
MODEL	Description	LIST PRICE
AD-1	5/8"-27 female to ½" pipe thread male (RCA Adaptor)	.60
AD-2	1/8" pipe female to 5/8"-27 male	.60
AD-3	1/8" pipe female to 5/8"-27 female	.60
AD-4	¾" long, 5/8'-27 male running thread	.30
AD-5	5/855-27 female to 5/8"-27 female coupling	.60
AD-6	7/8"-27 female to 7/8"-27 female coupling	.75
AD-7	3" long tube 5/8"-27 male each end	.60
AD-8	6" long tube 5/8"-27 male each end	.70
AD-9	7/8"-27 female to 5/8"-27 female	
AD-10	5/8"-24 female to 5/8"-27 female (W. E. Adaptor)	1.20
AD-11	Flange, 5/8-27" female. Base Diameter 1¼"	.70
AD-12	Flange, 5/8"-27 male. Base holes on 7/8" mounting centers	.70

All adaptors chrome plated.

We are prepared to supply any special types of adaptors or fittings, and bent tube sections, to your specifications in reasonable quantities.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

BRUSH ACOUSTIC PRODUCTS



MICROPHONES

BRUSH MODEL BA-106 MICROPHONE

The Brush Model BA-106 is a high quality microphone incorporating the hermetically sealed "Acousticel"* with Sintered bronze damping. "Metalseal"* crystal is used for protection against conditions of high humidity. This microphone offers unexcelled response in microphones of this type and price range.

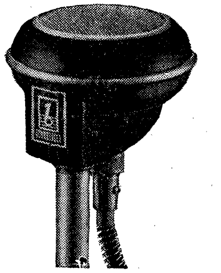
Vibration, shock or low frequency wind noise do not affect the performance of this microphone.

Output level 50 db. below 1 volt/dyne cm².

Flat from 40 to 6,000 cps. Unexcelled for home recording, public address systems, ham shacks, monitoring and institutional and industrial applications.

Net Wt. 1¼ lbs.

Shipping Wt. 3¼ lbs. **List Price $19.75**



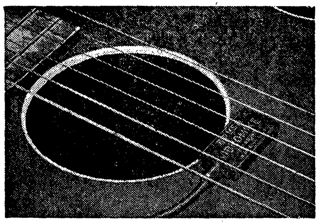
BRUSH MODEL BA-109 MICROPHONE

The Brush Model BA-109 microphone using the improved Acoustical* was created for public address, home recording and amateur applications. The "Metalseal"* crystal insures long life and reliability. Styled in rich maroon plastic and brushed chrome in compliance with the recent trend in industrial design.

- ✓ Response from 40 to 10,000 cps.
- ✓ Output Level 54 db. below 1 volt/dyne cm².
- ✓ Non-directional.
- ✓ High Impedance equivalent to approximately .002 mfd. (1.8 meg. ohms at 1,000 cycles.)

The microphone is designed for use with standard ⅝" 27 thread microphone stand.

* Trade Mark Shipping Wt. 1 lb. **List Price $22.50**



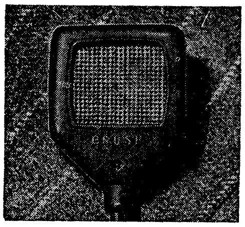
BRUSH MODEL "VM-1" VIBROMIKE*

The VM-1 or "Vibromike" is a miniature CONTACT-TYPE microphone with high sensitivity and unusually wide-range frequency response (30 to 6,000 cps.) Output voltage from .05 to .1 volt or higher. Size of microphone ⅞" x ¾" x ⅝".

Designed for a broad field of reproduction applications through direct contact. Adaptable to musical instruments, industrial uses—detecting mechanical vibrations. Hermetically sealed in black rubber covered case.

Microphone complete with mounting clamp and 25' of cable.

Model VM-1 . . . (#325) . . . . . . $19.50 list



BRUSH MODEL "BL-2" LAPEL MICROPHONE

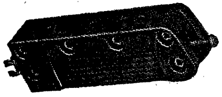
The improved Model BL-2 lapel microphone features virtually flat response from 30 to 10,000 cycles. Output level 57 db. below 1 volt/dyne/cm². Small and rugged (1½" x 2¼") the BL-2 can be used in hand or as instrument pickup as well as in lapel.

Microphone complete with 25' of cable.

Model BL-2 . . . (BA-111) . . . . . . $25.00 list

Net Wt. 8 oz. Shipping Wt. 2 lbs.

CRYSTAL CUTTER

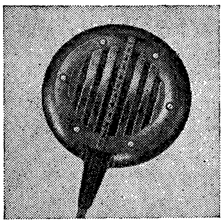


Brush Model "RC-20"

The Brush RC-20 Crystal Cutter has been designed to satisfy the demand for high quality, low cost recordings in the home, school and studio. Due to its inherent stiffness, the RC-20 will cut lateral type records in virtually all hard or soft disc materials. Being of simple and compact design, it is readily adaptable to all types of transcription equipment. A three watt amplifier is sufficient to satisfactorily drive the RC-20 cutter frequency response—flat within plus or minus 3 db. from 50 to 9,000 cps.

Cuts "Constant Amplitude" without equalization, and "Constant Velocity" or other desired frequency characteristics with suitable equalization. Complete technical data sent on request. Cutter (less stylus).

Net. Wt. 4 oz., Ship. Wt. 2 lbs. **Mod. RC-20 (#385) $25.00 list**



HUSHATONE*

Model BA-303

A miniature, molded plastic extension speaker for under pillow use. Disc shaped (4 3/16" dia. by 1 1/16" thick). Makes no uncomfortable lump beneath the pillow. Tone quality comparable to cone type speaker because of specially engineered response. Speaker gives ample output with low power consumption (.001 watt). Hermetically sealed, can be dipped into disinfecting solution (temperature not above 120°F). Light weight BIMORPH* crystal drive element insures uniform response and high sensitivity. No parts to wear, loosen, or become detached. Furnished in maroon with satin chrome trim. HUSHATONE* with 10' cord.

Net. Wt. 8 oz., Ship. Wt. 2 lbs. **BA-303 . . . . . $9.75**

Prices Subject to Change Without Notice **Complete technical data on request** *** Trade Mark Reg. U. S. Pat. Off.**

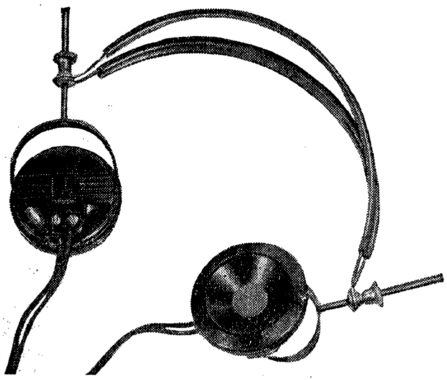
BRUSH ACOUSTIC PRODUCTS

BRUSH ELECTRONICS

Brush crystal phones possess the following outstanding features:

1. **BIMORPH * crystal drive element of such high impedance that line or circuit characteristics are not affected when monitored by Brush phones.**
2. **Wider range response with more uniform output.**
3. **Compensation for ear coupling.**
4. **Light-weight, rugged, shock-proof construction.**

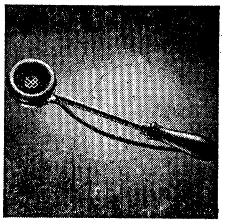
HEADPHONES



Brush Model
BA-206

Designed for use where High Fidelity and smooth frequency response are of paramount importance. They are especially applicable to broadcast monitoring, to laboratory use in the study of sound measurements, audiometry and similar exacting headphone applications. Features exceptionally flat frequency response. Impedance of 50,000 ohms at 1000 cps; no transformer required. Ideal for multiple installation. Sensitivity is approx. 6.3 dynes/cm^2/volt at 1000 cps. Low percentage of distortion. Designed to give your ear a smooth comfortable air-tight fit which provides an excellent bass response. The Metalseal Crystal* drive element is of such high impedance that line or circuit characteristics are not affected when monitored by these phones. Available in double, single and lorgnette models:

BA-206	**Double**	**$28.00 list**
Net Wt. 8 oz.		Shipping Wt. 2 lbs.
BA-207	**Single**	**$16.00 list**
Net Wt. 4 oz.		Shipping Wt. 1 lb.
BA-208	**Lorgnette**	**$22.95 list**
Net Wt. 6 oz.		Shipping Wt. 1 lb.



BRUSH MODEL "A" LORGNETTE PHONE

The "A" lorgnette phone is designed for use in group hearing aid sound systems installed in churches, concert halls, theatres and auditoriums. Telescope extension from 12" to 17". Attractively finished in satin black. Light weight, easy to handle, and comfortable at the ear.

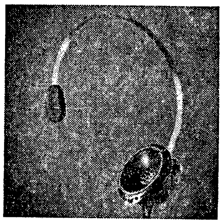
Single phone complete with 5' cord and lorgnette handle.

Model A . . . (BA-202) . . . $9.75 list
Net Wt. 5 oz. Shipping Wt. 1 lb.

HIGH FIDELITY MODEL "A-1"

For use where HIGH FIDELITY and extended frequency response are of paramount importance. (60 to 10,000 cps. Corrected for rising response below 200 cps.) Especially suited to monitoring, sound measurement, audiometry, and similar exacting headphone applications. Sensitivity approx. 1.5 dyne/cm^2/volt at 1,000 cps. Impedance over 80,000 ohms at any frequency within audio range. Headset complete with 5' cord and headband.

Model A-1 . . . . (#205) . . . . $18.00 list
Net Wt. 6 oz. Shipping Wt. 2 lbs.



BRUSH MODEL "A" Single Phone

Particularly adapted to individual or group hearing aid and radio applications. Light weight, good ear seal, and comfortable to wear. Spring steel headband with soft rubber cushion to eliminate slipping.

Single phone complete with 5' cord and headband.

Model "A" . . . . (#202) . . . . $6.45 list
Net Wt. 3 oz. Shipping Wt. 1 lb.

BRUSH MODEL "A" General Purpose

Designed for GENERAL PURPOSE applications including laboratory, studio and siklled amateur home use. The BIMORPH* crystal drive element insures wide ranges response (100 to 8,000 cps. and high sensitivity. High impedance; ideal for multiple installations.

Headset complete with 5' cord and adjustable headband.

Model "A" . . . . (#200) . . . . $12.00 list
Net Wt. 6 oz. Shipping Wt. 2 lbs.

BRUSH ELECTRONICS COMPANY

BRUSH ELECTRONICS

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZOELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT
ULTRASONIC EQUIPMENT

formerly
The Brush Development Co.
Brush Electronics Company
is an operating unit of
Clevite Corporation.

Prices Subject to Change Without Notice **Complete technical data on request**

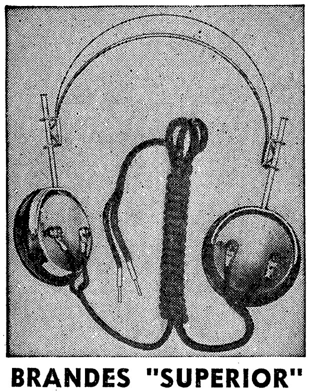
*** Trade Mark Reg. U. S. Pat. Off.**

HEADPHONES By C. F. CANNON

THE "CHIEF"
Cannon-Ball Bakelite Headset

A high quality headset of durable molded black plastic. Attractive in appearance, it is a sensitive and practical phone for every headset use. Inside terminals. Diameter of diaphragm is 2 1/16". Double coils, two in each receiver. Chrome steel magnets 1/4" diameter. Supplied with braid-covered headband with permanent adjustment and no removable parts. Cotton covered cord, 4 1/2 ft. long.

CC-2—2000 ohms D.C.	List	$4.00
CC-3—3000 ohms D.C.	List	4.50
CC-5—5000 ohms D.C.	List	5.50



BRANDES "SUPERIOR"
Matched Tone Headset

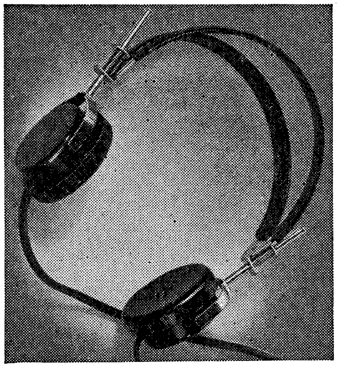
A rugged headset, millions of which are in use all over the world. Large size diaphragms of 2 1/8" diameter assure efficient performance. Outside terminals, with polished aluminum cases and bakelite caps. Double coils, two in each receiver. Chrome steel magnets. Steel headband with permanent adjusment. 4 1/2 ft. cotton covered cord.

BS-2—2000 ohms D.C.	List	$3.75

BRANDES "ADMIRAL"
Matched Tone Headset

The Brandes "Admiral" is of the same general construction as the Brandes Superior, but has terminals on the inside.

BA-2—2000 ohms D.C.	List	$4.00
BA-3—3000 ohms D.C.	List	4.50
BA-5—5000 ohms D.C.	List	6.00



CANNON-BALL ALNICO MAGNETIC No. 25

A New Headset of Unusual Quality, Efficiency and Durability, powered by Alnico V magnets.

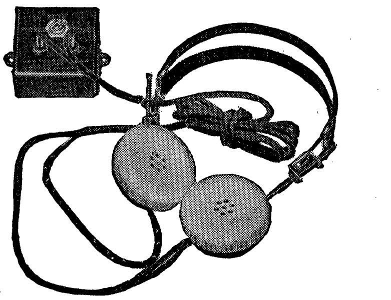
The headband is covered by attractive black extruded vinylite and provides utmost wearing comfort. Limits turn of phone to prevent twisting of cord. Cap and case of molded plastic. Large size diaphragm 2 1/8". Equipped with sanitary moisture-resistant plastic cord with riveted crotch piece.

AM-25-2	List	$6.50
AM-25-3	List	7.00
AM-25-5	List	8.50

ALNICO MAGNETIC No. 15

A new, small size, extra sensitive headset, light in weight. Diameter of diaphragm 1 7/8". Molded cap and case. Steel adjustable headband. 4 1/2 ft. cord.

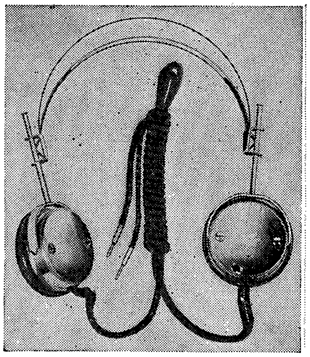
AM-15-2	List	$4.00
AM-15-3	List	4.50



CANNON-BALL HEARNG AID FOR RADIO OR TELEVISION

Provides private listening without disturbing others. Excellent for persons hard of hearing. Can be attached to any radio or television set and permits listening to phones alone, speaker alone, or both together.

FOR RADIO		
With single phone	List	$5.75
With double phones	List	8.00
FOR TELEVISION		
Kit complete with 15 foot cord, phone volume control and two sets of phones	List	$16.50



THE "MASTER"
Cannon-Ball Headset

Used extensively in hospitals and other institutions as well as for general purposes, and is especially recommended for institutions. Inside terminals Aluminum cases with black bakelite caps. Spring steel adjustable headband with no removable parts. Diaphragm 2 1/16" diameter. Double coils. Chrome steel magnets. 4 1/2 ft. cotton-covered cord.

MC-2—2000 ohms D.C.	List	$3.75
MC-3—3000 ohms D.C.	List	4.25
MC-5—5000 ohms D.C.	List	5.75

CANNON-BALL "EMPIRE"
Lightweight Headset

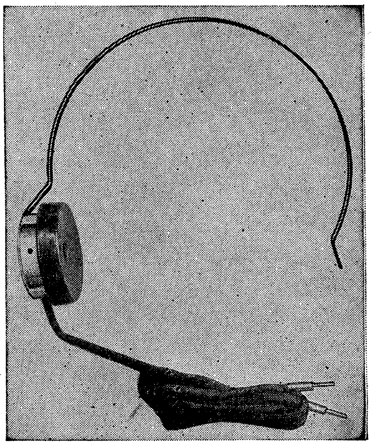
A low-priced light-weight headset with large magnet and double coils. Reproduces with clarity and good volume. Diameter of diaphragm is 1 7/8". Polished aluminum cases with bakelite caps. Steel adjustable headband. 4 1/2 ft. cord. Inside terminal connections.

EC-2—2000 ohms D.C.	List	$3.25
EC-3—3000 ohms D.C.	List	3.50

THE "DIXIE"
Cannon-Ball Headset

The "Dixie" is of the same general construction as the "Master" headset except that the terminals are on the outside.

CD-2—2000 ohms D.C.	List	$3.50
CD-3—3000 ohms D.C.	List	3.75



CANNON-BALL "GRAND"
Single Headphone

Equal in clarity and volume to most double headsets, efficient and attractive. Permits listening while being addressed by others. Concealed terminals. Diaphragm 1 7/8". Aluminum case and bakelite caps. Chrome steel magnet, double coils. 4 1/2 ft. cord. Spring steel headband permanently attached.

SG-1—1000 ohms D.C.	List	$2.00

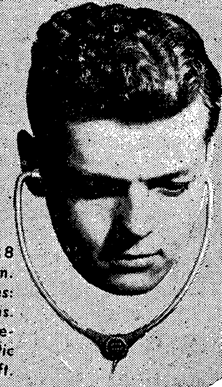
Phones can be supplied with any resistance required or with variations to meet special requirements. Sanitary plastic covered cords available for institutional use. Write for special quotation.

MONOSET*

Direct Signal for Both Ears!* Stethoscope design eliminates tiresome pressure . . . Blocks out background noise . . . Weighs only 1.2 oz. . . . Excellent for communications, dictation equipment, aircraft radio, etc.

	List
Monoset only	$ 9.95
Monoset with Standard Cord	14.15
Monoset with Volume Control Cord	18.55
Standard Cord only	4.20
Volume Control Cord only	8.60

SPECIFICATIONS—*Sensitivity: 88 db. above .000204 dynes per sq. cm. for 10 microwatts input. Impedances: 128 ohms, 500 ohms, 2,000 ohms. Construction: Sealed magnetic receiver . . . Grey polished Tenite plastic . . . Removable plastic eartips . . . 5 ft. tinsel cord with standard plug . . . Built-in volume control optional.*



DYNASET*

New Dynamic Under-the-Chin Headset with dynamic driver in plug. Excellent for office transcribing, radio monitoring and telecasting. Higher fidelity brings more lows and highs to your ears. Extremely sensitive—lightweight, only 1.25 oz. Comfortable under-the-chin styling.

	List
Dynaset Complete	$15.60

SPECIFICATIONS—*Sensitivity: Approximately 105 db. above .000204 dynes per square centimeter for one milliwatt power input. Recommended Maximum Power input: 25 MW. Impedance: 6 ohms. Construction: Anodyzed aluminum tone arm. Dynamic Driver housed in specially molded Tenite No. 2 plug. Frequency Range: 50 to 8,000 cps. or better.*

NEW WAYS TO 6 TELEX LISTENING COMFORT

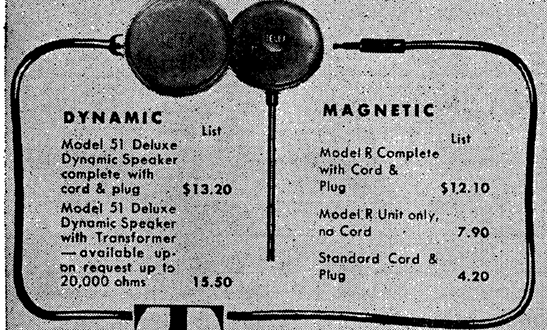
TWINSET*

Nothing touches the ear! Adjusts to any head without pinching or pressure . . . Adjustable sound arm need not touch ear . . . Entire unit weighs only 1.6 oz. . . . Flexible, can be slipped into pocket . . . C. A. A. approved . . .

	List
Twinset only	$13.05
Twinset with Cord	17.25
Monocord only	4.20

SPECIFICATIONS—*Sensitivity: 101 db. above .000204 dynes per sq. cm. for 10 microwatts input. Impedances: 1,000 ohms—brown; 64 ohms—yellow. Coding visible inside female socket. Construction: Tenite plastic and bright nickel. Headband, spring steel wire cased in Tenite. 5 ft. Monocord plugs into either receiver. Special cord with built-in volume control available.*

PILLOW SPEAKERS



DYNAMIC

	List
Model 51 Deluxe Dynamic Speaker complete with cord & plug	$13.20
Model 51 Deluxe Dynamic Speaker with Transformer—available upon request up to 20,000 ohms	15.50

MAGNETIC

	List
Model R Complete with Cord & Plug	$12.10
Model R Unit only, no Cord	7.90
Standard Cord & Plug	4.20

EARSET*

Slips onto the ear! Made with flat plastic frame or slim metal bow, Telex Earset holds sensitive receiver securely in place . . . Weighs only ½ oz. . . . User's other ear is always free for phone calls or conversation . . . Fits either ear, may be worn by anyone . . .

PLASTIC EARSET	List
Earset only	$ 7.80
Earset with Cord & Plug	12.00
Standard Cord only	4.20

METAL EARSET	List
Earset only	$ 8.50
Earset with Cord & Plug	12.70
Standard Cord only	4.20

SPECIFICATIONS—*Sensitivity: Comfortable listening level with 3 milliwatt input. Impedances: 120 ohms, 2,000 ohms. Construction: Clear plastic ear frame or metal bow. Sealed, rustproof receiver. 5 ft. Monocord with standard phone plug connection.*

TELEX *HEARING AT ITS BEST!*

STANDARD OF THE WORLD FOR QUALITY HEADSETS

*TRADEMARK

ELECTRO-ACOUSTIC DIVISION • TELEX PARK
ST. PAUL 1, MINN. *In Canada, Atlas Radio Corporation, Toronto*

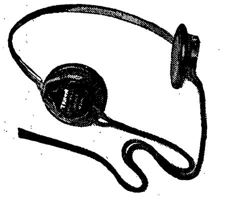
DEPT. B-17

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

TRIMM

HEADSETS AND ACCESSORIES

FEATHERWEIGHT



The world-famous TRIMM FEATHERWEIGHT headset. Weight: 4½ oz. complete with two units, 5-ft moisture-proof cord. Bakelite shell and cap. A custom-built phone throughout. Available in all standard ohmages.

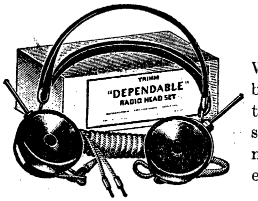
24,000-OHM IMP. SPECIAL for amateurs

No. 106—Double, adjustable nickel-plated headband	$11.00
No. 107—Double, fabric-covered wire headband	11.00

STANDARD FEATHERWEIGHT HEADSETS are available in 3, 76, 220, 500, 2M, 4M and 5M ohms d.c. resistance (Impedance approximately 5 times greater).

No. 100—Double, adjustable nickel-plated headband	$11.00
No. 104—Double, fabric-covered wire headband	11.00

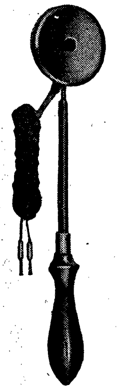
DEPENDABLE



When a high grade headset is desired, but price must be considered, choose the DEPENDABLE. Bakelite caps and shells. Extra heavy chrome steel forged magnets, 5-ft. cord, vinyl plastic covered wire headband.

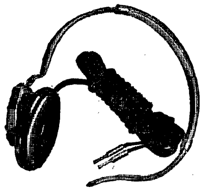
No. 65—Double, 2M ohms	$4.80
No. 67—Single, 1M ohms	2.60

GROUP HEARING AID COMPONENTS



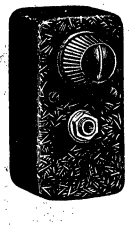
FEATHERWEIGHT EARPHONES

The most widely used single earphones for group hearing aid systems in churches, theatres, mortuaries, etc., are of the FEATHERWEIGHT type. Available with either lorgnette handles, or single headbands. Standard ohmages: 76, 1,000 ohms d.c. Low (less than 100-ohm), medium (100-500-ohm), and high (500 ohms and over) lines respectively.



No. 110—Headband type	$7.15
No. 120—Lorgnette type	8.25

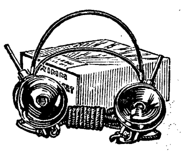
OUTLET BOXES AND CONTROLS



Boxes 460 and 461 are recommended for the majority of installations, combines volume control and jack. No. 460 has brown hammertone finish, No. 461 glossy ivory to improve visibility in theatres. Standard ohmages: 1000 for low impedance lines, 10,000 for high.

No. 460—Outlet Box (Brown—specify ohmage)	$4.40
No. 461—Outlet Box (Ivory—specify ohmage)	4.40
No. 477—Outlet Box, dual jack, brown, same general shape as No. 460	3.85
No. 478—Outlet Box, dual jack, ivory	3.85
No. 484—Outlet Box, single jack, brown	3.30
No. 485—Outlet Box, single jack, ivory	3.30

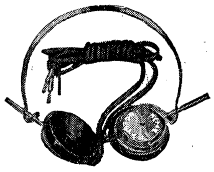
PROFESSIONAL



The choice of countless users . . . The original TRIMM headset. Watch case bipolar design, cap and shell molded of black bakelite (unless specified otherwise). Chrome steel forged magnet, concealed terminals, 5-ft. tinsel-braided cord. Standard resistance for double headsets: 4, 78, 500, 2M, 3M and 4M ohms d.c.

No. 70—Double (4M ohms furnished if not specified)	$5.80
No. 72—Single (2M ohms maximum ohmage)	3.30

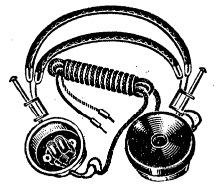
ACME



A superior lightweight, low-cost headset. Cap and shell of molded bakelite. Weight: 6 oz. Cord: 4½-ft.

No. 24—Double, 2M ohms, vinyl-covered headband	$3.95
No. 24—Double, 4M ohms, vinyl-covered headband	4.10
No. 25—Double, 2M ohms, metal headband	3.35
No. 25—Double, 4M ohms, vinyl-covered headband	3.65
No. 27—Single, 1M ohms, metal headband	2.00
No. 27—Single, 2M ohms, metal headband	2.20

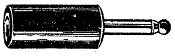
REX



Lowest cost TRIMM bi-polar type headset. Polished aluminum shell, molded bakelite cap. Double headsets, 4½ ft. braided cord. Single headsets, 4½ ft. all-rubber cord. Double headsets, adjustable, tubular plastic covered wire headband.

No. 30—Double, 2M ohms	$4.10
No. 32—Single, 1M ohms	2.40

"511" PLUG

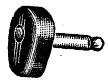


The standard radio phone plug. Tip and sleeve bright nickel. Stay cord anchorage provided. Shielded types have a fiber liner.

No. 511 —Black plastic shell	$0.55
No. 511-1—Red plastic shell	.55
No. 511-2—Shielded, nickel-plated, single-piece shell	.95
No. 511-3—Shielded, nickel-plated, two-piece shell	1.45
No. 511-4—Shielded, nickel-plated, stubby shell	.90
No. 515 —Adapter (Couples Amphenol type microphone plug to standard phone jack)	.50

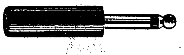
"512" PLUG

Compact, non-protruding design. Bakelite body, nickel-plated tip and sleeve. Cord pin tips held by set screws.



No. 512	$0.75

"514" MIN-A-PLUG



Developed especially for shielded microphone cable. Standard tip-sleeve construction. Wing type terminal clamps directly onto cord shield. Center conductor solders to lug.

No. 514 —Black plastic shell	$0.55
No. 514-1—Red plastic shell	.55
No. 514-2—Shielded shell	.90
No. 514-3—Shielded, stubby shell	.85

See other sections of U.C.P. Catalog or TRIMM General Catalog for more complete listings of headsets, plugs, jacks, replacement parts.

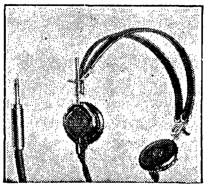
PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

TRIMM

HEADSETS AND ACCESSORIES

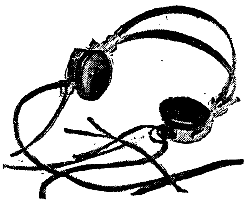
COMMERCIAL



One of the most ruggedly built yet lightweight headset. Practically non-breakable. Shell and cap molded of high strength plastic. Diameter 2⅛", depth ¾", cord 5-ft. tinsel, moisture-proof construction, type No. 501-10 plug attached. Leather-covered headband. This headset is recommended for monitoring service because of its high quality performance.

No. 156—Double, 600 ohms Imp.	$17.60
No. 157—Double, 17M ohms Imp.	17.60
No. 158—Double, 600 ohms Imp., no plug	15.95
No. 159—Double, 17M ohms Imp., no plug	15.95

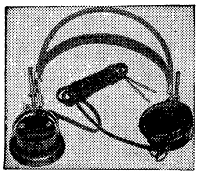
ARMY-NAVY



Very sensitive, 6-ft. waterproof cord, phone tip terminals. Plastic cap, metal shell. Leather headband. Weight: 1 lb. Available in two impedances.

No. 29—Double, 2,200 ohms d.c. (20M ohms Imp.)	$17.60
No. 28—Double, 112 ohms d.c. (600 ohms Imp.)	17.60

TRIMM "B"



Suggested for hospital installations. Bakelite shell and cap. Forged bar magnet. Fabric-covered headband. 5-ft. tinsel cord.

No. 42—Double, 2M ohms	$8.80
No. 43—Double, 600 ohms Imp.	8.80
No. 44—Single, 1M ohms	5.10
No. 45—Single, 300 ohms Imp.	5.10

Ohmages given are d.c. resistance unless specifically indicated as impedance which is about 4-7 times the d.c. resistance.

Prices subject to change without notice.

HEADSET REPLACEMENT PARTS

CORDS FOR TRIMM HEADSETS

No. 811—Double, black, 4½-ft., braided. Fits Acme and Rex	$1.27
No. 821—Double, black, 5-ft., braided. Fits Dependable	1.32
No. 822—Double, black or brown (specify), braided. Fits Professional	1.54
No. 831—Double, black, 6-ft., moisture-proof, braided. Fits Featherweight	2.09
No. 870—Double, black or brown (specify), 6-ft., moisture-proof, braided. Fits Commercial	1.76
No. 880—Double, black, 6-ft., water-proof, braided. Fits Army-Navy, etc.	3.30
No. 807—Single, black, 4½-ft., all-rubber. Fits Acme and Rex	.62
No. 826—Single, black, 5-ft., braided. Fits Dependable, Professional, etc.	.94
No. 838—Single, black, 6-ft., moisture-proof, braided. Fits Featherweight	1.65

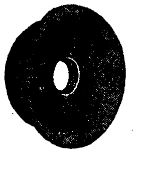
MISCELLANEOUS CORDS

No. 881—Double, black, 5-ft., pin tips at terminal and receiver ends	$1.10
No. 882—Double, black, 5-ft., pin tips at terminal. Fits Brush type A headsets	2.20
No. 883—Double, black, 5-ft., pin tips at terminal, spade at receiver end	1.10
No. 884—Double, black, 5-ft., pin tips at terminal, eyelet and receiver end. Fits Brandes, etc.	1.21
No. 890—Double, all synthetic rubber cordage with molded plastic crotch. Terminals and length as specified. Widely used in hospital radio installations	2.75

DIAPHRAGMS

No. 610—Featherweight	$0.25
No. 612—Professional, Dependable	.20
No. 613—Acme and Rex	.20

EAR CUSHIONS

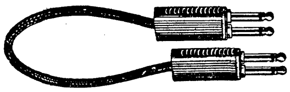


Sponge rubber ear cushions provide maximum ease in wearing headsets. Fit TRIMM Featherweight, Commercial, Acme, Rex, and "E" types.

No. 654	$1.50

For complete listing see TRIMM General Catalog

PATCH CORDS



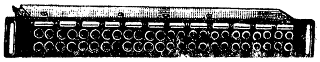
Widely used by the majority of radio stations. Cord assembly uses TRIMM No. 506 twin plugs and high quality shielded cord. Plug self aligning.

Number following "840" represents length.

No. 506 —Plug, twin type	$ 4.95
No. 840-1-PP—Cord-Plug assembly	13.20
No. 840-2-PP—Cord-Plug assembly	13.42
No. 840-3-PP—Cord-Plug assembly	13.80
No. 840-4-PP—Cord-Plug assembly	14.19
No. 840-6-PP—Cord-Plug assembly	14.96

See TRIMM Bulletin R-15 for more complete listing of Patch Cords, Plugs, etc.

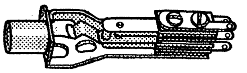
JACK PANELS



TRIMM "96" Series. Most widely used, and intended for use with standard "twin" type patch cords. Mounts on standard 19 inch rack.

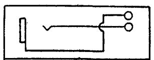
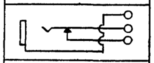
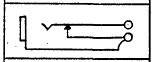
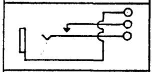
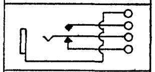
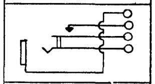
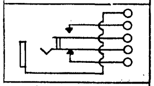
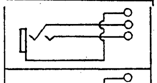
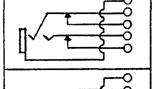
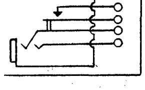
No. 96-01—Single row, 12 pair jacks	$46.00
No. 96-02—Double row, 24 pair jacks	83.50

See TRIMM Bulletin R-23 for complete listing.



JACKS

TRIMM "90" Series. Uses the commonly known telephone type construction. Bushing at end of frame of brass, unthreaded, jack mounted by means of screw into back side of panel. Frame, steel, zinc plated. Springs are nickel silver, contacts are of palladium-silver alloy.

CIRCUIT	**"90" SERIES**	
	CODE No.	**LIST**
	90-01	$1.15
	90-02	1.25
	90-03	1.25
	90-04	1.25
	90-05	1.40
	90-06	1.40
	90-07	1.80
	90-25	1.30
	90-26	1.80
	90-27	1.90

ADDITIONAL PRODUCTS MANUFACTURED BY TRIMM

- * WIRE WOUND POTENTIOMETERS
- * RHEOSTATS
- * L AND T PADS
- * MIDGET EARPHONES
- * STETH-A-PHONES
- * MIN-A-PHONES
- INSTITUTIONAL HEADSETS
- SPECIAL ARMY-NAVY HEADSETS
- PLUGS
- JACKS AND JACK PANELS
- PATCHCORDS
- REPLACEMENT CORDS

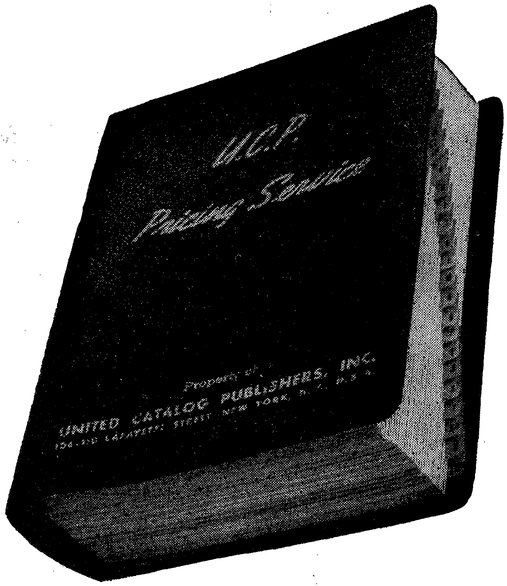
* Items marked with (*) are temporarily discontinued

COMPLETE LINE OF TELEPHONE PLUGS AND JACKS TO A-N SPECIFICATIONS
Further information on all items available upon request.

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**



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New York 13, N. Y.

DELIVERY

Delivery is often dependent on the availability of raw **materials.** So check with your distributor for delivery information.

Fairchild Recording and Playback Equipment

TRANSCRIPTION PLAYBACK EQUIPMENT

530	Transcription Table, 3-speed, in Cabinet	$ 530.00
00 Type	Turret-Head 3-Way Transcription Arm, with Viscous Damping	65.00
205-C	Passive Equalizer	50.00
215-A	Moving Coil Cartridge, Microgroove, 1.0 mil dia. Tip	37.50
215-B	Moving Coil Cartridge, Lateral 2.5 mil	37.50
215-C	Moving Coil Cartridge, Lateral 3.0 mil	37.50
216-A	Moving Coil Cartridge, Vertical, 2.0 mil	50.00
226-A	Plug-in Input Transformer	8.75
650-A	Preamp. with tubes & Power Supply	130.00
650-C	Preamp. less Power Supply	60.00
652-C	Preamp. less input transformer, for bridging	47.50

DISK RECORDERS & ACCESSORIES

523-J1	Studio Recorder, complete with 541-A1 Cutterhead, Microscope, Spiralling	$2985.00
539-K1	Console Recorder, complete with 541-A1 Cutterhead, 542-K1 Dynamic Pickup, Microscope, Spiralling	1395.00
539-G1	Portable Recorder, complete with 541-A1 Cutterhead, 542-K1 Pickup	985.00
541-A1	Magnetic Cutterhead, Equalizer 541-B1	160.00
300	Thermo-Stylus Kit, for Fairchild Cutterhead	100.00
301	Thermo-Stylus Kit, for RCA Cutterhead	115.00
302	Thermo-Stylus Kit, for Presto Cutterhead	115.00
304	Thermo-Stylus Kit, for Fairchild Cutterhead on 539 Recorder (Includes new type advance ball)	135.00
539-A19	Microscope & Mounting Kit for 539 Recorder	140.00
539-B12	Spiralling Kit for 539 Recorder	35.00
	Factory Installation Charge	12.50
539-B18	Suction Attachment, with 539-279 Bracket	12.50
539-325	Microgroove Kit for 539-G1 Recorder	135.00
	Factory Installation Charge	35.00
628-A1	Diameter Equalizer	130.00

TAPE RECORDER & ACCESSORIES

126	Professional Tape Recorder	$2750.00
130	Pic-Sync Attachment	1250.00
137	Automatic Framing Attachment, including Remote Control	1325.00
141	Control Track Generator	$200.00

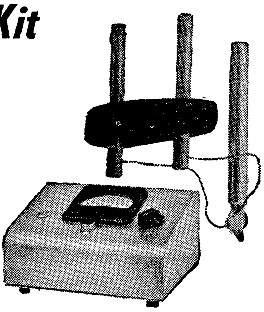
UNITIZED AMPLIFIER SYSTEM

Consists of 620 Power Amplifier, 650 Preamplifier, Line Amplifier, 624 Output Switching, 625 Input Switching, 626 NAB Equalizer, 629 Mixer, 630 VU Panel, Auxiliary Power Supply, 633 Frame and other mounting accessories.

Write for detailed information and prices.

NOTE: All prices are net, f.o.b. Whitestone, New York and subject to change without notice.

Thermo Stylus Kit



Applies heat directly to cutting jewel, reducing basic surface noise to vanishing point. Records at least 20 db lower noise level.

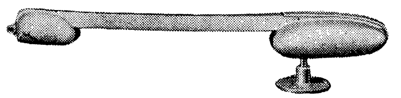
Minimizes mechanical loading of the cutter by disk material, thus increasing high frequency response, especially at small diameters.

Invaluable for microgroove, standard 33-1/3 and 45 r.p.m. speeds.

Available from stock for Fairchild, RCA and Presto Cutterheads. Others on special order.

Easily installed and operated. Includes heat control and calibrated meter.

201 Turret-Head Arm



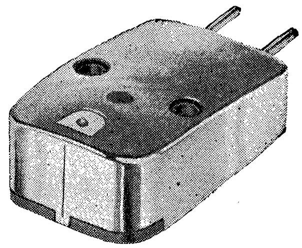
One Arm replaces multiple installations of several arms with throw-over switches, etc.

Mounts up to three of the Fairchild Miniature Moving Coil cartridges at one time — a stylus tip and pressure for each type of recording.

Select desired cartridge instantly by the turn of a knob. Stylus pressure automatically adjusted.

Arm resonance eliminated by viscous damping.

NEW
215 Series Cartridges



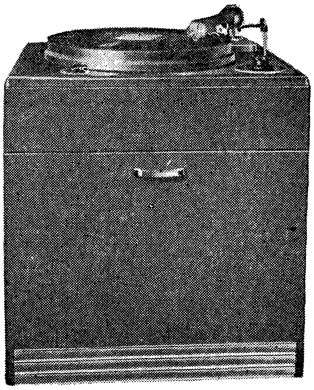
A True Moving Coil Design, with Linear Frequency Response (30-12,000 cycles) and High Compliance, gives you finest record reproduction.

Exceptional freedom from Record and Stylus wear, 'Needle Talk', Arm Resonance and Tracking Distortion.

Works into commercially available amplifiers with or without transformer. No impedance matching problems. Can be used to replace any modern pickup you are now using.

530 THREE-SPEED TURNTABLE

Industry-wide Acceptance



All Speeds Synchronous. Perfect Timing for Radio and Television broadcast schedules.

Turntable performance better than NAB Specification.

Up to *stable* speed from motor switch start in minimum time at all speeds.

126 PROFESSIONAL TAPE RECORDER

EXCLUSIVE FEATURES —

- Highest signal-to-noise ratio.
- Syncroll Drive with synchronous capstan speed.
- Oversize Capstan with 180° wrap eliminates tape slippage.
- Available with Pic Sync Attachment and Automatic Framing for Motion Picture production.

141 CONTROL TRACK GENERATOR

Provides means for lip-sync recording on any good quality 15" speed Tape Recorder, for later transfer, lip-sync to film. No extra heads or moving parts.

Widely used 'on location' because of extreme portability — weighs 10 pounds.

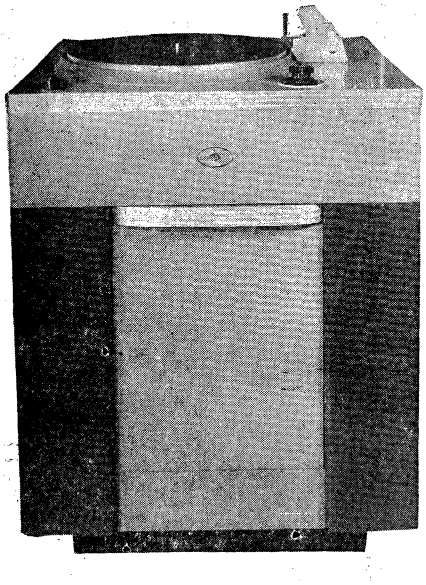
WRITE: **FAIRCHILD RECORDING EQUIPMENT CORPORATION**

154th ST. and 7th AVE.,
WHITESTONE, N.Y.
PHONE: INDEPENDENCE 3-2100

WRITE for information on the Control Track Generator which permits lip synchronous recording on good quality portable tape recorders for later transference to film, on Pic-Sync Recorder.

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS



Presto Type 153 Reproducer extra

PRESTO 64-A TRANSCRIPTION TURNTABLE

The Presto 64-A transcription turntable offers the following features which are of major importance to the owner and operator: Unusual mechanical simplicity . . . low mechanical disturbance . . . maximum speed accuracy . . . extreme ruggedness for long continuous operation . . . instantaneous selection of desired speed . . . and no requirements for mechanical adjustments.

This transcription turntable is directly gear driven and employs two separate motors, one for 33-1/3, and the other for 78.26 rpm. There is no friction device of any kind in the mechanism and no mechanical shift is required to change speeds. To select 33-1/3 rpm, 78 rpm or "off," the operator merely throws a three position switch. These changes may be made as rapidly as desired while the turntable is in motion with no damage to the mechanism. Only one motor at a time is in operation. The transmission "over runs" the motor which is not turning and thus does not carry it along in rotation although the stationary motor is never disengaged from the mechanism.

SPECIFICATIONS

Standard Equipment: The 64-A transcription turntable includes the electro-mechanical gear drive, turntable and cabinet. A **reproducer** and **network** is not included.

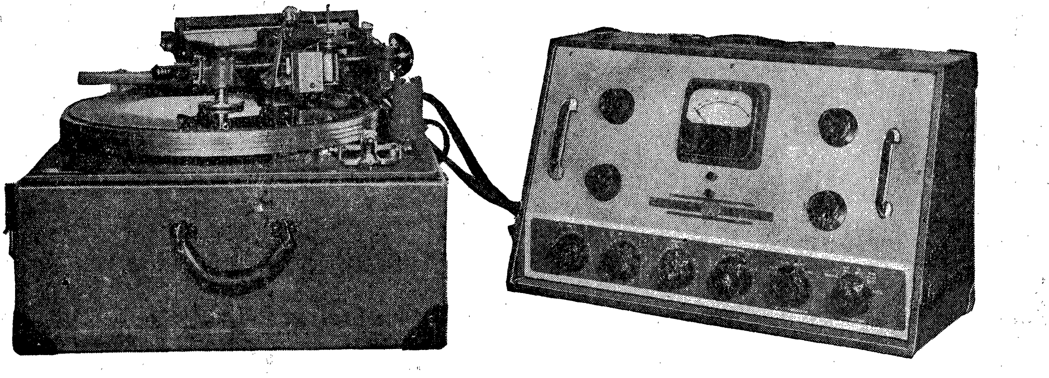
Speed Accuracy: No deviation from 33-1/3 and 78.26 rpm.

Noise Level: Mechanical noise originating in the equipment over 50 db below program level.

Power Requirements: Approximately 75 watts from a 115 volt, 60 cycle line. Motors are of the 1800 rpm synchronous type and are available for other voltages and frequencies at additional cost.

Mounting: Turntable and gear drive mounted in heavy wood cabinet 24 x 24 x 33 inches (61 x 61 x 84 cm.)

List Price, $585.00



PRESTO 6-N RECORDER AND 90-B AMPLIFIER

The PRESTO 6-N Recorder and 90-B Amplifier is the ideal recording equipment for portable or stationery operation.

The 6-N Recorder is outstanding in its suitability for broadcast stations because it offers all the qualifications for good recordings, including master records, at the most economical price. It is ideal for the station requiring delayed broadcast of network programs, and for reference recordings.

The 6-N standard equipment includes the Presto 1-D cutting head, spiraling feed screw, vertical damper, time scale and pick-up. It is available for microgroove recording at additional cost.

The Presto 90-B recording amplifier contains all the facilities necessary for operation on remote assignments, but with an overall performance found only in high-fidelity studio equipment.

It consists of three preamplifiers with individual gain controls, a mixer circuit, a master gain control and power amplifier. Provision is made for connecting the Presto 161-A automatic equalizer (radius compensator).

A five-position selector switch provides the following characteristics: 1—flat response, 30 to 15,000 ±1 db; 2—NAB 33⅓ rpm recording; 3—present day 78-rpm recording; 4—NAB playback, and 5—automatic equalization. The flat response can be modified by variable bass and treble controls, giving emphasis up to a maximum of 20 db at 100 and 7,500 cycles per second or 20 db de-emphasis at 7,200 cycles per second.

Noise is 55 db below recording level and distortion at maximum output is less than 1.5%.

The use of input and output selector switches makes the 90-B amplifier unusually flexible. It permits combining the signals of three microphones or of two microphones and either one of two pick-ups. By using the "Line" position, recordings can be made from an incoming program line. The output selector has three positions; playback (public address), continuous recording and simultaneous recording. While recording, the line jack provides a monitoring outlet or permits feeding a program line at the correct level.

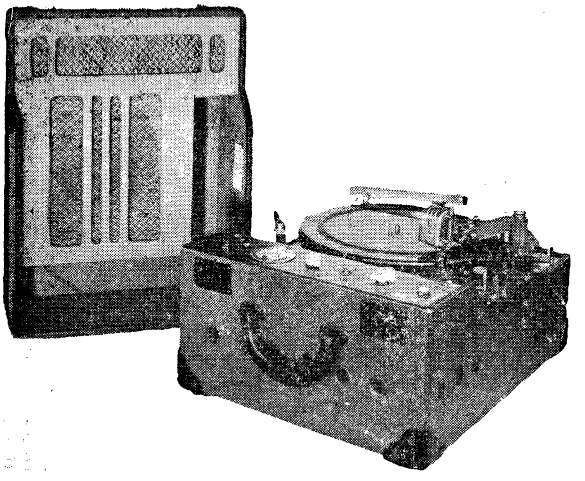
The correct level is monitored by means of a Weston Type 30 VU indicator with illuminated scale and its closely controlled electrical and dynamic characteristics make it an ideal volume indicator for recording.

List Price of 6-N, in Case	$773.00
List Price of 90-B	623.50

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO K-10 RECORDER FOR MICROGROOVE AND REGULAR RECORDING



The PRESTO K-10 Recorder, formerly known as the K-8, the foremost machine of its kind to be used in schools for speech, voice, languages, dramatics, music, etc., is now offered for MICROGROOVE (long-playing) recording as well as the standard method.

Note these features:

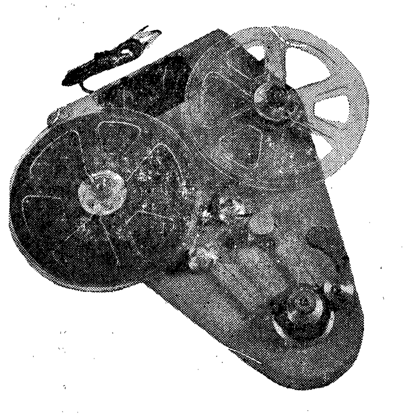
- Cutting pitches of 112 lines per inch Outside-in, 112 lines Inside-out, 224 lines per inch Outside-in and 224 lines per inch Inside-out.
- Standard unit is equipped for two speeds, 33⅓ and 78 rpm. Available for three speeds, 33⅓, 45 and 78 rpm at additional cost.
- The cutting head is equipped with an advance ball which regulates the depth of the groove more accurately than a counter spring.
- The K-10 is equipped with a turnover type cartridge having sapphire stylii for both standard and microgroove records. The cartridge is a ceramic type which has high output and is not easily affected by high temperature and humidity.
- A single control permits instant choice of recording, playback, or public address. Amplifier also contains radio and monitor jacks.

The PRESTO K-10 will, when set for MICROGROOVE, record 6¾ minutes on every inch of disc used. This means that a 15-minute recording with good fidelity can be put on one side of a 12" disc! And a half-hour can be put on one side of a 13¼" disc. Seven minutes can be recorded on one side of a 6½" disc.

Net Price of **K-10**, less microphone and stand................$366.50

*$5.00 additional for 45 rpm pulley and record adapter.

TL-10 PRESTO TAPE DRIVE



Presto offers an ingenious tape transport mechanism which can be quickly installed on any sixteen inch turntable. This mechanism derives its power from the turntable—it has no motors of its own. The present model is for tape reproduction only—no erasing or recording is included. No amplifier is provided. The equalized output of the playback head may be fed directly into standard speech input equipment.

The TL-10 Tape Drive consists of a triangular shaped cast chassis which mounts on two small posts fastened to the turntable panel. One point of the triangle carries the tape capstan and this rests directly on the center pin of the turntable to which the TL-10 is attached. A belt drive from the under side of the capstan rotates the take-up reel through a slip clutch. The reproducer head and guide pulleys are located on the upper side of the chassis and the equalizer network is placed below.

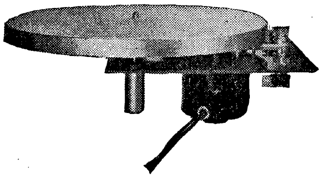
Two capstans are available for 15 or 7½ inches per second tape speed based on the turntable speed of 78 rpm. Rewinding is achieved by transferring the empty reel to the take-up spindle and releasing the drag on the supply spindle. Specify type of turntable when ordering the TL-10.

The output of the head and equalizer is sufficiently high to be fed directly into a high quality preamplifier such as found in standard broadcast speech input equipment. An unusual type of capstan is employed, consisting of a wheel, relatively large in diameter, and having a rubber rim. The tape is wrapped around this capstan 180° and obtains very great traction against the rubber surface.

NET PRICES

TL-10 Tape Drive	1-Speed	$132.50
	2-Speed	140.00

3-SPEED MICROGROOVE & STANDARD PLAYBACK TURNTABLE Type 15-G



The Presto Type 15-G turntable is an unusually high quality unit for the reproduction of recordings at 33⅓, 45 and 78 rpm. The design provides an instantaneous speed selection with a very convenient control arrangement.

FEATURES:

- Heavy cast aluminum 12" turntable accurately machined and balanced.
- Precision idler wheels and motor pulley.
- Good speed regulation—minimum "wow."
- Performance comparable to transcription equipment.
- May be connected to any radio or audio amplifier.

15-G Chassis—Net Price	**$53.50**
Cabinet for above—Net Price	**16.00**

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO LACQUER COATED ALUMINUM DISCS
CUTTING AND PLAYING NEEDLES

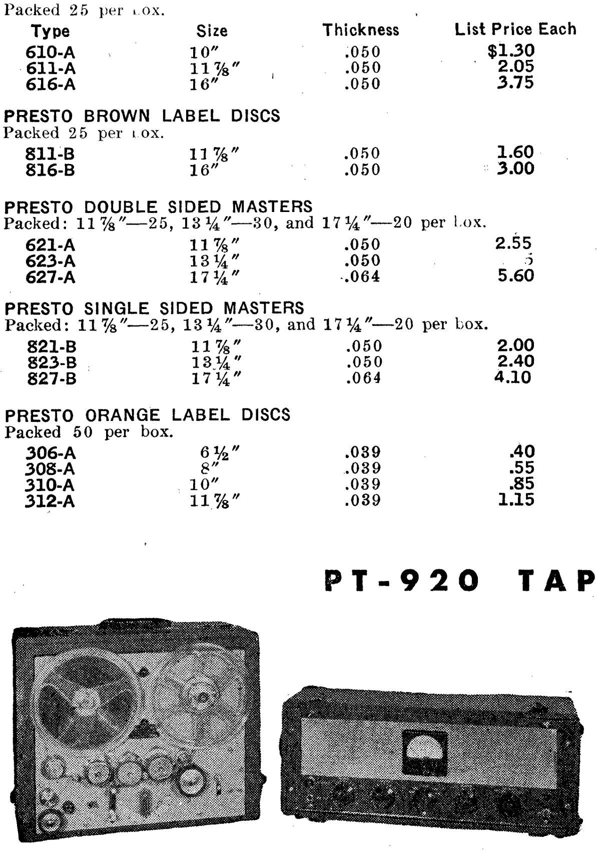
(For Professional and Institutional Recording)

Type	Size	Thickness	List Price Each
PRESTO GREEN LABEL DISCS Packed 25 per box.			
610-A	10″	.050	$1.30
611-A	11⅞″	.050	2.05
616-A	16″	.050	3.75
PRESTO BROWN LABEL DISCS Packed 25 per box.			
811-B	11⅞″	.050	1.60
816-B	16″	.050	3.00
PRESTO DOUBLE SIDED MASTERS Packed: 11⅞″—25, 13¼″—30, and 17¼″—20 per box.			
621-A	11⅞″	.050	2.55
623-A	13¼″	.050	[illegible]
627-A	17¼″	.064	5.60
PRESTO SINGLE SIDED MASTERS Packed: 11⅞″—25, 13¼″—30, and 17¼″—20 per box.			
821-B	11⅞″	.050	2.00
823-B	13¼″	.050	2.40
827-B	17¼″	.064	4.10
PRESTO ORANGE LABEL DISCS Packed 50 per box.			
306-A	6½″	.039	.40
308-A	8″	.039	.55
310-A	10″	.039	.85
312-A	11⅞″	.039	1.15

CUTTING AND PLAYING NEEDLES

Type and Number		List Price Per Needle
Sapphire Cutting Stylii		
320-A	—Brass Shank—Short, (Box of 6)	$6.00
321-A	—Brass Shank, Long, (Box of 6)	6.00
603-A	—Dural Shank—Short, (Box of 6)	8.00
603 MICRO	—Same as above for MICROGROOVE	8.00
604-A	—Dural Shank—Long, (Box of 6)	8.00
604 MICRO	—Same as above for MICROGROOVE	8.00
	Resharpening Sapphire	2.00
Stellite Cutting Stylii		
330-A	—(Box of 6)	2.00
331-A	—(Box of 6)	2.00
807-A	—Resharpening Stellite Point	.75
Steel Cutting Stylii, Long and Short		
350-A	—(Package of 3)	1.00
Sapphire Playing Needle		
420-A	—Sapphire Playing Needle	1.25
Transcriptone Playing Needle		
430-A	—Transcriptone Playing Needle	1.00
Red Shank Playing Needles		
440-A	—(Package of 25)	.25
440-B	—(40 Packages of 25)	10.00

PT-920 TAPE RECORDER



TYPE RC-7 TYPE A-920

PT-920 COMPLETE IN CARRYING CASES

SPECIFICATIONS

Frequency response 50 - 15,000 cps at 15″/sec. tape speed and 50 - 10,000 cps at 7½″/sec.

Signal to noise ratio is 50 db with 2% distortion at 400 cps.

Instantaneous speed variations at 15″/sec. is not more than 0.25%.

Microphone input impedance normally 250 ohms.
Output of amplifier 15 ohms, 10 watts.
Bridging input 20,000 ohms, unbalanced.

Weights: RC-7—40 lbs.; A-920—35 lbs.

The PT-920 tape recorder has been developed for fully professional recording work and hence no compromise has been made with quality of materials and workmanship. The PT-920 has been designed especially for broadcast stations and recording studios and has found wide acceptance among colleges and universities as well.

This recorder consists of a three-motor drive system, separate erase, record, and reproduce heads and two separate amplifiers—one for recording and the other for monitoring. This arrangement permits instantaneous monitoring of the tape. The equipment takes standard RMA 7″ reels. Continuous recording with two mechanical sections (type RC-7) and one amplifier section (A-920) may be done by interconnecting the units through the SA-12 changeover switch.

The PT-920 may be had on standard 19″ relay rack mounting panels. Simply specify: "for rack mounting." Price same as in carrying cases.

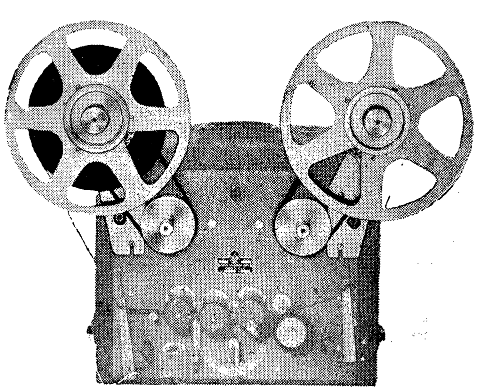
NET PRICES

Complete PT-920	$749.00
RC-7—Tape Transport Mech.	425.00
SA-12—Transfer Switch	46.00
A-920—Amplifier	324.00

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

RA-1 REEL ADAPTER



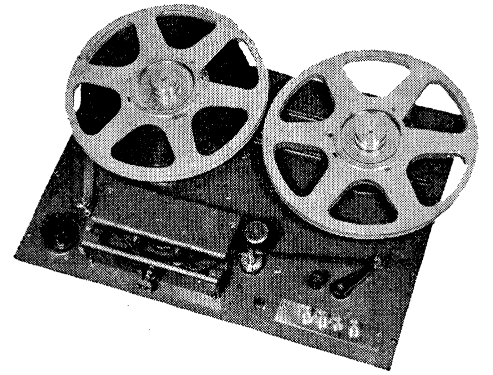
The Presto RA-1 reel adapters enable 10½ inch reels on NAB hubs to be used on the RC-7 mechanism. Since the RC-7 employs a true three-motor drive system—using torque motors identical to those in the Presto RC-11—the RA-1 reel adapters perform perfectly during all normal functions including fast forward speed.

The RC-7 (and the 900-R1 mechanism to which the RA-1 can also be attached) becomes a doubly valuable unit with these adapters for 10½ inch reels. These recorders perform as well as larger mechanisms and have the added advantage of being easier to handle when the large reels are not needed.

The RC-1 attaches easily to the RC-7 and the 900-R1 by loosening two screws on either side of the recorder panel.

Net Price $39.00

RC-11 RECORDER



The RC-11 Recorder is an unusually fine mechanism which can be mounted in a relay rack, in the CS-10 carrying case or the CC-1 console. The main panel is a heavy aluminum casting to which all other components are attached, including the Presto CDR-200 self-contained capstan drive assembly.

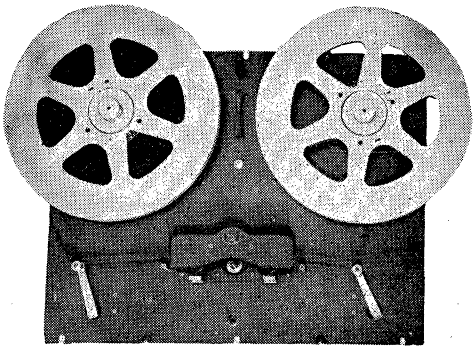
The three heads of the RC-11 are mounted as a group and are contained in a completely closed housing. Tape is threaded by simply dropping it into the opening made by pulling forward the front cover which also holds the tape off the heads for running the tape at fast speeds.

PERFORMANCE DATA

Frequency Response: 50-15,000 at 15 in/sec. and 50-10,000 at 7 in/sec.
Signal to Noise Ratio: 50 db at 3% distortion.
Flutter: 0.15% at 15 in/sec., 0.25% at 7½ in/sec.
Dimensions: 19″ x 14″ x 10″. **Weight:** 48 lbs.

RC-11 Chassis	Net Price	$775.00
CS-10 Carrying Case	Net Price	52.00
CC-1 Console	Net Price	150.00

PB-17 TAPE REPRODUCER



The Presto PB-17 has been especially designed for playing tape on wired music systems, in industrial plants, amusement parks, skating rings, etc. The capstan is centrally placed with a half-track head on either side. Dual track tape traveling at 3¾ in/sec provides a continuous playing cycle of 8 hours. Tape reels are 14 in. diameter and hold 4800 ft. of tape. The PB-17 mechanism reverses automatically at both ends of the tape. Frequency response is 50-8000 cps. Net Price $596.00

900-A3 AMPLIFIER

The 900-A3 amplifier (formerly 900-A2) actually consists of separate tape recording and reproducing (monitoring) amplifiers and a common power supply. Output of reproducing amplifier is plus 20 db, 500 ohms. Three-microphone mixer is normally wired for 250 ohms.

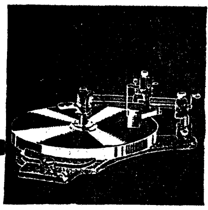
Type 901-A is similar to 900-A3 except three-microphone mixer is replaced by 500 ohm transformer for line level.

Net Price (Rack Mounting or Portable) $403.00

A-920 AMPLIFIER

The A-920 amplifier is a combination tape recording and reproducing amplifier. Output is 15 ohms, 10 watts. Input is for single microphone, normally 250 ohms. Monitoring during recording is accomplished through the reproduce preamplifier using high impedance phones.

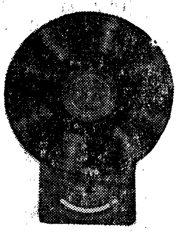
Net Price (Rack Mounting or Portable) $324.00



REK-O-KUT COMPANY

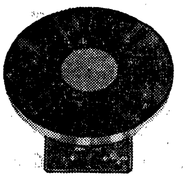
MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTR

WORLD'S TWO GREATEST HI-FIDELITY PORTABLE SOUND SYSTEMS



THE *Rhythmaster*

The RHYTHMASTER is equipped with the CVS-12 *Continuously-Variable Speed Turntable.*



THE *Recitalist*

The RECITALIST is equipped with the LP-743, *3-Speed Turntable.*

BOTH OFFER

3 INSTRUMENTS IN ONE

- ★ **PHONOGRAPH**
- ★ **P.A. SYSTEM**
- ★ **BROADCAST RECEIVER** (when used with FM Tuner)

Indispensable for Recreation Centers, Broadcast Stations, Advertising Agencies, Schools, Hospitals, Record Collectors, Musicians, Etc.

THE RHYTHMASTER AND THE RECITALIST are the only full-range portable phonographs that balance the response characteristics of amplifier, speaker and speaker enclosure. By carefully compensating the natural resonances of these three components, undesirable reverberations are eliminated, and **truly lifelike sound reproduction is achieved.**

THE POLYPHONIC SELECTOR, an exclusive Rek-O-Kut engineering triumph, found only in the Recitalist and the Rhythmaster, maintains the proper relationship between the highs and lows when the record is played **at any volume,** either very softly or very loud! Thus, the high notes of the violins, chimes, triangles, cymbals, etc., are always reproduced clearly and distinctly in all their original beauty and cannot be drowned out by the loud passages of the brasses and percussion instruments.

THE RHYTHMASTER'S PATENTED CONTINUOUSLY-VARIABLE SPEED TURNTABLE plays records not only at 33⅓, 45 and 78 R.P.M., but at **ANY speed variation** from 25 to 100 R.P.M. Not only will the CVS Turntable play your records back at the exact pitch and tempo they were recorded, but also at any increased or decreased tempo to fit a particular need: **★DANCING:**—Set the rhythm of your folk-dance, tango, rhumba to your own taste. **★PHYSICAL EDUCATION:**—Set the rhythm most suitable for teaching swimming, exercises, etc. **★MUSICIANS:**—**(1)** You can now set the pitch of your records to your own personal interpretation of any recording. **(2)** You can set the pitch of the record to match the pitch of your piano or other instrument for purposes of accompaniment. **★SCHOOLS:**—Invaluable tool for teaching music, band instruments, languages, typing, dancing, gymnastics, etc. **★RECREATION CENTERS, CAMPS, COMMUNITY CENTERS:**—Powerful amplifier and speaker afford undistorted volume to cover an assemblage of 500 people or more.

THE RHYTHMASTER AND RECITALIST ARE BOTH "FLEXIBLE" INSTRUMENTS. (1) A microphone input enables "mixing" of live music or voice simultaneously with a recording being played. **(2)** Can be used as a high fidelity public address system. **(3)** By connecting an AM or FM Tuner, these phonographs become superb broadcast receivers.

SPECIFICATIONS

TURNTABLE: 12″ cast aluminum, with hardened and ground shaft.

MOTOR: Constant-speed, 4 pole induction.

SPEAKER: 10″ PM type, built to our exacting specifications with heavy Alnico V magnet.

AMPLIFIER: Frequency response is controlled by **Polyphonic Selector.**
- **Position No. 1**—Uniform within 1 db from 50 to 15,000 cycles.
- **Position No. 2**—Bass up 4 db at 100 cycles, treble uniform above 5,000 cycles.
- **Position No. 3**—Bass up 6 db at 100 cycles, treble uniform above 5,000 cycles.
- **Position No. 4**—Uniform from 50 to 3,000 cycles, increasingly sharp cut-off, 14 db down at 10,000 cycles.

PICKUP: 16″ with dual stylus cartridge. Plays up to 16″ broadcast transcriptions, standard commercial pressings and micro-groove records.

POWER OUTPUT: 10 watts at less than 3% total harmonic distortion.

INPUT CHANNELS—THREE: High impedance microphone, radio, phono-pickup.

INPUT GAIN: Microphone, 120 db; phono-pickup, 80 db; radio, 80 db; magnetic pickup, 90 db.

OUTPUT IMPEDANCE: 6 - 8 ohms at speaker jack.

NOISE LEVEL: More than 50 db below rated output with all controls set at maximum.

CONTROLS: Microphone, radio-phono, Polyphonic Selector.

TUBE COMPLEMENT: (2) 6SL7, (2) 6V6GT, (1) 5Y3GT plus (1) 6SC7 for magnetic pickup.

POWER INPUT: 70 watts.

CASE: Sturdy Plywood, covered with rich grey leatherette.

DIMENSIONS: 17″ wide, 9½″ high, 21¼″ deep (Closed).

WEIGHT: 38 pounds.

Model	Description	Net Price
RP-43C RECITALIST	3 Speed, crystal pickup	**$229.95**
RP-43M RECITALIST	3 Speed, pre-amp., mag. pickup	**249.95**
RP-43VC RHYTHMASTER	Variable Speed, crystal pickup	**269.95**
RP-43VM RHYTHMASTER	Variable Speed, pre-amp., magnetic pickup	**289.95**

MODELS EQUIPPED WITH PAIR OF 10" MATCHED SPEAKERS

Model	Description	Net Price
RT-43C RECITALIST	3 Speed, crystal pickup	**$269.95**
RT-43M RECITALIST	3 Speed, pre-amp., mag. pickup	**289.95**
RT-43VC RHYTHMASTER	Variable Speed, crystal pickup	**309.95**
RT-43VM RHYTHMASTER	Variable Speed, pre-amp., magnetic pickup	**329.95**

Model SPK-43—Set of twin, high-powered, matched 10″ portable speakers only, for use with your own Recitalist or Rhythmaster.
Complete with cable and jacks..........**$50.00 net, the Pair**

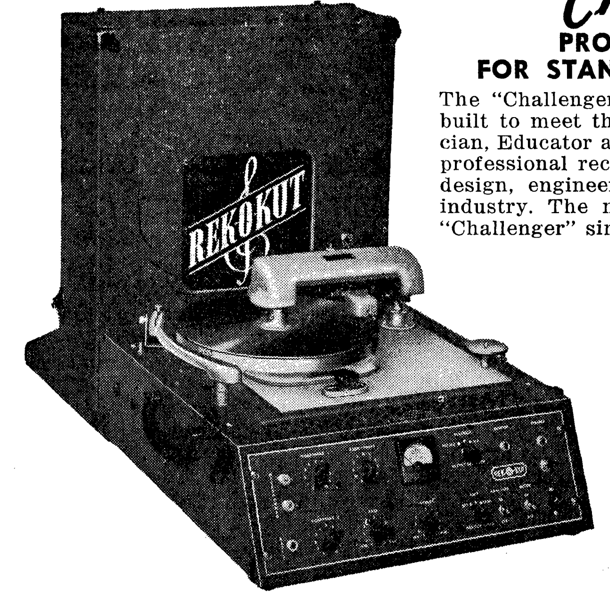
REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

Challenger De Luxe

PROFESSIONAL 13¼" DISC RECORDER FOR STANDARD AND MICRO-GROOVE RECORDING

The "Challenger," America's finest professional 13¼" disc recorder, is built to meet the respective needs of the Professional Recordist, Musician, Educator and Recording Enthusiast who wants to make permanent, professional recordings. The "Challenger" embodies the most advanced design, engineering and production techniques in the disc recording industry. The many exclusive operating features incorporated in the "Challenger" simplify and improve the art of disc recording.



SPECIFICATIONS:

1. **MOTOR:** Hysteresis Synchronous motor (TR-12H, described in detail on page E-8), fitted with lamitex drive pulley. Suspended in sheer shock mounts to prevent transmission of motor vibration.
2. **RECORDING AREA:** Records from 6" up to 13¼" masters.
3. **SPEEDS:** Simple, finger-tip speed control for instantaneous selection of speed desired — 78, 45, or 33⅓ RPM.
4. **OVERHEAD RECORDING MECHANISM:**
   - (a) **"LIFTOMATIC SAFETY CAM"** prevents double cutting and damage to the stylus by automatically raising the cutter from the disc as it approaches the center of the record.
   - (b) **FACILITATES INTERCHANGING LEADSCREWS** for standard or micro-groove recording.
   - (c) **SPIRAL GROOVES:** Run-in, run-out and locked grooves are made with a simple, manual operation.
5. **PICKUP ARM:** 16" with dual stylus magnetic variable reluctance cartridge. Plays up to 16" broadcast transcriptions, standard commercial pressings and micro-groove records.
6. **TURNTABLE:** Precision machined aluminum fitted with hardened and ground shaft. Driven by two double-duty neoprene idlers running against the inside rim.
7. **SPEAKER:** 10" PM type. Custom-built to rigid REK-O-KUT specifications for extra power and wide range. Mounted into detachable cover of case.
8. **CASE:** Sturdy plywood covered with rich grey leatheretté. Built to withstand rough usage.
9. **DIMENSIONS:** 25" x 22" x 12". Weight: 65 Lbs.

CHALLENGER DELUXE..**$459.95**

ACCESSORIES

LEAD SCREWS: see page E-8, Model M-12.

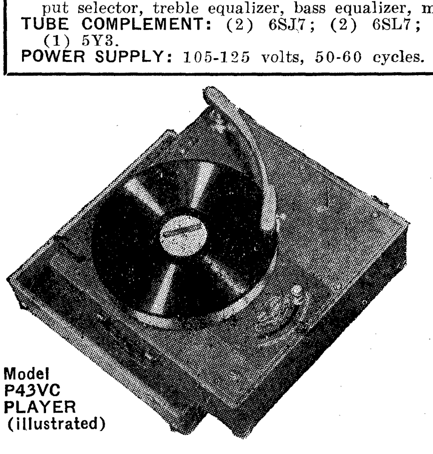
TR-103A........Idler and Record Bushing for 45 RPM, interchangeable with 33⅓ RPM idler **8.00**

R-8A UNIVERSAL RECORDING AMPLIFIER
(as used in DeLuxe "Challenger")

FREQUENCY RESPONSE: ±1 db from 30 to 20,000 cycles at normal setting of equalizer controls.
POWER OUTPUT: 13.5 watts at less than 3% total harmonic distortion into resistive load.
TREBLE EQUALIZER: Boost of 14 db and attenuation of 15 db above 8,000 cycles, continuously variable.
BASS EQUALIZER: Boost of 14 db and attenuation of 14 db below 50 cycles, continuously variable.
INPUT CHANNELS—FOUR: 2 high impedance microphones, phono channel compensated for G.E. or Pickering pickup, radio. Switch on rear of chassis changes phono channel for crystal pickup operation.
GAIN: Microphones—120 db; Phono—90 db; Radio—80 db.
OUTPUT IMPEDANCE: 4, 8, 15, 125, 250, 500 ohms for cutter and speaker.
OUTPUT SELECTOR: Three positions providing—recording, play-back and public address. Microphones are muted in play-back position.
MONITORING: A switch is provided giving three positions of monitor level—off, medium, loud. Speaker or headphones may be used. Meter on front panel indicates correct recording level.
HUM AND NOISE: 64 db below 13.5 watts with all controls turned for maximum hum and noise output.
CONTROLS: Microphone "1", microphone "2", radio-phone fader, output selector, treble equalizer, bass equalizer, monitor.
TUBE COMPLEMENT: (2) 6SJ7; (2) 6SL7; (1) 6SC7; (2) 6V6; (1) 5Y3.
POWER SUPPLY: 105-125 volts, 50-60 cycles.

POWER CONSUMED: 100 watts.
DIMENSIONS: Panel—19" x 6¼"; Chassis—17" x 8¾".

R-8A........For rack mounting, including tubes..................**$149.95**
C-85........Portable Case (illustrated), additional.............. **22.95**

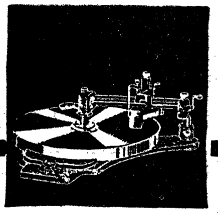


Model
P43VC
PLAYER
(illustrated)

RECORD PLAYERS
3 SPEED • VARIABLE SPEED

The quality instruments of the playback field. Play through any amplifier, sound projector, recorder, radio or TV set. Recommended for dubbing your favorite records into ANY type of recorder—wire, tape or disc.

Model	Turntable (See Page E-9 for Detailed Descriptions)	Pick-up	Net Price
P-43C	LP-743, 3 Speed	16" Crystal, Dual Stylus	**$ 99.50**
P-43M	LP-743, 3 Speed	16" Dual Stylus, Magnetic Variable Reluctance	**104.50**
P-43VC	CVS-12 Continuously Variable from 25 to 100 RPM	16" Crystal, Dual Stylus	**124.95**
P-43VM	CVS-12 Continuously Variable from 25 to 100 RPM	16" Dual Stylus, Magnetic Variable Reluctance	**129.95**



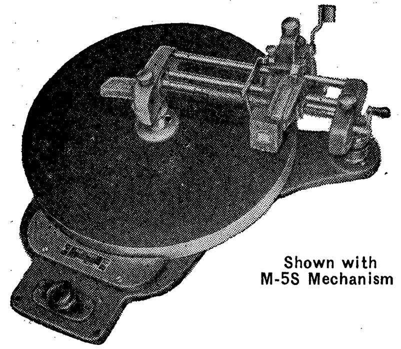
REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

MODEL V DELUXE DUAL SPEED 16" RECORDING TURNTABLES

The outstanding value in the recording field. Ruggedly constructed and precisely machined, the model "V" deluxe turntable will maintain the constant, wow-free speed and smoothness demanded in broadcast work.

The model M-5S Overhead Cutting Mechanism mounts to the "V" deluxe turntable in a matter of moments.



Shown with M-5S Mechanism

SPECIFICATIONS:

1. **MOTOR:** Hysteresis Synchronous equipped with lamitex pulley for maximum drive. Suspended in sheer shock mounts to prevent transmission of motor vibration to turntable or chassis.
2. **TURNTABLE:** Normalized aluminum alloy casting, lathe turned and balanced.
3. **CHASSIS:** Cast-iron ribbed L beam type with socket for instantaneous installation of M-5S recording mechanism.
4. **IDLERS:** Double-duty type made of Neoprene compound provides maximum traction. Will not glaze under operating conditions.
5. **OILING:** Shafts and bearings are self-oiling. Require infrequent periodic lubrication.
6. **SPEED CHANGE:** Mastermatic self-locking instantaneous speed shift.
7. **DIMENSIONS:** Front to Back 20″; Width 20″; Height 2½″ above motor board; 5″ below motor board; Weight 28 lbs.

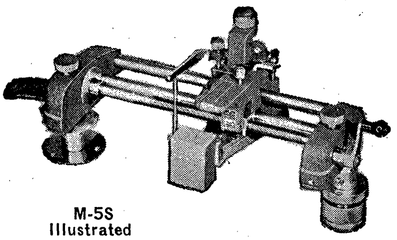
Model	Net Price
"V-Deluxe"	**$215.00**

ACCESSORIES

P-11—Portable case for "V" Deluxe recording table and M-5S cutting mechanism	**64.00**
C-7—Console cabinet, metallic grey finish, with record drawer for storing 100 transcriptions. 4 adjustable screw jacks. Built-in electrical outlets. Motorboard cutout	**129.95**
V103A—45 RPM Idler and record bushing interchangeable with 33⅓	**8.00**

MODEL M-5S MASTER-PRO 16" OVERHEAD RECORDING MECHANISM

A precise tool for professional work. Working surfaces and moving parts are hardened, ground and polished to a micro finish. The Master-Pro is a universal machine that can be readily attached to all 16″ recording turntables as well as the Rek-O-Kut model "V" recording table.



M-5S Illustrated

SPECIFICATIONS:

1. **TILT AND LEVEL ADJUSTMENT:** Enables the operator to level and square his unit to disc in a matter of moments.
2. **DUAL CLUTCH SPIRALING CONTROL:** A fool-proof device which eliminates the danger of spoiling a record while the crank-handle is in motion.
3. **MICROMETER DEPTH ADJUSTMENT:** For positive depth control of the cutting head.
4. **LEADSCREW:** Stainless steel with matched bronze feednut.
5. **ANGLE OF CUT:** Is controlled by a simple micrometer adjustment.
6. **GEARS:** Drive gears completely enclosed to prevent fouling by loose chips. Units equipped with 8-ohm magnetic cutter and 120-line O.I. Leadscrews.
7. **DIMENSIONS:** Length 16″; Width 6½″; Height 9″; Weight 11 lbs.

Model		Net Price
M-5S	With 8 ohm cutter	**$215.00**
M-5S	Without cutter	**200.00**

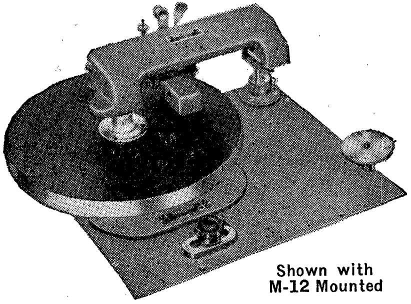
EXTRA LEADSCREWS

Specify "Inside Out" or "Outside In" by letters I.O. or O.I. after part number.

Part No.	Lines Per Inch	Net Price
MS-105	105	**$ 37.50**
MS-120	120	**37.50**
MS-135	135	**37.50**
MS-210 (Micro-Groove)	210	**47.50**
MS-240 (Micro-Groove)	240	**47.50**
MS-270 (Micro-Groove)	270	**47.50**

MODEL TR-12H DUAL SPEED 12" RECORDING TURNTABLE

The first 12″ dual speed recording turntable to feature a SYNCHRONOUS MOTOR. Design and construction of the model TR-12H is similar **to the Rek-O-Kut 16″ professional recording tables. The model M-12 overhead recording mechanism is mounted to the chassis in a few moments.**



Shown with M-12 Mounted

SPECIFICATIONS:

1. **TURNTABLE:** Aluminum, lathe turned and balanced.
2. **CHASSIS:** Cast aluminum. Drilled and tapped for instantaneous mounting of the M-12 recording mechanism.
3. **MOTOR:** Hysteresis Synchronous, fitted with a lamitex drive pulley. Suspended in sheer shock mounts to prevent transmission of motor vibration.
4. **SHAFTS:** Hardened, ground and polished to a micro-finish.
5. **DRIVE:** Internal rim. Drives through double-duty Neoprene idlers which insure free, smooth and quiet operation.
6. **SPEED CHANGE:** Instantaneous speed shift engages either the 78 or 33⅓ RPM idler.
7. **FINISH:** Beautiful grey wrinkle.
8. **DIMENSIONS:** Front to Back 16½″; Width 16″; Height 1⅜″ above motor board. 5″ below motor board. Weight 17 lbs.

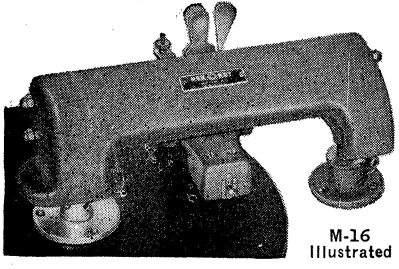
Model	Description	Net Price
TR-12H	With Synchronous Motor	**$129.95**

ACCESSORY

T-103A....45 RPM Idler and record bushing interchangeable with 33⅓	**8.00**

MODEL M-12 OVERHEAD RECORDING MECHANISM

The M-12 Overhead Cutting Mechanism is a truly professional machine for recording enthusiasts and professionals. It incorporates many of the features found only in 16″ professional units. The M-12 records up to 13¼″ master discs and can be mounted on any 12″ recording turntable.



M-16 Illustrated

SPECIFICATIONS:

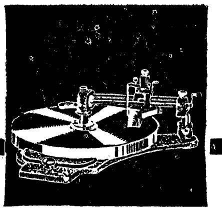
1. **SPIRAL GROOVE:** A run-in, run-out and locked groove made with a simple manual operation.
2. **LEADSCREW:** 108LPI stainless steel, lapped to a matched feednut which is in constant mesh.
3. **LIFT-O-MATIC:** Automatically lifts cutter from disc as it approaches end of leadscrew.
4. **MAGNETIC CUTTER:** 8 ohms, flat from 40 to 7,000 cycles.
5. **DIMENSIONS:** Length 11¼″; Width 4¼″; Height 6″.

Model		Net Price
M-12	For 12″ turntables	**$ 99.95**

EXTRA LEADSCREWS

Specify "Inside Out" or "Outside In" by letters I.O. or O.I. after part number.

Part No.	Lines Per Inch	Net Price
M12-120	120	**$ 17.95**
M12-144	144	**17.95**
M12-216 (Micro-Groove)	216	**27.95**
M12-240 (Micro-Groove)	240	**27.95**
M12-264 (Micro-Groove)	264	**27.95**



REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

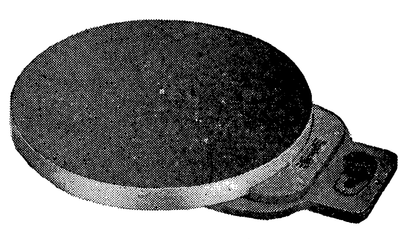
MODEL "G-2" DELUXE 16" TRANSCRIPTION TURNTABLES

The model "G-2 Deluxe" Transcription Turntable is acknowledged without reservation by the broadcasting industry to be the finest rim-driven turntable on the market. The rigid requirements for network programs are easily met by the "G-2 Deluxe."

OPERATING DATA:

1. **STARTING:** From standing start to 78 RPM ¾ of a turn. From standing start at 33⅓ RPM ¼ of a turn. Meets the NAB standard for speed variation and wow content.
2. **NOISE LEVEL:** 50 db below average recording level.
3. **CUEING:** 15¾″ turntable permits the record to overlap ⅛″ which enables the operator to cue from the rim of the disc.
4. **CONSTRUCTION:** **(A)** Precision lathe-turned balanced turntable. **(B) Hysteresis Synchronous** motor with Lamitex pulley. **(C)** Double duty Neoprene idlers. **(D)** Cast-iron L beam **no twist chassis. (E)** Mastermatic self-locking instantaneous speed shift. **(F)** All shafts hardened, ground, polished to micro finish.
5. **DIMENSIONS:** Front to Back 20″; Width 16″; Height 2½″ above motor board; 5″ below motor board. Weight 26 lbs.

Model	Description	Net Price
G-2 Deluxe	With Hysteresis Synchronous Motor, Mastermatic Shift	**$179.95**
G-2 Standard	With 4 pole Motor and Manual Shift	**137.50**
	ACCESSORY	
G 103 A	45 RPM Idler and record adapter interchangeable with 33⅓	**8.00**



G-2 Standard
Illustrated

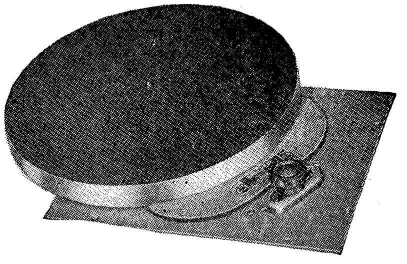
MODELS T-12H and T-43H DUAL SPEED 12" TRANSCRIPTION TURNTABLES

The REK-O-KUT Models T-12H and T-43H are the only 12″ dual speed turntables that meet the standards for speed regulation and wow content specified by the National Association of Broadcasters. The construction, design and performance standards equal the REK-O-KUT 16″ broadcast models. The T-12H and T-43H are recommended for use with Hi-Fi amplifiers and speaker systems.

SPECIFICATIONS:

1. **NOISE LEVEL (a) T-12H—T-43H:** 50 db below average recording level.
   (b) T-12—T-43: 40 db below average recording level.
2. **MOTORS: (a) T-12H and T-43H** — Hysteresis Synchronous.
   (b) T-12 and T-43—4 pole, built to REK-O-KUT specifications.
   All motors, shock mounted, are fitted with lamitex pulleys, which are pressed on, and ground concentric to the motor shaft—an exclusive REK-O-KUT feature which insures smooth, rumble-free operation.
3. **COMPONENTS:**
   Turntable—Cast aluminum, machined and balanced.
   Chassis—Aluminum casting, cross ribbed, flush mount. Requires a rectangular cutout for mounting. Easily installed.
   Drive—Internal rim drive through double-duty Neoprene idlers insures free, smooth and quiet operation.
   Shafts—Hardened, ground and polished to a micro-finish.
4. **SPEED SELECTION:** Instantaneous speed shift engages either 78 or 33⅓ RPM idler without stopping turntable or removing disc.
5. **FINISH:** Grey Wrinkle.
6. **DIMENSIONS:** Front to Back 15″; Width 13″; Height 1⅜″ above motor panel and 5″ below motor panel. Weight 13 lbs.

Model	Speeds	Net Price
T-12H	78 - 33⅓	**$119.95**
T-12	78 - 33⅓	**84.95**
T-43H	45 - 33⅓	**119.95**
T-43	45 - 33⅓	**84.95**
	ACCESSORIES	
T-103A	45 RPM Idler, with record bushing, interchangeable with 33⅓	**8.00**
T-104-43	78 RPM Idler, interchangeable with 45 RPM	**7.50**
C-12H	Portable Case	**26.95**



T-12H
Illustrated

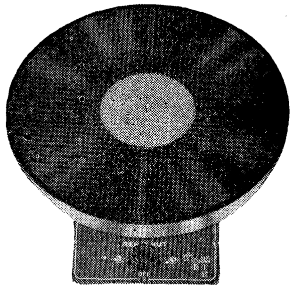
MODEL LP-743 — 3 SPEED 12" TRANSCRIPTION TURNTABLE

Here is the outstanding value for the discriminating buyer who seeks a quality three-speed turntable, at a moderate price. The LP-743 meets the growing demand for a good turntable which is priced between deluxe models and ordinary phono motors. Designed and dimensioned for easy replacement of obsolete motors in average consoles.

SPECIFICATIONS:

1. **NOISE LEVEL:** 30 db below average recording level.
2. **TURNTABLE:** Lathe-turned and balanced. Made of laboratory tested aluminum casting.
3. **MOTOR:** 4 pole, designed for smooth, quiet, vibration-free operation, fitted with a Lamitex motor pulley.
4. **SHAFT:** Turntable shaft hardened, ground and polished.
5. **SPEED CHANGES:** Instantaneous without stopping turntable or removing disc.
6. **FINISH:** Grey hammertone.
7. **DIMENSIONS:** Front to Back 14″; Width 12″; Height 1⅜″ above motor panel; 5″ below motor panel. Weight 10 lbs.

Model		Net Price
LP-743	3 Speeds: 78 - 45 - 33⅓	**$59.50**



MODEL CVS-12 — CONTINUOUSLY VARIABLE-SPEED TURNTABLE

Plays at any speed from 20 to 100 RPM without distortion or warble

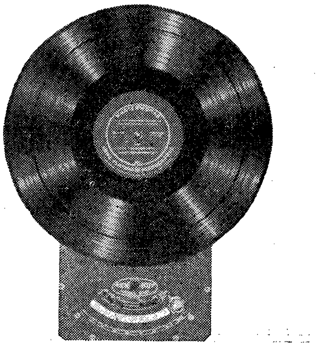
Operates on 50 or 60 cycles. Just plug in . . . no more changing of motor pulley or idler to convert from 50 to 60 cycles, or vice versa. Speeds are regulated by a simple movement of the lever to compensate for any fluctuations in line voltage or frequencies. Plays all standard and microgroove records as well as 16″ professional broadcast transcriptions. Excellent for broadcast stations, disc jockeys, schools, dance studios, musicians, singers, record collectors, gymnasiums, etc. The Only turntable to use in areas of fluctuating line voltage, frequency, or with portable power plant.

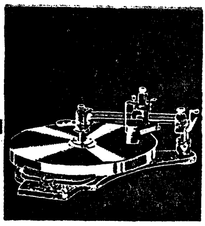
SPECIFICATIONS:

1. **SPEED RANGES: Continuously Variable.**
   (a) 110V-60 cycles, Range: 25 to 100 RPM.
   (b) 110V-50 cycles, Range: 20 to 85 RPM.
2. **MOTOR:** Constant speed, 4 pole, with cone pulley.
3. **DRIVE:** Exclusive VARI-CON* self-seating rim drive.
4. **TURNTABLE:** 12″ cast aluminum, with hardened and ground shaft.
5. **NOISE LEVEL:** 30 db minimum below average recording level.
6. **DIMENSIONS:** Front to Back 15½″; Width 12″; 1½″ above chassis, 5″ below chassis.

*Patent Pending.

Model		Net Price
CVS-12	Variable Speed, 25-100 RPM	**$84.95**





REK-O-KUT COMPANY

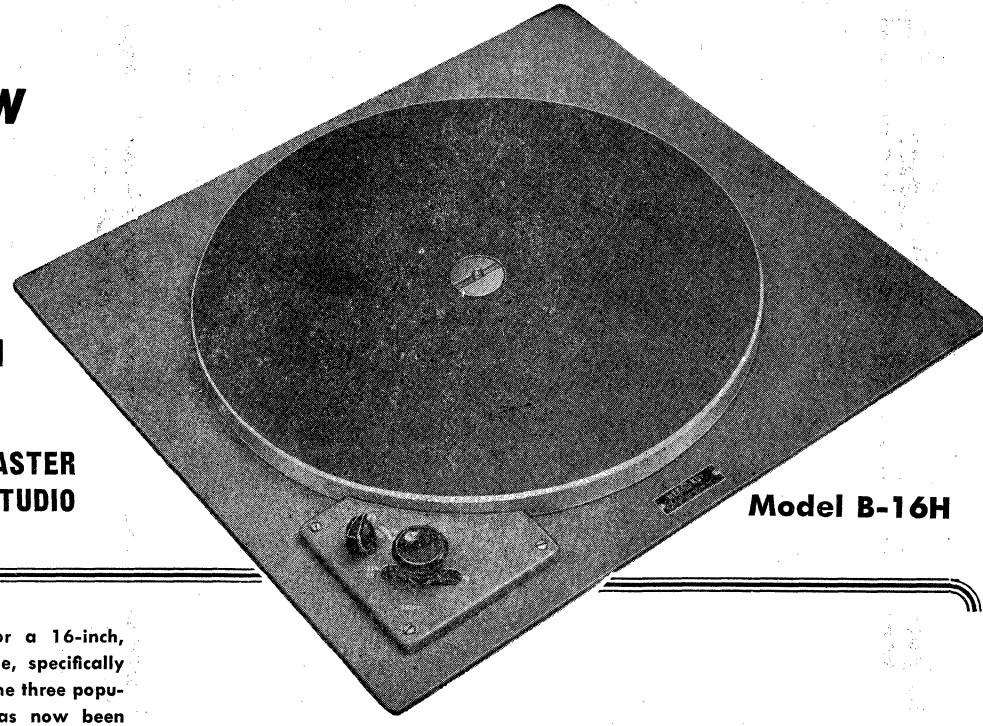
MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

THE *NEW*

16-INCH 3-SPEED

TRANSCRIPTION TURNTABLE . . .

. . . for the BROADCASTER and the RECORDING STUDIO



Model B-16H

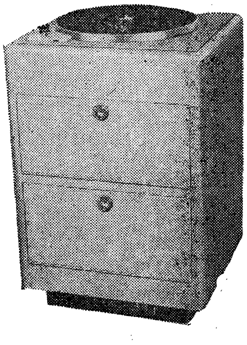
THE UNIVERSAL DEMAND for a 16-inch, 3-speed transcription turntable, specifically designed and engineered for the three popular disc recording speeds, has now been filled by the REK-O-KUT Model B-16H.

Entirely new elements of design and engineering, based upon suggestions made by leading engineers in the field, were embodied to produce this "authentic" three-speed turntable. As a result, all three recording speeds—33⅓, 45 and 78—can be selected with equal facility simply by turning an indicator.

The B-16H is dimensioned for ready replacement of your obsolete two-speed tables in your present consoles or cabinets. Some cabinets may require slight modifications for fitting.

New!

MODEL C-7B CONSOLE CABINET for B-16H



Cabinet is designed to receive B-16H chassis without using screws or bolts. Floats on felt. Features two storage compartments with piano hinges and flush ring-latches. Includes built-in electrical outlet and adjustable levelling legs. Metallic-grey finish. Dimensions: 33" high, 22" wide, 20½" deep.

PRICE $109.95 net

SPECIAL FEATURES

- THE TURNTABLE is cast aluminum, lathe turned and sub-mounted in base.
- 45 RPM ADAPTER . . . disappearing type . . . built into hub of turntable.
- BASE is drilled and tapped for mounting Audak, Gray and Pickering arms.
- DIMENSIONED for ready replacement of your obsolete two-speed tables in your present consoles or cabinets. Some cabinets may require slight modifications for fitting.
- MAINTENANCE is simple . . . the turntable, motor pulley and idlers are easily accessible.

OPERATING DATA

STARTING:

From standing start to 78 rpm . . . ¾ of a turn.

From standing start at 45 and 33 rpm . . . ¼ of a turn.

NOISE LEVEL: 50 db below average recording level.

SPEED VARIATION: Meets the NAB standard for speed variation and "wow" content.

CUEING: 15¾" Turntable permits the record to overlap ⅛" which enables the operator to cue from the rim of the disc.

DIMENSIONS: 1½" above base, 6" below. 20" x 18¾".

SPECIFICATIONS

BASE: Cast aluminum, square shape, machined. Radial ribbed for utmost rigidity.

TURNTABLE: Cast aluminum—16-inch. Lathe turned with extra heavy rim for balanced flywheel action. Sub-mounted in base.

SPEED CHANGE: Instantaneous for all three speeds. Controlled by selector.

DRIVE: Rim driven through idlers.

SPEED SHIFT: Mastermatic, self-locking. A REK-O-KUT exclusive.

MOTOR: Hysteresis Synchronous. 60 cycles A.C. 115 volts. Motors available in other frequencies and voltages at additional cost.

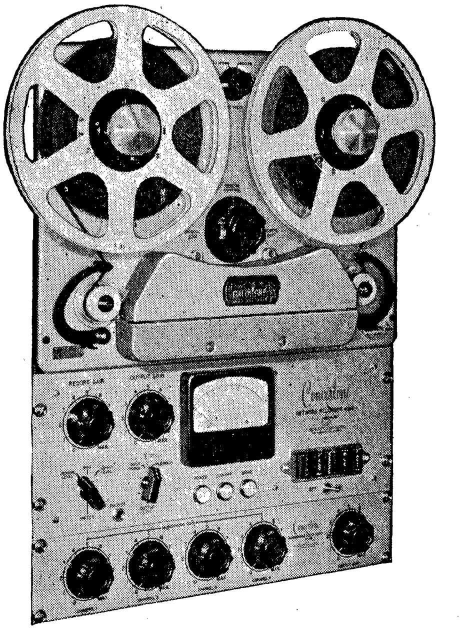
FINISH: Blue-gray wrinkle.

SHIPPING WEIGHT: 30 lbs.

PRICE: $250.00 net.

Concertone

MAGNETIC TAPE RECORDERS

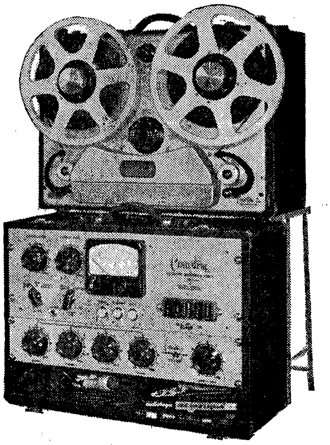


CONCERTONE NETWORK RECORDER

The Concertone Network Recorder and recording amplifier incorporates such features of engineering and design as to represent a major advance in dependability of operation and simplicity of maintenance in the field of broadcast recording and reproduction. A high degree of versatility is achieved through provision for mounting up to 5 heads; flexibility attained by option of rack panel mounting, portable cases or console cabinet installation.

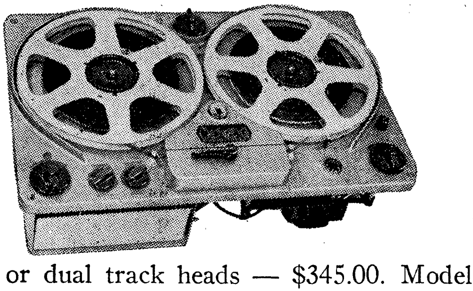
SPECIFICATIONS

NETWORK RECORDER NWR-1: Meets all adopted N.A.B. standards. **Frequency response:** ±2 db from 40 to 15,000 cps at 15"/sec., ±2 db from 50 to 9,000 cps at 7.5"/sec. **Signal to noise ratio:** 55 db. **Harmonic Distortion:** 2% at zero V.U. **NETWORK DRIVE NWD-1: Drive panel:** 14" x 19". **Mounting Depth:** 6" (below panel). **Tape speeds:** 7.5" and 15"/sec. **Flutter and wow:** 0.1% RMS at 15"/sec. 0.2% RMS at 7.5"/sec. **NETWORK AMPLIFIER NWA-1: Amplifier panel:** 7" x 19". **Mounting depth:** 6" below panel. **Input level:** Minus 20 V.U. minimum. **Output level:** Plus 20 V.U. maximum. **MICROPHONE MIXER NWM-1: Mixer panel:** 3½" x 19". **Mounting depth:** 6" (below panel). **Input:** Four low level low impedance microphone channels, individually controlled. **Output:** Plus 10 V.U. across 600 ohm balanced line.



PROFESSIONAL USERS' NET PRICES

Drive mechanism NWD-1 on 14" x 19" rack panel, complete with erase-bias oscillator — $478.00. Amplifier NWA-1 on 7" x 19" rack panel, complete with power supply and drive controls — $317.00. Four channel microphone mixer NWM-1, on 3½" x 19" rack panel, complete with self-contained power supply — $127.50. Carrying case for Network drive mechanism — $62.50. Carrying case for Network amplifier and microphone mixer — $62.50.



CONCERTONE HIGH FIDELITY RECORDER Model 1501

The only truly high-fidelity high performance tape recorder in the popular price field. Complies with NAB standards. Choice of 7.5" or 15"/sec. tape speeds. Plays standard 5", 7" and NAB 10½" reels. Extended frequency response, 50 to 15,000 cps ±2 db; tape noise down to random level. Simultaneous monitoring from tape while recording. Basic recorder (illustrated) ready for custom installation, includes drive, power supply and preamplifiers. Professional Users' Net Price, single or dual track heads — $345.00. Model 501 carrying case with monitoring amplifier, high fidelity 8" speaker and all connections for portable system — $82.50. Model 502, without amplifier and speaker — $47.50. Model 702 Console Cabinet, all metal — $97.50.

Manufactured by

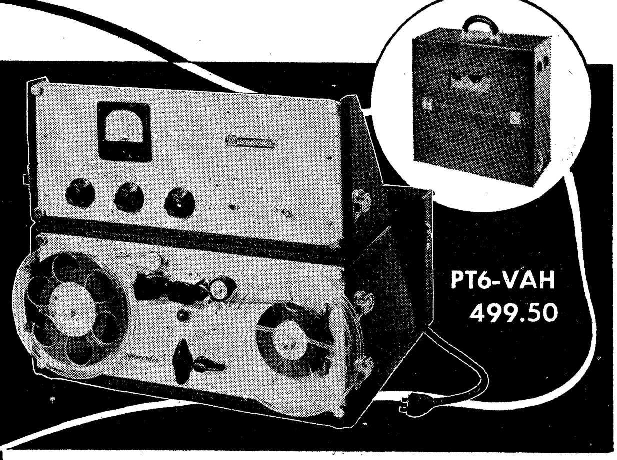
BERLANT ASSOCIATES

Magnecord

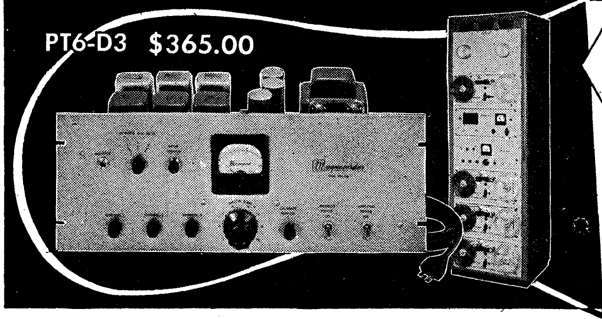
America's most complete line of professional recording equipment

the new magnecord Voyager

One-case PORTABLE — True portability with professional performance — the answer to your demand for a single case portable magnetic tape recorder for professional use. The standard PT6-AH recorder carried back to back with a lightweight line level amplifier — when in use, the amplifier swings up to rest on the recorder as shown (or may be instantly detached). Frequency response at 15"/sec. tape speed is ∓ 2 db from 50 to 15,000 cycles per sec. Weight 42 pounds, complete; carrying case measures 19" x 7¾" x 17¾"



PT6-VAH
499.50



PT6-D3 $365.00

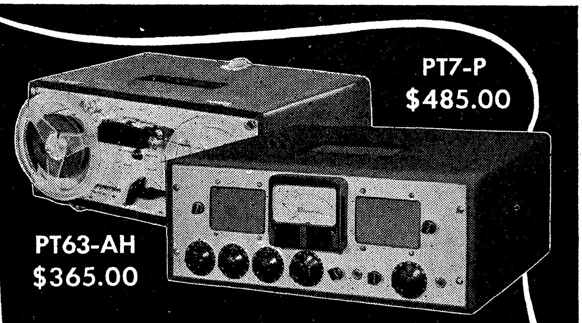
dubbing AMPLIFIER

for duplicating master tapes — Makes three duplicate copies simultaneously. From a playback machine, the output goes to the PT6-D3, dubbing amplifier, which in turn feeds to three PT6-A recorders. There's a calibrating circuit to insure equal levels on all tapes. Master motor control switch, volume meter, and headphone jack. Can be switched to any channel. See how the units "stack."

the FINEST Broadcast MAGNECORDER with 3-channel HIGH LEVEL mixing

the recorder PT63-AH — offering wide band response and fidelity. The famous Magnecorder with 3 heads for monitoring from the tape; separate erase, record and playback heads. High speed forward for fast cueing or editing.

the amplifier PT7-P — with inputs for 3 low-impedance microphones with separate pre-amp for each with high level mixing. Separate record and playback amplifiers. Output: zero level at 600 ohms, balanced, and 10 watts of audio; 4" VU meter.



PT7-P
$485.00

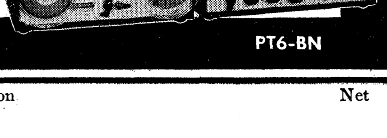
PT63-AH
$365.00

All prices subject to change without notice

Binaural 3-Dimensional Broadcasting

The newest sensation in radio, as dramatized by progressive stations across the country. Use your present AM and FM channels plus the new Binaural Magnecorder units. Ask us for detailed information on programming and engineering.

(right) Binaural amplifier — $515.00, and (left) Binaural recorder mechanism, $390.00.



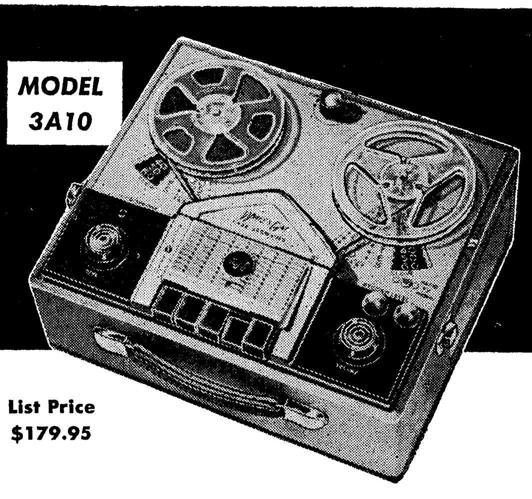
PT6-BAH PT6-BN

see your local CLASSIFIED TELEPHONE DIRECTORY **under "Recorders"**

. . . or write

Magnecord, Inc., RM 53
225 West Ohio Street, Chicago 10, Illinois

Name...
Company...
Address..
City...Zone......State.......................



MODEL 3A10

ONLY WILCOX-GAY tape Recordio® has the PRESTOMATIC PUSH-BUTTON KEYBOARD

List Price $179.95

At the press of a finger . . . "click", it's recording . . . "click", it's on playback . . . automatically. So easy a child can do it. Wilcox-Gay takes the mystery out of tape recording . . . with a remarkably simple, easy-to-read keyboard . . . it's "FINGER TIP MAGIC". The five PRESTOMATIC keys are marked: "RECORD", "PLAY", "STOP", "FORWARD" (high speed), and "REVERSE" (high speed).

. . . And for all its simplicity, RECORDIO maintains an unapproached standard of performance.

Model 3A11 comes equipped for plug-in connection of foot pedal control and earphone attachment for office dictation use.

- **Size:** 12″ x 14″ x 9″.
- **Weight:** 23 lbs.
- **Reels:** Uses 3″, 4″, 5″, or 7″ reels.
- **Speed Selector:** 3A10 — 3¾ and 7½ I.P.S.
  3A11 — 1⅞ and 3¾ I.P.S.
- **Speaker:** 5″ x 7″ elliptical P.M. speaker.
- **Record Lock Button** — Prevents accidental erasure.
- **Radio-Phono-TV Input Jack** — This low level input permits recording from radio, phono or TV speaker voice coil by means of a patch cord.
- **Fast Forward and Reverse** — Operates at ten times normal speed.
- **External Speaker Jack** — For earphone attachment or to permit operation of an external speaker.
- **Microphone Supplied** — Controlled reluctance microphone not affected by any climatic conditions.
- **Tone Control** — This full range variable control may be rotated from maximum brilliance to a deep, rich bass tone.
- **Volume Control** — Bass and Treble compensated for best reproduction.
- **Two Record Level Indicators** — The "Easy-View" neon indicators show at a glance "Normal and Overload" record levels.

3A10	±3 DB	3A11	±3 DB
3¾ IPS	80-6000 CPS	1⅞ IPS	100-5000 CPS
7½ IPS	75-10000 CPS	3¾ IPS	80-6000 CPS

Hum Level—45db
Noise Level—55db

Hum Level—40db
Noise Level—45db

MODEL 3A10			MODEL 3A11		
Recording Time Using Both Channels			Recording Time Using Both Channels		
Reel Sizes	3¾	7½	Reel Sizes	1⅞	3¾
5-inch Reel	1 Hr.	½ Hr.	5-inch Reel	2 Hrs.	1 Hr.
7-inch Reel	2 Hrs.	1 Hr.	7-inch Reel	4 Hrs.	2 Hrs.

EXTRA POWER de Luxe tape Recordio® by WILCOX-GAY

MODEL 3F10

FEATURING THE PRESTOMATIC PUSH-BUTTON KEYBOARD

List Price — $199.95

- **Size:** 18½" x 12¾" x 10⅝".
- **Weight:** 25 lbs.
- **Reels:** Uses 3", 4", 5", or 7" reels.
- **Speed Selector:** 3¾ and 7½ I.P.S.
- **Speaker:** 6" x 9" Elliptical PM Speaker.
- **Record Lock Button:** Prevents accidental erasure.
- **Radio-Phono-TV Input Jack:** This low level input permits recording from Radio, Phono or TV speaker voice coil by means of a patch cord.
- **Microphone Supplied** — Controlled reluctance microphone not affected by any climatic conditions.
- **Two Record Level Indicators:** The "Easy-View" neon indicators show at a glance "normal and overload" record levels.
- **External Speaker Jack** — For earphone attachment or to permit operation of an external speaker.
- **Tone Control:** This full range variable control may be rotated from maximum brilliance to a deep rich bass tone.
- **Volume Control:** Bass and treble compensated for best reproduction.
- **Push - pull amplifier:** High fidelity push-pull beam power output, delivering 6 watts of undistorted output.
- **Fast Forward and Reverse** — Operates at ten times normal speed.

PERFORMANCE DATA

	At ±3db
3¾ I.P.S.	75-7500 C.P.S.
7½ I.P.S.	55-10500 C.P.S.

Hum Level—48db
Noise Level—57db

Separate Storage Compartment for Tape & Accessories

Wilcox-Gay . . . pioneer name in home recorders, has achieved in the de luxe Recordio, a significant advance in tape recorder progress.

Never before has a unit so rich in fidelity, range and tone qualities been available for professional and home recording. Powerful enough to meet any volume requirement . . . sensitive enough to pick up the faintest whisper.

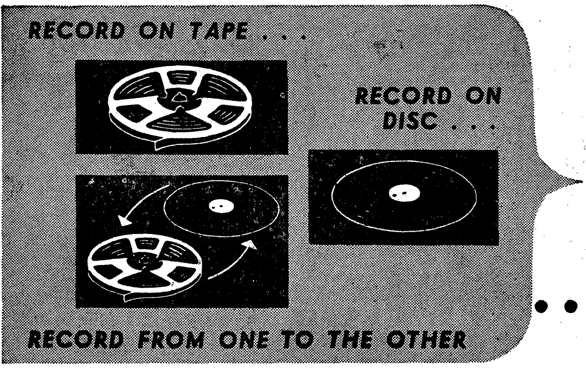
You'll marvel at the simplicity of operation . . . only the Wilcox-Gay Recordio has the PRESTOMATIC push-button keyboard . . . truly finger-tip magic.

Recording Time Using Both Channels

Reel Sizes	3¾	7½
5-inch Reel	1 Hr.	½ Hr.
7-inch Reel	2 Hrs.	1 Hr.

THE WILCOX-GAY CORPORATION

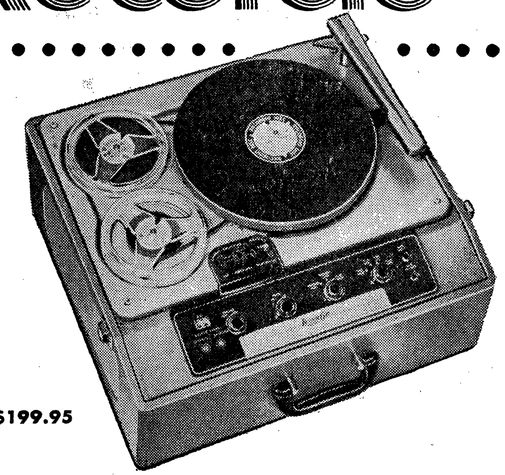
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY.*



WITH THE VERSATILE WILCOX-GAY

MODEL 3C10

COMBINATION TAPE-DISC Recordio®



Wilcox-Gay Tape-Disc Recordio is better than ever with a smartly designed carrying case and exciting new features. This is the Wilcox Gay recorder that opens up a wide new field of applications. You can transfer phonograph records to tape . . . re-record portions of tape recordings to discs. With fibre discs you can mail them like a letter or file them away for reference. The recording enthusiast will find a wealth of interesting uses for this versatile Tape-Disc Recordio. It's a handsome instrument, too, with eye appeal, convenient portability and quality performance.

List Price $199.95

- **Size:** 19" x 16½" x 11.
- **Weight:** 30 lbs.
- Two-Tone streamlined case.
- High speed wind—Forward and reverse.
- **Microphone Supplied:** Controlled reluctance microphone not affected by any climatic conditions.
- **Two Record Level Indicators:** The "Easy View" neon indicators show at a glance "Normal and Overload" record levels.
- Can be used as conventional phonograph and public address amplifier.
- Can be plugged into external amplifier.
- Combination tape and disc recording.
- **External Speaker Jack:** For earphone attachment or to permit operation of an external speaker.
- **Speaker:** 6" x 9" elliptical PM speaker.
- **Tone Control:** This full range variable control may be rotated from maximum brilliance to a deep rich bass tone.

PERFORMANCE DATA	
	At ±3db
3¾ I.P.S.	80-6000 C.P.S.

Hum Level — 45db

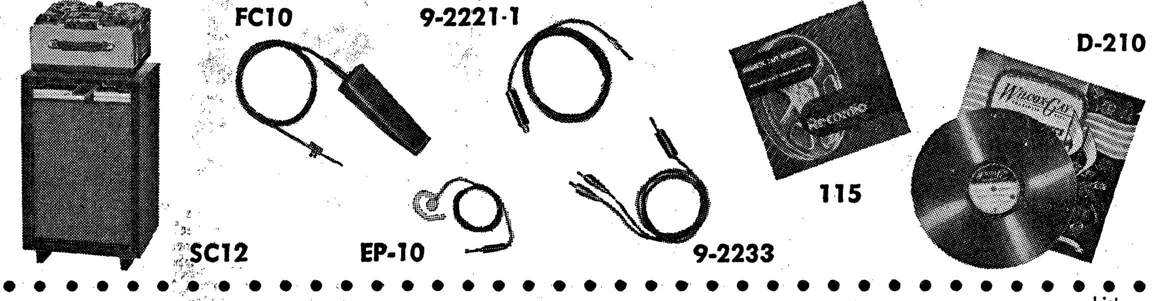
TAPE SPEED .... 3¾ I.P.S.

RECORD SPEED .... 78 R.P.M.

OPTIONAL ACCESSORIES

- Earphone attachment
- Patch cord for recording from Radio, TV or Phono

WILCOX-GAY Recordio® ACCESSORIES



Model Recordio Accessories

SC12—Extension Speaker Consolette, hand rubbed mahogany finish, containing 12" wide range speaker, bass reflex enclosure, complete with 20 ft. cord and plug. List Price **$59.50**

FC10—Foot Control mechanism with connecting Foot Control cord and plug for model 3A11 .... List Price **$17.50**

EP-10—Ear Phone, lightweight, plastic, excellent fidelity .... List Price **$12.00**

9-2221-1—Microphone connecting cord complete with connectors 12½ ft. List Price **$5.00**

9-2221-2—Microphone connecting cord complete with connectors 25 ft. List Price **$5.50**

Model

9-2233—Radio-Phono recording cable 6 ft. Complete with connectors and network. For models 2A10, 2A11, 3C10. List Price **$3.50**

20-233—Radio-Phono recording cable for models 3A10, 3A11, 3F10 ...... List Price **$1.35**

Model	Recordio Tape	List Price
115	5" Reel, 600 ft. roll, Plastic Base	$3.50
117	7" Reel, 1200 ft. roll, Plastic Base	5.50
ER-95	5" Empty tape reel in box (Minimum shipping quantity 12 reels)	.50
ER-97	7" Empty tape reel in box (Minimum shipping quantity 12 reels)	.60

Model	Recordio Discs	List Price
A-26½	6½" Fiber Base, 6 to pkg	$ .60
A-28	8" Fiber Base, 6 to pkg	1.00
D-210	10" Alum. Base, 6 to Album	2.50
D-26½	6½" lt.wt. Alum., 6 to Album	1.25
D-28	8" lt.wt. Alum., 6 to Album	1.75
G-28	8" hvy.wt. Alum., single sleeves	.40
G-210	10" hvy.wt. Alum., single sleeves	.60

Model	Recordio Point Needles	List Price
D-9	Spring action playback needle	$1.50
D-10	Dual purpose cutting playback needle (3 speed)	2.50
D-11	Dual purpose cutting playback needle (78 R.P.M.)	2.50

THE WILCOX-GAY CORPORATION

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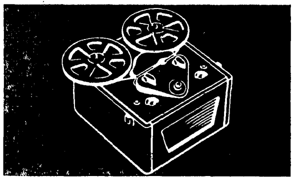
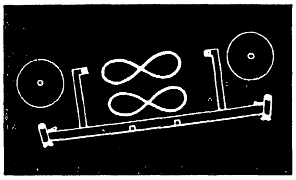
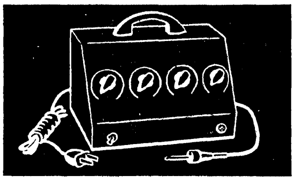
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY.*



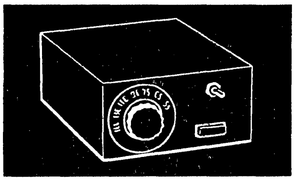
TAPE PLAYER — Model PB1, PBA2. 2 Speeds. Plays back any pre-recorded tape. Fast rewind, forward. Model PB1 with pre-amp plays through any amplifier. Model PBA2 has amplifier, speaker.



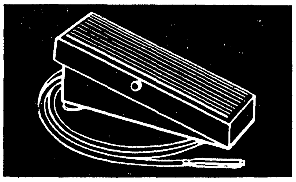
10½" REEL ADAPTER — Model X302 Converts 9T-3C and PB-A2 for 4 hour operation. Uses 2400' NAB hub broadcast reels plus smaller sizes.



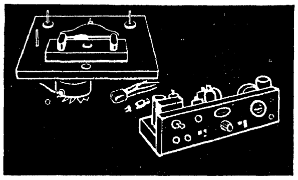
AUDIO-MIX—Model MM4 electronic mixer for multiple mike recording on tape, wire, disc, or P.A. systems. Wide range of audio blending. Connects to any audio system.



AM RADIO TUNER — Model AM-T. Self-powered selective tuner fits recorder compartment. Has AC line and plugs into phono jack. Plays through any amplifier.



FOOT CONTROL—Model FP-5 instantly starts, stops tape recorders and players. Designed for business and institutions. Invaluable for transcription, lectures, slide-film, conferences and dictation.



TAPE MECHANISM & PRE-AMP —Models 9T-3M & PRE-7. For custom installation. Plugs into any existing audio amplifier, radio, TV set.

tops! IN EYE APPEAL IN EAR APPEAL

Model 9T-3C

PENTRON

Multi-Speed TAPE RECORDER

The *one* all-purpose portable recorder that records and plays back every voice, every sound with faithful realism. Its unmatched versatility meets countless requirements of industry, business and government. Recordings can be played over and over or same tape can be re-recorded any number of times.

Only Low-Priced Recorder with all these Professional Features

2 Hours recording or playback.
"Edit-Ear" Control corrects while playing.
Push-Button 3¾" and 7½" speeds.
Fastest Rewind and forward speeds.

Auto. Amplifier Equalization in both speeds.
Auxiliary Jacks for P.A. system.
Heads—single or dual track.
Weight—only 27 lbs.

Write for FREE Bulletins!

IN "SOUND" ELECTRONICS IT'S

THE PENTRON CORP. CHICAGO 16, ILL.

The Only Complete Line in the Industry!

ACCESSORIES Auxiliary speaker. Telephone pick-up. Magnetic tape. Plastic reels. Extension cords.

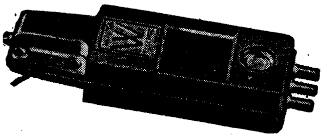
WEBSTER ELECTRIC

Webster Electric Company, Racine, Wisconsin. Established 1909

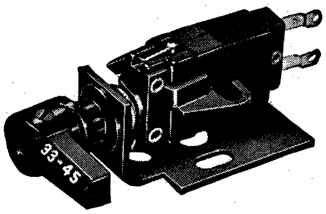
CRYSTAL CARTRIDGES

FOR

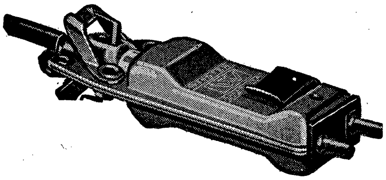
EASIER STOCKING . . . FASTER TURNOVER . . . EASIER REPLACEMENT



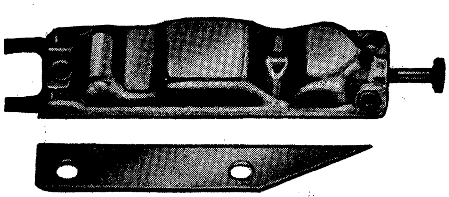
MODEL WS
for all 78 r.p.m. replacements



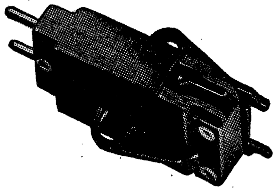
MODEL AX
for 3-speed, 2-needle replacements. Snap-off bracket for arms with integral twist mechanism.

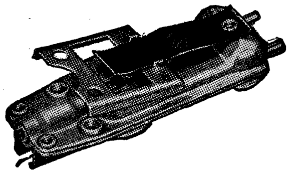


MODEL F16M



MODEL CX





MODEL Q

CHARACTERISTICS AND LIST PRICE

model No.	average output at 1000 C.P.S. Volts		minimum tracking pressure		approx. cut-off frequency C.P.S.	net weight grams	needle information (see note)	list price
	r.p.m. 33⅓ - 45	r.p.m. 78	r.p.m. 33⅓ - 45	r.p.m. 78				
dual purpose cartridge microgroove and standard (33⅓, 45 and 78 r.p.m.) and microgroove (33⅓ and 45 r.p.m.) only.								
			grams	**grams**				
A1	.75	1.00	7.0	7.0	5,000	5.0	1MS & 3MS	**$8.50**
A1M	.75	1.00	7.0	7.0	5,000	5.0	1MO & 3MO	**7.50**
A2	.75	—	7.0	—	5,000	5.0	1MS	**6.50**
A2M	.75	—	7.0	—	5,000	5.0	1MO	**6.00**
A9-1	.75	1.00	7.0	7.0	5,000	5.0	2MS	**6.50**
A9M1	.75	1.00	7.0	7.0	5,000	5.0	2MO	**6.00**
AX	1.0	1.5	7.0	7.0	5,000	13.0	1MO & 3MO	**8.25**
BX	.50	—	7.0	—	7,000	10.0	1MO	**6.00**
F13M	.85	—	7.0	—	6,000	8.0	1MO	**6.50**
F14-2	.85	1.70	7.0	21.0	6,000	10.0	DO	**8.50**
F15M	.85	1.70	7.0	21.0	6,000	10.0	1MO & 3 MO	**8.50**
F16M	.75	1.00	8.0	8.0	6,000	10.0	1MO & 3MO	**8.50**
F19	3.5	5.0	12.0	12.0	3,000	10.0	IMO & 3MO	**8.50**
Q3	2.0	3.0	12.0	12.0	5,000	23.0	2MO	**7.50**
standard (78 r.p.m. only)								
				ounces				
A3	—	1.00	—	.25	5,000	5.0	3MS	**6.50**
A3M	—	1.00	—	.25	5,000	5.0	3MO	**6.00**
CX	3.0	3.40	15.0	2.50	5,000	16.0	—	**4.50**
C4	—	2.50	—	2.50	5,000	16.0	—	**4.50**
D2	—	2.50	—	2.50	5,000	25.0	—	**5.40**
D3	—	.70	—	1.25	6,000	25.0	—	**5.55**
F1P	—	1.25	—	1.00	5,000	8.0	—	**5.00**
F2P	—	1.25	—	1.00	5,000	18.0	—	**5.00**
F7P	—	1.20	—	1.00	8,000	18.0	3MO	**7.50**
F7P 2	—	2.25	—	1.50	5,000	8.0	3MO	**6.50**
N6P	—	1.50	—	1.00	5,500	25.0	—	**5.25**
N7P	—	.60	—	.75	10,000	25.0	—	**6.50**
N10P	—	2.50	—	1.25	5,000	25.0	—	**5.25**
Q1	—	1.00	—	1.00	8,000	23.0	3MO	**8.50**
Q2	—	2.00	—	1.50	6,000	23.0	3MO	**7.50**
WS	—	1.50 or 4.00	—	.75	5,500	25.0	3MO	**5.50**

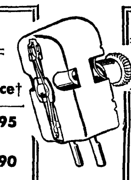
note: 1 MS = 1 Mil Sapphire tip; 1 MO = 1 Mil Osmium tip; 2 MO = 2 Mil Osmium tip; 3 MS = 3 Mil Sapphire tip; 3 MO = 3 Mil Osmium tip; DO = Dual tip 1 Mil Osmium and 3 Mil Osmium. Symbols indicate needles furnished.

PHONOGRAPH PARTS AND ACCESSORIES

G-E CARTRIDGES

"GOLDEN TREASURE" CARTRIDGES

Catalog Number	Type	Stylus	Stylus Radius in Inches	List Price†
RPX-052*	Triple Play	Diamond and Sapphire*	.001 diamond .003 sapphire	$38.95
RPX-053	Triple Play	Dual Diamond	.001 and .003 comb.	57.90
RPX-061	Single	Diamond	.001 diamond	33.95
RPX-063	Single	Diamond	.003 diamond	33.95
UPX-111	RPX-050 Triple Play Cartridge installed in a Webster Plug-in head.			15.95



TRIPLE PLAY (DUAL STYLUS TYPE)

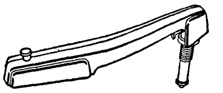
Catalog Number	Stylus	Stylus Radius in Inches	List Price†
RPX-050	Sapphire*	.001 & .003 Combination	$13.95

SINGLE STYLUS TYPE

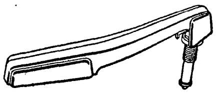
Catalog Number	Stylus	Stylus Radius in Inches	List Price†
RPX-040	Sapphire*	.003	$9.95
RPX-041	Sapphire*	.001	9.95

Some Sapphires are synthetic.

G-E TONE ARMS

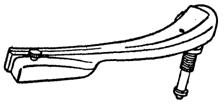


UPX-006. Plays 33⅓, 45 and 78 RPM records. With RPX-050 Triple Play Cartridge. **$19.95**

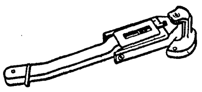


UPX-007. Tone arm and RPX-040 (.003 Sapphire*) Cartridge 78 RPM records. **$15.95**

UPX-004. For 33⅓ and 45 RPM records. RPX-041 (.001 Sapphire*) Cartridge. **$15.95**

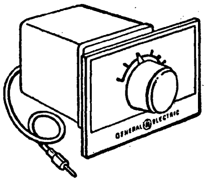


UPX-009. Conversion Tone Arm for Webster-Chicago changer models. **$15.55**



FA-21-A. Professional transcription arm — less cartridge. **$41.00**

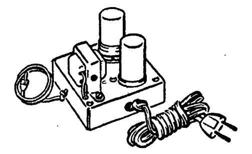
G-E RECORD COMPENSATOR



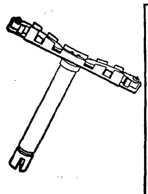
A1-900. Adjustable high impedance equalizer for Standard G-E Cartridges. **$14.95**

G-E PHONO PREAMPLIFIER

UPX-003A. Self-powered preamplifier. Provides full bass boost of 18db at 50 cycles. **$17.95**



G-E STYLI

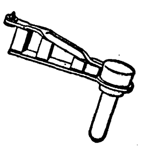


REPLACEMENT STYLI (DUAL)

Catalog Number	Stylus	Stylus Radius in Inches	List Price†
RPJ-007	Sapphire*	.001 & .0025 Combination	$ 5.95
RPJ-010	Sapphire*	.001 & .003 Combination	5.95
RPJ-011	Diamond	.001 & .0025 Combination	49.95
RPJ-012	Diamond	.001 & .003 Combination	49.95
RPJ-013	Diamond Sapphire*	Comb. .001 Diamond .003 Sapphire	31.00

REPLACEMENT STYLI (SINGLE)

Catalog Number	Stylus	Stylus Radius in Inches	List Price†
RPJ-001	Sapphire*	.003	$ 3.50
RPJ-002	Diamond	.0025	27.50
RPJ-003	Diamond	.003	27.50
RPJ-004	Diamond	.001	27.50
RPJ-005	Sapphire*	.001	3.50
RPJ-006	Sapphire*	.0025	3.50



†Prices subject to change without notice.

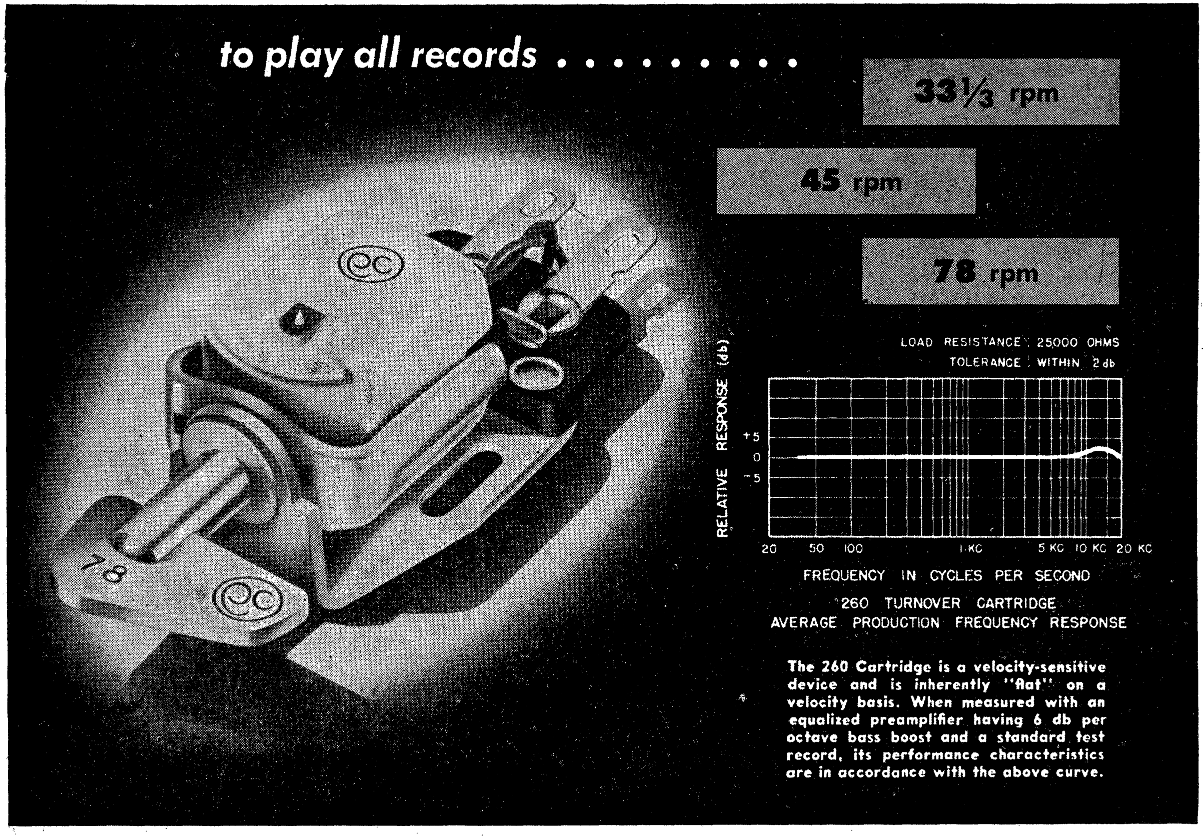
FOR COMPLETE INFORMATION WRITE: General Electric Company, Section 393, Electronics Park, Syracuse, New York.

GENERAL ELECTRIC

PICKERING

MODEL 260 • DIAMOND STYLUS

TURN-OVER PICKUP


to play all records . . . .
33⅓ rpm
45 rpm
78 rpm
78
LOAD RESISTANCE : 25,000 OHMS
TOLERANCE : WITHIN 2 db
RELATIVE RESPONSE (db)
+5
0
-5
20
50
100
1 KC
5 KC
10 KC
20 KC
FREQUENCY IN CYCLES PER SECOND

260 TURNOVER CARTRIDGE
AVERAGE PRODUCTION FREQUENCY RESPONSE

The 260 Cartridge is a velocity-sensitive device and is inherently "flat" on a velocity basis. When measured with an equalized preamplifier having 6 db per octave bass boost and a standard test record, its performance characteristics are in accordance with the above curve.

PICKERING MODEL 260 DIAMOND STYLUS TURN-OVER PICKUP . . .

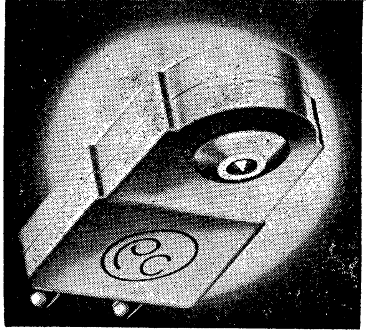
Inherent in the development, engineering and manufacture of the 260 Turn-Over Pickup, are the factors which have earned such a high reputation for Pickering Audio Components. . . . The 260 is now available with diamond styli — diamond styli wear longer, and prolong the life of recordings. The 260 has an output of 30 milivolts at 10 cm per second; it mounts easily in any type arm. The 260 Turn-Over Pickup may be used with the Pickering 410 Input System, 230H Preamplifier, 132E Record Compensator and 190 Arm or in any high quality playback system

PICKERING PROFESSIONAL AUDIO COMPONENTS / MAXIMIZE PLAYBACK PERFORMANCE

"For those who can hear the difference"

PICKERING *and company incorporated • Oceanside, L. I., New York*

PICKERING PROFESSIONAL AUDIO COMPONENTS FOR RECORD PLAYBACK



Models D-120M, S-120M, D-140S and S-140S, with diamond or sapphire stylus, are without equal; they produce the finest quality reproduction of lateral recordings.

MODELS D-120M AND S-120M are for playing standard records and transcriptions requiring 2.5 mil styli. MODELS D-140S AND S-140S are for long playing, microgroove records; 33⅓ and 45 RPM.

THE PICKERING CARTRIDGE

PICKERING CARTRIDGES . . .

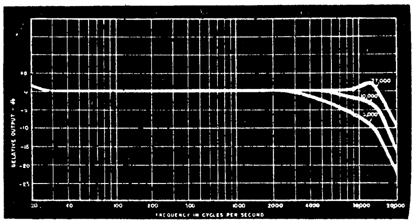
are the choice of audio engineers throughout the world. They are universally acclaimed because of their high output, wide range performance and low distortion. They have an output of 50 milivolts at 10 cm per second and are used wherever a fine cartridge is required in radio stations, recording studios and for purposes of quality control by leading record manufacturers.

Model S-120M with .0027" Sapphire stylus . . .

Model D-120M with .0025" Diamond stylus . . .

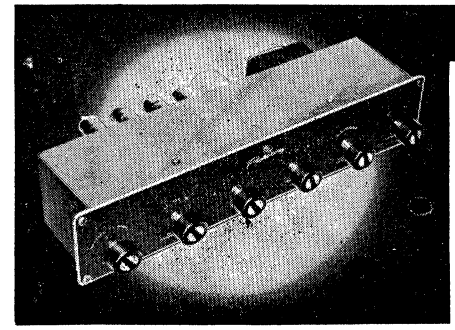
Model S-140S with .001" Sapphire stylus for long-playing MICROGROOVE reoordings . . .

Model D-140S with .001" Diamond stylus for long-playing MICROGROOVE recordings . . .



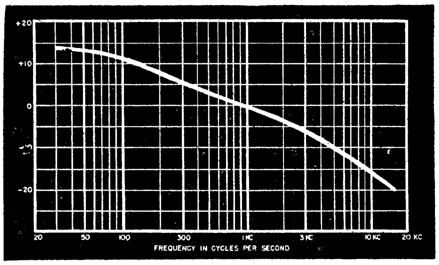
Series 140 and 120 frequency response characteristics with various load impedance values are shown in the accompanying curves.

THE PICKERING 410 AUDIO INPUT SYSTEM



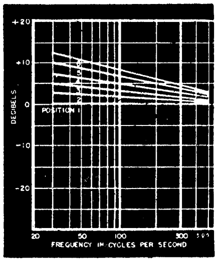
. . . is designed to provide a complete audio control center. Model 410 may be used in any high quality playback system. Three input channels are provided—one for magnetic cartridges and 2 "flat" channels for other audio circuits. A 3-position equalizer network is built into the magnetic cartridge channel and provides accurate equalization for LP, AES and 78 rpm recording characteristics. Separate bass and treble controls are also provided. These are of the step-type and permit bass and treble adjustments in 2 db increments. The tone control circuits are intended to compensate for record characteristics and for listener-environment acoustical conditions. *They are not intended to compensate for amplifier and/or loudspeaker deficiencies.* Model 410 is intended for use with the highest quality professional type playback equipment. The output of the Model 410 is fed from a cathode-follower circuit and will work into any high quality audio or line amplifier having a high impedance input. It may also be used with a transformer for the purpose of feeding a 500 ohm line. Because of its flexibility, low noise and low distortion level, it is ideally suited for bridging and monitoring purposes and for critical listening applications.

Playback and Tone Control Characteristics

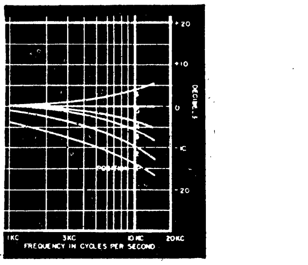


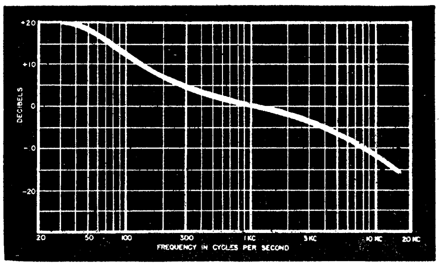
"LP" Playback

Bass Control



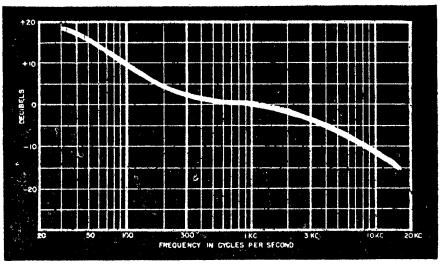
Treble Control





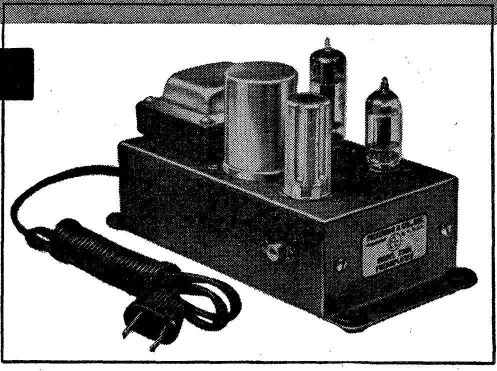
"AES" Playback

"78" Playback



PICKERING PROFESSIONAL AUDIO COMPONENTS FOR RECORD PLAYBACK

PREAMPLIFIER model 230H



EQUALIZES THE BASS RESPONSE OF RECORDS AND TRANSCRIPTIONS AND PROVIDES THE NECESSARY GAIN FOR HIGH-QUALITY MAGNETIC PICKUPS.

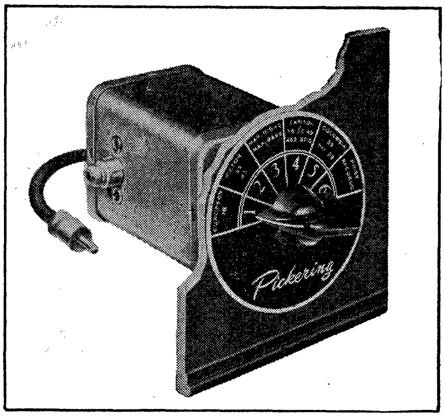
The Pickering 230H Preamplifier is designed to operate with any high-quality amplifier having a high impedance input. It is self-powered, operates from the 115 volt AC line, and is installed by simply plugging in.

Model 230H is unique in its accuracy of equalization, being superior to most broadcast station equipment in this respect. Further, the intermodulation and harmonic distortion is lower than good engineering practice requires in professional equipment.

The 230H Preamplifier represents the most advanced design ever achieved in phonograph preamplifiers, and like all Pickering Audio Equipment, symbolizes maximum performance.

TECHNICAL SPECIFICATIONS

FREQUENCY RESPONSE: Within 2 db from 40 — 20,000 cps. Compensates for 6 db per octave loss below 500 cps. . . . OUTPUT: High impedance, 2 volts average from phonograph records. (For 500/600 ohm output at —10 dbm use Pickering 600G transformer, available as accessory equipment.) . . . DISTORTION: Not more than 0.2 percent intermodulation at normal output level. Not more than 0.4 percent intermodulation at +10 db over normal level. Not more than 1.7 percent intermodulation at +20 db over normal level. . . . HUM LEVEL: —56 db below maximum signal. . . . INSTALLATION: Unit furnished with 6 ft. approved cord which can be connected to wall socket or amplifier. Input socket — standard type; matching plug furnished with unit. Output — terminal strip. Rubber shock mounts provided. . . . DIMENSIONS, WEIGHTS AND TUBES: Size of preamplifier: 7½ inches long, 3½ inches deep and 4⅝ inches high. Weight: 2 lbs. 6 oz. Tubes: 6C4, 6x4, 6AU6 (any good, standard brand).



RECORD COMPENSATOR model 132E

PROVIDES THE FLEXIBILITY REQUIRED TO PROPERLY EQUALIZE FOR THE DIFFERENT RECORDING CHARACTERISTICS USED BY VARIOUS RECORD MANUFACTURERS.

The Pickering Record Compensator permits proper equalization of the amplifier system to produce optimum reproduction of individual records; because all linear circuit elements are used it has no inherent distortion. This Compensator permits each individual record to offer all of its quality without compromise . . . permits getting the maximum use out of scratched and worn records. Its six positions correctly equalize for all of the established recording characteristics including microgroove and standard records, domestic and foreign.

The Pickering Record Compensator is a most important addition to any record player equipped with an amplifier system having a high gain preamplifier, such as the Pickering 230H. It is easily installed, and like all Pickering Audio Equipment, symbolizes maximum performance.

SWITCH POSITIONS

1—EUROPEAN RECORDS, this group covers HMV, English Decca, FFRR 78's, and American pressings of European recordings. 2—VICTOR, 33⅓ and 45 rpm recordings. 3—VICTOR 78, no high frequency roll-off, 500 cycle turnover. 4—CAPITOL, and for most 78 rpm domestic records, including Columbia, Decca, MGM, etc. 5—COLUMBIA, and for most makes of 33⅓ rpm microgroove recordings. 6—NOISY RECORDS, this position permits playing of old noisy records with objectionable hiss removed.

TECHNICAL SPECIFICATIONS

INPUT: High impedance magnetic cartridge . . . OUTPUT: To feed into high-gain amplifier which has 6 db per octave rise below 500 cycles per second, and which has an input resistance of 47,000 ohms . . . INSTALLATION: Unit can be mounted in any position (on panels up to ⅜ inch thick) by means of threaded bushing. Since no power is required to operate the Record Compensator only a single connection has to be made to a suitable preamplifier. Input connection — standard socket. Matching plug furnished with unit. Maximum distance between record compensator and preamplifier input 20 inches, cable supplied . . . DIMENSIONS AND WEIGHT: Size of unit: 1⅞" square by 3⅛" overall, less switch shaft. Weight: 6½ oz.

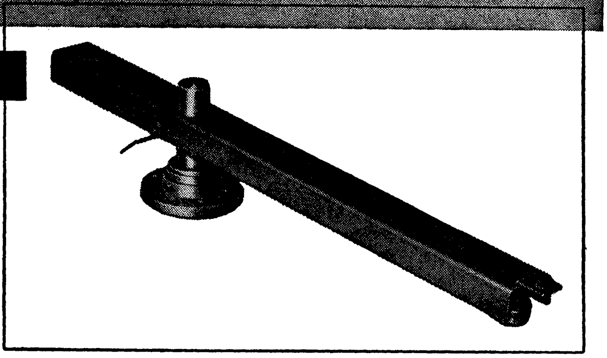
PICKERING PROFESSIONAL AUDIO COMPONENTS

MAXIMIZE PLAYBACK PERFORMANCE... *"For those who can hear the difference"*

PICKERING *and company incorporated • Oceanside, L. I., New York*

PICKERING PROFESSIONAL AUDIO COMPONENTS FOR RECORD PLAYBACK

PICKUP ARM model 190



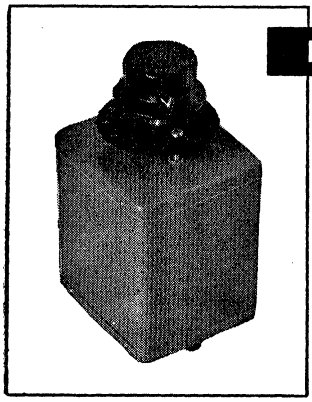
THE ONLY ARM CAPABLE OF OPTIMUM PERFORMANCE ON BOTH MICROGROOVE AND STANDARD RECORDS.

Much distortion in playing records can be caused by an inadequate pickup arm, regardless of how good the cartridge. The most common causes of distortion inherent in the operation of conventional arms are poor tracking and excessive record and stylus wear. These undesirable qualities are a result of improper lateral and vertical moments of intertia and an incorrect relationship between the two. Further, many arms cause tracking error which creates needless distortion.

The Pickering 190 Pickup Arm is designed to overcome the disadvantage of all conventional arms, the shortcomings of which have been severely accentuated by the advent of LP microgroove records. Extensive investigation by Pickering engineers disclosed that reproducer arms which perform well on 78 RPM phonograph records and standard transcriptions will not necessarily produce good results on LP microgroove records. In fact no commercially available arm was found which would meet all of the requirements for this type of service.

The 190 Pickup Arm embodies all the features determined as significant and important to enable a high quality cartridge to meet the stringent requirements for playing LP records without distortion and free of record and stylus wear: 1—The ratio of vertical-to-lateral moment of inertia is as low as possible . . . 2—The vertical mass has been minimized in order to track any record without imposing extra vertical load on grooves. It plays badly warped records just as well as flat ones . . . 3—There is no spurious arm resonance at any frequency . . . 4—Pivot friction is lower than 3 gram centimeters and the bearings are rugged and trouble-free . . . 5—The arm is statically balanced about the vertical axis to eliminate tendency to jump grooves when subjected to bumping or jarring . . . 6—Offset head reduces tracking error to less than plus or minus 2½° . . . 7—Stylus point is protected against contact with anything but the record grooves. It cannot strike the turntable mat or cener-pin. It plays all size records up to 17¼" O.D. In addition to these important design considerations, the 190 Pickup Arm features: Sensitive tracking force adjustment . . . height adjustments for turntables from ½" to 2" high . . . one-hole mounting and self-contained levelling screws . . . plug-in cartridge holder . . . magnetic arm rest . . . stylus point completely visible for starting and cueing records . . . 16¾" long.

Pickering Cartridges used with the Model 190 Arm require 50% less vertical tracking force than is required when using conventional arms.



EQUALIZER model 163A

A loss-type equalizing network for use with the Model 161M Pickup. It is designed to compensate for most of the commonly encountered record characteristics. Position 1—flat high frequency response to over 15,000 cps. Low frequency rise to give full compensation from 500 to 40 cycles. Position 2—flat high frequency response. Low frequency response approximately 5 db. below position 1. Position 3—for NAB or Orthacoustic transcriptions. Position 4—Low frequencies same as position 2. High frequencies sharply attenuated to reduce surface noise. Attenuation starts at 4000 cycles. Position 5—low frequencies same as position 1. High frequencies same as position 4. 250/600 ohms output,—60 lb. Size 3½ x 3¾ x 5 inches. Shipping weight 2 lbs.

EACH PICKERING PICKUP AND CARTRIDGE IS UNCONDITIONALLY GUARANTEED

With the exception of the stylus point, all models of the Pickering Cartridge Reproducer and Pickering reproducing equipment, are covered by an unconditional guarantee provided that the unit has not been tampered with nor subjected to extraordinary abuse. Replacement diamond and sapphire styli can be installed in cartridge reproducers for the following net charges:

Pickering Reproducing Equipment is Sold by All Principal Distributors

For Models 160 or 161 Diamond stylus of any radius	**$22.50 Net**
For Cartridge Reproducers	
.0027" Sapphire for 120 Series	**2.50 Net**
.001" Sapphire for 140 Series	**5.00 Net**
.0025" Diamond for 120 Series	**15.00 Net**
Special Radius Diamond for 120 and 140 Series	**22.50 Net**
.001" Diamond for 140 Series	**22.50 Net**

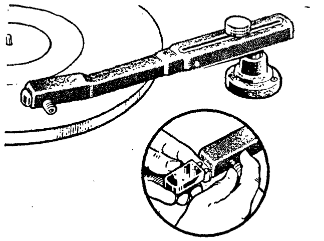
PICKERING PROFESSIONAL AUDIO COMPONENTS / *MAXIMIZE PLAYBACK PERFORMANCE*

"For those who can hear the difference"

PICKERING ***and company incorporated • Oceanside, L. I., New York***

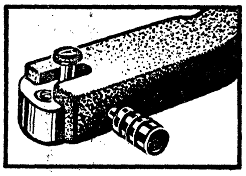
CLARKSTAN FINE ELECTRONIC & INDUSTRIAL EQIUP.

BEST FOR LP MICROGROOVE AND STANDARD DISCS



MODEL 213 — The new Clarkstan 12" record arm offers the best in standard disc and microgroove reproduction. Heavy aluminum casting eliminates audible resonance point. The slide-in cartridge holder allows instantaneous mounting of all types of standard cartridges. Silver-plated, spring loaded plungers maintain positive electrical contact without necessity of soldering. Quick acting weight adjustment is positive and accurate for change from microgrove to standard records. Arm has adjustable height, fits all standard turntables. Vertical roller bearing and thrust ball bearing minimize cramping — no mechanical bias on the pickup. Finish grey wrinkle and brushed chrome.

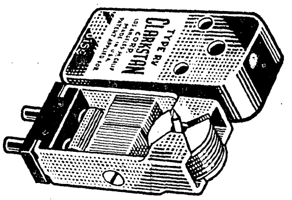
MODEL 212 — 16" Transcription arm. This high quality professional arm is built on same proven engineering principles as the above Model 213. Has slide-in cartridge holder and quick adjusting weight for accurate needle force. Accommodates both LP microgroove and standard records — any size up to 17" diameter. Overall length of arm is 14⅜". Has adjustable height for all turntable conditions. Vertical roller bearings and ball thrust bearings eliminate mechanical bias on the pickup. Attractively finished in grey wrinkle and brushed chrome.



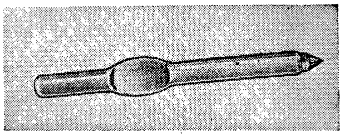
MODEL 213G — Same arm slotted to accommodate G.E. cartridge RPX-050.

MODEL 212G — Same arm slotted to accommodate G.E. cartridge RPX-050.

WIDE RANGE RV PICK-UP



MODEL 201 — Clarkstan RV wide range variable reluctance cartridge for best reproduction of LP microgroove and standard records. Instantaneously replaceable and interchangeable needles. Frequency velocity responsive to above 12,000 cps. Needle force 5-7 grams for LP microgroove, as low as 10 grams for conventional records. Output 60 millivolts. High impedance — 5 - 50 - 250 and 500 ohm models available. ½" mounting centers. Supplied with sapphire stylus. Specify .0012" for LP microgroove or .0030" tip radius for standard records .0015" - .0022" - .0025" tip radii also available. (Can also be supplied with diamond stylus of any of above tip radii.

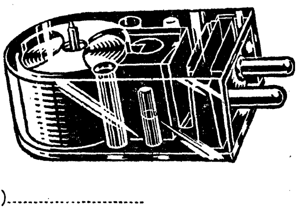


SAPPHIRE & DIAMOND STYLI

Extra styli (tubular shank) for Clarkstan Pickups:

Sapphire No.	Diamond No.	Ball Point Radius
251.10	254.10	.0012"
251.15	254.15	.0015"
251.2	254.2	.0022"
251.5	254.5	.0025"
251.3	254.3	.003"

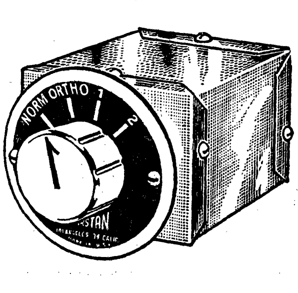
CLARKSTAN MAGNETIC PICKUP



MODEL 204 "RV-Jr." variable reluctance pickup has a removable and replaceable stylus. It weighs only one-half ounce and plays all popular makes of record changers having standard mounting holes ½" between centers. It is 1½" overall length. This magnetic pickup with balanced armature is velocity responsive (flat ± 2 db) from 50 cps to 10,000 cps. It delivers .030 volt from the average record.

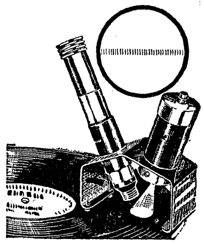
#204 "RV-Jr." Cartridge only (with 1 sapphire needle)........................
#204D "RV-Jr." Cartridge only (with 1 diamond needle).......................
(Specify whether .0012" or .0030" radius needle desired.)

FOUR-POSITION EQUALIZER



MODEL 221 — Clarkstan 4-position equalizer. A high impedance input and output — adjustable network, without amplification, for use with magnetic pick-ups. Has one position for correct NAB or orthacoustic roll-off required for finest reproduction of LP microgroove records. Also two positions for sharp high frequency cutoff for standard records. Will give proper response when used in normal high gain microphone input of amplifier. Turn-over frequency is 500 cps. Panel mounting on 2½" centers, ⅜" diameter center hole. Furnished with Clarkstan hand machined superfine knob and attractive dial plate.

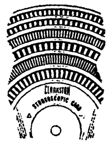
MICROSCOPE GROOVE ANALYZER



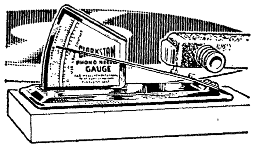
MODEL 231 — Low-cost, medium power microscope with built-in light and reticle. Designed expressly for the phono record recorder. The illumination is optimum for observing the condition of the groove and the number of lines per inch and depth of cut. Has flat field, excellent optics — can be used with glasses (eyepoint is 1" above top). Both 20x and 40x provided in one microscope. Reticle for direct measurement by .0020". Complete with lacquered wooden carrying case with sliding cover. Focusing is accomplished by means of friction sliding tube. Is easy and positive.

STROBOSCOPIC CARD #610

FOR 33-1/3 RPM
45 RPM AND 78 RPM



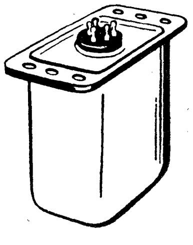
MODEL 610 — New stroboscopic card for checking turntable speed of microgroove and standard records. Includes replaceable punch-out for new 1½" center hole for 45 RPM records. Printed on quality enameled stock.



NEEDLE FORCE GAUGE

MODEL 301 — Clarkstan Gauge for phono needle force. This professional device has a calibrated dial to read in grams for use with LP microgroove records. Easily read to less than 1 gram. Also has scale in ounces.

PICK UP-TO-LINE TRANSFORMER

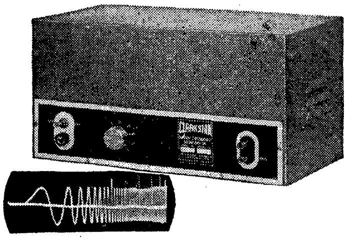


MODEL 225 — Clarkstan pick-up-to-line transformer. A high quality transformer to be used wherever the signal is to be introduced to 30/50, 200/250, 500/600 ohm lines. May also be used as a line to grid transformer.

CLARKSTAN FINE ELECTRONIC & INDUSTRIAL EQIUP.

REPRODUCTION AND TEST EQUIPMENT

AUDIO SWEEP FREQUENCY GENERATOR



MODEL 125 — Clarkstan Audio Sweep Frequency Generator. A Clarkstan development for testing the behavior of audio and other alternating electrical apparatus with respect to frequency and associated phenomena. The generator operates in the audio range from 40 cps. to 10,000 cps. The complete frequency range is regularly recurrent so that the signal may be used in conjunction with an oscilloscope. The sweep frequency is governed by 20 synchronizing pulses per second. Provides an instantaneous evaluation of the performance of amplifiers at various settings of tone control and pick-up correction networks, wire recorders, film recorders, broadcast and aircraft receivers, motion picture sound equipment, loud speakers, microphones, transformers, filters, pickups, pre-amplifiers and cutting heads. **Net price Model 125 complete with scanning disc $165.00.**

MODEL 130.1 — Scanning disc, 40 cps. to 10 kc. disc only. **$12.20 net price.**

MODEL 130.2 — Scanning disc 40 cps. to 7500 cps. disc only. **$12.20 net price.**

GRAPH SHEETS

Four extremely useful tools for the audio engineer. These specially designed graph sheets save endless time:

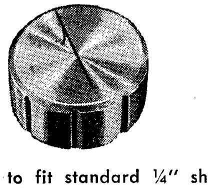
601 — Reactance-Freq. Graph. The elements of reactance, capacitance, and inductance all related in one simple graph. **Net price $1.00 pad** of 50 sheets.

602 — dbm — Impedance Graph. The four variables: power (W), voltage (V), current (ma), and Impedance or Resistance (Ω) are acquainted in such a manner that given any two of these electrical quantities the other two may be graphically determined. A decibel scale in dbm (decibels below or above 1 milliwatt) parallels the power ordinate. **Net price $1.00 pad of 50 sheets.**

603 — Attenuator-Design Graph. In this universal pad design chart here presented for the first time, the resistance in ohms for each branch of the pad may be determined by multiplying the values tound at the lower horizontal scale by the impedance of the line into which the pad is to be inserted. It covers balanced and unbalanced T and Pi pads. **Net price $1.00 pad of 50 sheets.**

604 — Semi-log, 3-cycle Graph. Designed expressly for the audio range. It has the unique virtue of starting at 20 cps. and covering three logarithmic cycles to 20,000 cps. On the vertical scale are 10 divisions per inch over 7 inches. **Net price per pad 50 sheets $1.00.**

CLARKSTAN KNOBS



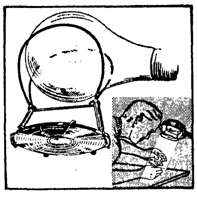
Attractive one-piece knobs accurately machined from DURAL add the professional appearance to control panels. All knobs have fluted sides and have screw-type mounting for round or flat shafts to fit standard ¼" shafts. Back of all knobs recessed ¾" dia. by 5/64" deep to accommodate panel bushing nut. Supplied with or without pointer.

Model	Knob Dia.	Height	Net Price
275-1B	1"	5/8"	— —
275-12B	1¼"	21/32"	— —
275-2B	1½"	11/16"	— —
275-3B	2"	3/4"	— —
275-4B	2½"	13/16"	— —

ALPHA COUNTER

This newly developed nuclear instrument is a practical tool for nuclear physicists, assayers, etc. An optical instrument which gives a clear visual statistical count of alpha particles from any source. Complete with quencher, carrying case, radioactive samples and instructions for use.

Light Concentrator



Provides bright spot illumination for close work. Lens clips easily on regular 40 to 100 watt frosted bulb, concentrating light in a 4" diameter at 12" from bulb. Steps up light intensity by 5 times. A Fresnel type lens ⅛" thick by 2½" dia., does the work of a much thicker ordinary type lens. Effective focal length 2½". **Net $1.00 each.**

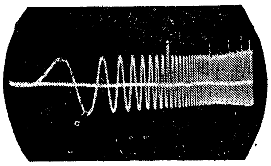
OTHER CLARKSTAN PRODUCTS

Industrial Microscop for inspection work in shops, laboratories. Rubber Hardness Gauge to measure the Shore (Durometer) hardness of all rubber and other elastomers. Accurately measures rubber hardness within any of the commercial manufacturing tolerances.

(All prices subject to change without notice.)

PACIFIC TRANSDUCER CORP., Los Angeles 64, California
(formerly CLARKSTAN CORP.)

AUDIO SWEEP FREQUENCY TRANSCRIPTION



The Sweep Frequency Transcription is a new method of making instantaneous frequency response runs. It has been designed with all correction factors included in the original recording, therefore, no charts or graphs are needed. Before the development of the Sweep Frequency Transcription, the tone record was used for frequency response measurements on playback systems. This method was both time consuming and laborious. If adjustments were required, a new frequency run was required after each adjustment. Now all that is needed is a cathode ray oscilloscope and a Sweep Frequency Transcription for instantaneous response measurements. Only a few quick adjustments on the equalizer circuits and the job is done. For complete frequency checking of all broadcast transmission equipment and components for production testing of phonographic reproducers, filter networks, audio amplifiers, preamplifiers, tone control systems and components.

MODEL 1000A — 12" Vinylite transcription, 78 RPM, 70 to 10,000 cps. recorded flat ± 1 db. **Net price $6.60.**

MODEL 1000D — 12" Vinylite transcription, 78 RPM, 5 KC to 15 KC, recorded flat ± 1 db. **Net price $6.60.**

MODEL 100A — 16" Vinylite transcription, 33-1/3 RPM, 60 to 10,000 cps. recorded with NAB curve. **Net price $10.00.**

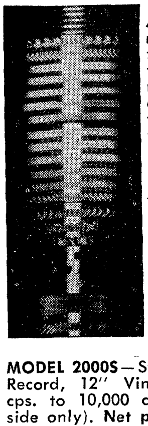
MODEL 102M — 12" Vinylite, for microgroove testing, 33-1/3 RPM, 70 to 10,000 cps. modified NAB recording **Net price $6.60.**

MODEL 115 — audio sweep frequency film, 35mm, positive print, variable density, 10 ft. lengths. **Net price $10.00.**

MODEL 116 — audio sweep frequency film, 35mm, positive print, variable area, in 10 ft. lengths. **Net price $10.00.**

MODEL 117 — audio sweep frequency film, 16mm, positive print, variable density, in 10 ft. lengths. **Net price $10.00.**

STEADY STATE FREQUENCY RECORDS



A series of new test records in which all the information for the engineer is annotated for both the cutting and reproduction. In recording these records harmonic distortion was kept to the lowest possible figure. Extreme care throughout the processing cycle was used. Careful reproduction, using the latest techniques insures exact duplication of the original recordings in each pressing.

MODEL 2000S — Steady State Frequency Record, 12" Vinylite, 78.26 RPM 50 cps. to 10,000 cps. flat recording (1 side only). **Net price S3.90.**

MODELS 2001S & 2002S — Microgroove Steady State Frequency Record, 12" Vinylite, 33-1/3 RPM, 50 cps. to 10,000 cps. one side NAB, other side flat recording. **Net price $3.90.**

MODEL 101 — Intermodulation Test Record, 12" Vinylite, 33-1/3 RPM, standard groove, 1/4 ratio, 7 KC and 100 cps. (1 side only). **Net price $3.90.**

Audax

Pickups for *facsimile* Reproduction

"The Standard by Which Others Are Judged and Valued"

POLYPHASE reproducers

In One Single Magnetic Unit 33-1/3—45—78 rpm

POLYPHASE LIST PRICES

D-L-6 *CHROMATIC HEAD,* for all lateral records, *MICRO DIAMOND and a standard Sapphire.*	$69.50

(The price of the new Chromatic is the cost of the L-6 plus the regular price of a Diamond)

L-6 Head — for all lateral records *with two genuine SAPPHIRE jewels*	$34.50
R-2 Head — for all lateral records *with two genuine SAPPHIRE jewels*	$24.50
VL-9 Vertical Lateral Head — (*SAPPHIRE jewels*)	$69.50

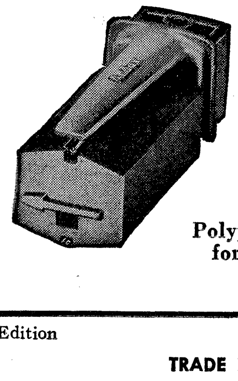
** Sapphires may be replaced with AUDAX DIAMONDS at any time.*

RECORD CHANGER ADAPTERS

For Garrard Changer (Plug-in)	$4.50
For Webster Changer (Plug-in)	$4.50

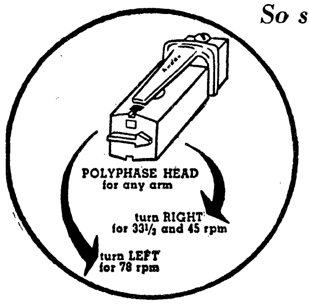
POLYPHASE REPLACEMENT STYLI

Sapphire — Micro or Standard	$ 3.50
Diamond — standard — CHROMATIC	$25.00
Diamond — microgroove — CHROMATIC	$35.00
Diamond — Vertical	$35.00
Sapphire — Vertical	$ 6.00



Polyphase Head
for any arm

So simple



- One, single magnetic unit and one low point-pressure for all discs.
- Replaceable Sapphire (or diamond).
- Response 20 to over 15,000 cps.
- Needle-talk practically nil.*
- Near-infinite compliance.
- Tracking phenomenal.
- Flexible plug-in connectors.
- Listening Quality — Superb.

By merely inserting the desired styli, the POLYPHASE makes possible any of the following combinations:

1. Microgroove and 78 rpm
2. Both Microgroove
3. Both 78 rpm
4. Microgroove and lateral transcriptions
5. 78 rpm and lateral transcriptions
6. Both for lateral transcriptions

**See "ELECTRONIC PHONO FACTS"*

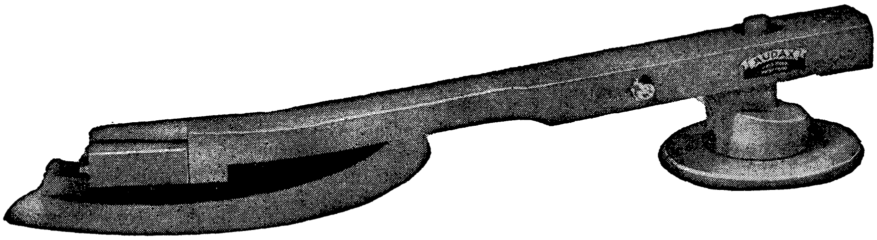
Audax

Cutters and Tone Arms

"The Standard by Which Others Are Judged and Valued"

COMPASS-PIVOTED tone-arms

unquestionably, the simplest and most efficient arms yet devised.

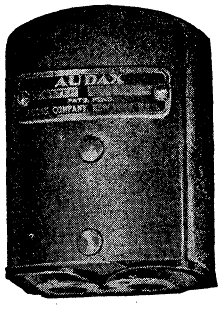


#16 arm—(*#12 same style*) for use with any current model AUDAX Reproducer.

- Only **3** parts.
- Highest tracking efficiency.
- No restraint to stylus travel.
- Frontal oscillations nil.
- No springs.
- No fatigue.
- Maintains original point-pressure permanently — regardless of climatic changes.
- Greatest possible distance between stylus and vertical pivots.

	turntable center to end of arm	LIST
#12 Arm to 12″ disc	10″	$23.00
#16 Arm to 16″ disc	13-9/16″	$33.00
STUDIO Arm to 16″ disc	18½″	$65.00

HIGH FIDELITY CUTTERS



AUDAX CUTTER H-5 — Substantially FLAT to 10,000 cycles, Distortion about 1.2% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 500 ohms.
List Price $185.00

AUDAX CUTTER H-4 — Substantially FLAT to 8,000 cycles. Distortion about 1.7% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 500 ohms.
List Price $125.00

AUDAX CUTTER H-3 — Substantially FLAT to about 7500 cycles. Distortion about 2.1% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 4000 ohms. List Price $83.00

AUDAX Cutters are readily interchangeable on most recording machines

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

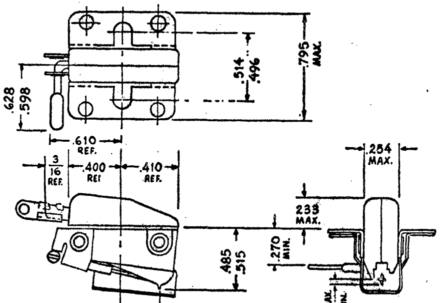
2 New Titone Pickup Cartridges

FEATURING THE FAMOUS SONOTONE CERAMIC PRINCIPLE

SPECIFICATIONS

Tracking Force	**9 grams**
Compliance	**0.7 x 10^{-6} cm/dyne**
Unit Capacitance	**400 uuf**
Output Voltage	**0.7 volts**
Recommended Load	**1-10 Megohms**
Cartridge Weight	**5.5 grams**
Mounting Dimensions	**Standard ½" mtg centers**
Needle	**Dual tip**

(.001" sapphire or diamond for microgroove .003" sapphire or diamond for standard records)



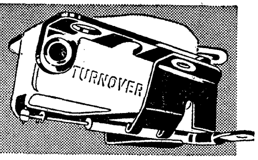
TITONE TURNOVER CARTRIDGES

	LIST PRICE
9980-S (2-sapphires)	**$9.50**
9980-SD (1-mil diamond, 3-mil sapphire)	**34.00**
9980-D (2-diamonds)	**56.00**

TITONE TURNOVER REPLACEMENT NEEDLES

	LIST PRICE
9987-S (2-sapphires)	**$3.50**
9987-SD (1-mil diamond, 3-mil sapphire)	**28.00**
9987-D (2-diamonds)	**50.00**

THE TITONE TURNOVER



A new and revolutionary cartridge designed to provide unequalled listening enjoyment of all records, regardless of speed or groove size.

Essentially two cartridges in one, the Titone Turnover represents the ultimate refinement of the needle change principle—only the tiny jewel tip itself is changed—thus permitting the design of a reproducer in which no unused but moving part can "eat up" the energy being transmitted by the needle.

Foremost among the many outstanding features of the new Turnover are:

Adaptability—Because of its small size and its standard half-inch mounting centers, the new Turnover will replace and modernize most present two-speed cartridge installations.

Simplicity of replacement—Since only the needle rotates, the entire needle assembly may be readily removed or replaced.

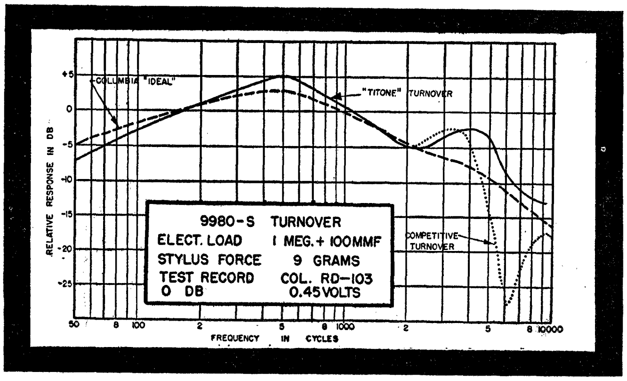
Proper groove fit—Each jewel tip is accurately polished to insure an exact fit in the appropriate groove, thereby providing perfect coupling to the record.

Superior tracking ability—The high lateral compliance not only helps reduce record wear, but permits the stylus to track even the lowest frequencies at all speeds, and at a single low needle force.

High sensitivity—The new, improved ceramic element of the Turnover provides the unusually high output of 0.7 volts on the RCA 12-5-31V microgroove test record, eliminating the need for any pre-amplification.

Outstanding response—The wide frequency range of the new Turnover is unprecedented in piezoelectric pickups.

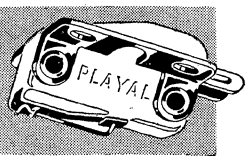
The curves below show how the Turnover response follows almost exactly the curve specified by Columbia as "ideal' for the proper reproduction of their high-fidelity LP records. This outstanding response is pointed up in striking fashion by the dotted curve, showing the response of a typical competitive turnover type cartridge.



TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

CERAMIC—the wonder element that reproduces electrically the exact tones recorded on the disc, yet is impervious to moisture and unaffected by temperature.

THE TITONE PLAYAL



The most versatile single cartridge ever developed, providing the means for playing all speed records without need for changing needle or adjusting tracking force.

With the introduction of the Playal ceramic cartridge and the new "truncated-cone" needle, Sonotone has produced the first truly universal cartridge, able to track all groove sizes without the distortion common to the usual "compromise" 2-mil radius needle.

This new cartridge, like the Turnover, is unequalled in performance, embodying the same advanced design features that have made the name Sonotone famous.

Principal among these features are:

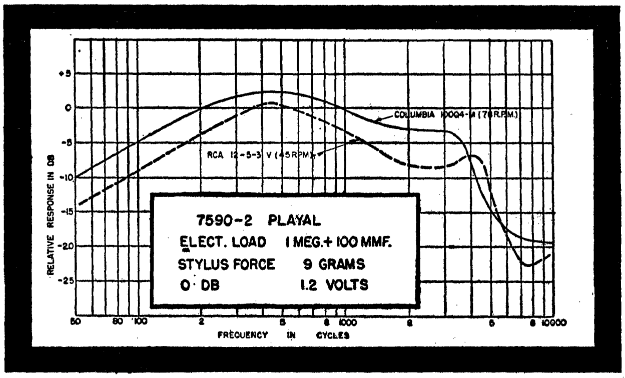
Adaptability—Because of its standard half-inch mounting centers and small size, the Playal may be readily used to modernize most existing phono pickup installations.

Excellent Frequency Response—The curve below shows the smooth, wide range response of the Playal cartridge to both standard and fine groove records. The upper curve shows the response to Columbia 78 rpm test record, while the lower shows that to the RCA 45 rpm record.

Low Distortion—The extremely high lateral compliance combined with the unique "truncated-cone" needle enables the Playal to track any groove with negligible distortion, even at the very low frequencies.

High Sensitivity—New advances in the development of the ceramic element have produced a cartridge with an output of over 1 volt on standard records.

Easy Replacement—The Playal needle may be replaced without even removing the cartridge from the pickup arm. If preferred, a conventional 1-mil or 3-mil sapphire-tip needle may be used instead of the "truncated cone."

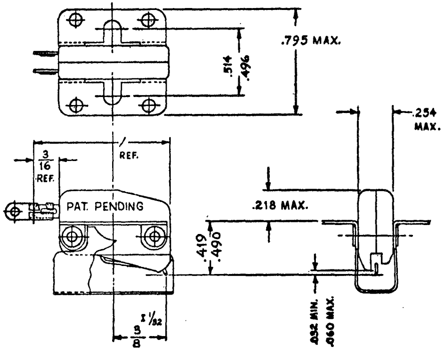


SPECIFICATIONS

Tracking Force	**9 gms**
Compliance	**0.5 x 10^{-6} cm/dyne**
Unit Capacitance	**400 uuf**
Output Voltage	**0.75 volts**
Recommended Load	**1-10 Megohms**
Cartridge Weight	**4.5 gms**
Mounting Dimensions	**Standard ½" mtg centers**

Needle

7590-2	2-mil osmium truncated cone
7590-1	1-mil sapphire spherical tip
7590-3	3-mil sapphire spherical tip



TITONE PLAYAL CARTRIDGES

	LIST PRICE
7590-1 (1-mil sapphire)	$7.50
7590-2 (2-mil truncated cone, osmium)	7.50
7590-3 (3-mil sapphire)	7.50

TITONE PLAYAL REPLACEMENT NEEDLES

	LIST PRICE
7552-2 (2-mil osmium)	$1.50
7529-1 (1-mil sapphire)	2.00
7529-3 (3-mil sapphire)	2.00

SONOTONE CORPORATION, ELMSFORD, N. Y.

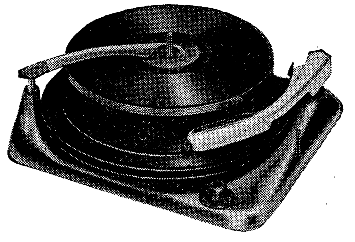
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

tri-o-matic®
RECORD CHANGERS

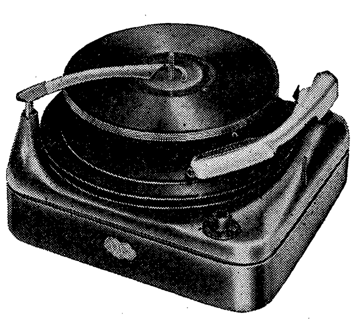
World's Fastest Selling Record Changer Line

Easy, automatic operation, exclusive features, attractive Luxury Styling and lower prices make V-M tri-o-matic record changers the best sellers everywhere. First to market the 3-speed changer, V-M continues to lead the industry. For good, steady profits today — *and tomorrow* — tie-up with V-M!

V-M tri-o-matic Features Help Close Sales

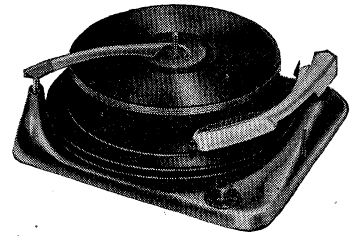


V-M Model 951 tri-o-matic Replacement Changer has all tri-o-matic features, is designed for fast, easy installation whereever a modern, automatic 3-speed changer is desired, fits all cabinets. One-knob control easily accessible in any installation. The 951 is installed as original equipment in most leading brands of consoles. Beautiful deep maroon finish, gold 2-needle tone arm and hold-down arm. Complete with phono cord and AC cord. Minimum mounting space, 13-3/16" x 11⅞" x 7¼". Shipping weight 11¼ lbs.

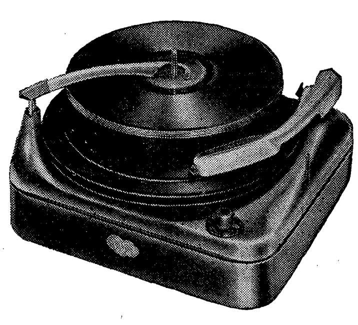


V-M Model 956 tri-o-matic Changer Attachment. Same as Model 951 mounted on metal base as a wired changer. Plays through any standard radio or TV equipped with phono input. Has 6 ft. AC cord and 4 ft. sound cord. Rubber feet protect furniture. Has all tri-o-matic features. Is 13-3/16" wide, 11⅞" deep, 7¼" high over-all. Shipping weight 14¼ lbs.

- **Automatic Set-Down** for 7", 10" and 12" records. No controls necessary.
- **Automatic Manual Operation,** no extra control necessary for manual operation.
- **Tri-o-matic Spindle** affords positive record protection; records *lowered—not dropped—*on spindle shelf.
- **Completely Automatic Operation** on records of all three sizes and speeds.
- **Automatic Shutoff** with all records. Tone arm returns to rest and motor shuts off.
- **Dual Needle Tone Arm** with reversible cartridge.
- **Completely Jamproof.** All moving parts, including tone arm, may be held at any time without damaging mechanism.
- **Simple, Centralized One-Knob Control** is easily accessible in any installation for turntable speed and On-Off-Reject.
- **Underwriters Approved** throughout, mechanically and electrically.
- **Record Capacity,** twelve 10" or ten 12", 33⅓ or 78 rpm; fourteen 7", 45 rpm records. *Positive Intermix* of any ten 12" or 10" records of same speed.



V-M Model 951GE tri-o-matic Replacement Changer especially designed for your high fidelity trade. The 951GE is the ideal replacement for more expensive older radio-phono combinations. Has all features of the 951 plus silent, constant-speed 4-pole motor, GE "turn-about" variable reluctance cartridge (1 mil needle for 33-1/3 rpm, 45 rpm, and separate 3 mil needle for 78 rpm) and muting switch. Complete with phono cord and AC cord. Minimum mounting space, 13-3/16" x 11⅞" x 7¼". Shipping weight 12¼ lbs.



V-M Model 956GE tri-o-matic Changer Attachment. Same as Model 951GE mounted on metal "plug-in" base. Has all tri-o-matic features. Attractive maroon finish, gold 2-needle tone arm and hold-down arm. Is 13-3/16" wide, 11⅞" deep, 7¼" high over-all. Shipping weight 15¼ lbs.

V-M CORPORATION BENTON HARBOR, MICHIGAN

WORLD'S LARGEST MANUFACTURER OF PHONOGRAPHS AND RECORD CHANGERS EXCLUSIVELY

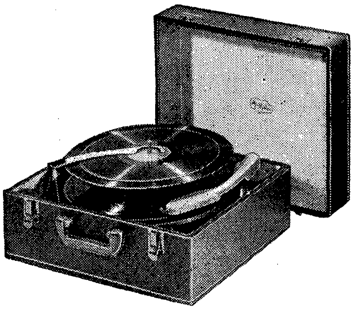
tri-o-matic®
RECORD CHANGERS

V-M Model 920 tri-o-matic Changer Attachment

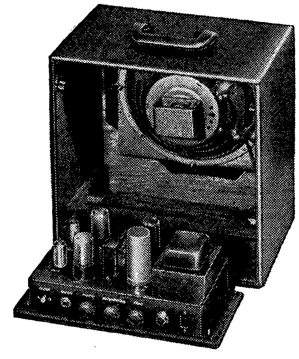
Beautiful deluxe automatic, 3-speed record changer at a low price. Has handsome mahogany grained plastic base; all tri-o-matic features PLUS exclusive Siesta Switch that shuts off everything (including amplifier and lamp plug-in in base!) after last record plays. Model 920 plays through any standard TV or radio equipped with phono input. Has 6 ft. AC cord and 4 ft. phono cord. Size 12" x 9¾" x 7". Shipping weight, 9¼ lbs.

V-M PORTABLE P-A PACKAGE

This 8 Watt system is designed and engineered to highest quality standards to please the most sensitive ear! It's low in price to open up big new markets — stores, schools, small factories, offices — wherever tops in sound reproduction is a must. Speaker and record changer in handsome matching mahogany leatherette cases.



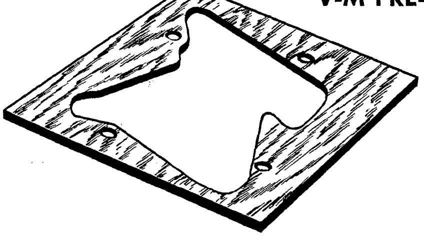
The V-M Model 960 tri-o-matic record changer is the Model 950 in a compact case. Has all tri-o-matic features. Measures 13½" x 15½" x 8½"; weighs 8 lbs.



V-M Model 160 Amplifier is an outstanding unit. Exclusive, practical features include: "Pull-out" amplifier assembly (amplifier remains near changer or microphone, speaker has 25 ft. cord and plug for remote use). Only one power outlet needed. Plug provided for extra speakers. Microphone input. 10" P.M. speaker. Storage space for power cords. Frequency response, 60 to 12,000 cycles. Tone-compensated volume control. Measures 13½" x 14½" x 9¼"; weighs 21½ lbs.

V-M ACCESSORIES

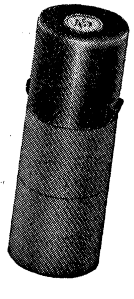
V-M PRE-CUT MOUNTING BOARD



For quick, easy mounting of any 951 series V-M changer. Made of 3-ply veneer, 5/16"x15¾"x 15¾", unfinished to permit matching any finish. Easily cut to fit in any console.

V-M 45 SPINDLE

Permits automatic playing of 14 large-center hole records, eliminates cost and bother of individual adapters in each record. Slides easily over standard tri-o-matic spindle. Individually boxed, packaged six to an attractive counter display carton. Weight, 3 lbs. 2 oz. per carton of six.

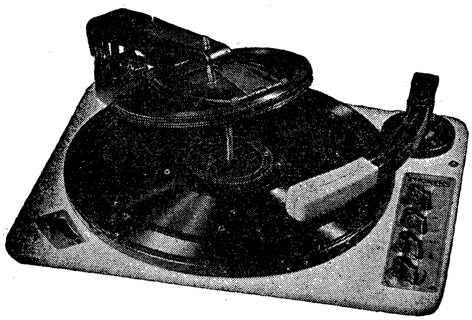


V-M CORPORATION BENTON HARBOR, MICHIGAN

WORLD'S LARGEST MANUFACTURER OF PHONOGRAPHS AND RECORD CHANGERS EXCLUSIVELY

LISTED UNDER REEXAMINATION SERVICE UNDERWRITERS' LABORATORIES, INC. UL

THORENS



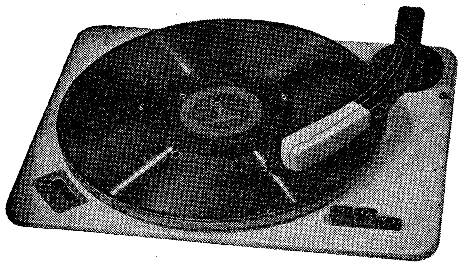
CD-43 RECORD CHANGER

FEATURES:

- **Motor E-53**
- 12 inch cast-iron turntable
- High-fidelity designed tonearm for minimum tracking error
- Two plug-in heads easily adaptable for all popular American cartridges
- Styled to add beauty to any custom installation
- Automatically intermixes 10 inch and 12 inch records, special selector for 7 inch size with all metal spindle for large hole records sold separately
- Last record shut-off, reject, repeat, and pause controls
- Muting switch
- Tonearm tracking weight adjustment screw
- Built in condenser
- Specially designed rubber shielded shock mountings

NET PRICE $93.75

THORENS

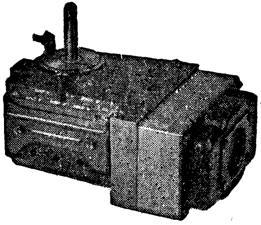


CBA-83 AUTOMATIC RECORD PLAYER

FEATURES:

- **Motor E-53**
- 12 inch turntable
- High-fidelity designed tonearm for minimum tracking error
- Two plug-in heads easily adaptable for all popular American cartridges
- Push button control for record size
- Reject control
- Automatic shut-off switch with tonearm returning to rest position
- Muting switch
- Tonearm tracking weight adjustment screw
- Built in condenser
- Specially designed rubber shielded shock mountings

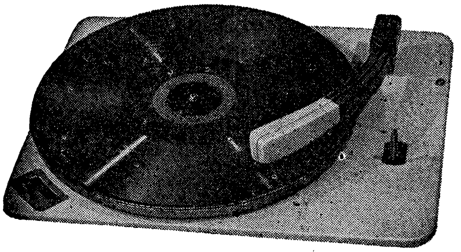
NET PRICE $67.50



MOTOR E-53

Each THORENS unit is equipped with the direct drive, governor controlled variable speed motor E-53, world famous for its silent, rumble and wow-free operation.

THORENS



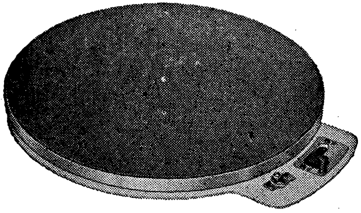
CB-33 MANUAL RECORD PLAYER

FEATURES:

- **Motor E-53**
- 12 inch turntable
- High-fidelity designed tonearm for minimum tracking error
- Two plug-in heads easily adaptable for all popular American cartridges
- Automatic shut-off
- Tonearm tracking weight adjusting screw
- Built in condenser
- Specially designed rubber shielded shock mountings

NET PRICE $52.50

THORENS



E-53 PA MOUNTING UNIT

FEATURES:

- **Motor E-53**
- 12 inch cast aluminum turntable with rubber mat
- On-Off switch
- Built in condenser
- Detailed mounting instructions and template to assure proper installation of your favorite tonearm and cartridge
- Shock springs for mounting board

NET PRICE $60.00

THORENS COMPANY

NEW HYDE PARK, N. Y.

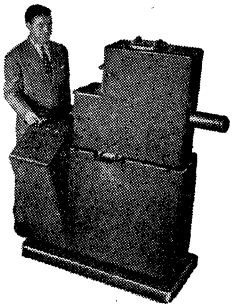
ACCESSORIES AVAILABLE

45-s—45 RPM spindle CD-43
WB-CD—Wood base CD-43
MB-CD—Mounting board CD-43
WB-CB—Wood base for record players
MB-CB—Mounting Board Record Players
MB-PA—Mounting Board Mounting Unit

Gray RESEARCH

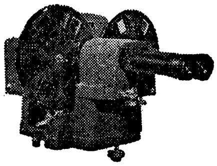
Networks and independent stations everywhere recommend and approve Gray professional equipment for broadcast station use. Such broad acceptance is not unwarranted. The products here mentioned are designed and engineered by audio and video specialists . . . incorporate highest quality and serviceability . . . are rightfully leaders in the industry.

...for the finest equipment for AM-FM-TV station use



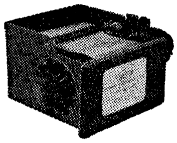
Gray TELOP I (*TELevision Optical Projector*)

Make PROFITS GROW for TV Stations. The Gray Telop projects low-cost, easily produced TV 'commercials'. Without keystoning, any two photos, titles, slides, etc., or small objects may be broadcast with superimposition, lap dissolve or fade-out. Four optical openings. Strip material may be used horizontally or vertically with Drives shown below.



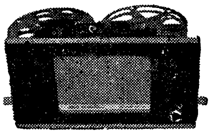
Gray 3A TELOJECTOR

Compact, portable unit for automatic, remote control projection of standard 2 x 2 slides in uninterrupted sequence . . . with studio effects of fading, lapping and superimposition. Projection alternates between two lens systems, with slide turrets changeable in seconds.



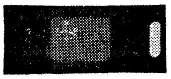
Gray 11A VERTICAL SCROLL DRIVE

Attaches to any optical openings of the Telop. Accommodates roll stock *vertically* to televise commentary or the commercial in the same way movie introductions are projected.



Gray 12A HORIZONTAL TAPE DRIVE

Attaches to optical openings of the Telop. News ticker tape fed from 8-mm reels is projected on any part of the screen, top to bottom, horizontally. May be used with test pattern or other commercial.

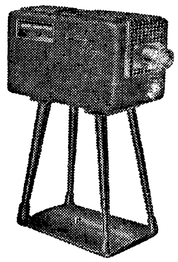


Gray 15R REVERSE CLOCK

For use where reversal is required. Designed to permit superimposing of the commercial or other copy.

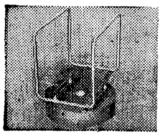
Gray 108B VISCOUS DAMPED TONE ARM

For all records — 33⅓, 45 and 78 r.p.m. Radically new suspension development on the viscous damping principle *for perfect tracking* of records and elimination of tone arm resonances. Instant cartridge change with automatic correct stylus pressure. Solves all transcription problems. IDEAL FOR LP RECORDS. For Pickering and GE cartridges.



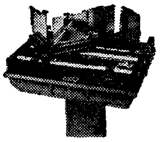
Gray TELOP II

With the versatile Gray TELOP II you can produce an amazing variety of professional-quality commercials at low cost. TELOP II presents selling messages with opaque cards, photographs and transparencies. You can get the effect of superimposition, lap dissolve and fade-out. Only limitation is your imagination. One operator does it all!



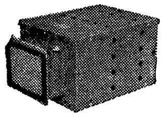
Gray 55A FILM CAMERA TURRET

Enables a single camera to serve up to 8 projectors. Centered on a rugged 'square' pedestal, requires a minimum of space. Heavy duty ball bearings. Rotates 360°.



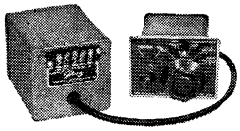
Gray 60A FOUR-WAY FILM MULTIPLEXER

A precision arrangement of mirrors for operation of pairs of projectors simultaneously into a single TV camera or individually into two separate cameras. *Enables a greater number of projectors to be used with fewer highly expensive TV cameras.*



Gray 13A LIGHT BOX

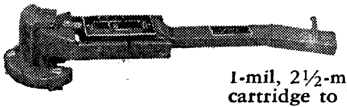
Provides back lighting of transparencies for Telop use.



Gray EQUALIZERS

MODEL 602B EQUALIZER has been specially engineered to provide constant velocity frequency response for both conventional and LP records. Four steps — flat, transcriptions, good records, poor records. Gray Equalizers used as standard professional equipment by broadcast stations.

MODEL 603 — Has 5 control positions. For both GE and Pickering cartridges.



Gray 106SP TRANSCRIPTION ARM

Designed to meet strictest requirements of modern highly compliant pickup cartridges. Three cartridge slides furnished enable GE 1-mil, 2½-mil or 3-mil cartridges or Pickering cartridge to be slipped into position in a jiffy. No tools or solder! Superb reproduction of 33⅓, 45 or 78 r.p.m. records. Low vertical inertia, precisely adjustable stylus pressure.

Please write Dept. RG for bulletins describing the above equipment.

GRAY RESEARCH

and Development Co., Inc., Hilliard St., Manchester, Conn.

FOUNDED 1891

AUDOGRAPH

Division of the GRAY MANUFACTURING COMPANY—Originators of the Gray Telephone Pay Station and the Gray Audograph

GI

Smooth Power

ELECTRIC PHONO MOTORS RECORDING MOTORS

TAPE-DISC RECORDING ASSEMBLIES

HOME-RECORDING AND PHONOGRAPH ASSEMBLIES

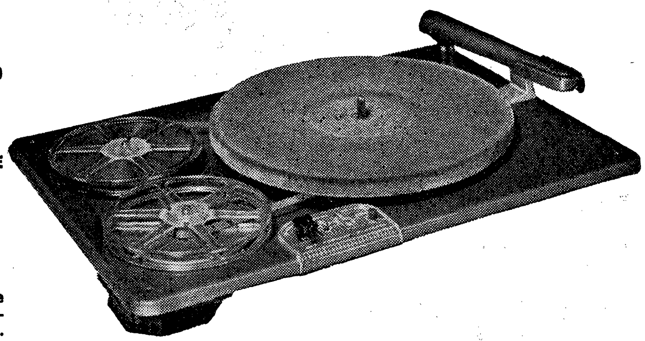
TAPE-DISC RECORDING ASSEMBLY

MODEL 250

115 volts a. c., 60 cycles **List Price, $79.50**

When connected with the proper amplifier, the Model 250 performs the following functions:

- RECORDS TAPE FROM RECORDS
- RECORDS DISCS FROM TAPE
- RECORDS MICROPHONE ON TAPE
- RECORDS RADIO ON DISC
- RECORDS MICROPHONE ON DISCS
- RECORDS RADIO ON TAPE
- PLAYS BACK BOTH TAPE AND DISCS
- PLAYS ANY 78 R.P.M. RECORDS



TAPE RECORDING FEATURES:

One hour recording time.

Dual track.

Fast forward and reverse.

Permanent magnet erase head.

Turntable acts as flywheel, giving constant tape speed.

Designed for use with 5" reels.

Tape speed 3¾" per second.

Designed for use with either plastic or paper base tape.

No tape threading — Merely place tape around turntable — Automatically drops into correct position.

Due to ingenious clutch and drive mechanism, impossible to throw tape.

Mechanical interlock eliminates any possibility of accidentally erasing tape.

Equipped with a switch for recording head electrical interlock.

Automatically shuts off at end of tape playback.

DISC RECORDER AND PLAYBACK FEATURES:

Cuts records up to 10" in diameter at 78 R.P.M.

Plays 78 R.P.M. recorded discs and all 78 R.P.M. commercial records. When pivot of arm is lifted it snaps into recording position, engages lead screw, and insures proper angle for cutting stylus.

Merely push arm down for playback.

Simple to interchange cutting stylus and playback needle.

Dimensions: Width 12½", Length 17½", Depth below mounting plate 4". Equipped with G.I. smooth power, dynamically balanced four-pole motor. Net weight 10½ lbs. Shipping weight 14 lbs.

THE GENERAL INDUSTRIES COMPANY, ELYRIA, OHIO

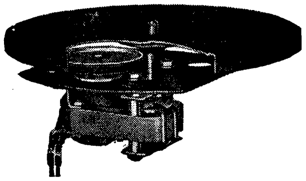
ALL PRICES AND MODELS SUBJECT TO CHANGE WITHOUT NOTICE

GENERAL INDUSTRIES

Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS

Suitable for every phonograph instrument where low cost, dependable performance, compactness, light weight and quietness of operation are important considerations. GI phonomotors are even in speed and have ample power to play 10" and 12" records. Fan cooling permits use in partially closed cabinets. Designed to comply with Underwriters' Laboratories' requirements.

CONSTANT SPEED ELECTRIC PHONOMOTORS

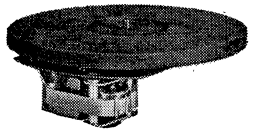


Model LX Model LX-3
Model LX-45

MODEL LX — 78 R. P. M. . . . . **List Price, $7.75**
MODEL LX3 — 33-1/3 R. P. M. . . . . **List Price, 8.70**
MODEL LX45 — 45 R. P. M. . . . . **List Price, 8.70**
115 volts a. c., 60 cycles

Rim drive, 2-pole motor. Rubber insulated from both mounting plate and turntable for quiet operation. Turntable shaft revolves with turntable, and is grooved for turntable clip. Furnished with 9" turntable and complete with mounting plate ready for installation.

Dimensions: Length—3½"; Width—2"; Depth—2" below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.

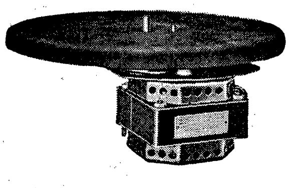


Model LC

MODEL LC — 78 R. P. M. . . . . **List Price, $6.65**
115 volts a.c., 60 cycles

A low-priced 78 R.P.M. 2-pole, rim drive motor suitable for installation where size and cost are prime factors. Furnished with 8" turntable and mounting plate ready for installation.

Dimensions: Length—3½"; width—2"; depth—1⅞" below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.



***Model* RM4 *Model* RM4-3**
***Model* RM4-45**

MODEL RM4 — 78 R. P. M. . . . . **List Price, $19.50**
MODEL RM4-3 — 33-1/3 R. P. M. . . . . **List Price, 20.25**
MODEL RM4-45 — 45 R. P. M. . . . . **List Price, 20.25**
115 volts a. c., 60 cycles

Heavy duty, rim drive, 4-pole motor. Rubber insulated from both mounting plate and turntable for exceptionally quiet operation. Turntable shaft revolves with turntable and is grooved for holding clip. Retractable pin in turntable permits playing standard records without adjustment. Efficient performance is assured by positive alignment of driving pulleys, idler and turntable in one plane. Furnished with 10" weighted turntable and complete with mounting plate ready for installation.

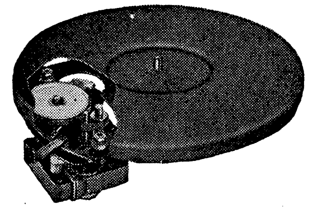
Dimensions: Length—3⅜"; Width—3⅜"; Depth—2 15/16" below mounting plate. Packed in individual cartons. Shipping weight—9 lbs.

DUAL-SPEED PHONOGRAPH MOTORS

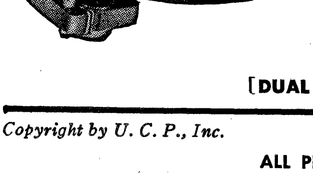
MODEL DS — 45, 33-1/3 R. P. M. **115 volts a. c., 60 cycles**

A novel 45-33⅓ R.P.M. rim drive, 2-pole motor. Very compact. Employs a Neoprene belt for the 33⅓ R.P.M. speed. 45 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designed and manufactured to hold wow and rumble to a minimum for excellent reproduction of the new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 8" or 9" turntable, using same mounting plate. **List Price, $10.75**

Dimensions: Length—3⅛"; Width—2¼"; Depth—2 9/16" below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.



MODEL DM — 33-1/3, 78 R. P. M. • **MODEL DE** — 45, 78 R.P.M.
115 volts a. c., 60 cycles



Novel and ingenious rim drive, 2-pole motors. Very compact. Employs a Neoprene belt for slow speeds. 78 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designed and manufactured to hold wow and rumble to a minimum for excellent reproduction of new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 9" turntable. **List Price, $10.75**

Dimensions: Length—3⅛"; Width—2¼"; Depth—2⅜" below mounting plate. Furnished complete with 9" turntable and mounting plate ready for installation. Shipping weight—4 lbs.

[DUAL SPEED PHONOGRAPH MOTORS . . . CONTINUED ON PAGE E-35]

ALL PRICES AND MODELS SUBJECT TO CHANGE WITHOUT NOTICE

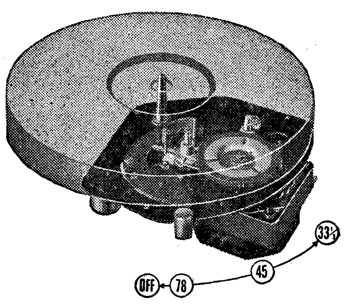
GENERAL INDUSTRIES

Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS

THREE-SPEED PHONOGRAPH MOTORS

DELUXE THREE-SPEED RIM DRIVE FOUR POLE MOTOR

MODEL DSS — 78, 45, 33⅓ R. P. M. **115 volts a.c., 60 cycles**



Model DSS

Simple speed change is accomplished by shifting the idler wheel vertically to the appropriate diameter on the motor shaft for desired turntable speed. When shifting speed selector to off position, a switch turns the motor off and the idler wheel is disengaged from the motor shaft. The driving motor is of the four-pole, shaded-pole type resulting in absolute minimum of stray field radiation—ideally suited for use with all types of pickups including magnetic. Motor uses oilless bearings and motor is dynamically balanced to a fine degree.

Precision construction throughout—low friction oilless turntable bearing—radially operated shift lever—10 inch turntable.

List Price, $24.50

Dimensions: Length 6⅝″—Width $6\frac{1}{16}$″—Depth $2\frac{21}{32}$″ below mounting plate. Furnished complete with 10 inch turntable, speed indicator dial, 45 RPM record adapter, off-on switch, and mounting plate ready for installation. Packed in individual cartons. Shipping Weight 6½ lbs.

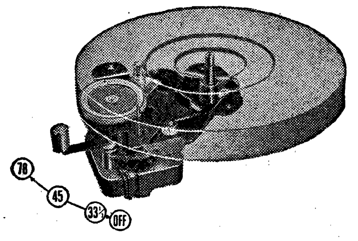
THREE SPEED TWO POLE PHONOGRAPH MOTORS

MODEL SS — 78, 45, 33⅓ R. P. M. **115 volts a.c., 60 cycles**

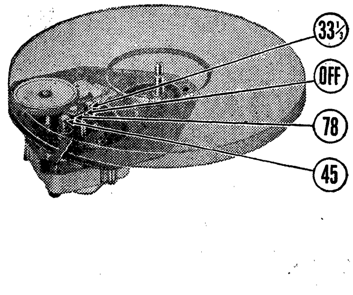
Very compact, three-speed, phonograph motor using the vertical idler shifting principle. Idler wheel drives the turntable directly from the appropriate step on the motor shaft. Idler wheel is disengaged from motor shaft during non-operating periods. Precision construction throughout. Uses a ribbed main mounting plate to assure stability and proper relationship of all components. Rumble and wow are held to a minimum. Motor uses oilless bearing and dynamically balanced rotor. Turntable shaft revolves with turntable and is grooved for turntable clip. Available with 8 inch turntable. A 45 RPM record adapter and a speed indicator dial are furnished with each motor.

List Price, $11.50

Dimensions: Length 5″—Width $4\frac{23}{32}$″—Depth $2\frac{15}{32}$″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Packed in individual cartons. Shipping Weight 4 lbs



Model SS



Model TR

MODEL TR — 45, 78, 33⅓ R. P. M. **115 volts a.c., 60 cycles**

Deluxe three-speed rim drive, 2-pole motor. Turntable speeds of 33⅓, 45 and 78 R.P.M. are secured through three separate pulleys running on oil-impregnated bearings and mounted on a turret plate. By means of a simple lever, the desired pulley is brought into contact with the idler wheel. The two pulleys not in contact with the idler wheel remain stationary. Symmetrical electrical and mechanical design results in minimum stray field and maximum performance. Ingenious locking device holds turret plate firmly in driving position at any of the three speeds. Available with 8″ or 9″ turntable. A 45 R.P.M. record adapter and speed indicator dial are furnished with each motor.

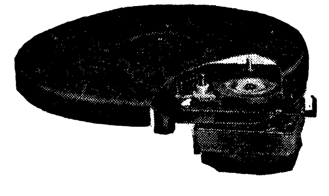
List Price, $12.10

Dimensions: Length—3⅛″; Width—2¼″; Depth—$2\frac{9}{16}$″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.

GI GENERAL INDUSTRIES GI
Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS

DUAL-SPEED PHONOGRAPH MOTORS . . . (continued)

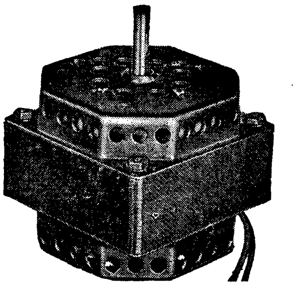
MODEL DR — 78, 33-1/3 R. P. M. • MODEL DZ — 78, 45 R. P. M.
MODEL DV — 45, 33-1/3 R. P. M. **115 volts a. c., 60 cycles**



Deluxe rim drive, 4-pole motors with a simple and positive mechanism for shifting from one speed to the other. Speed change is accomplished by means of an external push-pull lever. An ingenious mechanism raises and lowers the entire idler assembly, disengages the idler wheel from the two-diameter motor shaft and moves the idler wheel from one diameter to the other. At the slow speed the idler wheel engages the small diameter of the motor shaft; at the fast speed it engages the large diameter. **List Price, $21.75**

Dimensions: Length—6"; Width—5⅝"; Depth—2⅝" below mounting plate. Furnished complete with 10" turntable and mounting plate ready for installation. Shipping weight—6½ lbs.

TAPE, WIRE AND DISC RECORDING MOTORS



MODEL D-10

Heavy duty 4-pole, shaded pole induction motors. 1/70 H.P. Free speed: 1740 R.P.M. Maximum running torque: 12 ounce-inches.

Features include: A locating and locking arrangement for both top and bottom covers which assures high accuracy in alignment of rotor within the stator bore; new air intake; dual cooling fans and self-aligning, oil-impregnated sleeve bearings.

These high torque motors are used in practically all tape, wire and disc recorders now being manufactured. **List Price, $16.00**

Dimensions: Length—3⅜"; Width—3⅜"; Depth 3" below mounting plate; Shaft diameter—5/16"

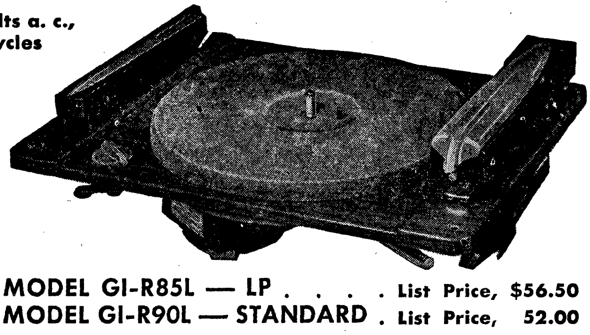
115 volts a. c., 60 cycles

HOME RECORDING AND PHONOGRAPH ASSEMBLIES

MODEL GI-R85L — LP, 78 and 33-1/3 R. P. M. with conversion spring for changing the 33-1/3 R. P. M. speed to 45 R. P. M.

MODEL GI-R90L — 78 & 33-1/3 R. P. M. — Standard

115 volts a. c., 60 cycles



Model GI-R90L is the standard model which has been in the GI line for several years. It cuts 120 lines per inch, and plays back records with the standard needle pressure.

The Model GI-R85L incorporates a dual purpose pickup cartridge and an excellent and simple adjustment for playing the LP records and standard records. It cuts 160 lines per inch. In a separate envelope is furnished a conversion spring for changing the 33⅓ R.P.M. speed to 45 R.P.M. with mounting instructions printed thereon.

Both models cut records up to 10" diameter . . . play records up to 12" diameter. To shift motor from one speed to the other, merely turn the speed change dial. Beautiful walnut wood grain on steel base plate. Streamline plastic trim on pickup and cutter arm attractively engraved with legends "Reproducer" and "Recorder". Turntable recessed into well in base plate. Merely lower cutting arm over record disc to start recording. Convenient, depth-of-cut adjustment. Dynamically-balanced, rim drive, 4-pole motor. Compensating switch operated by speed change dial.

MODEL GI-R85L — LP . . . . List Price, $56.50
MODEL GI-R90L — STANDARD . List Price, 52.00

Assembly includes dual speed motor; 10" weighted turntable; crystal cutter; crystal pickup; compensation switch; pickup and cutter arm rests; drawn steel base plate with formed down edges.

Above prices include crystal cutter.
For (M41-10) magnetic cutter add $2.00 each.

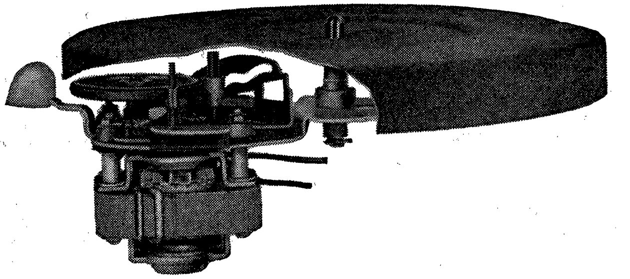
Dimensions: Base plate—15" wide; 11½" front to back; height above lower edge of base plate—2¾"; depth below lower edge of base plate—3⅞". Packed in individual cartons. Shipping weight—17 lbs.

alliance PHONOMOTORS

New 3-Speed Phonomotors for Record Playe

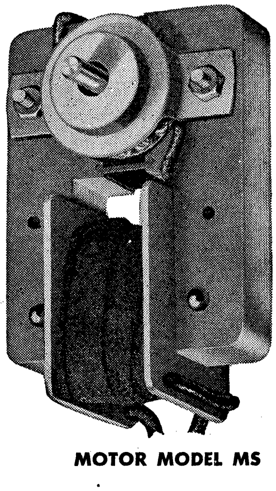
Drive 33⅓, 45, and 78 r.p.m. Records

New Alliance Phonomotor Model JPT8 features fewer moving parts — less "wow." There are no rubber bands or belts to slip, snap, distort or stretch . . . no external fan — neutral position to eliminate tire indentation. Motor has minimum height — dynamic balanced rotor — driving mechanism assures unimpaired performance at all speeds — minimum rumble, hum, and unequalled speed regulation! Removable, reversible center disc for 45 r.p.m. records. *An important* addition is the *neutral position* on the speed change lever, takes pressure off rubber tire. Available in 8″ or 9″ O.D. turntables.



Alliance 3-speed Phonomotor Model JPT8 (with standard 8″ or 9″ O.D. turntables).

NOMINAL RATING—33⅓ or 45 r.p.m. for 5 gram stylus force and 78 r.p.m. for 10 gram stylus force with 117 volts, 60 cycles, 0.3 amps., and 14½ watts input.



MOTOR MODEL MS

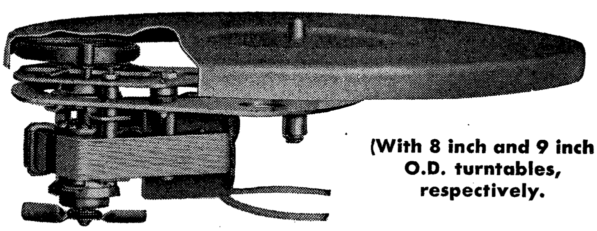
Powr-Pakt Model MS Motor

The Alliance Powr-Pakt Model MS motor is suitable for driving toys or other light loads. It is an adaptation of the quiet, smooth running motor which is used to power the Models MP8, MP9, and MP10 Phonomotors. It measures 3⅛″ x 2″ x 1¾″ not including the 7/16″ long shaft extension which has an 11/64″ diameter. Rotation is clockwise facing the shaft extension. Its self aligning bearings are of the porous bronze oilless type.

NOMINAL RATING—2800 r.p.m. at full load with 117 volts, 60 cycles, 0.3 amps., and 16 watts input. More detailed specifications are available upon request.

SINGLE SPEED

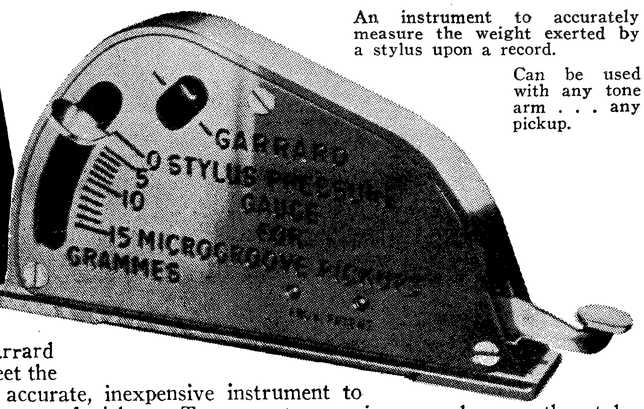
78 R.P.M. Phonomotor



(With 8 inch and 9 inch O.D. turntables, respectively.

This model MP8 Phonomotor is practically regarded as a standard power source! Operates on 110 or 220 volts, is made for 50 or 60 cycles, 16 watts input. Has no gears—runs at an even speed—has smooth, quiet, positive friction-rim drive. Ample proportioned bearings with large oil reserves assure long life. Motor and idler plate are shock mounted to minimize vibration transfer to turntable and motor board. Forced ventilation gives cool operation—the slip-type fan avoids any possible injury. Mounting plate maintains correct turntable height, regardless of mounting board thickness.

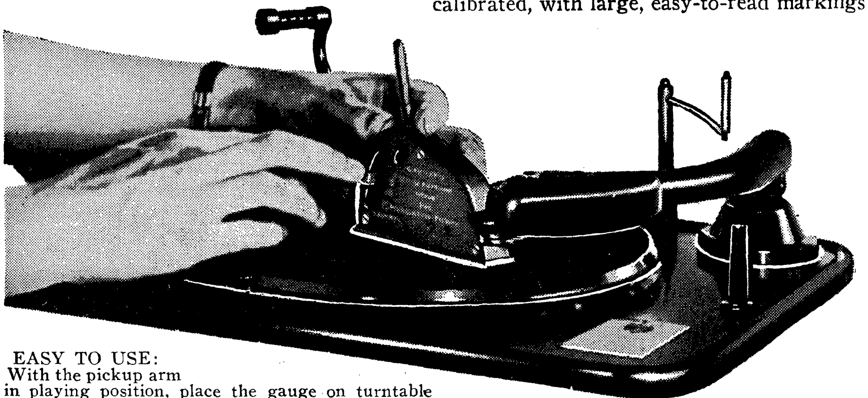
GARRARD STYLUS PRESSURE GAUGE *



An instrument to accurately measure the weight exerted by a stylus upon a record.

Can be used with any tone arm . . . any pickup.

An important new Garrard product developed to meet the demand for a simple, accurate, inexpensive instrument to measure the stylus pressure of pickups. To prevent excessive record wear, the stylus pressure should not exced cartridge manufacturer's specifications. In order to protect records, it is necessary to check the stylus pressure periodically, the pickup arm counter-balance being adjusted if necessary. The Garrard Stylus Pressure Gauge is scientifically calibrated, with large, easy-to-read markings at one gram intervals.

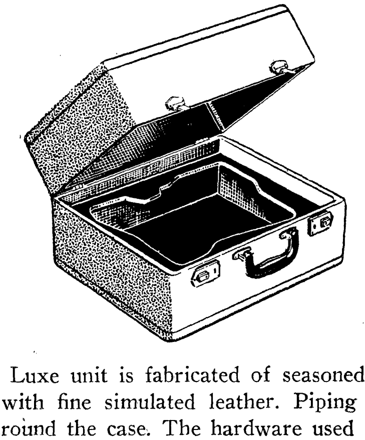


EASY TO USE:
With the pickup arm in playing position, place the gauge on turntable with pickup stylus point resting on the balance arm pan, as shown in illustration above. Slowly depress the indicating lever until the balance point is shown by the pointer appearing in the center of the small window. The indicating lever will then be in line with the stylus pressure on the gram scale.

FINE GARRARD CONSTRUCTION:

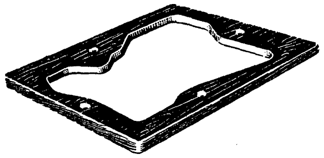
All moving parts are lightweight alloy, and completely sealed, so that no damage can be done to the delicate spring mechanism. Performance characteristics will not alter due to weather conditions or continued use. The handsomely designed Red and Ivory plastic case insures strength and durability.

GARRARD CARRYING CASE



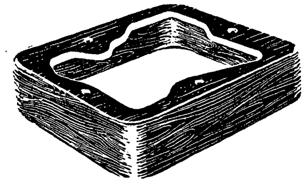
This De Luxe unit is fabricated of seasoned wood and covered with fine simulated leather. Piping runs completely around the case. The hardware used is the very finest durable brass and it has two fastening snaps. Easily carried, this unit is ideal for portable installations, for use in the home where one does not need the record playing equipment out unless it is in actual use. With solid mounting board or cutout for RC80 Changer.

GARRARD MOUNTING BOARD



Strong, durable 5/8" Gumwood, sanded and cut out for the RC80. Unfinished surface, for easy staining.

GARRARD WOOD BASE



Wood base of finest veneer, cut to fit Garrard Changers. Smoothly joined, attractively finished in dark mahogany.

GARRARD SALES CORPORATION • NEW YORK 13, N. Y.

The World's Finest 3-SPEED RECORD CHANGER

GARRARD *"Triumph"*

FULLY AUTOMATIC WITH AUTOMATIC STOP!

MODEL RC-80

Minimum cabinet dimensions — 15½" left to right; 13¼" front to rear; 5¾" clearance above and 3½" clearance below the top of motor board.

RC-80 — AC Model Dual voltage motor 100/130 and 200/250 volts, 60 cycles. (50 cycle bushing available) Less cartridge.

RC-80-DC—Same as RC-80, but for Direct Current only.

Introducing several ingenious innovations in 3 speed record changers, the RC80, nevertheless, retains the watch-like custom construction which has made Garrard acclaimed by music lovers the world over.

The Garrard "Triumph" plays all types of records now in use, 33⅓-45-78 rpm, regardless of diameter (7"-10"-12") or size of spindle hole. Once records are placed on the player and simply settings made, action is completely automatic, with unfailing switch-off at the end of the last record. Tone arm is automatically returned to rest position.

The RC80 changer is surprisingly simple in operation. It has one turntable, one tone arm, one set of switches. But over-simplification has been avoided in the interests of quality and standards of performance. Certain features found for many years in Garrard instruments have been retained because good basic engineering demands them.

For example, record changing is accomplished by the same tried-and-true pusher-type platform mechanism proven best in previous Garrard models.

45 rpm records are played exactly as intended by the manufacturer. A special spindle is provided with each changer to accommodate these records. No "spiders" or artificial inserts are necessary.

The Garrard RC80 is equipped with interchangeable plug-in heads of universal design. It will therefore accommodate virtually any crystal or magnetic cartridge, including the Audak, Pickering and GE twist models.

The "Triumph" is heavily built for long, rugged service. It cannot sag or warp. Repairs and adjustments can be made inexpensively on parts which, in most other machines, would require expensive replacement in their entirety.

GARRARD SALES CORP. **NEW YORK 13, N. Y.**

HEAVY DRIVE SHAFT:
A unique feature! Exclusive with Garrard!
Drive shaft for 33⅓ rpm and 45 rpm is heavy, thus obtaining more consistent quality at critical low speeds. Wows and wavers eliminated.

PUSHER TYPE PLATFORM:
Adjusts simply to 7"-10"-12" records regardless of diameter or size of spindle hole.
No record changing mechanism has been developed to equal the performance of the precision pusher platform. For records with standard center holes, the pusher platform is the only method that gives positive gentle record operation.

PULL-AWAY IDLER WHEEL
Avoids flattening on drive wheel when changer is not operating.

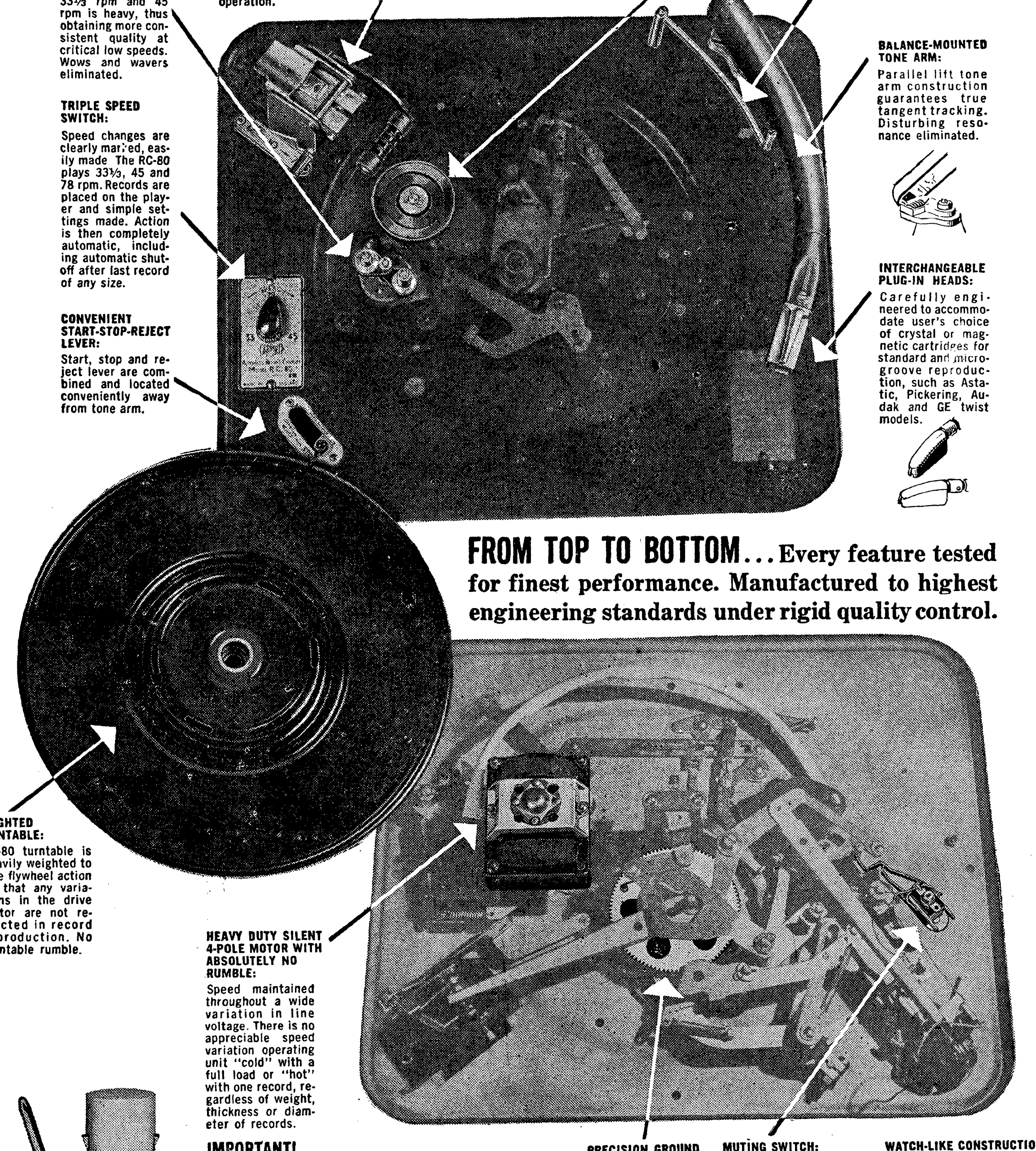
AUTOMATIC STOP:
Insures positive and unfailing action at end of any type record.

TRIPLE SPEED SWITCH:
Speed changes are clearly marked, easily made The RC-80 plays 33⅓, 45 and 78 rpm. Records are placed on the player and simple settings made. Action is then completely automatic, including automatic shutoff after last record of any size.

CONVENIENT START-STOP-REJECT LEVER:
Start, stop and reject lever are combined and located conveniently away from tone arm.

BALANCE-MOUNTED TONE ARM:
Parallel lift tone arm construction guarantees true tangent tracking. Disturbing resonance eliminated.

INTERCHANGEABLE PLUG-IN HEADS:
Carefully engineered to accommodate user's choice of crystal or magnetic cartridges for standard and microgroove reproduction, such as Astatic, Pickering, Audak and GE twist models.



FROM TOP TO BOTTOM...Every feature tested for finest performance. Manufactured to highest engineering standards under rigid quality control.

WEIGHTED TURNTABLE:
RC-80 turntable is heavily weighted to give flywheel action so that any variations in the drive motor are not reflected in record reproduction. No turntable rumble.

HEAVY DUTY SILENT 4-POLE MOTOR WITH ABSOLUTELY NO RUMBLE:
Speed maintained throughout a wide variation in line voltage. There is no appreciable speed variation operating unit "cold" with a full load or "hot" with one record, regardless of weight, thickness or diameter of records.

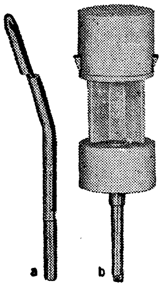
PRECISION GROUND GEARS
Perfectly meshed to insure constant smooth action and years of service.

MUTING SWITCH:
No sound while changer operates on run-in or run-off grooves. Continuity of music undisturbed by noises.

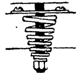
WATCH-LIKE CONSTRUCTION
All parts are precision made, fastidiously assembled and simple to adjust.

A complete stock of replacement parts is readily available to all Garrard owners.

IMPORTANT!
Only a 4-pole motor can assure no hum when used with sensitive magnetic pickups.



TWO INTERCHANGEABLE SPINDLES:
Easily inserted, the two Garrard Spindles accommodate all records as they were made to be played. (If user prefers one spindle can be used throughout simply by plugging center hole of 45 rpm records.) a: Typical Garrard spindle for standard center holes. b: Easily inserted wide spindle, for 45 rpm records, remains stationary when record is played. Only a small collar revolves, assuring longer center hole and record wear.



SIMPLE INSTALLATION:
Mounting holes are identical with former Garrard models, so that replacement is very simple. Unique spring suspension.

GARRARD
SWINDON

GARRARD SALES CORP. **NEW YORK 13, N. Y.**

Copyright by U. C. P., Inc.

New!

GARRARD

3 SPEED MANUAL RECORD PLAYER

(Specifications not available at time of printing . . . write or phone for information.)

New!

GARRARD

MULTI-SPEED TRANSCRIPTION TURNTABLE

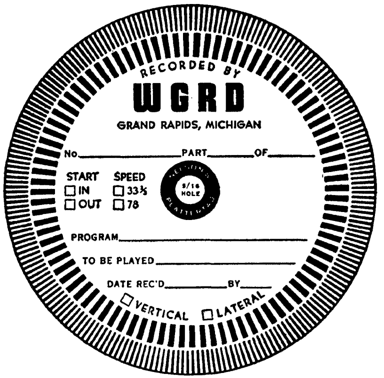
(Specifications not available at time of printing . . . write or phone for information.)

Self Adhesive

PLATTERTAGS *FOR* DISC AND TAPE REEL LABELS

for RADIO and TV STATIONS • RECORDING STUDIOS • ADVERTISING AGENCIES TAPE REEL MANUFACTURERS & DISTRIBUTORS

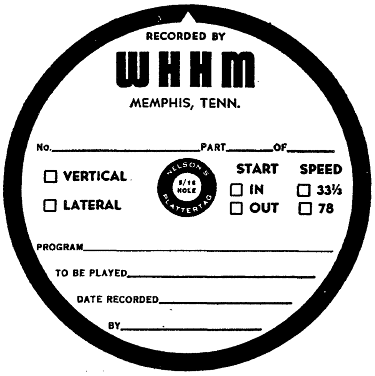
Quickly Applied • Sticks and Stays Stuck
Adaptable to Ink or Typewriter
No Moisture, Paste or Rubber Cement Necessary


RECORDED BY
WGRD
GRAND RAPIDS, MICHIGAN
No. PART OF
START SPEED
☐ IN ☐ 33⅓
☐ OUT ☐ 78
5/16 HOLE
PROGRAM
TO BE PLAYED
DATE REC'D BY
☐ VERTICAL ☐ LATERAL

DESIGN CP-1 - 4" DIAM.

SPECIFICATIONS

All Illustrations Shown are HALF SIZE. Design CP-1 has Stroboscope Border in black, with Call Letters and information lines in Red. Design CP-2 has Red border and center, with all information lines in black. All other designs are printed in black. Information lines on all designs will be exactly as illustrated. Write for quotations on special wording, special call designs or trade-marks, other color combinations, etc.


RECORDED BY
WHHM
MEMPHIS, TENN.
No. PART OF
☐ VERTICAL
☐ LATERAL
NELSON'S PLATTERTAG
5/16 HOLE
START SPEED
☐ IN ☐ 33⅓
☐ OUT ☐ 78
PROGRAM
TO BE PLAYED
DATE RECORDED
BY

DESIGN CP-2 - 4" DIAM.

PRICES—IMPRINTED with your Call Letters

	CP-1 & 2	CP-3	CP-4	TW-1 & 2	TW-3
250 (E)	$ 13.50	$10.00	$12.00	$10.00	$ 9.00
500 (E)	22.00	15.00	19.00	16.00	15.00
1000 (G)	31.00	22.00	27.00	24.00	22.00
2500 (G)	62.00	45.00	56.00	48.00	44.00
5000 (G)	112.00	83.00	102.00	90.00	82.00

PRICES—PLAIN (without Call Letters)

	CP-1 & 2	CP-3	CP-4	TW-1 & 2	TW-3
100 (E)	$ 4.00	$ 3.50	$ 4.00	$ 3.50	$ 3.00
250 (E)	9.50	7.00	8.50	7.00	6.50
500 (E)	17.00	12.00	15.00	12.50	11.50
1000 (G)	26.00	17.00	23.00	19.00	17.00
2500 (G)	53.00	37.00	47.00	39.00	34.00
5000 (G)	98.00	70.00	88.00	72.00	62.00

BLANK LABELS—without any printing on them whatsoever, can also be furnished at the above prices.

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ALL ILLUSTRATIONS ARE SHOWN ONE-HALF ACTUAL SIZE
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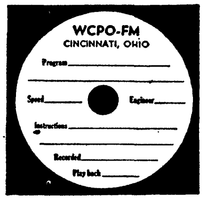
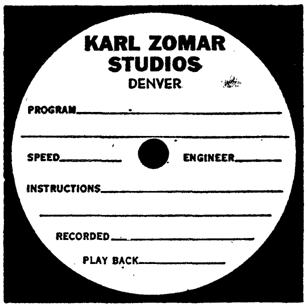
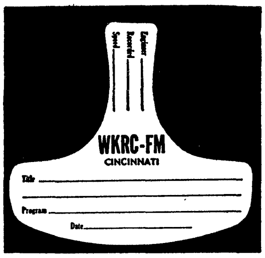

WCPO-FM
CINCINNATI, OHIO
Program
Speed
Engineer
Instructions
Recorded
Play back

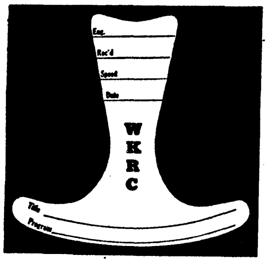
DESIGN CP-3 - 2" DIAM.


KARL ZOMAR STUDIOS
DENVER
PROGRAM
SPEED
ENGINEER
INSTRUCTIONS
RECORDED
PLAY BACK

DESIGN CP-4 - 3" DIAM.

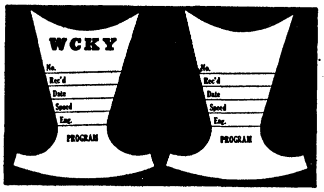

Speed
Recorded
Engineer
WKRC-FM
CINCINNATI
Title
Program
Date

Design TW-2 - For Audio 1,200 ft. Reel


Eng.
Rec'd
Speed
Date
W
K
R
C
Title
Program

Design TW-1 - For MMM 1,200 ft. Reel

ALL ILLUSTRATIONS ARE SHOWN ½ ACTUAL SIZE


WCKY
No.
Rec'd
Date
Speed
Eng.
PROGRAM
No.
Rec'd
Date
Speed
Eng.
PROGRAM

IMPRINTED PLAIN
Design TW-3 - For 600 ft. MMM Reel

FINN-JASKE COMPANY • CINCINNATI 2, OHIO

INSTANTANEOUS RECORDING BLANKS

THE RECORDISC CORP.

395 BROADWAY, NEW YORK 13, N. Y. • CABLE ADDRESS: RECORDISC, NEW YORK, N. Y.
EXPORT DEPT.: ROYAL NATIONAL COMPANY, INC., 89 BROAD STREET, NEW YORK

WORLD-FAMOUS HOME RECORDING BLANKS

ORANGE LABEL

Popular composition base disc . . . a party favorite! Heavy and firm, it will take punishment, yet it is coated carefully with our standard RECORDISC surface compound. The acme of amateur transcription blanks.

"GM" LABEL

Available in the three larger sizes only, these discs are made on heavy .021 aluminum base, coated with critically selected compound. Precision-made, and minutely inspected, they are guaranteed for perfect performance and long use.

PURPLE LABEL

Lightweight aluminum base disc with heavyweight selling power! The lowest-priced high-quality disc with an inexpensive .012 aluminum base, designed for amateurs desiring semi-professional reproduction.

MAGNETIC RECORDING TAPE

Precision-manufactured on a specially designed machine, RECORDISC recording tape features high tensile strength for longer life, even coating for high frequency response and controlled slitting for trouble-free winding.

RED LABEL

High-fidelity, volume selling disc with .021 aluminum base. Coated with flawless RECORDISC compound. Professional quality in smaller sizes for those who want the finest. Professional nitrate coating.

Super-Tone RECORDING WIRE

RECORDISC's stainless steel recording wire is the product of extensive research — delivers ultra-high fidelity, easy erasing qualities and outstanding durability. Wound on RMA-standard spools.

LIST PRICES

RECORDING WIRE

LENGTH	PRICE
¼ Hour	$2.00
½ Hour	3.00
1 Hour	5.00
Empty spool, 75c	

CODE:
P—Plastic Base
K—Kraft Base
IW—Inside Winding of Oxide
OW—Outside Winding of Oxide
625—625 ft. length
1250—1,250 ft. length

RECORDING TAPE

STYLE NO.	DESCRIPTION	SIZE REELS	LIST PRICE
PIW-625	625 Ft. Plastic Base, Oxide In	5"	$3.50
PIW-1250	1250 Ft. Plastic Base, Oxide In	7"	5.50
POW-625	625 Ft. Plastic Base, Oxide Out	5"	3.50
POW-1250	1250 Ft. Plastic Base, Oxide Out	7"	5.50
KIW-625	625 Ft. Kraft Base, Oxide In	5"	2.25
KIW-1250	1250 Ft. Kraft Base, Oxide In	7"	3.50
KOW-625	625 Ft. Kraft Base, Oxide Out	5"	2.25
KOW-1250	1250 Ft. Kraft Base, Oxide Out	7"	3.50

ALL TAPES SUPPLIED ON 6-SPOKE POLYSTERENE REEL

RECORDING DISCS

LABEL	BASE	6½"	8"	10"	12"
ORANGE	Bond	25c	35c	50c	
PURPLE	Aluminum	30c	40c	60c	
RED	Aluminum	40c	50c	80c	$1.00
"GM"	Aluminum		80c	$1.00	$1.25

Precision-Perfect Professional Recording Discs
Designed for broadcasting stations and recording studios. Years of costly research and the valuable experience gained as the world's largest producer of home recording blanks have been combined to produce the perfect professional recording disc . . . possessing a fidelity heretofore thought impossible. Each blank guaranteed for five full years.

LIST PRICES		10"	12"	16"
2 ★ ★ STAR	precision-processed, double-face	$1.15	$2.00	$3.15
3 ★ ★ ★ STAR	perfectly flawless, double-face	$1.40	$2.40	$3.95

STEEL STYLI
Chrome Plated SHANK
DESIGNED FOR PERFECT HOME RECORDING
3 for $1
RECORDISC

STEEL STYLI

(CHROME PLATED)

A fine economy stylus that gives excellent service during its recording life of approximately one hour. Shiny chrome-plate on hardened steel. Packed in protective cards. LIST **3 for $1**

RECORDISC
Special QX-5
75c
RECORDING STYLUS
Built to Studio Standards

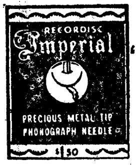
SPECIAL QX-5

A precision-made stylus made of processed and tempered steel . . . with an expensive filter cutting point and recessed shank. Smooth easy cutting for those who seek a fine but non-fragile recording tip. LIST PRICE **75¢**

PHONOGRAPH AND PLAYBACK NEEDLE

"The Imperial" by RECORDISC

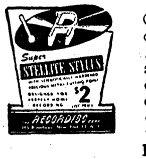
7000 PLAYS
•
GENUINE OSMIUM TIP



•
"Concert Quality"
•

An outstanding engineering achievement in high fidelity tone reproduction. Precious metal tip. **Equal or superior to the costliest needles on the market, but competitively priced.** In handsome, individual package.

LIST PRICE: **1.50**



STELLITE STYLUS

Carefully machined of special, hardened metal alloy . . . less fragile than costly sapphire styli. Recommended for less experienced recording operators. Packed one to a protective card. LIST PRICE **2.00**

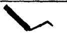
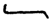
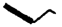
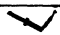
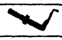
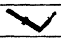
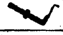
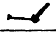
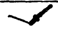
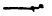
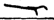
SAPPHIRE STYLUS
RECORDISC
$6.50

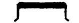
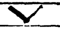
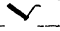
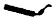
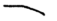
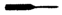
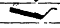
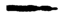
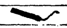
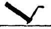
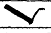
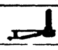
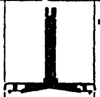
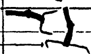
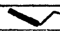
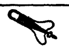
SAPPHIRE STYLUS

A specially lapped sapphire point on each stylus cuts clean shiny grooves with less surface noise than any similar stylus. As much as 10 hours of recording time . . can be sharpened as many as 15 times. Packed in individual jewel box. LIST PRICE **6.50**

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

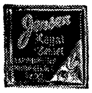
Jensen NEEDLES for the replacement trade

CARTRIDGE MFG.	CART. MFG. NEEDLE NO	JENSEN NEEDLE NO	ILLUSTRATION (Actual Size)	CARTRIDGE NUMBERS	POINT MATERIAL	POINT SIZE
Astatic	Q(M)	A-80		QT-M; QT2-M; QT3-M; LQD; LQD-1	Osmium	Standard
Astatic	Q-33(M)	A-80-LP		QT-33-M; CQ-M; LQD; LQD-1	Osmium	Micro-Groove
Astatic	Q-AG(M)	A-802		CQ-AG-M; CQ-AG-J	Osmium	All Groove
Astatic	Q(J)	A-81		QT-J; QT2-J; QT3-J; LQD; LQD-1	Sapphire	Standard
Astatic	Q-33(J)	A-81-LP		QT-33-J; CQ-J; LQD; LQD-1	Sapphire	Micro-Groove
Astatic	D(M)	A-83		LT-3D; LT-4D; LT-4D1; MD	Osmium	Standard
Astatic	D-33(M)	A-83-LP		LTD-3D; LT-4; LT-4D; LT-4D1	Osmium	Micro-Groove
Astatic	D-AG(M)	A-832		LT-4-AG	Osmium	All Groove
Astatic	G-78(M)	A-84		GC-78-M; MG-78-M	Osmium	Standard
Astatic	G(M)	A-84-LP		GC-M; GC-1M; MG-1M	Osmium	Micro-Groove
Astatic	G-AG(M)	A-842		GC-AG-M; MG-AG-M	Osmium	All Groove
Astatic	T(M)	A-86		LT-1M; LT-2M; LT-3M	Osmium	Standard
Astatic	T-33(M)	A-86-LP		LT-33	Osmium	Micro-Groove
Astatic	C-3(M)	A-87		MD-3	Osmium	Standard
Astatic	C-1(M)	A-87-LP		MD-1	Osmium	Micro-Groove
Astatic	U-78(M)	A-88		U-78-M	Osmium	Standard
Astatic	U(M)	A-88-LP		UM	Osmium	Micro-Groove
Astatic	C-3(J)	A-89		MD-3	Sapphire	Standard
Astatic	C-1(J)	A-89-LP		MD-1	Sapphire	Micro-Groove
Astatic	A-3(M)	A-85		AC-78; ACD Series	Osmium	Standard
Astatic	A-1(M)	A-85-LP		AC; ACD Series	Osmium	Micro-Groove
Astatic	A-AG(M)	A-852		AC-AG-M; AC-AG-J	Osmium	All Groove
Astatic	Nylon 1-M	A-82		Nylon 1J; Nylon 1M	Osmium	Standard
Shure	A62A	JP-30		P-30; P-57; P-70; P-72; P-74AD; P-76; P-77; P-79; P-85; P-88; P-89; P-94; PN-30; W-22AB; W-23B; W-60B; W-60HS; W-60PN; W-61B; W-65B Admiral 409A11	Osmium	Standard
Shure	A-63MG	JP-30-LP		Admiral 409A11; P-73; P-74AD; P-72V; P-76V	Osmium	Micro-Groove
Shure	A-66U	JP-312		Admiral 409A13-1; P-71; P-81; P-37	Osmium	Unipoint
Shure	A-61A	JPS-30		P-30; P-57; P-70; P-72; P-74AD; P-76; P-77; P-79; P-85; P-88; P-89; P-94; PN-30; W-22A; W-23A; W-60A	Sapphire	Standard
Shure	A-65MG	JPS-30-LP		P-73; P-74AD; P-72V; P-76V; W-21A; W-21AR; W-22A; W-22AB	Sapphire	Micro-Groove
Shure	A67U	JPS-312		P-71; P-81; P-37	Sapphire	Unipoint
RCA	72345	M-70		70338; 70339	Sapphire	Standard
RCA	74068	M-70-LP		74067	Sapphire	Micro-Groove
RCA	75046	M-71		70338; 70339	Osmium	Standard
RCA	75045	M-71-LP		74067	Osmium	Micro-Groove
RCA	39863	M-72		72551; 9890; 39919; 39550; 38598; 70332; 39851	Sapphire	Standard
RCA	38449	M-73		72551; 9890; 39919; 39550; 38598; 70332; 39851	Osmium	Standard
RCA	75497	M-74		75475	Sapphire	Standard
RCA	75496	M-74 LP		75475	Sapphire	Micro-Groove
RCA	75497	M-75		75475	Osmium	Standard
RCA	75496	M-75 LP		75475	Osmium	Micro-Groove
Electro-Voice	S-3	E-90		M12-S; H12-S; L12-S	Sapphire	Standard
Electro-Voice	S-1	E-90-LP		14-S; 22-S; 34S	Sapphire	Micro-Groove
Electro-Voice	S-13	E-91		16TT; 22TT	Sapphire	Twin Point
Electro-Voice	O-13	E-93		16TT; 22TT	Osmium	Twin Point
Electro-Voice	O-3	E-95		M12; H12; L12	Osmium	Standard
Electro-Voice	O-1	E-95-LP		14; 34;	Osmium	Micro-Groove
Electro-Voice	O-2	E-962		33; 33S	Osmium	All Purpose
Columbia	101	M-60-LP		45-1609	Sapphire	Micro-Groove
Columbia	102 & 103	A-81-LP		CQ	Sapphire	Micro-Groove

CARTRIDGE MFG	CART MFG NEEDLE NO	JENSEN NEEDLE NO	ILLUSTRATION (Actual Size)	CARTRIDGE NUMBERS	POINT MATERIAL	POINT SIZE
Webster-Electric	M	W-02		M-1	Osmium	Standard
Webster-Electric	F-14	W-05		F14; F14-1; F14-2; F14-3; F14-4	Osmium	Dual
Webster-Electric	A3S	W-14		A1; A8	Sapphire	Standard
Webster-Electric	A1S	W-15		A1; A2; A3; A4; A5; A6; A8	Sapphire	Micro-Groove
Webster-Electric	A3O	W-16		A1M; A1M-1; A5M; A6M	Osmium	Standard
Webster-Electric	A1O	W-17		A1M; A1M-1; A2M; A5M; A6M	Osmium	Micro-Groove
Webster-Electric	Q1	W-30		Q1	Osmium	Standard
Webster-Electric	G3	W-36		G3M	Osmium	Standard
Webster-Electric	G1	W-36-LP		G1M	Osmium	Micro-Groove
Webster-Electric	G2	W-362		G2M	Osmium	All Purpose
Webster-Electric	WS	W-37		WS	Osmium	Standard
Webster-Electric	AJ	W-37-LP		AJ4	Osmium	Micro Groove
Webster-Electric	A9	W-38		A9M	Osmium	All Purpose
Webster-Electric	A2	W-412		Q3; A9; F-13	Osmium	All Purpose
Webster-Electric	C9	W-422		C9	Osmium	All Purpose
Webster-Electric	Q2	W-49		Q2	Osmium	Standard
Webster-Electric	F16-3	W-72		F16; F16-1; F16-2	Osmium	Standard
Webster-Electric	F16-1	W-73		F16; F16-1; F16-2	Osmium	Micro-Groove
Webster-Electric	F15-3	W-81		F15; F15-1	Osmium	Standard
Webster-Electric	F15-1	W-82		F15; F15-1	Osmium	Micro-Groove
Webster-Electric	F7	15-LP		F7; F7-1; F7-2; Q2; F13	Osmium	Micro-Groove
Webster-Electric	F10	JP-30		F10; F11; F11-1	Osmium	Standard
Webster-Electric	F10-1	JP-30-LP		F11; F11-1	Osmium	Micro-Groove
General Electric	RPJ-001	GE-10		RPX-040; RPX-041; RPX-046	Sapphire	Standard
General Electric	RPJ-005	GE-10-LP		RPX-040; RPX-041; RPX-046	Sapphire	Micro-Groove
General Electric	RPJ-010	GE-11		RPX-050	Sapphire	Dual
Philco	45-1596	PH-10		Dynamic Reproducer 76-1622	Sapphire	Standard
Philco	45-1613	PH-11		45-1609	Osmium	Micro-Groove
Philco	35-2693	PH-12		76-4649	Osmium	Dual
Philco	45-1613	M-60-LP		45-1609	Sapphire	Micro-Groove
Philco	45-1597	PH-14		35-2671	Osmium	Standard
Philco	45-1651	PH-15		35-2671	Sapphire	Standard
Webster-Chicago	NE-215	NE-215		21P247; 21P402; 21P403	Osmium	Dual
Webster-Chicago	NE-316	NE-368		21P404	Osmium	Dual
American Microphone	S-1	AM-20		S-1; S-1A; S-2; S-2A	Osmium	Standard
American Microphone	CO-3	AM-21		C-3	Osmium	Standard
American Microphone	CO-1	AM-21-LP		C-1	Osmium	Micro-Groove
American Microphone	CO-2	AM-212		C-2	Osmium	All Purpose
Crosley	145720	C-99		145749	Sapphire	Standard
Magnavox	560102	M-02		560101	Osmium	Standard
Magnavox	560138	M-46		560133	Osmium	Twin Point

Free! Send for your free Wall Chart (above), which shows in actual size all Jensen Replacement Needles.

JENSEN NEEDLES FOR ALL RECORD PLAYERS



ROYAL JEWEL

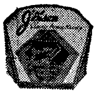
A long life top quality needle with a genuine sapphire tip; 13 needles to a display.

NYLON

The finest Nylon Needle with either sapphire or osmium tip for any record player.

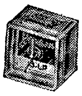
SWEET

High in quality, low in cost with genuine osmium tip, straight shank notched.



CLASSIC

Osmium tipped needle with an exclusive spring action that absorbs needle noise and reduces shock.



LONG PLAYING

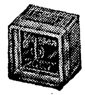
A needle with either sapphire or osmium tip for 33⅓ and 45 RPM record players.

FIFTY

Jensen's lowest priced quality needle with osmium tip. Twelve needles to a display card.

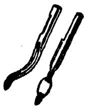
CONCERT

A popular priced needle with osmium tip and exclusive flexible shank that protects records.



ALL PURPOSE

Plays micro-groove as well as regular at all three speeds; 33⅓, 45 and 78 RPM.

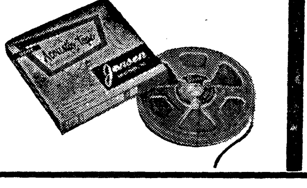


COIN MACHINE NEEDLES

Assure long satisfactory playing. Available with either curved or straight shank, sapphire or osmium tip.

JENSEN ACOUSTIC TAPE

Jensen's latest development . . . Magnetic Recording Tape, available with either plastic or paper base on 150, 600 and 1200 ft. plastic reels. An outstanding tape made to exacting specifications.



To round out the line Jensen offers the Symphonette Steel Needle, packaged 30 needles to an envelope, 50 envelopes to a counter display carton. Handle the complete line of Jensen Needles and be assured of never losing a sale.

Jensen INDUSTRIES, INC.

Chicago 12, Ill.

RECOTON *Replacement Needles*

Always faithful

NO DUPLICATION! Of the same needle under another number! Keeps your inventory down.

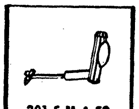
SIMPLE CONSECUTIVE MODEL NUMBERS! As 301, 302, 303 etc.

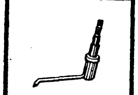
INVENTORY CONTROL! A separate inventory control card for each number— more sales with less stock.

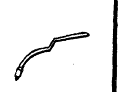
COMPLETE INFORMATION! All the information is on the card the needle is mounted on.

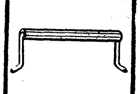
Replacement Needles for Cartridges of

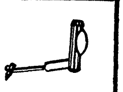
ASTATIC
AMERICAN MICROPHONE
COLUMBIA
CROSLEY
ELECTRO-VOICE
GENERAL ELECTRIC
MAGNAVOX
PHILCO
RCA
SEEBURG
SHURE
SONOTONE
WEBSTER-CHICAGO
WEBSTER ELECTRIC
—
AND MANY OTHERS

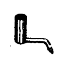

301-S-M-1.50

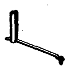

310-LP-J-2.00


319-A-M-1.50


328-LP&S-M-2.50


337-A-J-2.50


346-S-M-1.50


355-LP-M-1.50

JEWEL and OSMIUM TIPPED

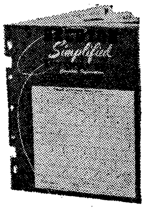
CAT. NO.	PRICE	CAT. NO.	PRICE	CAT. NO.	PRICE	CAT. NO.	PRICE
301	$1.50	326	$1.50	351	$1.50	376	pr. $2.50
302	2.50	327	2.50	352	2.50	377	pr. 2.50
303	2.50	328	2.50	353	3.50	378	1.50
304	1.50	329	1.50	354	1.50	379	2.50
305	1.50	330	1.50	355	1.50	380	1.50
306	2.50	331	2.50	356	1.50	381	1.50
307	1.50	332	3.50	357	1.50	382	1.50
308	2.50	333	2.50	358	1.50	383	3.50
309	3.50	334	2.50	359	2.50	384	3.50
310	2.00	335	1.50	360	2.50	385	3.50
311	1.50	336	1.50	361	1.50	386	2.50
312	2.50	337	2.50	362	1.50	387	2.50
313	4.00	338	1.50	363	1.50	388	2.50
314	5.50	339	1.50	364	1.50	389	1.50
315	1.50	340	2.50	365	1.50	390	1.50
316	1.50	341	1.50	366	3.50	391	1.50
317	2.50	342	1.50	367	3.50	392	1.50
318	1.50	343	2.50	368	5.95	2412R	1.00
319	1.50	344	2.50	369	3.50	2512R	1.50
320	1.50	345	1.50	370	2.50	2512MGR	1.50
321	1.50	346	1.50	371	2.50	2712R	1.00
322	1.50	347	1.50	372	2.50	2812R	1.50
323	4.00	348	1.50	373	2.50	2912R	2.50
324	2.25	349	2.50	374	2.50		
325	2.50	350	2.50	375	2.50		

DIAMOND TIPPED

CAT. NO.	PRICE	CAT. NO.	PRICE	CAT. NO.	PRICE	CAT. NO.	PRICE
302-D	$25.00	327-SD	$30.00	359-D	$25.00	377-D	$25.00
303-D	25.00	332-DD	49.00	360-D	25.00	379-D	25.00
306-D	25 00	332-SD	30.00	366-D	27.50	380-D	25.00
308-D	25.00	333-D	25.00	367-D	27.50	381-D	25.00
309-D	25.00	334-D	25.00	368-DD	49.00	382-D	25.00
310-D	25.00	337-D	25 00	368-SD	30.00	383-D	25.00
312-D	25.00	340-D	25.00	369-D	27.50	384-D	25.00
313-DD	49.00	343-D	25.00	370-D	25.00	385-DD	49.00
313-SD	30.00	344-D	25.00	371-D	25.00	385-SD	30.00
317-D	25.00	349-D	25.00	372-D	25.00	386-D	25.00
323-DD	49.00	350-D	25.00	373-D	25.00	387-D	25.00
323-SD	30.00	352-D	25 00	374-D	25.00	388-D	25.00
324-D	25 00	353-DD	49.00	375-D	25.00	2912-D	25.00
327-DD	49.00	353-SD	30.00	376-D	25.00		

For complete information regarding replacement needles, refer to Recoton Simplified Reference Guide.

WRITE US — IT'S FREE!



NEEDLE INSPECTION SERVICE
See for Yourself!
RECOTON
Replace Your Needles OFTEN
RECOTON
RECOTON
FOR ALL PHONOGRAPHS

No. 650 Display Kit
200 power RECOTON
precision microscope

Metal Replacement cabinet containing 2 needles each of Cat. No. 301-382 and including 2 each of 2412R, 2512R, 2512MGR, 2712R, 2812R, 2912R with FREE 200-power Recoton Microscope on illustrated display background.

No. 650 ....**$377.40**

No. 750 Display Kit—Same as No. 650 but containing 1 needle each **$188.70**

REPLACEMENT NEEDLE KIT No. 150

Recoton Replacement Needles are precision made of the finest materials by Recoton's skilled craftsmen. Expertly designed to fit all popular cartridges — Recoton's famous phoneedles incorporate the most advanced developments in the acoustical field — guarantee full tonal range and longer life.

List Price

No. 150—Replacement Cabinet containing 1 needle each of Cat. No. 301 through No. 319...**$ 43.50**

No. 550—Replacement Cabinet containing 2 needles each of Cat. No. 301 through 379 and including 2 each of 2412R, 2512R, 2512 MGR, 2712R, 2812R, 2912R **$368.40**

RECOTON
RECOTON
REPLACEMENT NEEDLES

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

RECOTON* *Phoneedles*

Always faithful

SUPEROSMIUM No. 2412

Recoton's fine permanent-type needle made of the finest osmium alloys. Micro-tested and factory sealed for precision results. Exceptionally gentle to records.

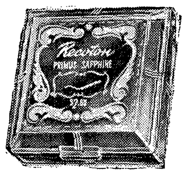
	List Price
No. 2412—1 needle to a container	$ 1.00
12 to a display card	12.00

NYLON PHONEEDLE* No. 2512

Recoton's precision-made nylon phoneedle provides long hours of enjoyable plays. Unconditionally guaranteed . . . with shock absorbing action. Contains surface noise filter . . . eliminates needle scratches.

	List Price
No. 2512—1 needle to a container	$ 1.50
12 to a display card	18.00

No. 2512—MG for 33-1/3 and 45 RPM Recordings



No. 2912 PRIMUS UNIVERSAL SAPPHIRE NEEDLE

Especially Designed for Finest Performance of All 3 Speeds — 33⅓, 45, 78 RPM.

No. 2912	List Price
Each needle	$ 2.50
12 to carton	30.00

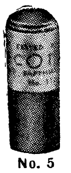
PRIMUS SAPPHIRE NEEDLE
No. 2612

Versatile . . . popular priced . . . ideal for every kind of electrical player including automatic changers. Features special wire-type grip to allow greater flexibility permitting needle to follow modulation track of record faithfully. Fine sapphire point eliminates surface noise, minimizes record wear. Reproduces entire tonal range.

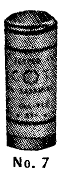
	List Price
No. 2612—Each needle	$ 2.50
12 to carton	30.00

No. 2612—MG for 33-1/3 and 45 RPM Recordings

CUTTING STYLI



No. 5



No. 7

SAPPHIRE CUTTING NEEDLES
Factory Tested and Sealed

Superbly crafted; equipped with finest sapphire point. For professional use.

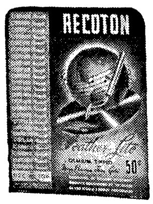
	List Price
No. 5*—Brass shank, packed in wooden container	$5.50
No. 7*—Dural shank, packed in wooden container	$7.25

* Available in "Long Shank"; specify with order LS after catalog number. No. 7 also available for Microgroove cutting. Specify No. 7MG when ordering.

SUPERIOR RECOTON No. 1S

Recoton's famous popular-priced steel needle, precision turned in Switzerland, made of Swedish surgical steel. Fine reproduction and elimination of surface noise. Good for 12 to 15 plays.

	List Price
No. 1S—Package of 25 needles (25c each) to an envelope.	
50 envelopes to carton	$12.50



OSMIUM TIPPED FEATHER-LITE NEEDLE No. 2124

Recoton's new osmium tipped bent shank phoneedle.* Permanent type construction. Fine value for needle of this quality!

	List Price
No. 2124—1 needle to package	$ .50
24 packages to a display card	12.00

ALL GROOVE NEEDLES

No. 2712 SUPEROSMIUM UNIVERSAL 3-SPEED OSMIUM TIPPED

Recoton's fine permanent-type needle made of the finest osmium alloys. Micro-tested and factory sealed for precision results. Lowest surface noise and hiss. Exceptionally gentle to records.

	List Price
No. 2712—1 needle to a card	$ 1.00
12 to a display card	12.00

No. 2812 ULTRA UNIVERSAL 3-SPEED SAPPHIRE

Popular-priced sapphire-tipped needle featuring high-level performance at low-level cost. Quality crafted . . . micro-tested, factory-sealed for fine results.

	List Price
No. 2812—1 needle to a card	$ 1.50
12 to a display card	18.00

STEEL CUTTING NEEDLES

Crafted of the highest-grade steel alloy to cut smooth grooves with low surface noise level. Shaped with careful precision, polished to mirror-like finish for accurate recordings. HAND-LAPPED for extra efficiency.

	List Price
5 needles to a card	$ 1.50
No. 1060—12 cards to a carton	18.00

STELLITE CUTTING NEEDLES

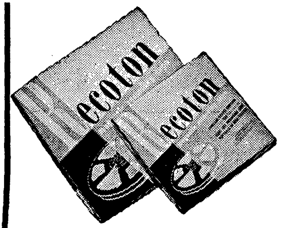
Designed for professional use, these high-grade cutting needles have a special patented finish that cuts and polishes groove of disc at same time. Equipped with Dural shank, can be depended upon for noiseless, high-fidelity performances. Will improve any recorder; recommended for slow-speed recordings.

	List Price
Cat No. 11—Stellite Cutting Needle, packed in individual cards	$ 2.00
Cat No. 1112—12 cards to a display card	24.00

PRECISION-TURNED CUTTING STYLI
Made in Switzerland

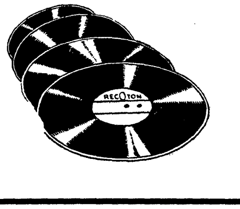
These steel cutting styli are precision turned of finest Swedish steel alloys. They are diamond-dust hand-lapped for cutting smooth grooves with extremely low surface noise and minimum background.

	List Price
Each stylus packed in individual container	$ .50
No. 2330—30 containers to a carton	15.00



MAGNETIC RECORDING TAPE for all Tape Recorders.
RECOTON Magnetic Recording Tape comes on sturdy six spoke plastic reels which turns true and resists warping.
RECOTON Magnetic Recording Tape is constant output controlled, 65 DB Dynamic Range with minimum background, eliminating rumble and even microscopic irregularities! Wide Bias latitude results in high uniform output and low distortion without critical bias adjustment.
RECOTON Magnetic Recording Tape is easy to erase and is guaranteed for thousands of recordings and playbacks.

Cat No.	Oxide-Base	Winding Oxide Faces	Length In Feet	Size of Plastic Reel	List Price
1112A	Red Plastic	In	1250	7″	$5.50
1112B	Red Plastic	Out	1250	7″	5.50
116A	Red Plastic	In	625	5″	3.50
116B	Red Plastic	Out	625	5″	3.50



HOME RECORDING DISCS

Perfected for home, commercial and educational use, these popular recording discs are preferred for their excellent reproductive quality, long life, absence of surface noise. Each disc is smooth cutting, uniformly coated and free from warpage. Carefully inspected at every point of manufacture.

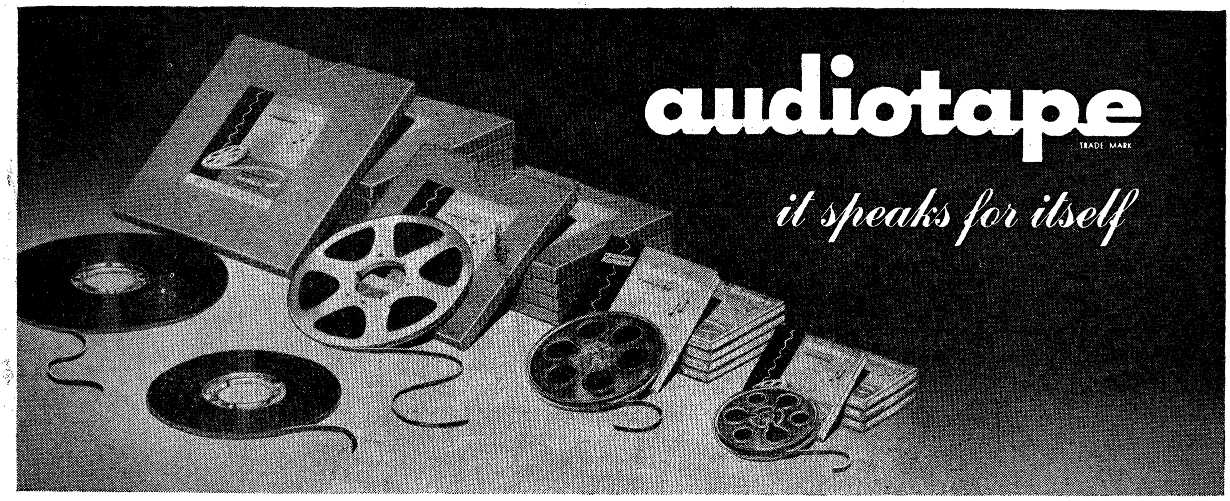
RED LABEL — ALUMINUM BASE	(per carton) List Price
6½″ packed 100 to a carton (35c each)	$40.00
8″ packed 50 to a carton (45c each)	25.00
10″ packed 50 to a carton (70c each)	40.00
12″ packed 25 to a carton (90c each)	25.00

GREEN LABEL — THIN ALUMINUM BASE		(per carton) List Price
6½″ (100 blanks packed to a carton)	(.25 ea.)	$30.00
8″ (100 blanks packed to a carton)	(.35 ea.)	40.00
10″ (100 blanks packed to a carton)	(.55 ea.)	60.00

RECOTON CORPORATION
NEW YORK 11, N. Y.

* Reg. U.S. Pat. Off.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*



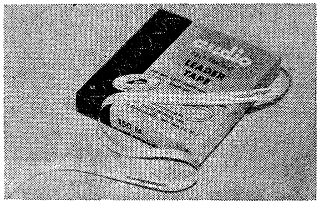
A complete line of professional quality magnetic recording tape—on plastic or paper base, with red or black oxide coating, permitting matched performance in any tape recorder.

Audiotape is precision manufactured to the same exacting standards of quality and uniformity which have characterized Audiodiscs for the past decade—your assurance of maximum fidelity, uniformity, frequency response, and freedom from background noise and distortion.

	Length	Reel	Coating	TYPE No.		List Price
				Oxide Out	Oxide In	
PLASTIC BASE	150 ft.	3″ Plastic	Red Oxide	150	151	$ 0.85
	300 ft.	4″ Plastic	Red Oxide	350	351	1.60
	600 ft.	5″ Plastic	Black Oxide	640	641	3.50
			Red Oxide	650	651	
	1200 ft.	7″ Plastic, with new 2 ¾″ hub*	Black Oxide	1240	1241	5.50
			Red Oxide	1250	1251	
	2500 ft.	Std. NAB Hub	Red Oxide	2550H	2551H	10.00
		10 ½″ Alum. Reel	Red Oxide	2550R	2551R	12.85
	5000 ft.	Std. NAB Hub	Red Oxide	5050H	5051H	20.00
		14″ Alum. Reel	Red Oxide	5050R	5051R	26.00
PAPER BASE	150 ft.	3″ Plastic	Red Oxide	120	121	0.70
	300 ft.	4″ Plastic	Red Oxide	320	321	1.25
	600 ft.	5″ Plastic	Black Oxide	600	601	2.25
			Red Oxide	620	621	
	1200 ft.	7″ Plastic, with new 2 ¾″ hub*	Black Oxide	1200	1201	3.50
			Red Oxide	1220	1221	
	2500 ft.	Std. NAB Hub	Red Oxide	2520H	2521H	6.50
		10 ½″ Alum. Reel	Red Oxide	2520R	2521R	9.35

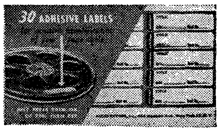
*Older style 7″ reels with small hub and 1250 ft. of tape are available at the same price. Add letter S to Type Number of corresponding 1200-ft. reel.

AUDIOTAPE can also be supplied in any desired width, for special recording applications.



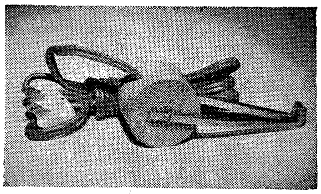
AUDIO SELF-TIMING LEADER TAPE

Durable plastic material with spaced markings for accurate timing at all standard speeds. Individually boxed in 100 ft. rolls. **List Price, $0.60**



ADHESIVE REEL LABELS

Convenient press-on adhesive labels for positive identification of tape reels. Easy to apply or remove.
List Price per pack of 30, $0.25



AUDIO HEAD DEMAGNETIZER

A 110-115 volt A-C electromagnet assembly for removing permanent magnetism from magnetic recording heads. **List Price, $12.00**

AUDIOTAPE coating is specially formulated to give uniformly high undistorted output at all frequencies.

AUDIOTAPE has no transverse curl—lies flat on heads, giving better frequency response.

AUDIOTAPE's new 7″ plastic reel with 2¾″ hub gives more accurate timing, reduced tape tension, more constant pitch.

AUDIOTAPE has no audible low-frequency modulation noise.

AUDIOTAPE's perfected anti-friction process reduces head wear, eliminates friction squeal, prevents "tackiness."

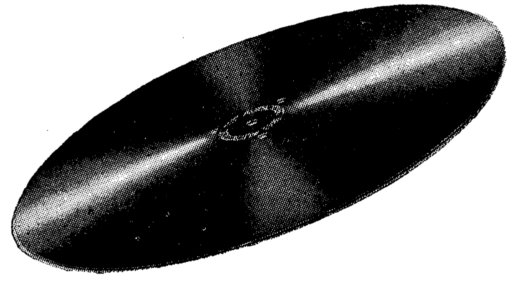
AUDIOTAPE is designed to give maximum signal-to-noise ratio.

AUDIOTAPE has unequalled uniformity of output—within the reel and from reel to reel.

AUDIOTAPE is guaranteed splice-free in both 1200 and 2500 ft. reels, plastic base.

audiodiscs *and* **audiopoints** *are listed on the following page.*

audiodiscs®



For truly fine recording and reproduction

For more than a decade, Audiodiscs have consistently maintained their position of eminent leadership in every field of instantaneous disc recording.

A superior lacquer coating, applied to the mirror-smooth aluminum base by a patented process, gives these outstanding advantages: maximum uniformity of coating, permanent resistance to humidity, longer stylus life, freedom from audible background scratch, long playback life, brilliant frequency response, and freedom from deterioration with age.

Type	Diameter	List Price per Disc	Box Contains
RED LABEL Audiodiscs for professional use. Exceed the most exacting demands for highest quality professional recordings. The finest discs obtainable. Aluminum base. Double sided. Embossed labels.	7″* 8″ 10″ 12″ 16″	$1.15 0.90 1.25 2.05 3.75	25
SINGLE FACE RED LABEL Audiodiscs. Same quality as double sided Red Label Audiodiscs, listed above.	12″ 16″	$1.65 2.95	25
YELLOW LABEL Audiodiscs for general use. High uniform quality. The popular choice for all general purpose recording. Aluminum base. Double sided. Yellow paper labels.	8″ 10″ 12″ 16″	$0.75 1.00 1.65 2.95	25
REFERENCE LABEL Audiodiscs. Provide maximum economy for test cuts, filing, reference recordings, auditions and equipment adjustments. Aluminum base. Double sided. White paper labels.	10″ 12″ 16″	$0.85 1.25 2.25	25
BLUE LABEL Audiodiscs for amateur use. Same high quality lacquer as professional discs, but on thinner aluminum base. Ideal for schools, homes, and general amateur use. Double sided. Blue paper labels.	6½″ 8″ 10″	$0.40 .55 .80	50
MASTER Audiodiscs. The outstanding choice of professional recordists for use where pressings are to be made. Give fine results with either silvering or gold sputterings. Aluminum base. Double sided or single face. — Double Sided	12″ 13¼″ 17¼″	$2.60 3.35 5.60	25
Single Face	12″ 13¼″ 17¼″	$2.05 2.35 4.10	25

*Standard 45 rpm disc with 1½″ center hole. Center-hole adapters included for recording on conventional turntable.

Prices slightly higher in Pacific Coast and Southwestern Areas.

AUDIODISC CHIP-CHASER

A simple but perfect solution to the thread removal problem in recording. The felt-lined wiper blade is set on the disc before starting the recording. The Chip-Chaser automatically and infallibly brushes the thread toward the center, winding it up on the center, winding it up on the overhead post or drive pins, as the case may be.

List Price { for 16″ turntables, **$6.25**
for 12″ turntables, **$5.00**

HOW TO MAKE
GOOD
RECORDINGS

"HOW TO MAKE GOOD RECORDINGS"

A complete, authoritative and non-technical handbook on all phases of disc recording—materials, equipment and techniques. Contains 140 pages, profusely illustrated with photographs, charts and diagrams. Includes a glossary of recording terms. Now in its 9th printing. **List price $2.00**

audiopoints®

microscopically matched recording and playback styli

The complete line of Audiopoints covers the full range of recording and playback needs—for professional as well as general use. Audiopoints are made by skilled craftsmen, and conveniently packaged in cards, boxes or envelopes.

RECORDING AUDIOPOINTS

audiopoints
RECORDING

SAPPHIRE No. 14—long recognized as the finest recording stylus made. Short or long dural shank, and 87° or 70° included angle.
List Price—$7.25
(Resharpening cost, 89°—$3.25)
(Resharpening cost, 70°— 3.75)

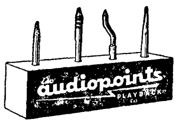
SAPPHIRE No. 202—a high-quality professional stylus. Short or long brass shank.
List Price—$5.25
(Resharpening cost—$2.60)

SAPPHIRE No. 20—especially designed for professional microgroove recording. Short or long dural shank. **List Price—$7.25**
(Resharpening cost—$3.25)

STELLITE No. 34—a favorite with many professional and non-professional users. Short or long shank. 87° included angle.
List Price—$1.75
(Resharpening cost—$0.85)

DIAMOND LAPPED STEEL No. 50—most practical and economical stylus for non-professional use. **List Price—3 for $1.00**

PLAYBACK AUDIOPOINTS



SAPPHIRE No. 113—meets the requirements of the most critical professional recordists. Straight dural shank. **List Price—$6.50**
(Resharpening cost—$2.25)

SAPPHIRE No. 123—for professional use with microgroove recordings. **List Price—$2.00**
(Resharpening cost—$1.50)

"RED CIRCLE" SAPPHIRE No. 103—for professional use with instantaneous recordings or vinyl transcriptions. Straight dural shank.
List Price—$2.00
(Resharpening cost—$1.00)

"RED CIRCLE" SAPPHIRE No. 303—same as No. 103, except with bent dural shank. Ideal for phonograph records. **List Price—$2.00**
(Resharpening cost—$1 00)

STEEL TRANSCRIPTION NEEDLE No. 151—finest steel needles made. 100% shadowgraphed to assure perfection of every needle.
List Price—100 for $1.25
20 for $0.25

RESHARPENING SERVICE

Established years ago, our Resharpening Service materially reduces the over-all cost of using sapphire and stellite Audiopoints. Each resharpened point is disc-tested. Special cards and envelopes are available for returning Audiopoints for resharpening.

Miller Replacement Phonograph Needles

—PACKAGED TO SELL—

REPLACEMENT NEEDLES
FOR ALL CARTRIDGES
Miller
ASTATIC
ELECTRO-VOICE
SHURE
RCA

NEW 1953 ALL STEEL MASTER COUNTER DISPENSER

Designed to hold 300 or more needles for rapid reference — easy selection — faster sales — simplified inventory — uses limited counter space. Each of six compartments has illustrated identification card on outside to create impulse buying.

Miller
REPLACEMENT NEEDLES
FOR ALL CARTRIDGES
SHURE
ASTATIC
RCA

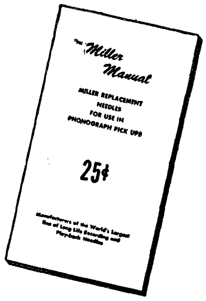
NEW 1953 ALL-STEEL DEALER COUNTER DISPENSER

Holds 150 or more individually carded needles for easy reference.

Provides quick selection and identification.

MILLER MANUAL

Handy, 48 page illustrated booklet plus cover, gives complete summary of Miller Replacement Needles with installation diagrams. Also includes presentation of cartridges to which Miller Needles are adapted; reference material; data, etc. Available upon request.



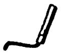
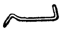
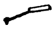
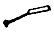
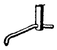
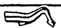
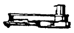
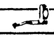
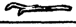
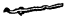
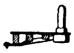
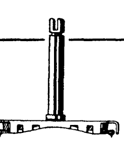
The Miller Manual
MILLER REPLACEMENT NEEDLES FOR USE IN PHONOGRAPH PICK UPS
25¢

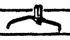
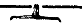
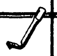
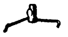
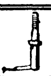
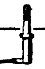
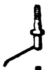
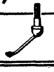
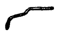
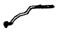
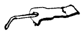
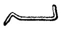
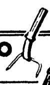
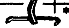
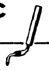
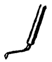
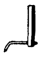
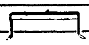
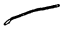
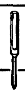
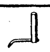
Have you seen our "Carillon Dynamic" Line of conventional phonograph needles? Write today for literature!

M. A. Miller MANUFACTURING CO.
4th AND CHURCH STREETS
LIBERTYVILLE, ILLINOIS

Atlas Radio Corp., Ltd., 560 King St., West, Toronto 2, Canada

Miller REPLACEMENT NEEDLES

Cartridge Mfg's. Needle No.	ILLUSTRATION		POINT SIZE	MILLER CATALOG NEEDLE NUMBER	PRICE
ASTATIC					
T-33; D-33			MG	A-11(M)	$ 1.50
D or T			STD	A-13(M)	1.50
D-AG-M			AG	A-113(M)	1.50
D-AG-J		*	AG	A-113(S)	2.50
Q-33-M			MG	A-21(M)	1.50
Q(M)			STD	A-23(M)	1.50
Q-(AG)M			AG	A-213(M)	1.50
Q-33(J)		*	MG	A-21(S)	2.50
Q-(J)		*	STD	A-23(S)	2.50
Q-(AG)J		*	AG	A-213(S)	2.50
G-33(M)			MG	A-31(M)	1.50
G-78(M)			STD	A-33(M)	1.50
G-AG(M)			AG	A-313(M)	1.50
G-33(J)		*	MG	A-31(S)	2.50
G-78(J)		*	STD	A-33(S)	2.50
G-AG(J)		*	AG	A-313(S)	2.50
U-M			MG	A-41(M)	1.50
U-78(M)			STD	A-43(M)	1.50
			AG	A-413(M)	1.50
U-J		*	MG	A-41(S)	2.50
U-78(J)		*	STD	A-43(S)	2.50
		*	AG	A-413(S)	2.50
C-1(M)			MG	A-51(M)	1.50
C-3(M)			STD	A-53(M)	1.50
C-AG(M)			AG	A-513(M)	1.50
C-1(J)		*	MG	A51(S)	2.50
C-3(J)		*	STD	A-53(S)	2.50
C-AG(J)		*	AG	A-513(S)	2.50
A-1(M)			MG	A-61(M)	1.50
A-3(M)			STD	A-63(M)	1.50
A-AG-(M)			AG	A-613(M)	1.50
A-1(J)		*	MG	A-61(S)	2.50
A-3(J)		*	STD	A-63(S)	2.50
A-AG-(J)		*	AG	A-613(S)	2.50
Nylon 1J			STD	A-73(S)	2.50
American Microphone					
CR-5; CO-1(M)			MG	AM-11(M)	1.50
CR-6; CO-3(M)			STD	AM-13(M)	1.50
CR-7; CO-2(M)			AG	AM-113(M)	1.50
AUDAK					
Microgroove		*	MG	AU-11(S)	3.50
Standard		*	STD	AU-13(S)	3.50
COLUMBIA					
Model 101		*	MG	COL-11(S)	1.50
Models 102, 103, 104		*	MG	COL-21(S)	1.50
Model 105				See A-113(S) above	
ELECTRO-VOICE					
O-1			MG	E-11(M)	1.50
O-3			STD	E-13(M)	1.50
O-2			AG	E-113(M)	1.50
S-1		*	MG	E-21(S)	2.50
S-3		*	STD	E-23(S)	2.50
S-2		*	AG	E-213(S)	2.50
O-13			Dual	E-313(M)	2.50
S-13		*	Dual	E-413(S)	3.50
GENERAL ELECTRIC					
RPJ-005		*	MG	GE-21(S)	3.50
RPJ-001		*	STD	GE-23(S)	3.50
RPJ-006		*	Trans	GE-213(S)	3.50
RPJ-004			MG	GE-31(D)	27.50
RPJ-003			STD	GE-33(D)	27.50
RPJ-002			Trans	GE-313(D)	27.50
RPJ-010		*	Dual	GE-113(S) STD-MG	5.95
RPJ-007		*	Dual	GE-513(S) Trans-MG	5.95
RPJ-012		*	Dual	GE-413(D) STD-MG	49.95
RPJ-013			Dual	GE-413(DS) STD-MG	31.00
RPJ-011			Dual	GE-513(D) Trans-MG	49.95

Cartridge Mfg's. Needle No.	ILLUSTRATION		POINT SIZE	MILLER CATALOG NEEDLE NUMBER	PRICE
MAGNAVOX					
560102			STD	M-13(M)	$ 1.50
560138		*	Dual	M-213(M)	2.50
560153		*	Dual	M-313(M)	2.50
PHILCO					
45-9674 Dyn. Reproducer		*	STD	PH-13(S)	2.25
45-9586			MG	PH-21(M)	1.50
45-9587		*	MG	PH-21(S)	1.50
45-9588			Dual	PH-313(M)	2.50
45-9589		*	Dual	PH-313(S)	3.50
R C A					
74068		*	MG	RC-11(S)	1.60
72345		*	STD	RC-13(S)	3.95
74068			MG	RC-21(M)	1.50
72345			STD	RC-23(M)	1.50
75496			MG	RC-31(M)	1.50
75497			STD	RC-33(M)	1.50
75496		*	MG	RC-31(S)	1.60
75497		*	STD	RC-33(S)	1.60
74818		*	MG	RC-51(S)	1.60
75497		*	STD	RC-53(S)	1.60
SHURE					
A63MG			MG	P-31(M)	1.50
A62A			STD	P-33(M)	1.50
A66U			AG	P-313(M)	1.50
A65MG		*	MG	P-41(S)	2.50
A61A		*	STD	P-43(S)	2.50
A67U		*	AG	P-413(S)	2.50
A53MG			MG	P-51(M)	1.50
A52A			STD	P-53(M)	1.50
A56U			AG	P-513(M)	1.50
SONOTONE					
W-7590-1			MG	SA-31(M)	1.50
		*	MG	SA-31(S)	2.50
W-7590-3			STD	SA-33(M)	1.50
		*	STD	SA-33(S)	2.50
W-7590-2			AG	SA-313(M)	1.50
		*	AG	SA-313(S)	2.50
WEBSTER CHICAGO					
NE-214 or NE-215			Dual	WC-213(M)	4.00
NE-316		*	Dual	WC-313(M)	4.00
WEBSTER ELECTRIC					
Q-1			STD	WE-13(M)	1.50
F-13			MG	WE-21(M)	1.50
Q-2			STD	WE-23(M)	1.50
Q-3			AG	WE-213(M)	1.50
A(M)1			AG	WE-31(M)	1.50
A(M)3			STD	WE-33(M)	1.50
A(M)AG			AG	WE-313(M)	1.50
A(J)1		*	MG	WE-31(S)	2.50
A(J)3		*	STD	WE-33(S)	2.50
A(J)AG		*	AG	WE-313(S)	2.50
F-16(D)			MG	WE-41(M)	1.50
F-16(V)			STD	WE-43(M)	1.50
F-16(D)			STD	WE-403(M)	1.50
F-14			Dual	WE-513(M)	2.50
G-1			MG	WE-61(M)	1.50
G-3			STD	WE-63(M)	1.50
G-2			AG	WE-613(M)	1.50
M			STD	WE-73(M)	1.50
AJ			MG	35-1	1.00
WS			STD	35-3	1.00
C-9			AG	35-2	1.00
F-20			MG	WE-81(M)	1.50
F-20			STD	WE-83(M)	1.50

* **Available with Diamond Tip**

MILLER abbreviations and designations to assist in using this chart:

- MG Microgroove—Plays 33 1/3 & 45 RPM
- AG All Groove—Plays 33 1/3, 45 & 78 RPM
- STD Standard—Plays 78 RPM

- (M) After Miller Cat. No. designates Osmium Alloy Tip
- (S) After Miller Cat. No. designates Sapphire Synthetic Tip
- (D) After Miller Cat. No. designates Diamond

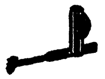
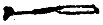
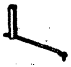
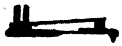
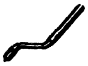
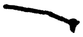
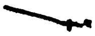
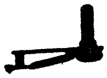
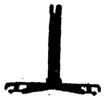
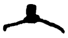
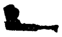
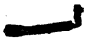
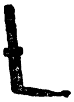
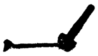
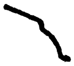
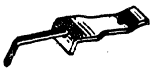
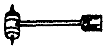
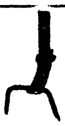
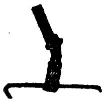
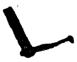
"1" before the suffix (M) or (S) designates a 1 mil needle for 33-45 RPM

"3" before the suffix (M) or (S) designates a 3 mil needle for 33-45 RPM

A three number designation ending in "13" indicates an All Groove or a dual needle for playing all record speeds.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

DUOTONE DIAMOND NEEDLES

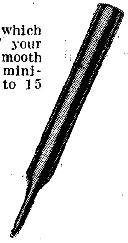
CARTRIDGE	ILLUSTRATION	DUOTONE NEEDLE NO.	POINT SIZE	POINT MATERIAL	PRICE
Astatic Q		AS3	.003	Diamond	$25.00
Astatic Q 33		AS4-LP	.001	Diamond	25.00
Astatic Q		AS4-A	.002 All Groove	Diamond	25.00
Astatic U		AS7	.003	Diamond	25.00
Astatic U		AS7-LP	.001	Diamond	25.00
Astatic C		AS8	.003	Diamond	25.00
Astatic C		AS8-LP	.001	Diamond	25.00
Astatic A-3(J)		AS9	.003	Diamond	25.00
Astatic A-1(J)		AS9-LP	.001	Diamond	25.00
Astatic A-AG(J)		AS9-A	.002 All Groove	Diamond	25.00
Audak		AUS	.003	Diamond	25.00
		AUS-LP	.001	Diamond	25.00
Duotone		36D	.003	Diamond	25.00
Duotone		36D-LP	.001	Diamond	25.00
Duotone		36DA	.002 All Groove	Diamond	25.00
Electro-voice S-3		ES23	.003	Diamond	25.00
Electro-voice S-1		ES24-LP	.001	Diamond	25.00
Electro-voice S-13		ES22	.003 .001	Diamond Diamond	50.00
Electro-voice S-13		ES22-DS	.001 .003	Diamond Sapphire	27.50
General Electric RPJ-001		GE3	.003	Diamond	25.00
General Electric RPJ-005		GE1-LP	.001	Diamond	25.00
General Electric RPJ-006		GEA	.002 All Groove	Diamond	25.00
General Electric RPJ-010		GED	.001 .003	Diamond Diamond	50.00
General Electric		GEDS	.001 .003	Diamond Sapphire	27.50
Magnavox 560138		MAS17	.001 .003	Diamond Diamond	50.00
Magnavox		MASD17	.001 .003	Diamond Sapphire	27.50
Philco-Columbia 45-1613		CS6-LP	.001	Diamond	25.00
Philco-Columbia 35-2693	 	PHS15	.001 .003	Diamond Diamond	50.00
Philco-Columbia		PHS15-DS	.001 .003	Diamond Sapphire	27.50
Philco 45-1596		*PHS14	.003	Diamond	25.00
RCA 39863		RS7	.003	Diamond	25.00
RCA 74068		RS8-LP	.001	Diamond	25.00
RCA 75497		RS11	.003	Diamond	25.00
RCA 75496		RS11-LP	.001	Diamond	25.00
Shure A61A		MSS	.003	Diamond	25.00
Shure A63-MG		MSS-LP	.001	Diamond	25.00
Shure A66U		MSS-A	.002 All Groove	Diamond	25.00
Shure A52A		SHS	.003	Diamond	25.00
Columbia 360		COL360	.001 .003	Diamond Sapphire	28.00
Webster-Chicago NE215		WO-13	.001 .003	Diamond Diamond	50.00
Webster-Chicago NE316		WO11	.001 .003	Diamond Diamond	50.00
Webster-Chicago		Combination above	.001 .003	Diamond Sapphire	27.50
Webster-Racine A-3S		WES28	.003	Diamond	25.00
Webster-Racine A-1S		WES29-LP	.001	Diamond	25.00

ALSO COMPLETE REPLACEMENT LINE IN OSMIUM AND SAPPHIRE NEEDLES

TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

DUOTONE REGULAR NEEDLES, CUTTING NEEDLES, TAPE, DISCS, ELECTROWIPE CLOTH, 45 ADAPTERS

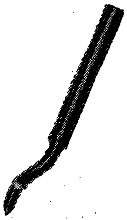
FILTER POINT No. 6



The Filter Point needle is a newly developed needle which actually filters surface noise, yet retains the brilliance of your recordings. The highly polished and rounded point assures smooth movement in the record groove, reducing record wear to a minimum. The needles are hand picked and will play from 12 to 15 records without frequency loss or distortion. The specially designed point is guaranteed not to break when used with any type of record changer.

	List Price
Package of 10 needles	$ 0.10
Cat. No. 610-B—Carton of 100 pkgs.	10.00
Cat. No. 610-C—Display card of 50 pkgs.	5.00
Packages of 25 needles	$ 0.25
Cat. No. 625-B—Carton of 50 pkgs.	12.50
Cat. No. 625-C—Display card of 50 pkgs.	12.50

MIRO-POINT No. 21



The Miro-Point Needle is the "low surface" specialist of the Duotone Line. Despite this fact it still brings out the highs in a manner never before attained by a needle of this type. Designed to play up to 1000 records the Miro-Point is the outstanding needle in the field today.

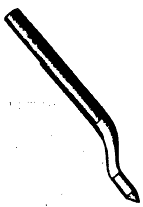
	List Price
Needle list price, each	$0.50
Cat. No. 21-B—Carton of 18 needles	9.00
Cat. No. 21-C—Display card of 18 needles	9.00

DURPOINT No. 15

Permanent needle for home use. Will play up to 4000 records without changing. Takes additional polish from the grove of the record thus minimizing record wear, and reducing surface noice. Because of this feature the Durpoint should not be removed from pick up until replacement is necessary. Packed on individual cards.

	List Price
Each Needle	$ 1.00
Cat. No. 15-C—Display card of 12 needles	12.00
Cat. No. 15-B—Carton of 12 needles	12.00
Cat. No. 15-C—(M) Micro-Groove	12.00
Cat. No. 15-AC—All Groove	12.00

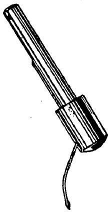
DUOTONE No. 20 "LIFETONE" OSMIUM TIPPED



The Duotone Lifetone Needle was especially designed for use with record changers. Its brilliant performance coupled with low surface noise makes it ideal for this purpose. When properly used, it will give up to 5000 perfect playings, maintaining throughout its life the same bright reproductive qualities. Packed in beautiful plastic container.

	List Price
Each Needle	$ 1.50
Cat. No. 20-B—Carton of 12 needles	18.00
Cat. No. 20-C—Display card of 12 needles	18.00
Cat. No. 20-C—(M) Micro-Groove	18.00
Cat. No. 20-AC—All Groove	18.00

SHOCKPROOF NYLON NEEDLE No. 25

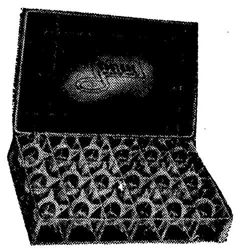


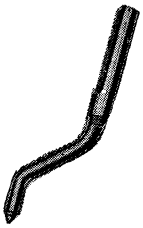
Unique in design, this needle has an osmium tip on spring steel set into a Nylon bumper. This eliminates damage to either needle or record should the pickup arm be accidentally dropped. This needle also eliminates surface noise. Individually packed in attractive lucite container. This needle will play up to 5,000 recordings. Ideal for children.

	List Price
Each Needle	$ 1.75
Cat. No. 25-C—Display card of 12 needles	21.00
Cat. No. 25—(M) Micro-Groove*	
Cat. No. 25—(A) All Groove*	

*Same prices as above

UNITONE 3 SPEED NEEDLE



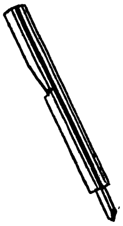


The needle everyone has been waiting for — the high quality hand-crafted Sapphire Needle that plays all types of records with full brilliance and tone. Packaged in individual cases and counter displays of beautiful, clear lucite as above. Sell UNITONE Needles for replacement in 3 speed machines.

Cat. No. 36
Each needle in lucite box
List Price $2.50

Cat. No. 36-C
18 to giant lucite case
List Price $45.00

SAPPHIRE CUTTING NEEDLES
DURAL SHANK No. 11



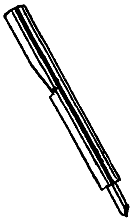
This needle is similar to No. 12, and in addition is held to more exacting specifications, as established by leading engineers. Mounted in Dural shank. Packed in plastic container. **Each $7.25**

Available Stylus No. 12. **$5.50 Each, List**
(Resharpening—Each $1.75)

MICRO-GROOVE CUTTING NEEDLES

11-M—Special Sapphire Cutting Stylus, for use with Micro-Groove Equipment. **$7.25 Each, List**

LAPPED *STEEL* CUTTING STYLUS No. 10

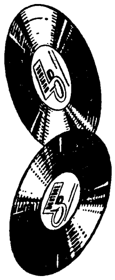


This new hand-made lap on the cutting edge of the needle makes a much smoother cut, thereby reducing surface noise and adding to the life of the needle. Especially recommended for making vocal recordings.

	List Price
5 Needles on card	$ 1.50
Cat. No. 10-B—Carton of 10 cards	15.00
Cat. No. 10-C—Display card of 10 cards	15.00

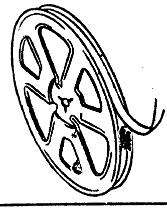
DUOTONE RECORDING BLANKS

All Duotone recording discs have a "professional nitrate" coating



	Red Label (Aluminum Base)		**Purple Label (Aluminum Base)**		**Orange Label (Compo Base)**	
	Carton	Each	Carton	Each	Carton	Each
6½ inch	100	$.40	100	$.30	100	$.20
8 inch	50	.50	100	.40	100	.30
10 inch	50	.80	100	.60	—	—
12 inch	25	1.00	—	—	—	—

DUOTONE MAGNETIC RECORDING TAPE



High Constant Output with Minimum Background Noise High Frequency Response—Long Life (No rub off oxide coating)—Interchangeable with other good quality tape.
*All Tape Comes on Six Spoke Polystyrene Reels.

RPI (in) 1250 — RPI (in) 625	**List Price**
Red Oxide Plastic Base, 1250 ft., 7″ reel	$5.50
Red Oxide Plastic Base, 625 ft., 5″ reel	3.50

RPO (out) 1250 — RPO (out) 625	**List Price**
Red Oxide Plastic Base, 1250 ft., 7″ reel	$5.50
Red Oxide Plastic Base, 625 ft., 5″ reel	3.50

Individually packed in boxes — 10 boxes to carton.
*2500 ft. on hub **$10.00** 2500 ft. on reel $12.85

RPI (in) 5000 ft.	**List Price**
NAB Aluminum Hub	$20.00

DUOTONE "ELECTRO WIPE"
MAGIC RECORD CLOTH

Completely removes static charges from all records with one wipe. Ends annoying pops and clicks, cleans record grooves of harmful grit and increases record life. Cloth is chemically treated and harmless.

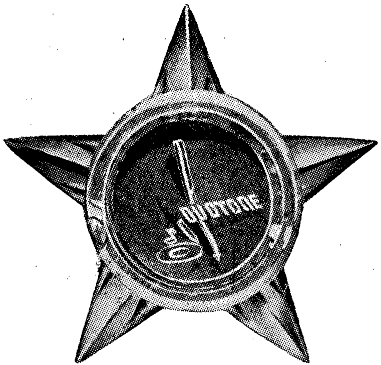
Packed in air tight plastic bag.

	List Price
1 Electro Wipe Magic Record Cloth	$ 1.50
Packed 12 cloths to a display	18.00

No. 19 "STAR"

Reproduces any type of record without **surface noise** yet maintains brilliant high frequencies. Finest quality gem, brightly polished for smooth riding in groove. Special design filters out all noise and needle talk. Has flat on shank for easy insertion in pickup. May be removed if desired. Individually packed in beautiful lucite box. Ideal for dubbing.

	List Price
All Groove Each Needle	$2.50
Cat. No. 19-B—Carton of 12 needles	$30.00
18 to Lucite Case	$45.00



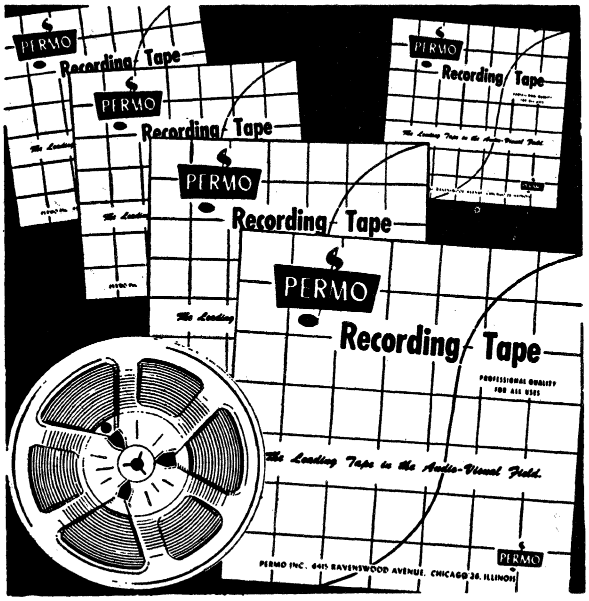
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

PERMO RECORDING TAPE
PROFESSIONAL QUALITY
FOR ALL USES

THE LEADING TAPE IN THE AUDIO-VISUAL FIELD

The same long years of design, engineering and production experience that have made PERMO the world's largest and oldest maker of long life phonograph needles are your assurance of highest professional standards in Permo Recording Tape and Accessories.

Permo Recording Tape is packed 12 individually boxed reels to the carton. Plastic Reels are standard.


PERMO
Recording Tape
Professional Quality for All Uses
The Leading Tape in the Audio-Visual Field
PERMO INC. 6415 RAVENSWOOD AVENUE, CHICAGO 26, ILLINOIS

PLASTIC BASE — Red Oxide Coating — Plastic Reels

CATALOG NUMBER		DESCRIPTION	SUG'D LIST PRICE
INSIDE WIND	OUTSIDE WIND		
T-3PL-I	T-3PL-O	3-inch plastic reel containing 150 ft. of tape*	$1.00 ea.
T-61-I	T-61-O	4-inch plastic reel containing 300 ft. of tape*	$2.25 ea.
T-66-I	T-66-O	5-inch plastic reel containing 600 ft. of tape*	$3.50 ea.
T-68-I	T-68-O	7-inch plastic reel containing 1200 ft. of tape*	$5.50 ea.
T-69-IH		Standard Aluminum NAB hub with 2400 ft. of tape†	$10.00 ea.
T-69-IF		Standard Aluminum NAB hub with flanges and 2400 ft. of tape†	$12.85 ea.

PAPER BASE — Red Oxide Coating — Plastic Reels

CATALOG NUMBER		DESCRIPTION	SUG'D LIST PRICE
INSIDE WIND	OUTSIDE WIND		
T-80-1	T-80-0	3-inch plastic reel containing 150 ft. of tape*	$ .75 ea.
T-81-1	T-81-O	4-inch plastic reel containing 300 ft. of tape*	$1.75 ea.
T-86R-I	T-86R-O	5-inch plastic reel containing 600 ft. of tape*	$2.25 ea.
T-88R-I	T-88R-O	7-inch plastic reel containing 1200 ft. of tape*	$3.50 ea.

ACCESSORIES — Plastic and Metal Reels — Splicing Tape

CATALOG NUMBER	DESCRIPTION	SUG'D LIST PRICE
T-3-PM	Empty 3-inch plastic reel for 150 ft. of Recording Tape*	$ .30 ea.
T-4-PM	Empty 4-inch plastic reel for 300 ft. of Recording Tape*	$ .50 ea.
T-5-PM	Empty 5-inch plastic reel for 600 ft. of Recording Tape*	$ .50 ea.
T-7-PM	Empty 7-inch plastic reel for 1200 ft. of Recording Tape*	$ .60 ea.
TM-35-PM	Empty 5-inch metal reel for 600 ft. of Recording Tape*	$ .90 ea.
TM-37-PM	Empty 7-inch metal reel for 1200 ft. of Recording Tape*	$1.00 ea.
T-20-PM	Splicing Tape 100-inch roll, ½ inch wide, specifically designed for splicing recording tape	$ .35 ea.

*NOTES: *All reels packed in a sturdy album type box with indexing, logging, and filing features.*
†All Nab hub and reel packages supplied in sturdy cloth hinge type box with tray and hub boss for secure handling

PERMO *Lubri-Lo* RECORDING WIRE

The Quietest Magnetic Recording Wire Ever Produced!

BECAUSE—Permo Recording Wire combines a new low D-C noise wire with *Lubri-Lo*. Permo's exclusive wire lubrication process achieves new professional standards of high fidelity in wire recording. An improvement of fully 10 db. over competitive wires.

DESIGNED USED RECOMMENDED ALL MAGNETIC WIRE RECORDERS
PERMO MAGNETIC
LUBRI-LO
160-36N
RECORDING WIRE
1-HOUR SPOOL
PERMO MAGNETIC
RECORDING WIRE

PERMO RECORDING WIRE and ACCESSORIES

Catalog No.	Description	SUG'D LIST PRICE
	RECORDING WIRE with PLASTIC LEADERS ATTACHED	
160-36N	1 Hour Spool, 7,200 Ft. of Wire on Metal Spool	$6.00
260-36N	½ Hour Spool, 3,600 Ft. of Wire on Metal Spool	4.00
360-36N	¼ Hour Spool, 1,800 Ft. of Wire on Metal Spool	3.00
	(2 Nylon Leaders Included Loose in Each Box)	
	RECORDING WIRE with NYLON LEADERS ATTACHED	
160N-36	1 Hour Spool, 7,200 Ft. of Wire on Metal Spool	$6.00
260N-36	½ Hour Spool, 3,600 Ft. of Wire on Metal Spool	4.00
360N-36	¼ Hour Spool, 1,800 Ft. of Wire on Metal Spool	3.00
	(2 Plastic Leaders Included Loose in Each Box)	
	ACCESSORIES	
PM-121N7	Empty Metal Spool for Up to 1 Hour of Wire with 2 Plastic and 2 Nylon Leaders in Box	$ .75
PM-125	Long Plastic Leader (17″ Long) Each	.15
PM-122	Short Plastic Leader (6″ Long) Each	.10
PM-123	3′ Nylon Leaders per Pair Pair	.10

A convenient box designed for use as a wire album is supplied at no extra charge when wire is purchased 5 rolls at a time.

CONVENTIONAL TYPE PHONOGRAPH NEEDLES

PERMO, INC.
CHICAGO 26, ILLINOIS

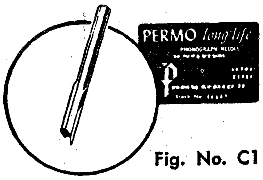


Fig. No. C1

"CUTTING STYLUS"

With 87° Included Angle for all "Standard" Groove recording.

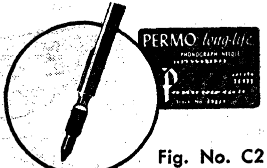


Fig. No. C2

"PERMOTONE"

High Output with Good Frequency characteristics and life.

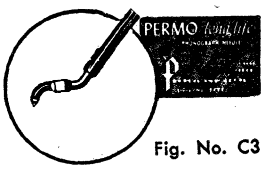


Fig. No. C3

"STANDARD OFFSET"

Standard Frequency characteristics output, and life.

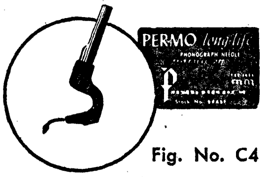


Fig. No. C4

"NYLON"

Combines maximum compliance, listening pleasure and economy, with slightly lower output.

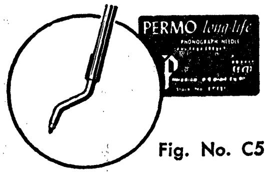
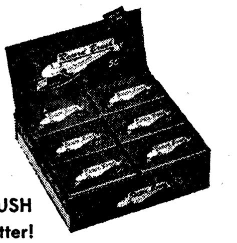


Fig. No. C5

"MICRO-POINT" "STANDARD" "COMPROMISE" } Shielded Jewel or Diamond

All of the advantages of Bent Shank design with choice of Shielded Jewel or Diamond Tips for extended life of both records and needles.



RECORD BRUSH

- —Makes records sound better!
- —Reduces noise and extends life of both records and needle by removing lint, dust and grit from the grooves as the record is being played.
- —Easily attached to all types of tone arms.
- —12 individual packages to each counter display carton.

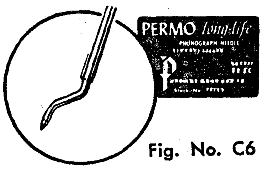


Fig. No. C6

"COMPROMISE"—PERMOMETAL

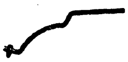
Bent Shank design is the result of precise matching of cartridge, needle, and record characteristics.

TYPES OF RECORDS PLAYED	PERMO NEEDLE NUMBER	NAME—TIP MATERIAL—SIZE	FIG. NO.	SUG'STED LIST PRICE
CONVENTIONAL TYPE NEEDLES				
33⅓ & 45 "Microgroove"	A-311	"Micro-Point" Shielded Jewel .001"	C5	$1.50
	311-C8	Display Card of 8, A-311 Needles		12.00
	A-311D	"Micro-Point" Diamond .001"	C5	25.00
78 "Standard"	C-370	"Permotone" Permometal .003"	C2	.50
	370-C8	Display Card of 8, C-370 Needles		4.00
	370-C12	Display Card of 12, C-370 Needles		6.00
	C-427	"Standard Offset" Permometal .003"	C3	1.00
	427-C8	Display Card of 8, C-427 Needles		8.00
	427-C12	Display Card of 12, C-427 Needles		12.00
	C-325	"Nylon" Permometal .003"	C4	1.25
	325-C8	Display Card of 8, C-325 Needles		10.00
	325-C12	Display Card of 12, C-325 Needles		15.00
	C-312	"Standard" Shielded Jewel .003"	C5	1.50
	312-C8	Display Card of 8, C-312 Needles		12.00
	C-312D	"Standard" Diamond .003"	C5	25.00
33⅓, 45 & 78 "All Groove"	B-310	"Compromise" Permometal .0021"	C6	1.00
	310-C8	Display Card of 8, B-310 Needles		8.00
	310-C12	Display Card of 12, B-310 Needles		12.00
	B-388	"Compromise" Shielded Jewel .0021"	C5	1.50
	388-C8	Display Card of 8, B-388 Needles		12.00
	B-388D	"Compromise" Diamond .0021"	C5	25.00
CUTTING STYLUS	D-366	"Cutting Stylus" 87° Included Angle	C1	1.50
RECORD BRUSH	700	"Record Brush"		.50
	700-B12	Display Box of 12, No. 700 Record Brushes		6.00

ILLUSTRATIONS OF SPECIAL TYPE NEEDLES

PERMO, INC.

CHICAGO 26, ILLINOIS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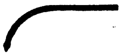
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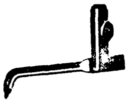
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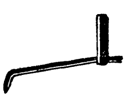
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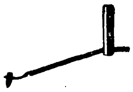
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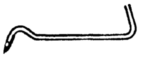
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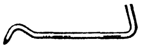
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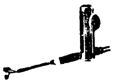
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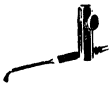
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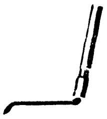
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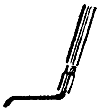
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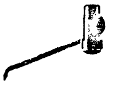
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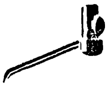
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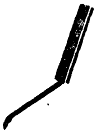
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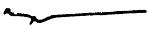
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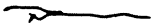
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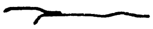
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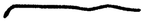
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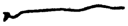
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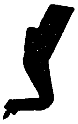
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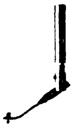
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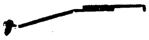
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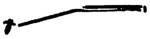
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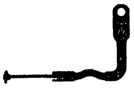
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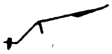
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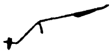
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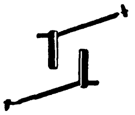
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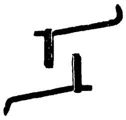
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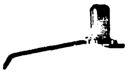
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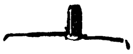
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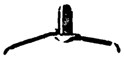
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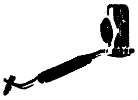
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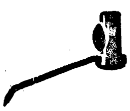
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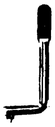
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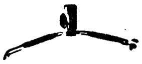
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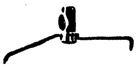
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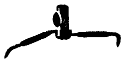
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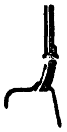
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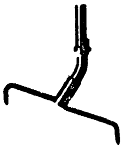
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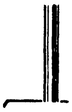
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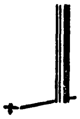
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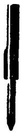
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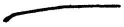
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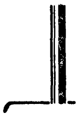
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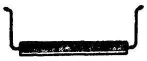
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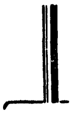
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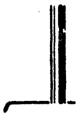
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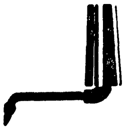
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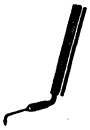
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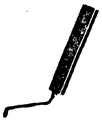
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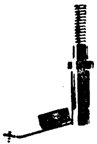
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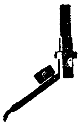
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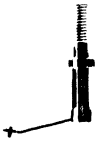
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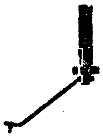
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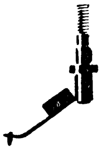
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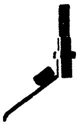
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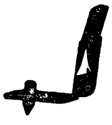


Fig. 57

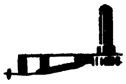


Fig. 58

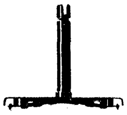


Fig. 59

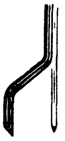


Fig. 60

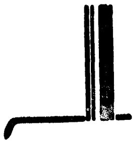


Fig. 61

CARTRIDGE ORIGINATORS NAME and NEEDLE NUMBERS	PERMO NEEDLE NUMBER	SUGGESTED LIST PRICE	TYPES OF RECORDS PLAYED	PERMO TIP MATERIAL	FIG. NO. *	SALES CODE #
AMERICAN MICROPHONE COMPANY						
A-478(M)	C-391	$ 1.50	78	Permometal	14	
CO-1(M) CS-1(J)	A-387	1.50	33⅓ & 45	Permometal	12	
CO-3(M) CS-3(J)	C-389	1.50	78	Permometal	12	
CO-17-RD(M) CS-17(J)	B-390	1.50	33⅓, 45 & 78	Permometal	13	
ASTATIC						
A-AG(J)	B-349	2.50	33⅓, 45 & 78	Shielded Jewel	5	E
	B-349D	25.00	33⅓, 45 & 78	Diamond	5	
A-AG(M)	B-321	1.50	33⅓, 45 & 78	Permometal	4	E
A-1(J)	A-347	2.50	33⅓ & 45	Shielded Jewel	5	E
	A-347D	25.00	33⅓ & 45	Diamond	5	
A-1(M) RCA 76323(M)	A-319	1.50	33⅓ & 45	Permometal	4	E
A-3(J)	C-348	2.50	78	Shielded Jewel	5	G
	C-348D	25.00	78	Diamond	5	
A-3(M)	C-309	1.50	78	Permometal	4	E
C-1(J)	A-356	2.50	33⅓ & 45	Shielded Jewel	23	
Markel C-1(J)	A-356D	25.00	33⅓ & 45	Diamond	23	
C-3(J)	C-355	2.50	78	Shielded Jewel	23	
Markel C-3(J)	C-355D	25.00	78	Diamond	23	
D(M) Markel D(M)	C-341	1.50	78	Permometal	11	E
D-AG(M)	B-342	1.50	33⅓, 45 & 78	Permometal	11	E
D-33(M)	A-343	1.50	33⅓ & 45	Permometal	11	E
G(J)	A-332	2.50	33⅓ & 45	Shielded Jewel	6	E
Sonotone W-7590-1(J)	A-332D	25.00	33⅓ & 45	Diamond	6	
G(M) RCA 74985(M)	A-304	1.50	33⅓ & 45	Permometal	7	G
G-AG(J)	B-334	2.50	33⅓, 45 & 78	Shielded Jewel	6	E
	B-334D	25.00	33⅓, 45 & 78	Diamond	6	
G-AG(M) Sonotone W-7590-2(M)	B-326	1.50	33⅓, 45 & 78	Permometal	7	G
G-78(J)	C-330	2.50	78	Shielded Jewel	6	G
Sonotone W-7590-3(J)	C-330D	25.00	78	Diamond	6	
G-78(M)	C-331	1.50	78	Permometal	7	E
M-5(J) Markel M-5(J) Set of two needles	AA-403	5.00	33⅓ & 45	Shielded Jewel	27	
	AA-403D	50.00	33⅓ & 45	Diamond	27	
M-5(M) Markel M-5(M) Set of two needles	AA-404	3.00	33⅓ & 45	Permometal	28	
M-6(J) Markel M-6(J) Set of two needles	CC-405	5.00	78	Shielded Jewel	27	
	CC-405D	50.00	78	Diamond	27	
M-6(M) Markel M-6(M) Set of two needles	CC-406	3.00	78	Permometal	28	
Nylon (J) Nylon (M)	C-301	2.50	78	Shielded Jewel	20	
Q(J)	C-327	2.50	78	Shielded Jewel	8	E
Q(X)	C-327D	25.00	78	Diamond	8	
Q(M)	C-308	1.50	78	Permometal	9	E
Q-AG(J)	B-328	2.50	33⅓, 45 & 78	Shielded Jewel	8	F
	B-328D	25.00	33⅓, 45 & 78	Diamond	8	
Q-AG(M)	B-329	1.50	33⅓, 45 & 78	Permometal	9	F
Q-33(J)	A-305	2.50	33⅓ & 45	Shielded Jewel	8	E
Q-33(X)	A-305D	25.00	33⅓ & 45	Diamond	8	
Q-33(M)	A-357	1.50	33⅓ & 45	Permometal	9	E
R(M)	A-428	1.50	33⅓ & 45	Permometal	3	G
R-AG(M)	B-429	1.50	33⅓, 45 & 78	Permometal	3	F
R-78(M)	C-430	1.50	78	Permometal	3	G
T(M)	C-344	1.50	78	Permometal	10	F
T-33(M)	A-421	1.50	33⅓ & 45	Permometal	10	F
U(J)	A-361	2.50	33⅓ & 45	Shielded Jewel	22	F
U(X)	A-361D	25.00	33⅓ & 45	Diamond	22	
U-TR(J)	D-368	2.50	Transcription	Shielded Jewel	22	
U-TR(X)	D-368D	25.00	Transcription	Diamond	22	
U-78(J)	C-360	2.50	78	Shielded Jewel	22	
U-78(X)	C-360D	25.00	78	Diamond	22	
COLUMBIA RECORDS INCORPORATED						
105(J)	B-426	2.50	33⅓, 45 & 78	Shielded Jewel	21	G
	B-426D	25.00	33⅓, 45 & 78	Diamond	21	
Model 360 Player Sonotone W-9987-S(J) Sonotone W-9987-SD(J&D)	AC-434	3.50	33⅓ & 45 78	Shielded Jewel Shielded Jewel	24	
	AC-434D1	28.00	33⅓ & 45 78	Diamond Shielded Jewel	24	
	AC-434D2	28.00	33⅓ & 45 78	Shielded Jewel Diamond	24	
	AC-434D	50.00	33⅓ & 45 78	Diamond Diamond	24	

*Refer to Page 6 for Illustrations.

#Sales Code (Turnover) "E" Excellent; "G" Good; "F" Fair. Where no sales code is shown—movement depends on local demand.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

PERMO NEEDLES LISTED BY CARTRIDGE ORIGINATORS NEEDLE NUMBERS

CARTRIDGE ORIGINATORS NAME and NEEDLE NUMBERS	PERMO NEEDLE NUMBER	SUGGESTED LIST PRICE	TYPES OF RECORDS PLAYED	PERMO TIP MATERIAL	FIG. NO. *	SALES CODE #
ELECTRO-VOICE						
O-1(M)	**A-337**	$ 1.50	33⅓ & 45	Permometal	18	F
O-2(M)	**B-307**	1.50	33⅓, 45 & 78	Permometal	18	G
O-3(M)	**C-340**	1.50	78	Permometal	18	G
O-13(M&M)	**AC-367**	2.50	33⅓ & 45 78	Permometal Permometal	17	F
S-13(J&J)	**AC-369**	3.50	33⅓ & 45 78	Shielded Jewel Shielded Jewel	15	F
	AC-369D	50.00	33⅓ & 45 78	Diamond Diamond	15	
	AC-369D1	27.50	33⅓ & 45 78	Diamond Shielded Jewel	15	
	AC-369D2	27.50	33⅓ & 45 78	Shielded Jewel Diamond	15	
SO-13(J&M)	**AC-333**	3.00	33⅓ & 45 78	Shielded Jewel Permometal	16	G
	AC-333D3	26.50	33⅓ & 45 78	Diamond Permometal	16	
S-1(J)	**A-339**	2.50	33⅓ & 45	Shielded Jewel	19	G
	A-339D	25.00	33⅓ & 45	Diamond	19	
S-2(J)	**B-346**	2.50	33⅓, 45 & 78	Shielded Jewel	19	E
	B-346D	25.00	33⅓, 45 & 78	Diamond	19	
S-3(J)	**C-345**	2.50	78	Shielded Jewel	19	E
	C-345D	25.00	78	Diamond	19	
GENERAL ELECTRIC						
RPJ-001(J)	**C-409**	3.50	78	Shielded Jewel	58	G
RPJ-003(D)	**C-409D**	27.50	78	Diamond	58	
RPJ-006(J)	**D-408**	3.50	Transcription	Shielded Jewel	58	
RPJ-002(D)	**D-408D**	27.50	Transcription	Diamond	58	
RPJ-005(J)	**A-407**	3.50	33⅓ & 45	Shielded Jewel	58	G
RPJ-004(D) RCA 74622(D)	**A-407D**	27.50	33⅓ & 45	Diamond	58	
RPJ-007(J&J)	**DA-417**	5.95	33½ & 45 Transcription	Shielded Jewel Shielded Jewel	59	
RPJ-011(D&D)	**DA-417D**	49.95	33⅓ & 45 Transcription	Diamond Diamond	59	
RPJ-010(J&J)	**AC-410**	5.95	33⅓ & 45 78	Shielded Jewel Shielded Jewel	59	G
RPJ-012(D&D)	**AC-410D**	49.95	33⅓ & 45 78	Diamond Diamond	59	
RPJ-013(D&J)	**AC-410D1**	31.00	33⅓ & 45 78	Diamond Shielded Jewel	59	
MAGNAVOX						
560102(M)	**C-352**	1.50	78	Permometal	29	G
560138(M&M)	**AC-350**	2.50	33⅓ & 45 78	Permometal Permometal	31	E
560153(M&M)	**AC-351**	2.50	33⅓ & 45 78	Permometal Permometal	30	E
MARKEL						
C-1(J) Astatic C-1(J)	**A-356**	2.50	33⅓ & 45	Shielded Jewel	23	
	A-356D	25.00	33⅓ & 45	Diamond	23	
C-3(J) Astatic C-3(J)	**C-355**	2.50	78	Shielded Jewel	23	
	C-355D	25.00	78	Diamond	23	
M-5(J) Astatic M-5(J) Set of two needles	**AA-403**	5.00	33⅓ & 45	Shielded Jewel	27	
	AA-403D	50.00	33⅓ & 45	Diamond	27	
M-5(M) Astatic M-5(M) Set of two needles	**AA-404**	3.00	33⅓ & 45	Permometal	28	
M-6(J) Astatic M-6(J) Set of two needles	**CC-405**	5.00	78	Shielded Jewel	27	
	CC-405D	50.00	78	Diamond	27	
M-6(M) Astatic M-6(M) Set of two needles	**CC-406**	3.00	78	Permometal	28	
PERMO						
33⅓ & 45 RPM Conventional Types	**A-311**	1.50	33⅓ & 45	Shielded Jewel	C5	
	A-311D	25.00	33⅓ & 45	Diamond	C5	
78 RPM Conventional Types	**C-370**	.50	78	Permometal	C2	
	C-427	1.00	78	Permometal	C3	
	C-325	1.25	78	Permometal	C4	
	C-312	1.50	78	Shielded Jewel	C5	
	C-312D	25.00	78	Diamond	C5	
33⅓, 45 & 78 Conventional Types	**B-310**	1.00	33⅓, 45 & 78	Permometal	C6	
	B-388	1.50	33⅓, 45 & 78	Shielded Jewel	C5	
	B-388D	25.00	33⅓, 45 & 78	Diamond	C5	
Cutting Stylus	**D-366**	1.50	78	Permometal	C1	

NOTE—Refer to Page 5 for Illustrations—Conventional Type Needles.

*Refer to Page 6 for Illustrations.

#Sales Code (Turnover) "E" Excellent; "G" Good; "F" Fair. Where no sales code is shown—movement depends on local demand.

CARTRIDGE ORIGINATORS NAME and NEEDLE NUMBERS	PERMO NEEDLE NUMBER	SUGGESTED LIST PRICE	TYPES OF RECORDS PLAYED	PERMO TIP MATERIAL	FIG. NO. *	SALES CODE #
PHILCO						
35-2638(J) 35-2661(J) 45-1552(J) 45-1596(J) 45-9610(J) 45-9674(J)	**C-317**	$ 2.25	78	Shielded Jewel	34	F
	C-317D	25.00	78	Diamond	34	
35-2678(M) 45-1613(M) 45-9586(M) 45-9675(M)	**A-316**	1.50	33⅓ & 45	Permometal	33	G
45-1650(J) 45-9587(J) 45-9676(J)	**A-314**	2.50	33⅓ & 45	Shielded Jewel	32	E
	A-314D	25.00	33⅓ & 45	Diamond	32	
45-9488(M&M) 45-9677(M&M)	**AC-315**	2.50	33⅓ & 45 78	Permometal Permometal	36	G
45-9588(M&M) 45-9589(J&J)	**AC-313**	3.00	33⅓ & 45 78	Shielded Jewel Permometal	35	E
45-9677(M&M) 45-9678(J&J)	**AC-313D3**	26.50	33⅓ & 45 78	Diamond Permometal	35	
45-9784(M&M)	**AC-431**	2.50	33⅓ & 45 78	Permometal Permometal	37	E
PICKERING						
S-20(J)	**D-411**	2.50	.002″ Transcription	Shielded Jewel	57	
	D-411D	25.00	.002″ Transcription	Diamond	57	
S-25(J)	**D-412**	2.50	.0025″ Transcription	Shielded Jewel	57	
	D-412D	25.00	.0025″ Transcription	Diamond	57	
S-30(J)	**C-413**	2.50	78	Shielded Jewel	57	
	C-413D	25.00	78	Diamond	57	
RADIO CORPORATION OF AMERICA						
38449(J) 70915(J)	**C-399**	2.50	78	Shielded Jewel	51	E
	C-399D	25.00	78	Diamond	51	
39863(J) 72345(J)	**C-400**	2.50	78	Shielded Jewel	53	E
	C-400D	25.00	78	Diamond	53	
74068(J)	**A-396**	2.50	33⅓ & 45	Shielded Jewel	53	E
	A-396D	25.00	33⅓ & 45	Diamond	53	
74622(D) General Electric RPJ-004(D)	**A-407D**	27.50	33⅓ & 45	Diamond	58	
General Electric RPJ-005(J)	**A-407**	3.50	33⅓ & 45	Shielded Jewel	58	G
74818(J) 75770(J)	**A-398**	2.50	33⅓ & 45	Shielded Jewel	54	E
	A-398D	25.00	33⅓ & 45	Diamond	54	
74985(M) Astatic G(M)	**A-304**	1.50	33⅓ & 45	Permometal	7	G
75045(M) 76374(M) Shure A63MG(M) Webster Electric F11(M)1	**A-322**	1.50	33⅓ & 45	Permometal	2	G
75046(M) Shure A62A(M) Webster Electric F11(M)3	**C-320**	1.50	78	Permometal	2	E
75496(M)	**A-437**	1.50	33⅓ & 45	Permometal	56	
75497(M)	**C-436**	1.50	78	Permometal	52	
75497 with Jewel Tip	**C-401**	2.50	78	Shielded Jewel	55	G
	C-401D	25.00	78	Diamond	55	
76323(M) Astatic A-1(M)	**A-319**	1.50	33⅓ & 45	Permometal	4	E
77899(J)	**A-435**	2.50	33⅓ & 45	Shielded Jewel	55	G
	A-435D	25.00	33⅓ & 45	Diamond	55	
SHURE BROS.						
A52A with Jewel Tip	**C-420**	2.50	78	Shielded Jewel	25	F
	C-420D	25.00	78	Diamond	25	
A52A(M)	**C-414**	1.50	78	Permometal	26	F
A53MG with Jewel Tip	**A-418**	2.50	33⅓ & 45	Shielded Jewel	25	F
	A-418D	25.00	33⅓ & 45	Diamond	25	
A53MG(M)	**A-415**	1.50	33⅓ & 45	Permometal	26	F
A56U with Jewel Tip	**B-419**	2.50	33⅓, 45 & 78	Shielded Jewel	25	F
	B-419D	25.00	33⅓, 45 & 78	Diamond	25	
A56U(M)	**B-416**	1.50	33⅓, 45 & 78	Permometal	26	F
A61A(J)	**C-318**	2.50	78	Shielded Jewel	1	E
	C-318D	25.00	78	Diamond	1	
A62A(M) RCA 75046(M) Webster Electric F11(M)3	**C-320**	1.50	78	Permometal	2	E
A63MG(M) RCA 75045(M) RCA 76374(M) Webster Electric F11(M)1	**A-322**	1.50	33⅓ & 45	Permometal	2	G
A65MG(J)	**A-300**	2.50	33⅓ & 45	Shielded Jewel	1	E
	A-300D	25.00	33⅓ & 45	Diamond	1	
A66U(M)	**B-306**	1.50	33⅓, 45 & 78	Permometal	2	E
A67U(J)	**B-335**	2.50	33⅓, 45 & 78	Shielded Jewel	1	E
	B-335D	25.00	33⅓, 45 & 78	Diamond	1	

*Refer to Page 6 for Illustrations.

#Sales Code (Turnover) "E" Excellent; "G" Good; "F" Fair. Where no sales code is shown—movement depends on local demand.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CARTRIDGE ORIGINATORS NAME and NEEDLE NUMBERS	PERMO NEEDLE NUMBER	SUGGESTED LIST PRICE	TYPES OF RECORDS PLAYED	PERMO TIP MATERIAL	FIG. NO. *	SALES CODE #
SHURE BROS. (cont.)						
A64MG(M) Permo, Conventional Type	**A-311**	$ 1.50	33⅓ & 45	Shielded Jewel	C5	
	A-311D	25.00	33⅓ & 45	Diamond	C5	
A68D(M&M) Wilcox Gay D-11(M&M)	**DC-425**	2.50	Cutting Point 78 Playing Point	Permometal Permometal	60	
SONOTONE						
W-7590-1(J) Astatic G(J)	**A-332**	2.50	33⅓ & 45	Shielded Jewel	6	E
	A-332D	25.00	33⅓ & 45	Diamond	6	
W-7590-2(M) Astatic G-AG(M)	**B-326**	1.50	33⅓, 45 & 78	Permometal	7	G
Astatic G-AG(J)	**B-334**	2.50	33⅓, 45 & 78	Shielded Jewel	6	E
	B-334D	25.00	33⅓, 45 & 78	Diamond	6	
W-7590-3(J) Astatic G-78(J)	**C-330**	2.50	78	Shielded Jewel	6	G
	C-330D	25.00	78	Diamond	6	
W-9987-S(J) W-9987-SD(J&D) Columbia Model 360 Player	**AC-434**	3.50	33⅓ & 45 78	Shielded Jewel Shielded Jewel	24	
	AC-434D1	28.00	33⅓ & 45 78	Diamond Shielded Jewel	24	
	AC-434D2	28.00	33⅓ & 45 78	Shielded Jewel Diamond	24	
	AC-434D	50.00	33⅓ & 45 78	Diamond Diamond	24	
WEBSTER CHICAGO						
NE215(M&M)	**AC-336**	3.00	33⅓ 78	Permometal Permometal	38	
NE316(M&M)	**AC-338**	3.00	33⅓ & 45 78	Permometal Permometal	39	
WEBSTER ELECTRIC						
A(J)1	**A-376**	2.50	33⅓ & 45	Shielded Jewel	41	G
	A-376D	25.00	33⅓ & 45	Diamond	41	
A(M)1	**A-378**	1.50	33⅓ & 45	Permometal	40	F
A(J)3	**C-375**	2.50	78	Shielded Jewel	41	F
	C-375D	25.00	78	Diamond	41	
A(M)3	**C-377**	1.50	78	Permometal	40	G
A(J)AG	**B-380**	2.50	33⅓, 45 & 78	Shielded Jewel	41	
	B-380D	25.00	33⅓, 45 & 78	Diamond	41	
A(M)AG	**B-381**	1.50	33⅓, 45 & 78	Permometal	40	
AJ(M)	**A-423**	1.50	33⅓ & 45	Permometal	42	
C9(M)2	**B-379**	1.50	33⅓, 45 & 78	Permometal	42	G
F7P(M) Q1(M)	**C-392**	1.50	78	Permometal	49	
F7P-2(M) Q2(M)	**C-393**	1.50	78	Permometal	50	
F11(M)1 RCA 75045(M) RCA 76374(M) Shure A63MG(M)	**A-322**	1.50	33⅓ & 45	Permometal	2	G
F11(M)3 RCA 75046(M) Shure A62A(M)	**C-320**	1.50	78	Permometal	2	E
F13(M)1	**A-394**	1.50	33⅓ & 45	Permometal	50	
F14(M&M)	**AC-371**	2.50	33⅓ & 45 78	Permometal Permometal	45	F
F15(M)1 F16(M)1 F18(M)1 F19(M)1	**A-302**	1.50	33⅓ & 45	Permometal	47	E
F15(M)3	**C-372**	1.50	78	Permometal	47	F
F16(M)3 F18(M)3 F19(M)3	**C-303**	1.50	78	Permometal	46	E
F16-2(M)1 F16-3(M)1 F16M(M)1	**A-374**	1.50	33⅓ & 45	Permometal	44	
F16-2(M)3 F16-3(M)3 F16M(M)3	**C-373**	1.50	78	Permometal	44	
F20(M)1	**A-432**	1.50	33⅓ & 45	Permometal	61	
F20(M)3	**C-433**	1.50	78	Permometal	61	
G1(M)	**A-384**	1.50	33⅓ & 45	Permometal	43	F
G2(M)	**B-385**	1.50	33⅓, 45 & 78	Permometal	43	
G3(M)	**C-383**	1.50	78	Permometal	43	F
M1(M)	**C-386**	1.50	78	Permometal	48	
Q3(M)	**B-395**	1.50	33⅓, 45 & 78	Permometal	50	
WS(M)	**C-382**	1.50	78	Permometal	42	
WILCOX GAY						
D-10(M&M)	**DB-424**	2.50	Cutting Point 33⅓, 45 & 78 Playing Point	Permometal Permometal	60	
D-11(M&M) Shure A68D(M&M)	**DC-425**	2.50	Cutting Point 78 Playing Point	Permometal Permometal	60	

*Refer to Page 6 for Illustrations.

#Sales Code (Turnover) "E" Excellent; "G" Good; "F" Fair. Where no sales code is shown—movement depends on local demand.

REEVES

SOUNDCRAFT CORP.

RECORDING DISCS
Soundcraft

FAMOUS NAME SOUND RECORDING DISCS

"THE BROADCASTING STATION STANDARD"

10 SOUNDCRAFT FEATURES

- Greater dynamic range of Soundcraft discs exceeds highest broadcasting requirements.
- Inaudible surface noise. Soundcraft microscopically filters all impurities out of coating materials and dries wet coatings with conditioned, dust-free air.
- High-frequency response to 15,000 cps. Soundcraft coating formulation combines proper physical texture with wax-like low cutting-friction.
- Dependability from batch to batch regardless of season. The Soundcraft disc plant makes its own weather, eliminates mysterious humidity troubles.
- Uniform cutting for both conventional and micro-groove recording. Soundcraft discs, to minimize minute variations in groove depth, are manufactured with the flattest, smoothest, aluminum bases obtainable.
- Long stylus-life assured. Soundcraft coating purity and low-friction reduce stylus wear and eliminate recording failures from stylus damage.
- 1,000 or more playings. Soundcraft's sealed-in lubricant for low needle-friction reduces wear to the point where dust in grooves and needle quality are chief controlling factors.
- Long storage-life, recorded or new. Under normal conditions Soundcraft discs cut and play after years of storage.
- Improved diameter effects. Soundcraft's superior coating formula minimizes high frequency loss and actually lowers surface noise as diameter decreases.
- Easy-to-pick-up thread. The Soundcraft coating is compounded with an exclusive ingredient to make thread throw toward center, and to minimize static charge.

DEALER PRICE LIST

The "PLAYBACK"

The standard broadcast-quality disc for all professional applications in radio stations, recording and motion picture studios. Physical and sound properities assure the finest quality of recorded sound.

Size	Standard Package	List Price Each
6½"	20	.65
8"	20	.90
10"	20	1.25
12"	20	2.05
16"	20	3.75

The "PLAYBACK" — Single Face

The same quality as the "Playback" but intended for economy applications requiring the use for only one side. Both sides of the disc are coated, and the useable side is identified by the Soundcraft embossing.

Size	Standard Package	List Price Each
10"	20	1.00
12"	20	1.65
16"	20	2.95

The "AUDITION"

A double face disc, selected from the regular runs, suitable for less important station and studio applications, for schools, amateur, and better home recording. Paper labelled for greater convenience.

Size	Standard Package	List Price Each
6½"	20	.55
8"	20	.75
10"	20	1.00
12"	20	1.65
16"	20	2.90

The "BROADCASTER"

A MASTER selection in instantaneous sizes for vitally important and critical recordings. A premium product guaranteeing absolute perfection. Available only in double face type.

Size	Standard Package	List Price Each
10"	20	1.40
12"	20	2.20
16"	20	3.95

The "MAESTRO"

Oversize MASTER discs for originals in making phonograph records and transcriptions. Best available for either regular microgroove recording. Available either with standard one drive hole or with center hole only for 45 rpm masters. Processed regularly by all of the foremost phonograph record and transcription manufacturers.

THE "MAESTRO" — DOUBLE FACE

Size	Standard Package	List Price Each
12"	20	2.55
13¼"	20	3.40
17¼"	20	5.60

THE "MAESTRO" — SINGLE FACE

Size	Standard Package	List Price Each
12"	20	2.00
13¼"	20	2.40
17¼"	20	4.10

PRICE LIST
MAGNETIC RECORDING TAPE

REEVES
SOUNDCRAFT CORP.

TAPE IN SINGLE BOXES

RED OXIDE PLASTIC BASE

SOUNDCRAFT Magnetic recording tape, a superior tape in quality and performance. Plastic base tape in the blue package with the red band and famous SOUNDCRAFT design.

TYPE	LENGTH	REEL	OXIDE WOUND	STD. PKG.	LIST EACH
SPN-1 SPO-1	150′	3″ Plastic	in out	10	$ 1.00
SPN-3 SPO-3	300′	4″ Plastic	in out	10	$ 2.25
SPN-6 SPO-6	625′	5″ Plastic	in out	10	$ 3.50
SPN-12 SPO-12	1250′	7″ Plastic	in out	10	$ 5.50

RED OXIDE PAPER BASE

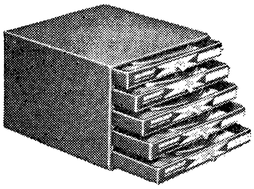
SOUNDCRAFT tape is the only recording tape manufactured by specialists in the sound industry. The paper base is distinctive in the blue box with the orange band.

TYPE	LENGTH	REEL	OXIDE WOUND	STD. PKG.	LIST EACH
RKN-1 RKO-1	150′	3″ Plastic	in out	10	$ .75
RKN-3 RKO-3	300′	4″ Plastic	in out	10	$ 1.75
RKN-6 RKO-6	625′	5″ Plastic	in out	10	$ 2.25
RKN-12 RKO-12	1250′	7″ Plastic	in out	10	$ 3.50

TAPE CHESTS
(5 REELS PER CHEST)

ALL PLASTIC BASE

The SOUNDCRAFT Tape chest, an exclusive SOUNDCRAFT package. 5 reels of SOUNDCRAFT plastic base tape handsomely packaged in this permanent pyroxilin covered filing cabinet. Each reel stored horizontally in its own drawer to protect and insure its safety.



TYPE	LENGTH	REEL	OXIDE WOUND	STD. PKG.	LIST EACH
SPNC-5 SPOC-5	625′	5″ Plastic	in out	2	[illegible]
SPNC-7 SPOC-7	1250′	7″ Plastic	in out	2	$27.50

SOUNDCRAFT PROFESSIONAL TAPE

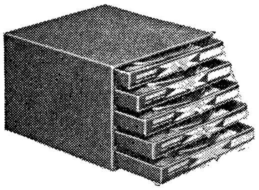
ALL PLASTIC BASE

SOUNDCRAFT *(Micropolished)* Professional Tape. The latest addition to this distinguished line of fine recording tapes. Packaged in the blue box with the light blue band this tape has been engineered specifically for professional users. *Micropolishing*, insures high fidelity—uniformity— sensitive high frequency response.

TYPE	LENGTH	REEL	OXIDE WOUND	STD. PKG.	LIST EACH
SPN-12P	1200′	7″ Plastic Prof Hub	in out	10	$ 6.00
SPN-25P	2500′	Hub Reel	in out	1	$10 00 $12.85
SPN-33P	3300′	Hub	in out	1	$13.00
SPN-50P	5000′	Hub Reel	in out	1	$20.00 $28.00

SOUNDCRAFT PROFESSIONAL TAPE CHESTS

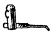
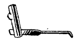
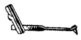
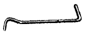
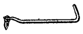
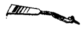
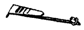
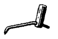
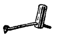
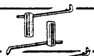
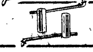
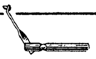
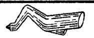
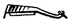
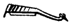
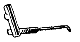
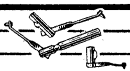
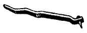
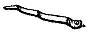
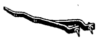
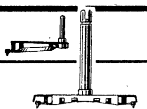
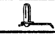
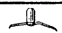
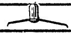
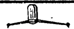
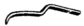
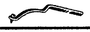
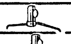
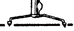
SOUNDCRAFT *(Micropolished)* Professional Tape is also available in the 7″ size in the tape chest in order to give users of professional tape the advantages of this fine package



TYPE	LENGTH	REEL	OXIDE WOUND	STD. PKG.	LIST EACH
SPNC-7P SPOC-7P	1250′	7″ Plastic Prof Hub	in out	2	$30.00

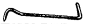
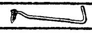
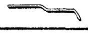
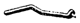
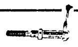
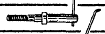
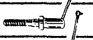
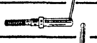
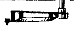
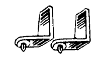
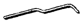
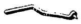
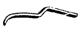
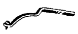
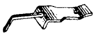
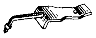
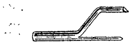
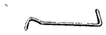
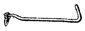
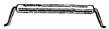
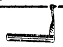
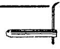
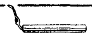
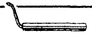
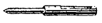
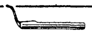
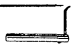
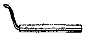
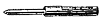
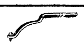
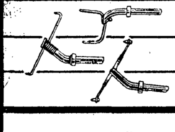
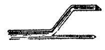
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

★ Walco REPLACEMENT NEEDLES ★

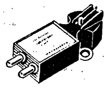
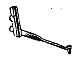
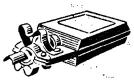
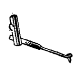
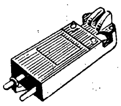
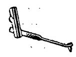
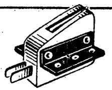
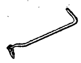
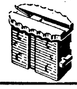
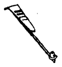
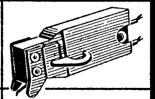
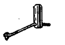
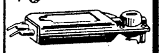
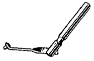
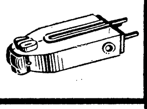
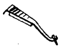
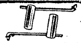
CARTRIDGE MANUFACTURER	CARTRIDGE NUMBER	ILLUSTRATION	Cartridge M'fctr's Needle Number	WALCO NEEDLE NUMBER	LIST PRICE
AMERICAN MICROPHONE	S-1; S-1A; S-2; S-2A		S-1	W-55A	1.50
	CR6; CR6A CR5; CR5A CR7; CR7A		CO-3 CO-1 CO-2	W-56A W-56MGA W-56AGA	1.50 1.50 1 50
ASTATIC	LT-M; LT2-M; LT3-M LT-33		T-(M) T-33(M)	W-1A W-1MGA	1.00 1.00
	QT-M; QT-2M; QT-3M; LQD; LQD-1 series QT-33-J; CQ-J, CQM, CAC;CQ-AG-M		Q-(M) Q-33(M) Q-AG(M)	W-2A W-2MGA W-2AGA	1.00 1.00 1.00
	QT-J; QT-2J, QT-3J; LQD; LQD-1 series LQD, LQD-1 series; CQ-AG-J		Q-(J) Q-33(J) Q-AG(J)	W-2S W-2MGS W-2AGS	1.50 1.50 1.50
	GC-78-M, 402-M GC-M; GC-1M GC-AG-M		G-78(M) G-(M) G-AG(M)	W-3A W-3MGA W-3AGA	1.00 1.00 1 00
	GC-78-J GC-J; GC-1J GC-AG-J		G-78(J) G-(J) G-AG(J)	W-3S W-3MGS W-3AGS	1.50 1.50 1.50
	U-78-M U-M		U-78(M) U-(M)	W-4A W-4MGA	1.00 1.00
	U-78-J U-J		U-78(J) U-(J)	W-4S W-4MGS	1.50 1.50
	AC-78, ACD series AC, ACD series AC-AG-M		A-3(M) A-1(M) A-AG(M)	W-5A W-5MGA W-5AGA	1.00 1.00 1.00
	AC-78-J, AC-C-78J; ACD series AC-J; AC-C-J; ACD-J series AC-AG-J		A-3(J) A-1(J) A-AG(J)	W-5S W-5MGS W-5AGS	1.50 1.50 1.50
	For Late Model Markel MD-5 Changer #74 & #75 MD-6		M-5(M) M-6(M)	W-5MGA-H(2) W-5A-H(2)	2.25 pr. 2.25 pr.
	For Late Model Markel MD-5 Changer #74 & #75 MD-6		M-5(J) M-6(J)	W-5MGS-H(2) W-5S-H(2)	3.25 pr. 3.25 pr.
	LT-3D; LT-4D; LT-4D1; MD LT-3D; LT-4, LT-4D1 LT-4-AG; LT-5-AG		D-(M) D-33(M) D-AG(M)	W-6A W-6MGA W-6AGA	1.00 1.00 1.00
	LT-3D; LT-4D, LT-4D1; MD LT-3D; LT-4; LT-4D1; LT-5-AG LT-4-AG; Columbia 105 Player		D-(J) D-33(J) D-AG(J)	W-6S W-6MGS W-6AGS	1.50 1.50 1.50
	Nylon 1M Nylon 1J		Nylon(J)	W-7S	1.50
	MD-3 MD-1		C-3(M) C-1(M)	W-19A W-19MGA	1.00 1.00
	MD-3 MD-1		C-3(J) C-1(J)	W-19S W-19MGS	1.50 1.50
	14L-3D; 15L-3D;14L-3-78; 15L-3-78 14L-3D; 15L-3D; 14L-3; 15L-3 14L-3-AG; 15L-3-AG		R-78 R R-AG	W-25A W-25MGA W-25AGA	1.00 1.00 1 00
COLUMBIA	CQ; CAC-J		Q-33(J)	W-2MGS	1.50
	105 Player, LT-4-AG		D-AG(J)	W-6AGS	1.50
	45-1609; 45-1612		45-1650	W-45MGS	1.50
ELECTRO-VOICE	12; 32, 42; 96; 96-T 14; 34; 44; 96; 96-T 33; 33-B; 43		O-3 O-1 O-2	W-20A W-20MGA W-20AGA	1.00 1.00 1.00
	12; 32; 42; 96; 96-T 14; 34; 44; 96; 96-T 33; 33-B; 43		S-3 S-1 S-2	W-21S W-21MGS W-21AGS	1.50 1.50 1.50
	16; 16TT 16; 16TT 16; 16TT		SO-13 O-13 S-13	W-22AS W-22TPA W-22TPS	2.50 2.00 3.00
GENERAL ELECTRIC	RPX-040; RPX-041 RPX-042; RPX-046 NAB Transcriptions		RPJ-001 RPJ-005 RPJ-006	W-67S W-67MGS W-67Tr	3.50 3.50 3.50
	RPX-047; RPX-050; RPX-051; RPX-052 NAB Transcriptions		RPJ-010 RPJ-007	W-66TPS W-66Tr	5.95 5.95
MAGNAVOX	560101		560102	W-50A	1.00
	560133		560138	W-51TPA	2.50
	560153		560153-2	W-52TPA	2.50
	560153			W-52TPS	4.00
PHILCO	35-2671-1		45-1597	W-30A	1.00
	35-2671-1		45-1651	W-30S	1.50
	45-1609; 45-1612		45-1613	W-45MGA	1.00
	45-1609; 45-1612		45-1613	W-45MGS	1.50
	76-4649		35-2693	W-46TPA	2.00
	76-4649		45-9589	W-46TPS	2.50
	Dynamic Reproducer		45-1596	W-48S	2.25

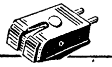
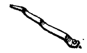
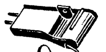
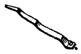
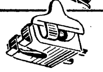
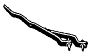
IMPORTANT NOTICE! Walco model numbers also indicate specifications as follows: **A—Alloy S—Sapphire (Syn.) MG—MicroGroove AG—All-Groove (3-speed) TP—Twin Point C—3 Mil Cutter and Playback 2C—2 Mil Cutter and Playback Tr—Transcription (.0025" Tip radius)**

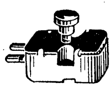
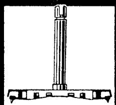
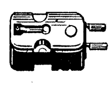
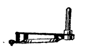
★ Walco REPLACEMENT NEEDLES ★

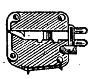
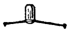
CARTRIDGE MANUFACTURER	CARTRIDGE NUMBER	ILLUSTRATION	Cartridge M'fctr's Needle Number	WALCO NEEDLE NUMBER	LIST PRICE
RCA			74985(M)	W-3MGA	1.00
	74984; 76297		74985(J)	W-3MGS	1.50
	75044 75044		75045(M) 75046(M)	W-29A W-29MGA	1.00 1.00
	75044 75044		75045(J) 75046(J)	W-29S W-29MGS	1.50 1.50
	70332;70338;70339;72551;74067 74625;75976;9690; 38453;38598		72345 74068	W-42S W-42MGS	2.00 2.00
	39550; 39851; 39919			W-43A	1.50
	75475 75475			W-44A W-44MGA	1.50 1.50
	75475 75475		75497 75496	W-44S W-44MGS	2.00 2.00
	74466		74622	W-67MGS	3.50
SEEBURG	(A-251620) 50 Record 78 RPM phono (A245789) 50 Record 45 RPM phono		S-140 (A251621) S-120 (A245794)	W-53S(2) W-53MGS(2)	2.50 pr. 2.50 pr.
SHURE	W-22AB; W-22AB-T; W22A; WC-22AB; P76V; P76AFV;		Recommended for best results in Turn-over Cartridge models.	W-29A W-29MGA	1.00 1.00
	P77V; P72V; PC72V; P76AV; P77AV			W-29S W-29MGS	1.50 1.50
	W60A; W60B; W61B; W60HS; P30; P30B; P70; P74AD: P76; P76AF; P70A; P75A; W66B		A62A A63MG A66U	W-30A W-30MGA W-30AGA	1.00 1.00 1.00
	W21F; P72; P73; W23B P75; P73A, P75A W66B;W26B;W26A;P37A;P34C;P71 P71B; P71C; P81; P81A; P81C		A61A A65MG A67U	W-30S W-30MGS W-30AGS	1.50 1.50 1.50
	WC33B W31AR; WC31AR WC36B; W36B		A52A A53MG A56U	W-31A W-31MGA W-31AGA	1.00 1.00 1.00
	WC33B W31AR; WC31AR WC36B; W36B		A51A A55MG A57U	W-31S W-31MGS W-31AGS	1.50 1.50 1.50
	W56N		A68D	W-80C	2.50
SONOTONE	W-7590-3 W-7590-2 W-7590-1		7590-3(M) 7590-2(M) 7590-1(M)	W-3A W-3AGA W-3MGA	1.00 1.00 1.00
	W-7590-3 W-7590-2 W-7590-1		7590-3(J) 7590-2(J) 7590-1(J)	W-3S W-3AGS W-3MGS	1.50 1.50 1.50
WEBSTER ELECTRIC	F14; F-14-2; F-14-4, F-14-1; F-14-3		F-14	W-9TPA	2.00
	A1; A1-8; A7, A7-1 A7-5; A7-8; A8; A10		A3S A1S	W-10S W-10MGS	1.50 1.50
	A1M; A1M1; A2M; A5M, A6M; A7M; A8M; A10M; AB1M; AX		A30 A10	W-11A W-11MGA	1.00 1.00
	Q1		Q-1	W-12A	1.00
	Q3; A9; F13		A2	W-13AGA	1.00
	C9		C9	W-14AGA	1.00
	Q2		Q2	W-15A	1.00
	F16; F16-1; F16-2; F19; F19-1		F16-3 F16-1	W-16A W-16MGA	1.00 1.00
	F15; F15-1; F18; F18-1		F15-3 W15-1	W-17A W-17MGA	1.00 1.00
	F7P F7; F7-1; F7-2; F13		F7P(M) F7	W-18A W-18MGA	1.00 1.00
	G3M G1M G2M		G3 G1 G2	W-23A W-23MGA W-23AGA	1.00 1.00 1.00
	WS; WS-1; WS-2		WS	W-24A	1.00
	F11; F11-1; F10		F10 F10-1	W-30S W-30MGS	1.50 1.50
WEBSTER-CHICAGO	21P247; 21P404; 21P403		NE-215	W-60TPA	2.00
	21P404		NE-316	W-63TPA	2.00
	21P404		NE-317	W-63TPS	3.50
WILCOX GAY	23-2144; W56N .003" Cutter & Playback 23-2161; W56N .002" Cutter & Playback		D-11 D-10	W-80C W-80-2C	2.50 2.50

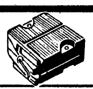
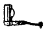
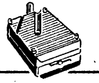
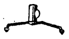
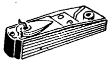
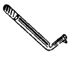
Walco DIAMOND NEEDLES
Listed by CARTRIDGES

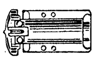
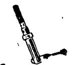
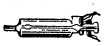
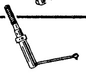
ASTATIC CORP.		Walco Needles		
CAC-J, CAC-W-J, CQ-J, CQ-1J, CAC-X, CAC-W-X, CQM, CAC-AG-J, CQ-AG-J, CAC-78-J, CAC-78-W-J, 403-J, CAC-78-X, CAC-W-X			W-2D W-2MGD W-2AGD	
LQD-J, LQD-1J, LQD-1JB			W-2D W-2MGD	
QT-J, QT-2J, QT2-J, QT2-J-PN, QT-3J, QT3-J, QT3-JA, QT3-J-PN, QT-M, QT-2M, QT2-M, QT2-M-PN, QT-3M, QT3-M, QT3-MA, QT3-M-PN, QT-33J, QT-33M			W-2D W-2MGD W-2AGD	
GC-AG-J, GC-J, GC-78-J			W-3D W-3MGD W-3AGD	
U-J, U-X, U-TR, U-TRX, U-78-J, U-78-X			W-4D W-4MGD	
AC-J, AC-R-J, AC-C-J, AC-AG-J, AC-C-AG-J, AC-78-J, AC-C-78-J			W-5D W-5MGD W-5AGD	
LT-4D LT-4AG, LT-5AG			W-6D W-6MGD W-6AGD	
MD-1J, MD-3J,			W-19D W-19MGD	
MD-5, MD-6			W-5D-H W-5MGD-H	

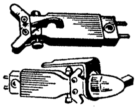
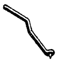
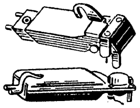
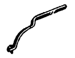
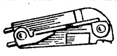
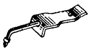
ELECTROVOICE		Walco Needles		
12, 12S, 14, 14S 42, 96, 96-T			W-21D W-21MGD W-21AGD	
32, 32-S, 33, 33-S, 34 34-S			W-21D W-21MGD W-21AGD	
16, 16TT, 16-O, 16-OTT, 16-S, 16-STT			W-22DS W-22TPD	

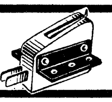
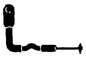
GENERAL ELECTRIC		Walco Needles		
RPX-047, RPX-050 RPX-052 RPX-053			W-66DS W-66TPD *W-66TrD	
RPX-046, RPX-040, RPX-041 RPX-061, RPX-063			W-67D W-67MGD W-67TrD	

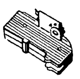
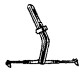
MAGNAVOX		Walco Needles		
560133, 560153			W-52DS W-52TPD	

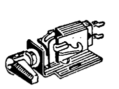
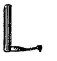
PHILCO		Walco Needles		
45-1609, 45-1612			W-45MGD	
76-4649			W-46DS W-46TPD	
76-1622, 76-1622-1			W-48D	

RCA		Walco Needles		
9890, 75976, 38453, 38598, 39919, 39550, 39851, 70332, 74067			W-42D W-42MGD	
75475			W-44D W-44MGD	

SHURE		Walco Needles		
W22A, W22AB, P72; W22AB-T, P72A;P72AF, P72V; P76, P76A, P76AFV, P76V, P77, P77A, P77AV, P77V, P79, PC72V			W-29D W-29MGD	
W23B, W60A, W60B; W60HS; W61B, W23A, P30; P70, P85, W57AN W21F, P75, P75A; P80 W26A; W26B; W66B; P71; P81			W-30D W-30MGD W-30AGD	
W31AR, WC31AR, WC33B, W36B, WC36B WC24			W-31D W-31AGD W-31MGD	

SONOTONE-COLUMBIA		Walco Needles		
W9980			W-75DS W-75TPD	

WEBSTER-CHICAGO		Walco Needles		
V-47, 21P404			W-63DS W-63TPD	

WEBSTER ELECTRIC		Walco Needles		
A1, A1-8, A7, A7-1, A7-5, A7-8, A8, A10, A1M, A1M-8, A1SM, A7M, A7M-1, A7M-5, A7M-7, A7SM-1, A8M, A10M, AB1M, AX			W-10D W-10MGD	

LEGEND: *the letters following the model numbers indicate specifications as follows:*

D – 3.0 mil diamond (for 78 RPM)
MGD – 1.0 mil diamond (for 33⅓ and 45 RPM)
AGD – 2.0 mil diamond (for all grooves, all speeds)
TPD – Twin Point Diamond, 3.0 mil and 1.0 mil (for 78, 33⅓ and 45 RPM)
DS – 1.0 mil diamond and 3.0 mil sapphire (for 78, 33⅓ and 45 RPM)
TrD –.0025" transcription radius
*–Dual Diamond Stylus (.001" and .0025" transcription radius)

Walco DIAMOND NEEDLES Color Code

SINGLE TIP MODELS:

Tip Radius	Color Tip	Color Dot
1.0 Mil (.001")	Red	Green
2.0 Mil (.002")	Natural	White
2.5 Mil (.0025")	Natural	Yellow
3.0 Mil (.003")	Natural	Black

TWIN POINT MODELS:

Tip Radius	Color Tip	Color Dot
1.0 Mil (.001") Diamond 3.0 Mil (.003") Diamond	Red Natural	Violet
1.0 Mil (.001") Diamond 2.5 Mil (.0025") Diamond	Red Yellow	Violet
1.0 Mil (.001") Diamond 3.0 Mil (.003") Sapphire	Red Natural	Green

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the international standard of the recording industry . . .

REG. U.S. PAT. OFF.

SCOTCH BRAND Magnetic Tape

SCOTCH
Magnetic Tape
High Output

Rigid manufacturing standards, continuous research and testing . . . analyzing . . . testing . . . analyzing . . . over and over again always adds up to the same answer. "SCOTCH" Brand Magnetic Tape is the No. 1 sound recording tape on the market. Ask for it . . . look for it in the distinctive plaid decorated box. It costs no more and the brand name "SCOTCH" is your assurance of sound quality. Insist on "SCOTCH" Brand Magnetic Tape.

"SCOTCH" Brand Magnetic Tape is available in the following types and sizes.

No. 101 (*A or **B) "SCOTCH" Brand Sound Recording Tape (Paper Base — Red Oxide Coating). For use in general recording work where economy is essential.

SIZE	LIST PRICE
¼″ x 150 ft. plastic reel	$0.75
¼″ x 300 ft. plastic reel	1.75
¼″ x 600 ft. plastic reel	2.25
¼″ x 1200 ft. plastic reel	3.50

No. 111 (*A or **B) "SCOTCH" Brand Sound Recording Tape (Plastic Base — Red Oxide Coating). High fidelity plastic tape for every recording need, the acknowledged international standard of the recording industry.

SIZE	LIST PRICE
¼″ x 150 ft. plastic reel	$ 1.00
¼″ x 300 ft. plastic reel	2.25
¼″ x 600 ft. plastic reel	3.50
¼″ x 1200 ft. plastic reel	5.50
¼″ x 2400 ft. NARTB hub	11.00
¼″ x 2400 ft. NARTB reel	13.85
¼″ x 4800 ft. NARTB hub	22.00
¼″ x 4800 ft. NARTB reel	28.00

*A Magnetic Coating wound facing in.
**B Magnetic Coating wound facing out.

No. 111 (***AP) "SCOTCH" Brand Magnetic Tape (Plastic Base — Red Oxide Coating). (This tape wound on 7″ plastic professional reel).

SIZE	LIST PRICE
¼″ x 1200 ft. plastic professional reel	$6.00

No. 120 (*A or **B) "SCOTCH" Brand "High Output" Magnetic Tape (Plastic Base — Green color for easy recognition). Offers unequaled performance in difficult recording applications, giving at least 8 db more output with no increase in harmonic distortion.

SIZE	LIST PRICE
¼″ x 600 ft. plastic reel	$ 4.00
¼″ x 1200 ft. plastic reel	6.50
¼″ x 1200 ft. plastic professional reel	7.00
¼″ x 2400 ft. NARTB hub	13.00
¼″ x 2400 ft. NARTB reel	15.85
¼″ x 4800 ft. NARTB hub	26.00
¼″ x 4800 ft. NARTB reel	32.00

***AP Magnetic Coating wound facing in.
Professional reel has 2 ¾″ hub diameter.

Empty reels and boxes may also be purchased.

"SCOTCH" Brand Splicing Tape No. 41

This is a special pressure-sensitive tape designed for splicing sound recording tape. It has a special white adhesive which will not ooze and cause sticky splices when spliced to sound recording tape. ½″ x 100″ length on metal utility dispenser ....**List Price $0.29**

"SCOTCH Brand Leader and Timing Tape No. 43

This is a tough ¼″ plastic treated paper tape that can be spliced to sound recording tape for protection, for cueing and exact timing. ¼″ x 150 ft. length..**List Price $0.50**

Made in U.S.A. by

MINNESOTA MINING & MANUFACTURING COMPANY • St. Paul 6, Minn.

SOUND RECORDING

irish Tape

BRAND

REG. U. S. PAT. OFF.

PROFESSIONAL GRADE
ORRadio
irish
MAGNETIC

PROFESSIONAL GRADE
ORRadio
irish
MAGNETIC

DOMESTIC GRADE
ORRadio
irish
MAGNETIC

211RPA PROFESSIONAL GRADE, GREEN BAND, PLASTIC BASE, RED OXIDE, MAGNETIC TAPE:

SIZE	Individually Boxed Reels Per Carton	LIST PRICE
¼" x 150' plastic reel	12	$ 1.00
¼" x 300' plastic reel	12	2.25
¼" x 600' plastic reel	12	3.50
¼" x 1200' plastic or metal reel	12	5.50
¼" x 2400' NAB hub only	12	11.00
¼" x 2400' NAB 10½" metal reel	12	13.85
¼" x 4800' NAB hub only	12	22.00
¼" x 4800' NAB 14" metal reel	12	28.00

211RPA-P PROFESSIONAL GRADE
(SAME AS 211RPA EXCEPT WOUND ON PROFESSIONAL 7" PLASTIC REEL):

¼" x 1200' professional 7" plastic reel	12	6.00
7" empty professional plastic reels 2¾" hub	12	1.25

220RPA RED BAND "SOUND PLATE" HIGH SPEED PROFESSIONAL MAGNETIC:

¼" x 150' plastic reel	12	2.10
¼" x 300' plastic reel	12	4.25
¼" x 600' plastic reel	12	7.80
¼" x 1200' plastic or metal reel	12	15.50
¼" x 1200' plastic or metal 7" professional reels	12	16.00
¼" x 2400' NAB hub only	12	29.30
¼" x 2400' NAB 10½" metal reel	12	33.85
¼" x 4800' NAB hub only	12	57.80
¼" x 4800' NAB 14" metal reel	12	66.05

220RPA-P PROFESSIONAL GRADE SOUND PLATE—7" PLASTIC REEL:

¼" x 1200' professional 7" plastic reel	12	16.00
7" empty professional plastic reel, 2¾" hub	12	1.25

195RPA DOMESTIC GRADE BROWN BAND, RED OXIDE, PLASTIC BASE, MAGNETIC SOUND RECORDING TAPE:

¼" x 150' plastic reel	12	.75
¼" x 300' plastic reel	12	1.75
¼" x 600' plastic reel	12	2.25
¼" x 1200' plastic or metal reel	12	3.50
¼" x 2400' NAB hub only	12	7.00
¼" x 2400' NAB 10½" metal reel	12	9.85
¼" x 4800' NAB hub only	12	14.00
¼" x 4800' NAB 14" metal reel	12	20.00

205RKA YELLOW BAND, PAPER BASE, RED OXIDE:

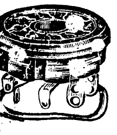
¼" x 150' plastic reel	12	.75
¼" x 300' plastic reel	12	1.75
¼" x 600' plastic reel	12	2.25
¼" x 1200' plastic or metal reel	12	3.50
¼" x 2400' NAB hub only	12	7.00
¼" x 2400' NAB 10½" metal reel	12	9.85
¼" x 4800' NAB hub only	12	14.00
¼" x 4800' NAB 14" metal reel	12	20.00

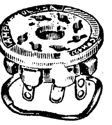
Made in U. S. A. by ORRADIO INDUSTRIES, Inc., Opelika, Alabama

Prices subject to change without notice.

Retainer Ring "S" Type Sockets

Extremely compact sockets, furnished complete with retainer rings. Mount in 1-11/64" keyed hole. Use Amphenol No. 25-LD-1 Punch and Die.


Black Bakelite


Steatite

Black Bakelite	List	Contacts	Steatite	List
78-S4	$ .13	4 Contacts	49-SS4	$ .47
78-S5	.13	5 Contacts	49-SS5	.47
78-S6	.13	6 Contacts	49-SS6	.47
78-S7C*	.17	7 Comb. for 7L, 7S	....	....
78-S7L*	.13	7 Large	49-SS7L*	.59
78-S7S	.13	7 Small	49-SS7S	.47
78-S8	.17	8 Octal	49-SS8	.47
78-S8L	.21	8 Loktal	....	....
78-S9	.21	9 Octal Style	....	....
78-S11	.29	11 Octal Style	....	....
78-A7P†	.30	7 for Miniatures	.....	....
78-A9P†	.45	9 for Miniatures	.....	....
78-B	.07	Blank	....	....

* Mounts in 1-21/64" keyed hole. Use 25-LD-2 Punch and Die.

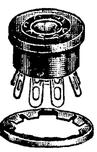
† Mounts in standard socket hole. Has miniature socket in center.

Magnal Socket Has 1-1/16" pin circle for cathode ray and television ubes. Mounts in 1-5/8" hole. Steatite.

No. 49-SS11L 11 Contact, Magnal....................**List $1.21**

Miniature Retainer Ring Type Sockets

Mount in 5/8" round or "D" shaped hole with No. 2-9 retainer rings.



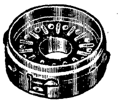
Black Bakelite

Number	Description	List
78-S3S	For 3 prong min. photo cells	$ .17
78-S4S	4 Contact	.17
78-S5S	5 Contact	.21
78-S6S	6 Contact	.21
78-7P	7 Contact. Miniature	.21

Mica-Filled Bakelite

8-7PT	7 Contact. Miniature	.28

Duodecal and Diheptal Tube Sockets



Designed for television viewing tubes, oscilloscopes and other cathode-ray tubes. Provides means of grouping leads within the socket housing and bringing them out radially. Grouping of the wires in the enclosed raceway eliminates flexing at solder terminals, minimizing breakage. Socket cap and body molded from high quality electrical bakelite. Designed for easy assembly and dis-assembly . . . requires no special tools.

Duodecal Socket for a maximum of 12 equally spaced pins on a circle iameter of 1.063".

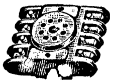
No. 59-402....................................**List $1.56**

Diheptal Sockets for a maximum of 14 equally spaced pins on a circle iameter of 1.750".

No. 59-415 Small—for 2.050" D. Tube base.... ....**List $1.67**

No. 59-417 Medium—for 2.250" D. Tube base........... **1.67**

Barrier Type Industrial Octal Socket



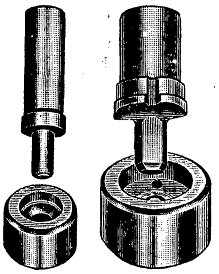
Molded in one piece of Melamine. Contacts are removable. R.M.A. numbered reversible screw type terminals.

No. 146-103 Standard Socket without Tie Point Inserts—Top Mounted....**List $1.58**

No. 146-104 Socket with Four Molded-in Threaded Inserts for Tie Points—Top Mounted................**List $2.16**

Laboratory Punch and Dies

For punching mounting holes for Amphenol connectors, plugs and receptacles. Made of tool steel, properly hardened.



For Amphenol Retainer Ring Mounting Tube Sockets, Radio Plugs, etc.

Drill 1/2" hole for pilot punch.

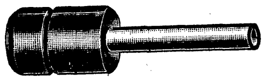
No.	Size of Hole	List
25-LD-1	1-11/64" keyed	$12.00
25-LD-2	1-21/64" keyed	12.00

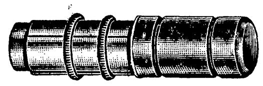
For Miniature Sockets and Microphone Connectors

Drill 3/8" pilot hole for 25-LD-3, 5 and 6 and 1/4" hole for 25-LD-4.

25-LD-3	13/16" round	$3.60
25-LD-4	5/8" round	3.60
25-LD-5	5/8" "D" hole	6.00
25-LD-6	1/2" "D" hole	6.00

Retainer Ring Hand Tools

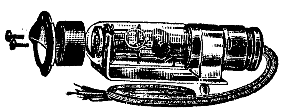

51-5


51-1

Convenient for assembling miniature sockets, Plugs and tip jacks to panels or chassis. Designed for hand operation..

Number	Description	List
51-5	For No. 2-9 Rings	$1.20
51-6	For No. 2-11 Rings	1.20
51-7	For No. 2-10 Rings	1.20
51-1	For "S" type sockets and "CP" type plugs except 7C and 7L sizes. Required where socket spacing is very close.	6.66
51-2	For "S" type sockets 7-large and 7-combination	6.66
51-3	For "SS" steatite sockets and "60" and "61" receptacles. Of two-piece construction . . . somewhat easier but slower to use than 51-1 (above) for "S" sockets and "CP" plugs	6.66

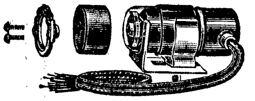
Magic Eye Assembly



For easily adapting or replacing a 6 prong magic eye tube in any radio having automatic volume control. Also for FM receivers, test instruments, signal tracers, and as volume level and modulation indicators. Includes 1 megohm target plate resistor wired into socket and 5 wire, color coded cable 22" long. Mounting bracket is slotted for tube adjustment. Complete as illustrated, with escutcheon and hardware for assembly. Tube not included.

No. 58-MEA6 Complete Magic Eye Assembly...........**List $1.51**

Octal Magic Eye Assembly

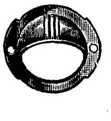


Similar to No. 58-MEA6 shown above, but for octal type magic eye tubes. New universal short bracket for the smaller tube sizes permits use of any of the octal magic eye tubes including the dual pattern and the new multi-pattern types. Complete with 8 wire, color coded cable, 22" long, full vision escutcheon and hardware for assembly. Tube not included.

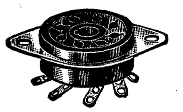
No. 58-MEA8 Complete Octal Magic Eye Assembly......**List $1.51**

Magic Eye Escutcheons

Hood type is of sturdy plastic with beautiful antique bronze finish. Full vision type for octal dual-pattern and new octal multi-pattern types is brass with antique bronze finish.



Number	Description	List
10-102	Hood Type. For 6 prong tubes.	$ .15
10-2	Full Vision Type. For octal tubes....................	.36

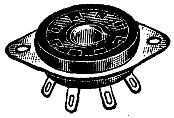


MIP Molded-In-Plate Sockets

Molded of high dielectric black Bakelite, sturdy, steel mounting plate molded directly into the solid body, cannot come loose or vibrate. Contacts grip tube prongs firmly and retain their resiliency indefinitely. Mount in 1-5/32" round hole. Two 5/32" screw holes on 1-1/2" centers.

Number	Contacts	List	Number	Contacts	List
77-MIP-4	4 Contacts	$ .12	77-MIP-8	8, Octal	$ .14
77-MIP-5	5 Contacts	.12	77-MIP-9	9, Octal style	.18
77-MIP-6	6 Contacts	.12	77-MIP-11	11, Octal style	.24
77-MIP-7L*	7 Large	.14	77-MIP-12	12, Octal style	.30
77-MIP-7S	7 Small	.12	77-MIP-20	20 Contact	.80

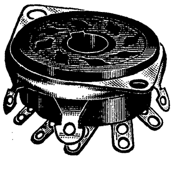
* 77-MIP-7L mounts in 1-9/32" D. round hole.



Compact MIP Sockets

Same as MIP series above but smaller in diameter. Mount in 1-1/8" round hole. Two 5/32" diameter mounting holes on 1-5/16" centers. Black Bakelite dielectric.

Number	Contacts	List
88-8	8 Contacts	$ .14
88-8X	8, Loktal	.21

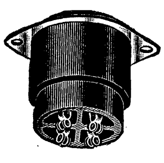


Saddle Type Octal Sockets

An economical socket for below chassis mounting. 74-8 mounts in a 1⅛" hole with two $\frac{5}{32}$" diameter mounting holes on 1½" centers. 168-150 mounts in 1" hole with two .140" diameter mounting holes on 1$\frac{5}{16}$" centers. Both with 4 grounding lugs, tuning fork contacts, black bakelite.

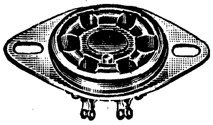
No. 74-8.........................List $ .14
No. 168-015.....................List .13

High Voltage Safety Sockets



For rectifier and other tubes with base diameter of 1.156". Socket is set at the bottom of a deep molded Bakelite shell. Heavy steel mounting plate molded into shell has 5/32" diam. mounting holes on 1-7/8" centers. Socket mounts from above or below in 1-1/2" round hole.

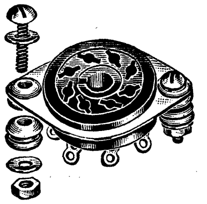
		List
77A-4T	4 Contacts. Mica-filled	$1.51



Replacement Sockets

Regular "S" sockets, assembled with No. retainer ring to steel mounting plate wit slotted holes to fit mounting centers fro 1-1/2" to 1-7/8".

Black Bakelite	List	Contacts	Steatite	Lis
78-RS4	$ .14	4 Contacts	49-RSS4	$ .4
78-RS5	.14	5 Contacts	49-RSS5	.4
78-RS6	.14	6 Contacts	49-RSS6	.4
78-RS7C	.18	7 Comb.	....	...
78-RS7L	.14	7 Large	49-RSS7L	.6
78-RS7S	.14	7 Small	49-RSS7S	.4
78-RS8	.18	8 Octal	49-RSS8	.4
78-RS8L	.22	8 Loktal	....	...
78-RS9	.22	9 Octal style	....	...
78-RS11	.30	11 Octal style	....	...

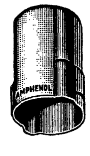


Floating Octal Sockets

Live rubber grommets fit into mounting hol to cushion this socket for vibration-free ope ation. Black bakelite dielectric. Mounts 1-3/16" round hole above or below chassi Two 1/4" screw holes on 1-1/2" centers.

Number	Description	Li
77-MIP-8FK	Octal. Complete with 4 rubber grommets, 2 mounting screws, nuts and washers	$ .3
11-3K	Kit for making floating connections using Amphenol MIP Sockets. 4 grommets, 2 mounting screws, nuts and washers only	.2

Tube Shield and Spring Assemblie



Number	Height	Description	Li
5-401	1-3/8"	For 7 Pin Miniature Sockets	$ .1
5-402	1-3/4"	For 7 Pin Miniature Sockets	.1

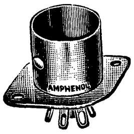
Tube Shields No. 5-401 and 5-402 are used with Sockets N 59-367, 147-905, 147-913, 147-925, 147-955 and 147-96

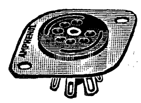
Number	Height	Description	Li
5-405	1-1/2"	For Noval Sockets	.2
5-408	1-15/16"	For Noval Sockets	.2
5-409	2-3/8"	For Noval Sockets	.2

Tube Shields No. 5-405, 5-408 and 5-409 are used wi Sockets No. 59-369, 59-406 and 59-407.

MINIATURE 7 AND 9 PIN SOCKETS

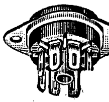
ZIP-IN, Ethylon-A

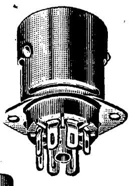




Molded of Ethylon-A with high "Q" factor. Mounting plate has .136" diameter holes on 1-5/16" centers. Round chassis holes are 27/32" for 7 pin and 15/16" for 9 pin.

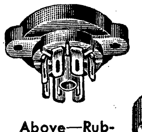
Number	Description	List
59-357	7 Pin. Without tube shield base	$ .21
59-367	7 Pin. With tube shield base	.27
59-359	9 Pin. Without tube shield base	.51
59-369	9 Pin. With tube shield base	.61

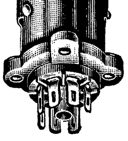




Above—Bottom Mounted

Right—Top Mounted with Tube Shield Base





Above—Rubber Mounted

Right—Rubber Mounted with Tube Shield Base

Bakelite and Steatite Sockets

Used for television, FM, auto radios, portables, etc. 147 Seri mount in 5/8" chassis hole; mounting centers 7/8"; screw hol 1/8". 59 Series mount in 3/4" chassis hole; mounting centers 1-1/8 rivet holes .095".

Bottom Mounting—No Tube Shield Base

Number	Contacts	Dielectric	Li
147-500	7	Black Bakelite	$.
147-501	7	Steatite	.
59-409	9	Black Bakelite	.
59-410	9	Mica-Filled Bakelite	.

Top Mounting—With Tube Shield Base

Number	Contacts	Dielectric	Li
147-905	7	Black Bakelite	.
147-913	7	Mica-Filled Bakelite	.
147-925	7	Steatite	.
59-406	9	Black Bakelite	.
59-407	9	Mica-Filled Bakelite	.

Rubber Mounted—No Tube Shield Base

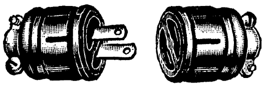
Number	Contacts	Dielectric	Li
147-502	7	Black Bakelite	.

Rubber Mounted—With Tube Shield Base

Number	Contacts	Dielectric	Li
147-955	7	Black Bakelite	.
147-963	7	Mica-Filled Bakelite	.

Shielded Cable Connectors, 110—250 Volt

End Cable Outlet—For cables up to ½" diameter



Fully shielded cable terminals with black Bakelite connector units encased in a tight cap that fits securely and is easily removed. Available with cable clamp that relieves soldered connections of strain, or with rubber grommets for protection against abrasion.

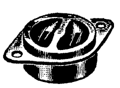
With Cable Clamp	List	Description	With Grommet	List
60-F11	$ .66	3 Pole Receptacle	**60-F4**	$ .60
60-M11	.66	3 Pole Polarized Plug	**60-M4**	.60
61-F11	.54	2 Pole Universal Receptacle	**61-F4**	.48
61-M11	.54	2 Pole Standard Plug	**61-M4**	.48
61-MP11	.54	2 Pole Polarized Plug	**61-MP4**	.48

Flush Motor Plug, 110–250 Volt

Neat, compact plug or receptacle set in type 61-61 steel shell for below surface mounting. Room for insertion of Amphenol End Cable Outlet Plugs.

Number	Description	List
61-F10	2 Pole Universal Receptacle	$ .48
61-M10	2 Pole Standard Plug	.48
61-MP10	2 Pole Polarized Plug	.48

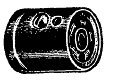
Molded-In-Plate Receptacle



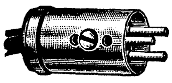
Same as 61-F Receptacle with standard steel mounting plate molded into the Bakelite body. Mounts in 1-3/16" chassis hole; two 5/32" screw holes on 1-1/2" centers.

No. 61-MIP-61F 2 Pole Universal Receptacle......List..... $ .30

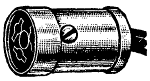
Miniature Cable Connectors



Short



Long



Flared

For shielded or unshielded cables having up to 6 conductors. Black Bakelite elements are housed in cadmium plated brass shells and are held in place by side set screws. Polarized contact spacing makes incorrect insertions impossible. Accommodates cable up to 1/4" diameter.

Short Shell—13/16" Long

Male	List	Description	Female	List
91-MPM3S	$ .36	3 Contact	**91-MPF3S**	$ .36
91-MPM4S	.40	4 Contact	**91-MPF4S**	.40

Long Shell—1-3/16" Long

Also use with shielded chassis units shown below.

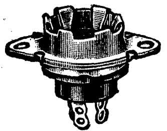
Male	List	Description	Female	List
91-MPM3L	$ .36	3 Contact	**91-MPF3L**	$ .36
91-MPM4L	.40	4 Contact	**91-MPF4L**	.40
91-MPM5L	.45			
91-MPM6L	.45			

Note: Use long shell type with shielded chassis units; use either long or short shells with unshielded types such as 78-S3S and 86-CP-3S.

Flared Shell—1-3/16" Long

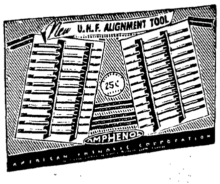
Description	Number	List
3 Contact	**91-MPF3**	$ .36
4 Contact	**91-MPF4**	.40

Shielded Chassis Units



Economical chassis receptacles for connecting shielded or unshielded cables having from 2 to 6 conductors (for 2 wire cable use 3 contact unit and leave 1 contact unwired). Black Bakelite element; steel mounting plate. Can be mounted on surface or behind chassis or panel in 7/8" D. hole; 5/32" screw holes on 1-1/4" centers. Use with long shell cable connector above for a fully shielded connection.

Female	Description	List
78-PCG3	3 Contact	$ .36
78-PCG4	4 Contact	.36
78-PCG5	5 Contact	.41
78-PCG6	6 Contact	.41



Alignment Tool

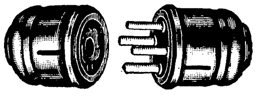
Made of Amphenol 912-A polystyrene. Has no capacity effect when aligning critical circuits. A necessary tool for anyone who must make adjustments on high frequency circuits.

No. 55 U.H.F. Alignment Tool (minimum order 24).....**List $ .25**

Illustrated above is the colorful sales card on which are mounted 24 Amphenol Alignment Tools.

No. 55-024 Sales Card with 24 Alignment Tools.........**List $6.00**

Shielded Multi-Wire Cable Connectors



Multi-wire cable connectors consist of Amphenol "S" type tube sockets and "CP" plugs. Metal cap shields connections and provides an unbreakable cover for cable termination. Cap may be removed with an ordinary screwdriver. Accommodates cable up to 7/16" diameter. Female chassis receptacles or sockets 78-S, 78-RS and 77-MIP; male receptacles are listed below.

With Rubber Grommets

With Rubber Grommet Type Plug Cap 3-13.

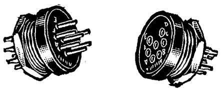
Female	List	Contacts	Male	List
78-PF4	$ .31	4 Contact	**86-PM4**	$ .31
78-PF5	.31	5 Contact	**86-PM5**	.31
78-PF6	.31	6 Contact	**86-PM6**	.31
78-PF7L	.31	7 Large	**86-PM7L**	.31
78-PF7S	.31	7 Small	**86-PM7S**	.31
78-PF8	.35	8 Octal	**86-PM8**	.35
78-PF9	.39	9 Octal Style	**86-PM9**	.39
78-PF11	.47	11 Octal Style	**86-PM11**	.47
		20 Contact	**86-PM20**	1.00

With Cable Clamps

With positive grip Cable Clamp Type Plug Cap 3-24.

				List
78-PF4-11	$ .37	4 Contact	**86-PM4-11**	$ .37
78-PF5-11	.37	5 Contact	**86-PM5-11**	.37
78-PF6-11	.37	6 Contact	**86-PM6-11**	.37
78-PF7L-11	.37	7 Large	**86-PM7L-11**	.37
78-PF7S-11	.37	7 Small	**86-PM7S-11**	.37
78-PF8-11	.41	8 Octal	**86-PM8-11**	.41
78-PF9-11	.45	9 Octal Style	**86-PM9-11**	.45
78-PF11-11	.53	11 Octal Style	**86-PM11-11**	.53

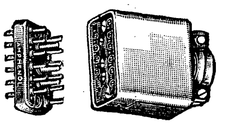
155 Series Miniature 7-Contact Connector



For use in the interconnection of miniature electronic equipment. Over-all diameter including the retaining flange is only ⅝". Bodies are threaded to mount without external shells. Contacts are for No. 20 wire.

No. 155-352 Male Connector..........................**List $3.00**
No. 155-353 Female Connector.........................**List 4.50**

26 Series Rack and Panel Connectors

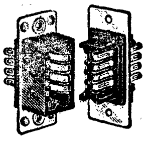


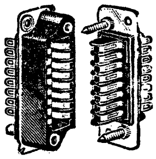
Eyelets for added strength in mounting, male contacts molded into the inserts. Female contacts of beryllium copper. High quality mica-filled phenolic inserts. Aluminum housing has cable clamp. Voltage rating 500 volts RMS, 60 CPS at sea level.

Insert Only	List	Description	With Housing	List
26-804	$2.00	Male, 11 Contacts	**26-809**	$3.20
26-805	1.45	Female, 11 Contacts	**26-808**	2.65
26-151	2.30	Male, 15 Contacts	**26-152**	3.60
26-150	1.60	Female, 15 Contacts	**26-153**	2.90
26-806	2.75	Male, 20 Contacts	**26-811**	4.15
26-807	2.00	Female, 20 Contacts	**26-810**	3.40

BLUE RIBBON CONNECTORS

RACK and PANEL

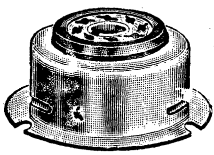




These connectors feature a unique spring contact construction that provides positive contact, even under vibration, with low insertion and extraction force while maintaining high individual contact pressure. Spring members meet all service requirements with a safety factor of five or more.

Plug	No. of Contacts	List Each	Receptacle	No. of Contacts	List Each
26-182	8	2.00	**26-183**	8	2.10
26-159-16	16	3.40	**26-190-16**	16	3.50
26-159-24	24	3.90	**26-190-24**	24	4.00
26-159-32	32	4.60	**26-190-32**	32	4.80

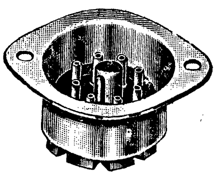
Receptacle Shells



ACS Shell extends "CP" or "S" type sockets or plugs 13/16″ above or below surface. 4 knockouts in sides. Mounts in 1-3/4″ hole; has 3 notched holes for No. 6 screws.

Number	Description	List
23-1S	For small "S" Sockets............	$ .12
23-1L	For large "S" Sockets............	.12

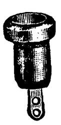
61-61 Shell. Nickel plated steel shell, lowers bottom of "CP" and "S" type plugs and sockets and 60 and 61 connectors 1-3/16″ below surface. Mounts in 1-7/16″ hole; two 5/32″ screw holes on 1-3/4″ centers.



No. 61-61 Shell only...............List $ .18

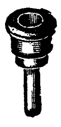
Tip Jacks

Molded of Bakelite in black or red. Mount in 3/8″ hole with retainer ring included. Use standard phone tips for 78-1P1, and 78-1 Contacts recessed 1/8″. The body may be used as a feed-thru.



Number	Description	List
78-1S	For 3/32″ Plug..........	$ .09
78-1L	For 5/32″ Plug..........	.09
78-1M	For 1/8″ Plug..........	.09
78-1P	For .080 Phone Tip......	.09
78-1P1	High Voltage for .080 Phone Tip. Mounts in 1/2″ hole....................	.12

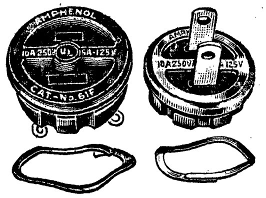
Single Prong Plugs



Bakelite Plugs, black or red, for use with Tip Jacks above.

Number	Description	List
71-1S	For 3/32″ Socket..........	$ .06
71-1M	For 1/8″ Socket..........	.06
71-1L	For 5/32″ Socket..........	.06

Inserts and Shells for Cable Plugs, Connectors and Receptacles. For Assembly into Type Required



For 110-250 Volt Plugs and Receptacles

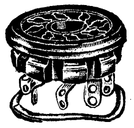
Compact in design, molded from high dielectric black Bakelite. Rated at 15 amp., 110 v. or 10 amp., 250 v. Two-pole type accepts any standard electric plug. Retainer ring type mounts in 1-11/64″ keyed hole as punched by Tools 25-LD-1 Mounting plate type requires 1-9/32″ D. chassis hole; has slotted screw holes on 1-1/2 to 1-7/8″ centers—Mounting plate type is similar to Type "RS" Replacement Sockets.

Receptacles

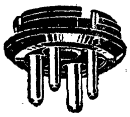
Retainer Ring Type Number	List	Description	With Mounting Plate Number	List
61-F	$ .30	2 Pole, Universal	**61-F1**	$ .34
60-F	.42	3 Pole, Polarized	**60-F1**	.46

Plugs

Retainer Ring Type Number	List	Description	With Mounting Plate Number	List
61-M	$ .30	2 Pole, Standard	**61-M1**	$ .34
61-MP	.30	2 Pole, Polarized	**61-MP1**	.34
60-M	.42	3 Pole, Polarized	**60-M1**	.46



"S" Socket (Listings on page 1).



"CP" Plug

For Multi-Wire Plugs and Receptacles

For quick, easy assembly to chassis or panels from 19 to 16 gage (.044 to .062″) using Amphenol retainer ring. Black Bakelite or Mica-Filled Bakelite. Cadmium plated socket contacts for easy soldering; plug prongs are nickel plated brass; rotation feature for lining up contacts. Complete with retainer ring.

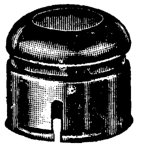
Can be assembled in any of the plug caps or receptacle shells below. For chassis mounting in 1-11/64″ keyed hole as punched by Tools 25-LD-1.

"CP" Plugs

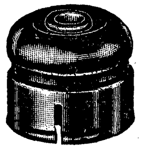
Black Bakelite	List	Contacts	Mica-Filled Bakelite	List
86-CP4	$ .13	4 Prong	**86-CP4T**	$ .21
86-CP5	.13	5 Prong	**86-CP5T**	.21
86-CP6	.13	6 Prong	**86-CP6T**	.21
86-CP7L*	.13	7 Large	**86-CP7LT***	.21
86-CP7S	.13	7 Small	**86-CP7ST**	.21
86-CP8	.17	8 Prong, Octal	**86-CP8T**	.24
86-CP9	.21	9 Prong, Octal Style	**86-CP9T**	.28
86-CP11	.29	11 Prong, Octal Style	**86-CP11T**	.36

* Mounts in 1-21/64″ keyed hole. Use 25-LD-2.

Plug Caps for Every Purpose



3-10



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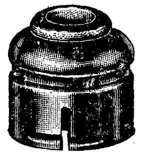
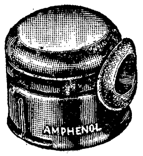
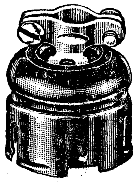


3-13



3-17

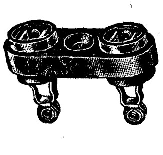


3-24

Cable terminals can be assembled with these plug caps, using retainer ring type plugs, sockets and 60 and 61 series shown above. Plug caps are designed to fit all but the 7-large and 7-combination sizes. For 7-large and 7-comb. use Plug Cap 3-13L shown below.

Number	Length	End Hole	Side Hole	Grommet	List
3-10	1″	None	None	None	$ .18
3-12	1″	5/16″	None	Metal	.18
3-13	1″	7/16″	None	Rubber	.18
3-17	1″	None	7/16″	Rubber	.18
3-24	Cap with Cable Clamp attached. Accommodates cables to 1/2″ diameter..........				.24
79-CC4	Cable Clamp only. Same as used on Cap 3-24..........				.12
3-13L	Cap for large 7 Socket and Plugs, end rubber grommet 7/16″ ID..........				.24

Crystal Holder Socket



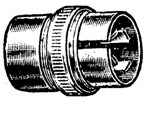
Molded of mica-filled Bakelite ... for crystal holders having 2 prongs on 3/4″ centers. Easily mounted. May be used as dual tip jacks on test panels.

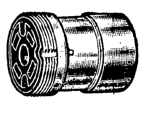
Number	Description	List
33-2T	For 1/8″ Prongs...	$ .17
33-3T	For 5/32″ Prongs..	.17

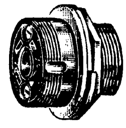
Heavy Duty Power Plugs

Male unit has four heavy brass blades; female has heavy phosphor bronze contacts. For use with current loads up to 15 amperes at 125 volts or 10 amperes at 250 volts. Molded black Bakelite unit is enclosed in tight, heavy brass shell . . . bright cadmium plated. Polarized with shell keys and keyways. Strain is taken up by concealed cable clamp. Grounding screw in body for safe wiring. Threaded locking ring keeps shells tight.

Chassis or panel receptacle mounts in 1¼" hole in any material up to ½" thick. Complete with lock washer, spacer washer and nut.

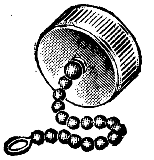

Plug


Jack


Receptacle

Mating parts are arranged in same horizontal line below.

Number	Contacts	List	Number	Contacts	List	Number	Contacts	List
92-M	Male	**$3.01**	**92-F**	Female	**$3.01**	**92-C**	Female	**$3.01**
92-F1	Female	**3.01**	**92-M1**	Male	**3.01**	**92-C1**	Male	**3.01**



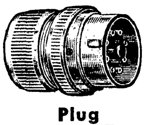
Cap and Chain

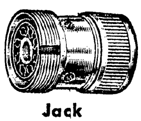
For sealing power plugs and radio connectors against dirt and moisture. Can be used with connectors listed above and below having male threads. Heavy brass cap, chrome plated. Nickel silver bead chain.

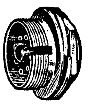
No. **79-CCC8** Cap and Chain................................**List $ .61**

Heavy Duty Radio Connectors

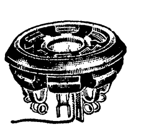
The plugs shown in bold face type mate with jacks and receptacles listed in bold type **in the same horizontal line.** For numbers in light faced type follow the same procedure . . . plugs mate with jacks and receptacles in the same horizontal line. Bold type also designates the most popular units.







	Plug		Jack		Receptacle		
Contacts	Male	Female	Female	Male	Female	Male	List
4	**79-04M**	79-04F1	**79-04F**	79-04M1	**79-P04F**	79-P04M	**$1.51**
5	**79-05M**	79-05F1	**79-05F**	79-05M1	**79-P05F**	79-P05M	**1.51**
6	**79-06M**	79-06F1	**79-06F**	79-06M1	**79-P06F**	79-P06M	**1.51**
8	**79-08M**	79-08F1	**79-08F**	79-08M1	**79-P08F**	79-P08M	**1.51**
12	**79-012M**	79-012F1	**79-012F**	79-012M1	**79-P012F**	79-P012M	**2.41**

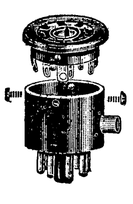


Bulb Tester and Tube Socket

Standard 7 contact combination socket for large and small 7 prong tubes. For testing miniature bulbs, either screw or bayonet types.

Number	Description	List
78-7CD	With retainer ring	**$ .53**

Adapters



A simple way to make adapter units which may be used for modernizing tube checkers and analyzers, adapting new tubes to old circuits and for connections to output meter, phonograph pickup, etc.

Socket Tops Only

Number	Contacts	List
44-8	8 Octal	**.24**

For testing new 9 pin miniature tubes.

Number	Contacts	List
44-9	9 Noval	**.45**

Bases Only

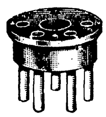
With side stud accommodating a metal tube grid cap clip. Both tops (left) and bases are drilled for self-tapping screws which are supplied with bases.

Number	Prongs	List
50-8SG	8 Octal	**.36**

Shell Only

Of metal tubing for snap-in connection on either end of Amphenol "S" type sockets or "CP" plugs. Combinations possible from 4 to 11 prongs or contacts.

No. **3-14D** With side hole, rubber grommet..............................**List $ .24**

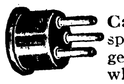


Molded Speaker Plugs

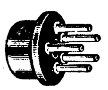
Prongs are securely molded into one-piece black bakelite body. Each prong is deeply set into individually molded pocket, eliminating the possibility of shorts in case of pull-back of wire insulation.

With Finger Grip	Prongs	List	With Straight Sides	Prongs	List
71-4	4	**$ .13**	**70-8**	8	**$ .17**
71-5	5	**.13**	**70-9**	9	**.21**
71-6	6	**.13**	**70-12**	12	**.30**
71-7	7	**.13**	**70-20**	20	**.61**

Miniature Plugs



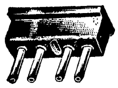
Cable Type used extensively for speaker connections in compact midgets. Ideal for all plug-in connections where space is limited. Brass prongs are deeply recessed in molded pockets preventing shorts due to insulation pulling back. With molded finger grip. Use with miniature sockets.

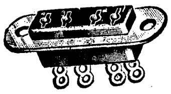


Chassis Type mounts in plain round 5/8" hole. No screws or rivets required. Held firmly by retainer ring included. Use with female miniature connectors (MPF type).

Cable Type	List Price	Description	Chassis Type	List
71-3S	**$ .15**	3 Prong	**86-CP-3S**	**$ .15**
71-4S	**.15**	4 Prong	**86-CP-4S**	**.15**
71-5S	**.21**	5 Prong		
71-6S	**.21**	6 Prong		

Rectangular Plugs and Sockets

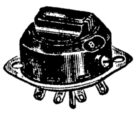

Style B


Style C

For compact apparatus. Plugs are often used as a supported type self-sustaining coil form.

Number	Style	Prongs or Contacts	List
	Plugs		
70-25	B	3	**.15**
70-26	B	4	**.18**
	Sockets		
77-26	C	4	**.30**

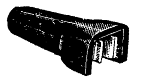
Tap Change Switch



An 8-position single pole continuous switch with white markings clearly visible in window cap. Side set screw locks switch arm in position preventing accidental tap changes.

Number	Description	List
36-1	With numerals 1 to 8	**$ .90**
36-2	With impedance markings 0—2—4—8—16—250—500	**.90**

Universal Grid Cap



A grid cap of improved design for universal use with tube grid caps from ¼ to ⅜" diameter including standard glass and metal tubes. Spring brass contacts in phenolic body.

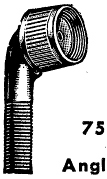
63-1 Unwired Grid Cap......**List Price $ .18**

Series 75 Microphone Connectors—Single Contact

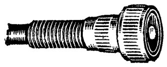
Fit almost every microphone. Standard with leading manufacturers for many years. Compact, rugged, neat. Chassis receptacles are integral parts of microphones using single conductor cable. Widely used in amplifiers, transmitters, phonoelectric devices, home recorders and similar equipment. They are also suitable for connecting various units such as PM speakers, headphones, and for theft alarms or wall type coin operated devices, etc.

In the 75 Series, plugs mate with all cable jacks and receptacles. Circuit closing contacts are the same except that they close the circuit when plug is disengaged, eliminating open circuit grid howls.

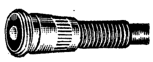
Locknut Receptacles mount in .385″ holes when grounding to chassis and ½″ holes for ungrounded 2 circuit applications.



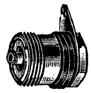
75-MC1FA



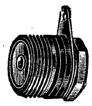
75-MC1F



75-MC1M



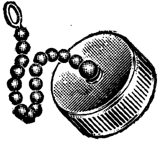
75-PC1M



75-CL-PC1M

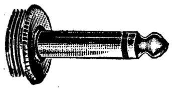
Angle Plug	Contact	List	Straight Plug	Contact	List	Cable Jack	Contact	List	Locknut Receptacles	Contact	List
75-MC1F-A	Flush	$1.00	75-MC1F	Flush	$.45	75-MC1M	Flush	$.35	75-PC1M	Flush	$.30
									75-CL-PC1M	Cl. Cr.	.45

Cap and Chain



Seals open chassis units against dirt and dust. Also used with 80 Series Connectors.
75-CCC1..**List $.55**
Cl.Cr. Closed Circuit.

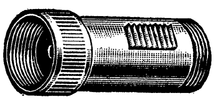
Phone Plug Adapter



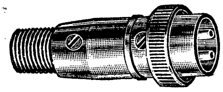
Screws into coupling ring of 75-MC1F and 75-MC1F-A plugs, permitting the cable to be plugged into any standard phone jack. No soldering or wiring.
75-MC1P..........................**List $.50**

Microphone Switch

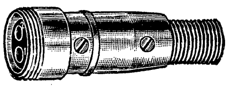
Threaded on one end, coupling ring on the other end. For 75 Series Connectors. May be connected directly to any mike equipped with 75-PC1M or similiar receptacle. Push-to-talk or slide button for permanent connection.
75-MC1S..................**List $1.40**



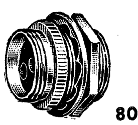
Series 80 Microphone Connectors—Single and Double Contacts



80-MC2M



80-MC2F



80-PC2F

Plugs	Contacts	List	Cable Jacks	Contacts	List	Locknut Receptacles	Contacts	List
SINGLE CONTACT								
80-M	**M**	**$.71**	**80-F**	**F**	**$.71**	**80-C**	**F**	**$.44**
80-F1	F	.71	80-M1	M	.71	80-C1	M	.44
TWO CONTACTS								
80-MC2M	**M**	**.88**	**80-MC2F**	**F**	**.88**	**80-PC2F**	**F**	**.49**
80-MC2F1	**F**	**.88**	80-MC2M1	M	.88	80-PC2M	M	.49

Series 80 Cable Connectors are designed for shielded cables; for single and two conductor coaxial cables, microphone cables; for twisted pairs, concentric lines, photo cell leads, patch cords and similar uses. Suitable for connecting model railroad equipment, pin ball games and other small electrical apparatus. Elements are high dielectric black Bakelite. Receptacles mount in 5/8″ chassis holes. Maximum chassis thickness for locknut type receptacles is 11/32″.

Mating families of connectors are listed in horizontal lines.

The most popular connectors are shown in bold face type.

Cap and Chain required is **75-CCC1.**

M Male. **F** Female.

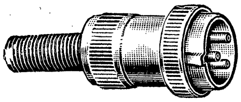
Series 91 Microphone Connectors—3 and 4 Contacts

Extensively used on all types of portable apparatus, these connectors were designed primarily to use with microphones. Some of the advantages of Amphenol Microphone Connectors . . .

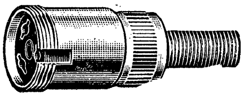
- Accidental disconnections are eliminated by a positive screw-type connection.
- Incorrect insertions are impossible because connectors are polarized.
- Pulling and twisting strain on soldered contacts is eliminated because a squeeze-type clamp grips cable securely after assembly.

Chassis receptacles mount in 27/32″ chassis holes. Maximum chassis thickness for chassis receptacle is 1/8″.

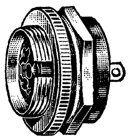
Mating families of connectors are listed in horizontal lines.



91-MC3M



91-MC3F

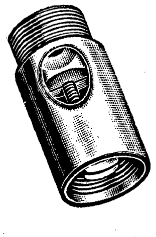


91-PC3F

Plugs	Contacts	List	Cable Jacks	Contacts	List	Chassis Receptacles	Contacts	List
THREE CONTACTS								
91-MC3M	**M**	**$1.10**	**91-MC3F**	**F**	**$1.10**	**91-PC3F**	**F**	**$ .55**
91-MC3F1	F	1.10	91-MC3M1	M	1.10	91-PC3M	M	.55
FOUR CONTACTS								
91-MC4M1	**M**	**1.20**	**91-MC4F**	**F**	**1.20**	**91-PC4F**	**F**	**.60**
91-MC4F1	F	1 20	91-MC4M1	M	1.20	91-PC4M	M	.60

M Male. **F** Female. The most popular connectors are shown in bold face type.

Side Cable Outlet



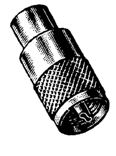
Provide an outlet for microphone cable where it is not practical to run the cable thru the stand. For use between microphones and stands having 5/8-27 threads.
91-SCO3.........**List $. 82**

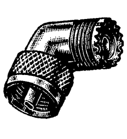
Cap and Chain

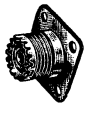
For 91 Series Connectors. Same construction and material as No. 75-CCC1.
No. 91-CCC3........................**List $ .55**

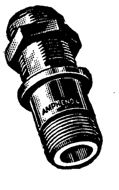
Amphenol Radio Frequency Connectors

Amphenol low-loss RF Connectors, Adapters and Terminations have been especially designed for use with RG/U type Coax and Twinax. There is an Amphenol connector for every RF application.


83-1SP


83-1AP


83-1R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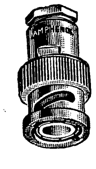
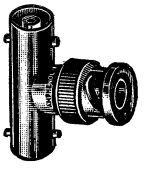

31-002

Military No.	Amphenol No.	Description	Class	List Each
UG-18B/U	82-86	Plug	N	$3.25
UG-19B/U	82-87	Panel Jack	N	3.75
UG-20B/U	82-88	Jack	N	3.25
UG-21B/U	82-61	Plug	N	3.00
UG-21C/U	82-96	Plug	N	3.50
UG-22B/U	82-62	Panel Jack	N	3.50
UG-22C/U	82-95	Panel Jack	N	4.00
UG-23B/U	82-63	Jack	N	3.00
UG-23C/U	82-94	Jack	N	3.50
UG-27A/U	82-64	Angle Adapter	N	7.00
UG-27B/U	82-98	Angle Adapter	N	6.00
UG-28A/U	82-99	"T" Adapter	N	7.50
UG-29A/U	82-65	Straight Adapter	N	3.25
UG-29B/U	82-101	Straight Adapter	N	3.75
UG-30/U	82-66	Feed-Through, Pressurized	N	4.00
UG-57B/U	82-100	Straight Adapter	N	5.00
UG-58/U	82-24	Receptacle	N	2.25
UG-58A/U	82-97	Receptacle	N	2.50
UG-59A/U	82-38	Plug	HN	5.50
UG-59B/U	82-804	Plug	HN	7.25
UG-60A/U	82-39	Jack	HN	3.75
UG-60B/U	82-814	Jack	HN	22.00
UG-61A/U	82-40	Jack	HN	4.25
UG-61B/U	82-815	Jack	HN	23.00
UG-85/U	82-21	Plug	BN	3.60
UG-87/U	82-42	Receptacle	BN	3.25
UG-88/U	31-002	Plug	BNC	3.25
UG-88B/U	31-018	Plug	BNC	3.50
UG-89/U	31-005	Jack	BNC	3.00
UG-89A/U	31-019	Jack	BNC	3.25
UG-94A/U	82-84	Plug	N	3.25
UG-95A/U	82-89	Jack	N	3.25
UG-96A/U	82-90	Panel Jack	N	3.75
UG-102/U	83-22SP	Plug, Sm. Twin	UHF	1.50
UG-103/U	83-22R	Receptacle, Sm. Twin	UHF	1.50
UG-104/U	83-22AP	Angle Adapter, Small Twin	UHF	3.00
UG-105/U	83-22J	Junction, Small Twin	UHF	2.50
UG-106/U	83-1H	Hood	UHF	.25
UG-107A/U	82-36	"T" Adapter	N	7.50
UG-107B/U	82-102	"T" Adapter	N	7.50
UG-111/U	83-750	Plug for small cable	UHF	1.25
UG-114/U	82-25	Panel Jack	BN	3.75
UG-115/U	82-26	Jack	BN	3.35
UG-154/U	82-59	Plug	LC	15.00
UG-159A/U	82-103	Jack	N	6.00
UG-160A/U	82-67	Jack	N	3.25
UG-160B/U	82-93	Jack	N	3.75
UG-167A/U	82-104	Plug	N	14.00
UG-175/U	83-185	Adapter	UHF	.25
UG-176/U	83-168	Adapter	UHF	.25
UG-177/U	83-765	Hood	UHF	.40
UG-196/U	83-22T	"T" Adapter	UHF	3.25
UG-203/U	83-776	Plug	UHF	1.75
UG-204A/U	82-105	Plug	N	7.50
UG-206/U	31-101	Receptacle	BN	3.48
UG-212A/U	82-91	Right Angle Adapter	HN	6.00
UG-254A/U	31-016	Receptacle, Pressurized	BNC	5.50
UG-260/U	31-012	Plug, Weatherproof	BNC	3.00
UG-260A/U	31-021	Plug, Weatherproof	BNC	3.25
UG-261/U	31-015	Jack, Weatherproof	BNC	2.75
UG-261A/U	31-022	Jack, Weatherproof	BNC	3.00
UG-262/U	31-011	Panel Jack, Weatherproof	BNC	3.25
UG-262A/U	31-023	Panel Jack, Weatherproof	BNC	3.50
UG-274/U	31-008	"T" Adapter	BNC	7.50
UG-290/U	31-003	Receptacle	BNC	3.00
UG-291/U	31-001	Panel Jack	BNC	3.50
UG-291A/U	31-020	Panel Jack	BNC	3.75
UG-306/U	31-009	Right Angle Adapter	BNC	7.25
UG-333/U	82-56	Jack	HN	8.50
UG-333A/U	82-107	Jack	HN	8.50
UG-334/U	82-57	Panel Jack	HN	9.75
UG-334A/U	82-108	Panel Jack	HN	9.00

Military No.	Amphenol No.	Description	Class	List Each
UG-352/U	82-80	Receptacle	LC	$12.00
UG-357/U	83-21R	Receptacle	UHF	2.50
UG-358/U	83-21SP	Plug	UHF	4.50
UG-359/U	83-21AP	Right Angle Adapter	UHF	5.50
UG-360/U	83-21J	Junction	UHF	2.75
UG-363/U	83-1F	Feed-Through, Pressurized	UHF	2.50
UG-447/U	31-817	Receptacle	BNC	3.89
UG-496/U	82-92	Receptacle	HN	3.75
UG-560/U	82-805	Receptacle	HN	7.00
UG-564/U	82-508	Adapter	C	4.85
UG-565/U	82-509	Adapter	C	6.75
UG-566/U	82-507	"T" Adapter	C	10.00
UG-567/U	82-506	Right Angle Adapter	C	10.00
UG-568/U	82-504	Receptacle	C	3.80
UG-569/U	82-505	Receptacle	C	5.00
UG-570/U	82-502	Jack	C	5.50
UG-571/U	82-501	Panel Jack	C	4.50
UG-572/U	82-503	Jack	C	4.50
UG-573/U	82-500	Plug	C	5.50
UG-574/U	82-85	Plug	N	5.50
UG-575/U	82-83	Receptacle	N	5.00
UG-646/U	83-1AP	Right Angle Adapter	UHF	2.00
UG-657/U	31-102	Receptacle, Pressurized	BNC	3.48
CW-123/U	31-006	Cap and Chain	BNC	1.15
CW-155/U	31-007	Cap, less Chain	BNC	1.00
CW-159/U	31-017	Shorting Plug with Chain	BNC	1.80
MX-103/U	103-301	Tapering Tool	HN	16.50
MX-564/U	82-48	Armor Clamp	N	.75
MX-564A/U	82-109	Armor Clamp	N	1.80
MX-913/U	82-106	Cap and Chain	N	1.25
49190	83-1SP	Plug	UHF	1.00
49191	83-1J	Junction	UHF	1.50
49192	83-1AP	Right Angle Adapter	UHF	2.00
49192A	83-58	Right Angle Adapter	UHF	3.00
49193	83-1H	Receptacle Hood	UHF	.25
49194	83-1R	Receptacle	UHF	1.10
49195	83-1SPN	Plug	UHF	1.50
49198	83-2AP	Right Angle Adapter	UHF	6.00
49199	83-1T	"T" Adapter	UHF	2.70
49267	82-64	Right Angle Adapter	N	7.00
49470	82-24	Receptacle	N	2.25
49482	83-776	Plug	UHF	1.75
491049	83-1F	Feed-Through, Pressurized	UHF	2.50
PL-258	83-1J	Junction	UHF	1.50
PL-259	83-1SP	Plug	UHF	1.00
PL-259A	83-1SPN	Plug	UHF	1.50
PL-274	83-1F	Feed-Through, Pressurized	UHF	2.50
PL-275	83-22F	Feed-Through, Pressurized	UHF	3.50
PL-284	83-22SP	Plug, Sm. Twin	UHF	1.50
PL-285	83-22J	Junction, Sm. Twin	UHF	2.50
PL-293	83-22AP	Right Angle Adapter, Small Twin	UHF	3.00
PL-295	83-2SP	Plug, Large Twin	UHF	3.88
PL-305	83-2J	Junction, Large Twin	UHF	2.94
PL-325	83-2AP	Right Angle Adapter, Large Twin	UHF	6.00
SO-239	83-1R	Receptacle	UHF	1.10
SO-264	83-22R	Receptacle, Small Twin	UHF	1.50
SO-265	83-2R	Receptacle, Large Twin	UHF	2.97
M-358	83-1T	"T" Adapter	UHF	2.70
M-359	83-1AP	Right Angle Adapter	UHF	2.00
M-359A	83-58	Right Angle Adapter	UHF	3.00
M-360	83-1H	Receptacle Hood	UHF	.25
M-365	83-2H	Receptacle Hood, Large Twin	UHF	.49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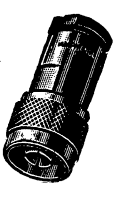
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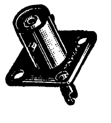
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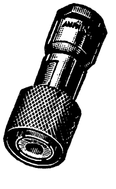
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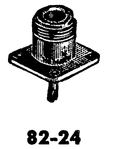
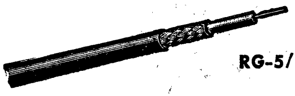
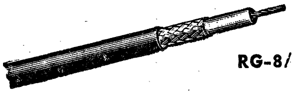
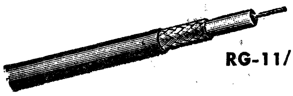
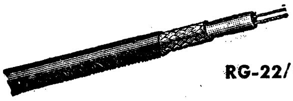

82-24

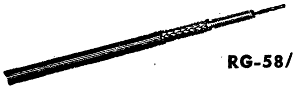
Amphenol Coax and Twinax RG Cables

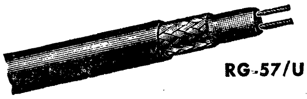

RG-5/U


RG-8/U


RG-11/U


RG-22/U


RG-58/U


RG-57/U

Amphenol Coaxial and Twinax RG Cables are produced to standards surpassing military specifications for electrical performance and mechanical excellence. Conductors are centered 20% closer for Coax and 50% closer for Twinax Cables than required by "AN" specifications.

Most cables utilize the exceptional dielectric properties of polyethylene—low loss, flexibility, mechanical stability. The outer jacket in the majority of approved types is a tough, highly resistant vinyl jacket which is non-hygroscopic and impervious to most acids, alkalies, oils and gasoline. Other types are armored for still greater mechanical protection.

Amphenol has cables that are designed to operate efficiently at temperatures as high as 500° Fahrenheit. Teflon is used as the dielectric because of its low loss, high voltage breakdown and its ability to withstand heat.

Characteristics

	Polyethylene	Teflon
Specific Gravity	.92	2.2
Water Absorption	.005%	0.00%
Cold-Brittleness	-94°F.	-100°F.
Dielectric Constant 60 cycles to 100 mc	2.29	2.0
Power Factor 60 cycles to 100 mc	.0004	.0002
Volume Resistivity, ohm-cm	1013	1016
Softening Temperature	220°F.	500°F.

Write Your Distributor For Prices Which Are Based On Reel Lengths

Legend

CW—Copperweld
S—Silvered Copper
T—Tinned Copper
C—Copper
Poly—Polyethylene
SS Poly—Semi-solid Polyethylene
Armor—Armored Cable

Velocity of Propagation

Dielectric Material	
Solid Polyethylene	65.9%
Semi-Solid Polyethylene	84.0%
Teflon	69.5%

STANDARD JACKET		LOW TEMP. BLACK JACKET		NOM. IMP. OHMS	NOM. CAP. MMF/FT	INNER CONDUCTOR	DIELECTRIC NOM. O. D.	DIELECTRIC MATERIAL	INNER SHIELD	OUTER SHIELD	STANDARD VINYL	NOM. O. D.
A-N NUMBER RG-/U	AMPHENOL NUMBER	A-N NUMBER RG-/U	AMPHENOL NUMBER									
5	21-001			52.5	28.5	16	.185	Poly	C	C	Black	.332
5A	21-271	5B	21-294	50	29	16S	.181	Poly	S	S	Grey	.328
6	21-002	6A	21-330	76	20	21CW	.185	Poly	S	C	Grey	.332
7	21-003			97	12.5	19	.250	Poly	C	—	Black	.370
8	21-004	8A	21-290	52	29.5	7/21	.285	Poly	C	—	Black	.405
9	21-005			51	30	7/21S	.280	Poly	S	C	Grey	.420
9A	21-231	9B	21-332	51	30	7/21S	.280	Poly	S	S	Grey	.420
10	21-006	10A	21-338	52	29.5	7/21	.285	Poly	C	—	Grey	.475
11	21-007	11A	21-296	75	20.5	7/26T	.285	Poly	C	—	Black	.405
12	21-008	12A	21-340	75	20.5	7/26T	.285	Poly	C	—	Grey	.475
13	21-009	13A	21-334	74	20.5	7/26T	.280	Poly	C	C	Black	.420
14	21-010	14A	21-336	52	29.5	10	.370	Poly	C	C	Grey	.545
15	21-011			76	20	15CW	.370	Poly	C	C	Black	.545
17	21-013	17A	21-298	52	29.5	.188	.680	Poly	C	—	Grey	.870
18	21-014	18A	21-300	52	29.5	.188	.680	Poly	C	—	Grey	.945
19	21-015	19A	21-303	52	29.5	.250	.910	Poly	C	—	Grey	1.120
20	21-016	20A	21-305	52	29.5	.250	.910	Poly	C	—	Grey	1.195
21	21-017	21A	21-308	53	29	16N	.185	Poly	S	S	Grey	.332
22	21-038			95	16	Two 7/.0152	.285	Poly	T	—	Black	.405
22A	21-148	22B	21-310	95	16	Two 7/.0152	.285	Poly	T	T	Grey	.420
29	21-018			53.5	28.5	20	.116	Poly	T	—	Poly	.184
34	21-019	34A	21-429	71	21.5	7/21	.455	Poly	C	—	Black	.625
35	21-020	35A	21-311	71	21.5	9	.680	Poly	C	—	Grey	.945
42	21-021			78	20	21N	.196	Poly	S	S	Grey	.342
54A	21-022			58	26.5	7/.0152	.178	Poly	T	—	Poly	.250
55	21-023			53.5	28.5	20	.116	Poly	T	T	Poly	.206
57	21-039	57A	21-313	95	17	Two 7/21	.472	Poly	T	—	Black	.625
58	21-024			53.5	28.5	20	.116	Poly	T	—	Black	.195
58A	21-199	58C	21-316	50	29	19/.0068	.116	Poly	T	—	Black	.195
59	21-025	59A	21-291	73	21	22CW	.146	Poly	C	—	Black	.242
62	21-026	62A	21-318	93	13.5	22CW	.146	SS Poly	C	—	Black	.242
63	21-027	63B	21-320	125	10	22CW	.285	SS Poly	C	—	Black	.405
71	21-029			93	13.5	22CW	.146	SS Poly	T	T	Poly	.250
74	21-041	74A	21-321	52	29.5	10	.370	Poly	C	C	Grey	.615
79	21-070	79B	21-325	125	10	22CW	.285	SS Poly	C	—	Black	.475
83	21-180			35	44	10	.240	Poly	C	—	Black	.405
87A	21-250			50	29.5	7/20S	.280	Teflon	S	S	Fiberglas	.425
89	21-253			125	10	22CW	.285	SS Poly	C	—	Black	.632
108	21-261	108A	21-327	76		Two 7/28	.073 Ea.	Poly	T	—	Black	.230
111	21-255	111A	21-329	95	16	Two 7/.0152	.285	Poly	T	T	Grey	.490
116	21-378			50	30	7/20S	.280	Teflon	S	S	Fiberglas	.475
117	21-377			50	29	.188	.620	Teflon	C	—	Fiberglas	.730
118	21-374			50	29	.188	.620	Teflon	C	—	Fiberglas	.780
119	21-398			50	29	10	.328	Teflon	C	C	Fiberglas	.465
120	21-399			50	29	10	.328	Teflon	C	C	Fiberglas	.515
	21-125			71	21.5	9	.680	Poly	C	—	Grey	.870
	21-388			50	29	15S	.185	Teflon	S	S	Fiberglas	.332
	21-391			72	21	7/25S	.280	Teflon	S	—	Fiberglas	.405
	21-385			50	29	19S	.116	Teflon	S	S	Fiberglas	.206
	21-382			50	29	19S	.116	Teflon	S	—	Fiberglas	.195
	21-379			73	21	21S	.146	Teflon	S	—	Fiberglas	.241

LOW LOSS PLASTICS

POLYWELD 912
COIL DOPE

Amphenol Polyweld "912" is pure polystyrene in solution. Use as coil dope or to weld polystyrene pieces together. Will not disturb circuit constants.

No. 53-912-2	2-oz. bottle	**List $ .50**
No. 53-912-4	4-oz. bottle	**List .65**
No. 53-916-2T	2-oz. bottle Thinner	**List .25**
No. 53-916-4T	4-oz. bottle Thinner	**List .35**

307
SILICONE
COMPOUND

Amphenol 53-307 Silicone Compound causes surface moisture to break up into isolated drops. Prevents formation of moisture film with attendant impedance change. Effective up to 400°C. In one-ounce tube.

53-307 Silicone Compound....**List $2.00**

24-5P

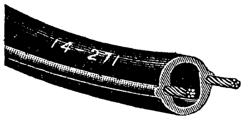
24-6H

24

Coil Forms for receivers and low powered transmitters in the RF and UHF range.

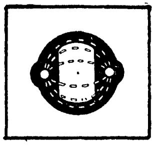
No.	Description	List
24-4P	1¼″ OD, 2¼″ long, fits standard tube sockets, 4 prong	**$ .40**
24-5P	Same except 5 prong	**.40**
24-6P	Same except 6 prong	**.40**
24-6H	Use with 78S6S socket, ¾″ OD, 6 prong	**.40**
24-5H	Same except 5 prong	**.40**
24	Miniature, ¾″ OD, 1$\frac{9}{16}$″ long, raised hole in center of base for self-tapping screw	**.15**

14-271 Tubular Twin Lead

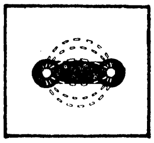


U.S. Patent No. 2543696

Amphenol's Tubular Twin-Lead is unequalled as an economical, low-loss lead-in for UHF television. This low-loss characteristic also makes it the ideal lead-in for fringe areas and installations requiring long lengths of lead-in.

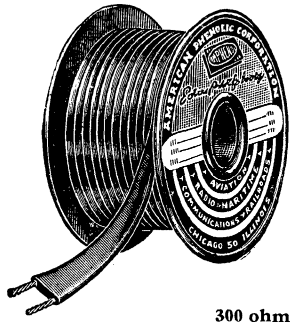


This illustration shows the concentrated field of energy between the two conductors, largely protected by the protective canopy of virgin brown polyethylene. This field of energy is almost entirely unaffected by any exterior condition.

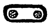


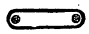
The field of energy in ordinary flat twin-lead is largely outside and exposed to all weather conditions. Under adverse conditions, the signal loss of flat lead-in will run as much as three times the loss of Tubular Twin-Lead under identical conditions.

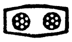
		List Per 1000 ft.
300 ohm Twin-lead		
14-271	(500) Reels of 500 feet	$70.75
14-271	(1000) Reels of 1000 feet	$68.00

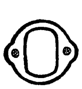


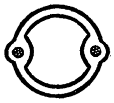
14-080

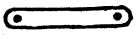

14-079


14-056


14-023


14-271


14-076


14-022

Twin-Lead Transmission Lines

The use of brown pigmented polyethylene dielectric assures minimum RF loss and a more constant impedance over the exceptionally long life of Amphenol Twin-Lead. This remarkable material remains flexible at — 70°C., repels water and is unaffected by acids, alkalies and oils.

Receiving Twin-Lead

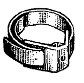
	List Per 1000 ft.
300 ohm Twin-Lead for FM and TV Antennas	
14-056 (500) & (1000) Brown polyethylene	$32.00
150 ohm Twin-Lead for experimental work	
14-079 Reels of 1000 feet	$26.50
75 ohm Twin-Lead for lower impedance applications	
14-080 Reels of 1000 feet	$23.50

Amateur Transmitting and Copper Clad Types of Twin-Lead

75 ohm Twin-Lead for transmitting, rated 1 KW RF power	
14-023 Reels of 1000 feet	$82.25
300 ohm Tubular Twin-Lead rated 1 KW RF power	
14-076* Reels of 1000 feet	
300 ohm Extra-Strength Twin-Lead with copper clad conductors	
14-022 Reels of 1000 feet	$72.25

*Temporarily Withdrawn from Production

Universal Mast Clamp

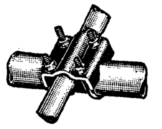


Wrap-around mast clamp for Stand-off Insulator. Will fit any mast with O.D. from .900″ to 1.660″. Complete with 66-204 Screw-Eye Insulator for Twin-Lead Transmission Lines.

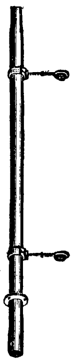
No. 114-490		**List $ .30**
No. 114-492	Same less insulator	**List .20**

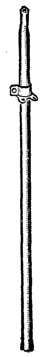
Universal Mounting Clamp

Will accommodate mast sizes of 1″ to 1½″ O.D. which includes 1″ water pipe as well as ¾″ to 1¼″ electrical conduit. Two U bolts and channeled plate establish and maintain perfect right angle alignment. Stress to horizontal member is spread over entire length of clamp, thus preventing distortion and buckling.



No. 114-500	**List $ .55**





Antenna Mast Extensions

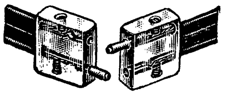
Television Mast Extension for 114-302 two bay television antenna and other 1-1/4″ diameter antenna masts. Consists of 5 foot length of 1-1/4″ diameter alloy steel tubing, guy ring and two clamp type stand-off insulators.

114-291	**List ea. $3.00**

FM and Television Mast Extension for all Amphenol FM and Television antennas except the two bay antenna which requires the mast extension listed above. Consists of 5 foot length 3/4″ steel conduit and guy wire clamp.

114-300	**List ea. $3.00**

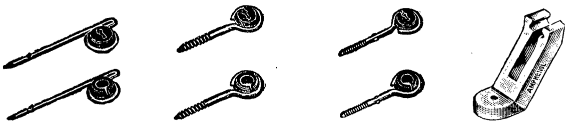
Twin-Lead Connector



Solderless, low-loss twin-lead splice without impedance change. Design prevents reversal of lead. Use in pairs.

80-850	**List Each $ .25**

Stand-Off Insulators

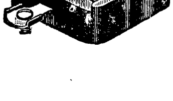


Polyethylene Inserts

Twin-Lead Types for 14-056, 14-079 and 14-080		**List per 100**
Wood Screws No. 14 Thd.		
66-202	3″ length	**$4.45**
66-209	7½″ length	**7.64**
Mach. Screws No. 10-32 Thd.		
66-204	3″ length	**$6.11**
66-210	7½″ length	**8.35**
Nail-in		
66-211	3½″ length	**$6.25**
Coax Types, ½″ Max. Cable O. D.		
Wood Screws No. 14 Thd.		
66-201	3″ length	**$5.44**
66-208	7½″ length	**7.94**
Mach. Screws No. 10-32 Thd.		
66-203	3″ length	**$6.42**
Nail-in		
66-212	3½″ length	**$7.11**
Polystyrene Stand-off Insulator for 14-358 Twin-Lead		
66-909	1 5/16″ length	**List Each $.0750**

Lightning Arrestor For Antennas

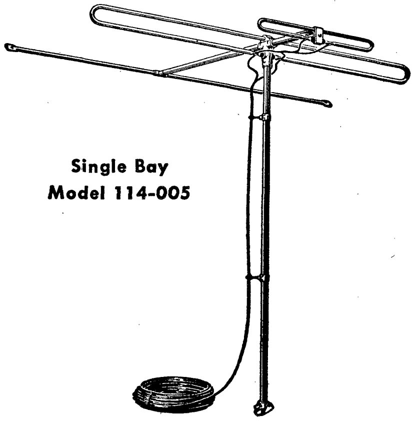
Attaches to 14-056 300 ohm Twin-Lead without cutting the conductors. Designed to meet the requirements of the Underwriters' Laboratories. Molded of high grade electrical phenolic with conducting plate and gap molded in. Precise gap spacing is maintained. Self contained also is a high resistance shunt permanently sealed aginst moisture. Overall dimension 1-7/8″x2″x3/4″.



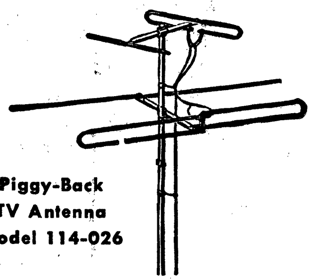
155-338	**List ea. $1.50**

Television Antennas

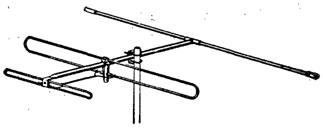
Engineered and perfected in the Amphenol Antenna Development Laboratories, the antennas illustrated and described on this page will provide unsurpassed reception of FM and TV signals. Top-quality materials, rugged construction and the latest in design are incorporated into each Amphenol antenna to provide perfect performance. Each antenna packaged complete with instructions for easy installation.



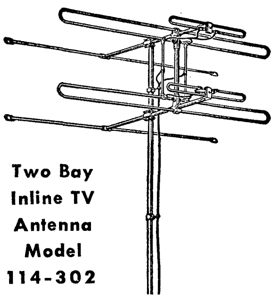
Single Bay
Model 114-005



Piggy-Back
TV Antenna
Model 114-026



Installers Inline
Antenna Kit
Model
114-040



Two Bay
Inline TV
Antenna
Model
114-302

114-005 TELEVISION ANTENNA ARRAY, complete with mast, swivel mounting plate, guy clamp, necessary hardware, stand-off insulators and 75 ft. Amphenol 300 ohm Twin-Lead..**List ea. $19.50**
114-009 Same less transmission line.................................**List ea. 17.00**

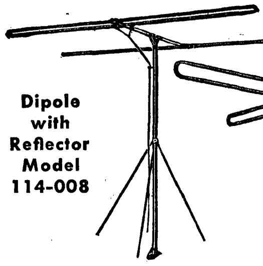
114-301 ADAPTOR KIT for building 114-005 into a Stacked Array includes single bay, connecting rods for symmetrical feed, two box brackets, two 5-foot lengths of 1-1/4" Mast, guy ring and stand-off insulators.............................**List ea. $20.50**

114-302 TWO BAY TV STACKED ARRAY consists of a top and bottom bay, connecting rods, two box brackets, two 5-foot lengths of 1-1/4" mast, guy ring and stand-off insulators. Twin-Lead transmission line is not included............................**List ea. $35.00**

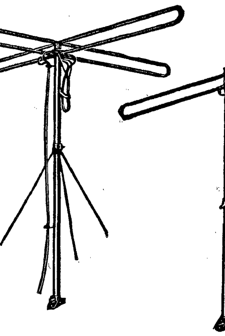
114-322 Same as 114-302 except has 100 ft. 300 ohm Twin-Lead...........**List $38.50**
114-314 Same as 114-302 except has no mast...........................**List 29.00**
114-324 Same as 114-302 except has 100 ft. 300 ohm Twin-Lead and has no mast..**List 32.50**

114-026 PIGGY-BACK TV ANTENNA consists of one folded dipole and reflector for each band which may be oriented individually, phasing leads, guy clamp, stand-off insulators and 75 ft. Amphenol Twin-Lead..............................**List ea. $19.50**
114-029 Same less transmission line.................................**List ea. 17.00**

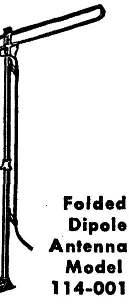
114-040 INSTALLERS INLINE ANTENNA KIT is furnished without mast, twin-lead or stand-off insulators. Shipped with mounting clamp for masts ¾" to 1½" O.D...**List ea. $13.50**



Dipole
with
Reflector
Model
114-008



All-Direction
Double Folded
Dipole Antenna
Model 114-010



Folded
Dipole
Antenna
Model
114-001

FM Antennas

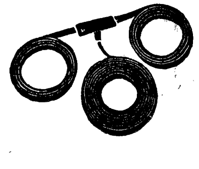
114-008 DELUXE FM FOLDED DIPOLE WITH REFLECTOR, complete with mast, mounting plate, insulators, guy clamp, hardware and 75 ft. Amphenol 300 ohm Twin-Lead................**List ea. $16.25**

114-010 DELUXE FM ALL-DIRECTION DOUBLE FOLDED DIPOLE ANTENNA, complete with quarter-wave phasing stub, mast, mounting plate, guy clamp, hardware, insulators, and 75 ft. Amphenol 300 ohm Twin-Lead..................................**List ea. $16.25**

114-001 FM FOLDED DIPOLE ANTENNA, complete with mast, swivel mounting plate, insulators, guy clamp, necessary hardware and 75 ft. Amphenol 300 ohm Twin-Lead.................**List ea. $12.25**

Folded Dipole Amateur Antenna Set

This Antenna Kit has been designed to meet the need for a simple effective folded dipole antenna system. The kit consists of: 2 lengths of #16 copper-clad steel conductor twin-lead—cut to band length, 1 75-foot length of standard 300 ohm twin-lead for lead-in, 1 high strength laminated "T" block and assembly and installation instructions.

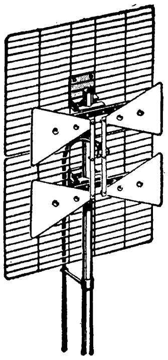


Number	Frequency	Band	Length	List
139-010	28 mc	10 meters	20 feet	**$8.90**
139-020	14 mc	20 meters	36 feet	**10.00**
139-040	7 mc	40 meters	68 feet	**13.00**
139-080	3.5 mc	80 meters	134 feet	**18.75**

TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

UHF TELEVISION ANTENNAS

Because UHF television is so much more critical than VHF television, great care must be taken to insure that each antenna system provides the maximum signal strength available. The selection of an antenna must be governed by the physical environment, distance from the transmitter, the number and the channels of available stations, etc. The Amphenol line of UHF antennas has been designed to make available a variety of antennas and accessories that will permit customizing each antenna system to the immediate installation.

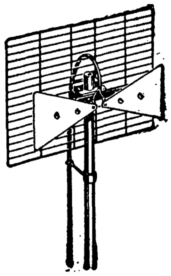


Two Model 114-065 BO-TY Antennas Stacked for Greater Gain

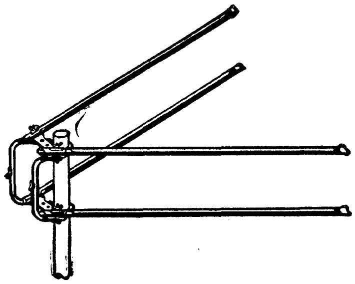
114-065 BO-TY BROADBAND ANTENNA

The 114-065 BO-TY with Reflector is an inexpensive, quality antenna designed to receive all UHF channels from 14 to 83. The antenna and the reflector are pre-assembled at the factory and packaged as a single unit. It is intended for use in major signal areas and has a uni-directional reception pattern with moderately high gain on all the UHF channels. Each 114-065 is shipped with one Stacking Rod. When a stacked array is desired for added gain, it is necessary to have only two 114-065 BO-TYs and to utilize the two Stacking Rods furnished.

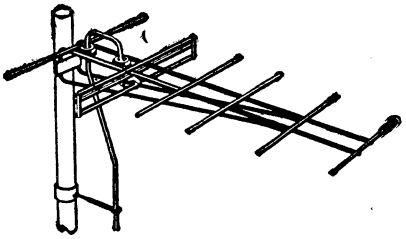
Write for price information



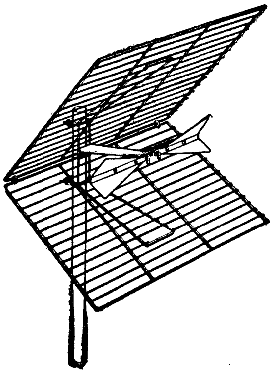
Model 114-065 Single Bay BO-TY with Reflector



Model 114-059 Stacked-V



Model 114-054 Yagi Antenna



Model 114-058 Corner Reflector

Model 114-054 Yagi UHF Antenna is designed for high gain on specific channels. Specify the channel when ordering. Write for price information.

Model 114-058 Corner Reflector is a broadband antenna designed to incorporate great mechanical strength with high gain on all the UHF channels. Write for price information.

Model 114-059 Stacked-V is intended for VHF-UHF locations. It has excellent gain in the UHF spectrum and moderate gain in the VHF spectrum. Write for price information.

SELF-LOCKING CONNECTORS

HUBBELL *Interlock*

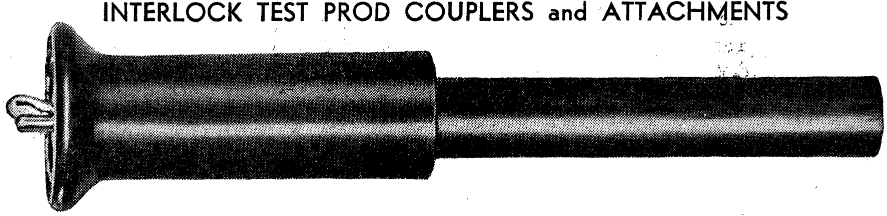
TRADE-MARK

A *NEW* SELF-LOCKING ELECTRICAL CONNECTOR

"As reliable as an unbroken wire"

LOCK AUTOMATICALLY VIBRATION and PULL PROOF CONSTANT LOW RESISTANCE

INTERLOCK TEST PROD COUPLERS and ATTACHMENTS



702S11—BLACK TEST PROD COUPLER (less wires) PRICE — $140.00 per C
703S11—RED TEST PROD COUPLER (less wires) PRICE — $140.00 per C

Hubbell Interlock Test Prod Couplers and Attachments with new locking action — permit an easy and simple change from one type of attachment to another. Automatically locked — instantly released. As quick as a snap of your fingers. Parts sold separately or as a unit.

TEST PROD KIT

5000 VOLTS

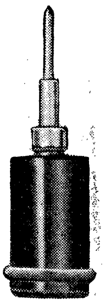
The complete Test Prod Kit includes one red and one black set of the following attachments:

- Phone Tip
- Phono Needle
- Alligator Clip
- Spade Terminal

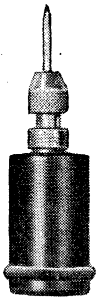
Also included in the Kit is one Test Prod Coupler in red and one in black each wired with four feet of test lead wire. Each kit individually packed.

700S90 (one complete kit)
Price $10.00 ea. List

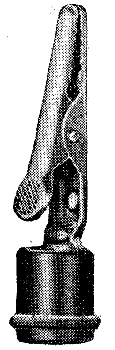
INTERCHANGEABLE ATTACHMENTS



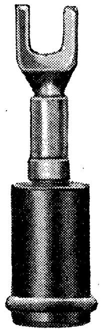
PHONE TIP
704S29—Black
Price, $55.00 per C
705S29—Red
Price, $55.00 per C



PHONO NEEDLE
706S29—Black
Price, $66.00 per C
707S29—Red
Price, $66.00 per C



ALLIGATOR CLIP
708S29—Black
Price, $80.00 per C
709S29—Red
Price, $80.00 per C

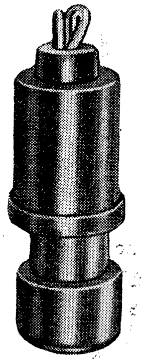


SPADE TERMINAL
710S29—Black
Price, $78.00 per C
711S29—Red
Price, $78.00 per C

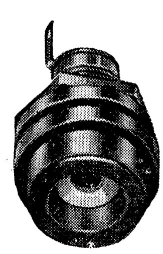
INTERLOCK TYPE "S" SLIDE STANDARD PLUGS and JACKS

15 AMPERE CAPACITY

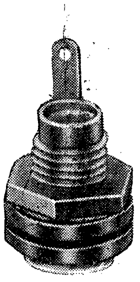
CONTACT PRESSURE 28 OZ.—
PULL OUT 150 LBS.—CONTACT
POINTS SILVER PLATED



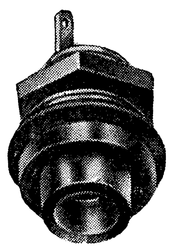
PLASTIC PLUG
(With spring terminal wire connection)
716S19—Black
Price, $90.00 per C
717S19—Red
Price, $90.00 per C



PLASTIC ENTRY JACK
712S21—Black
Price, $76.00 per C
713S21—Red
Price, $76.00 per C



METAL ENTRY JACK
(Insulating washers)
714S21—Black
Price, $74.00 per C
715S21—Red
Price, $74.00 per C



PLASTIC JACK
(Waterproof)
718S21—Black
Price, $90.00 per C
719S21—Red
Price, $90.00 per C

For additional information or assistance from Hubbell Representatives in your area write to Harvey Hubbell, Inc., Interlock Department, Bridgeport 2, Connecticut.

Terminal strips are available for Type "A" Hook Standard and Type "B" Hook Miniature lines listed on the opposite page.

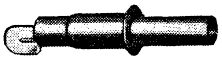
HARVEY HUBBELL, INC. BRIDGEPORT, CONN., U.S.A.

THE ABOVE PROVISIONAL LIST PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

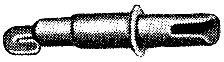
HUBBELL SELF-LOCKING CONNECTORS *Interlock* TRADE-MARK

INTERLOCK TYPE "A" HOOK STANDARD CONNECTORS and ACCESSORIES

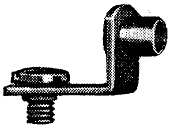
10 AMPERE CAPACITY — CONTACT PRESSURE 24 OZ.



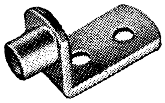
101A30 STRAIGHT PLUG
(Crimping terminal)
PRICE .... $22.50 per C



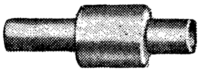
124A31 STRAIGHT PLUG
(Solder terminal)
PRICE .... $22.50 per C



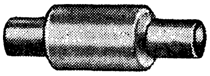
116A43 JACK
(Screw terminal)
PRICE .... $21.50 per C



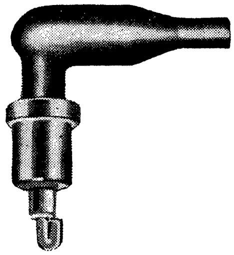
117A49 JACK
(Terminal Post adaptor)
PRICE .... $19.00 per C



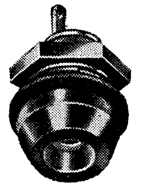
109A40 CONNECTOR
(Crimping terminal)
PRICE .... $21.00 per C



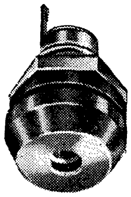
110A49 SPLICING LINK
PRICE .... $21.00 per C



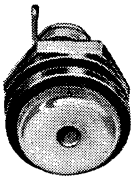
102A19—BLACK
103A19—RED
Plastic and Rubber angle plug, with 4 ft. rubber covered wire.
PRICE .... $170.00 per C



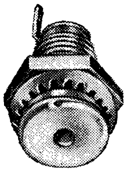
126A21—BLACK
127A21—RED
PLASTIC JACK
(Waterproof, solder terminal)
PRICE .... $90.00 per C



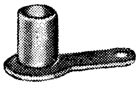
112A21—BLACK
113A21—RED
PLASTIC ENTRY JACK
(Solder terminal)
PRICE .... $76.00 per C



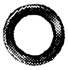
114A21 BLACK
115A21 RED
Metal
ENTRY JACK
$74.00 per C



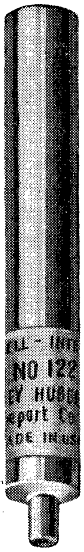
118A41
Metal
ENTRY JACK
(no insulating washers)
$74.00 per C



111A41
EYELET
PANEL JACK
(Solder terminal)
$3.55 per C



123A99
Eyelet Spacing
WASHER
(For eyelet Jack)
$1.05 per C



122A91
EYELET SETTING
PUNCH

PRICE $1.25 ea. Net

This punch may be used in a press or with a hammer, to mount 111A41 Jacks in insulated boards or strips.

Instructions:

1. Prepare insulated panel with .200 inch dia. holes. Normally use 7/16 inch center to center. For higher voltage increase spacing center to center.

2. Assemble correct number of washers to Jack. See chart below.

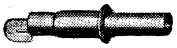
3. Insert assembly through hole with lug on underside.

4. "Set" Jack with punch.

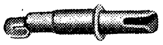
Panel Thickness	Washers Needed
.218	None
.187	1
.156	2
.125	3
.093	4
.062	5

INTERLOCK TYPE "B" HOOK MINIATURE CONNECTORS and ACCESSORIES

5 AMPERE CAPACITY — CONTACT PRESSURE 10 OZ.

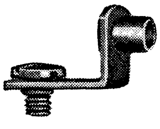


401B30 STRAIGHT PLUG
(Crimping terminal)
PRICE .... $19.00 per C

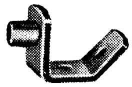


424B31 STRAIGHT PLUG
(Solder terminal)
PRICE .... $19.00 per C

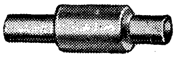
404B93 rubber cover for
401B30 & 424B31
PRICE .... $20.00 per C



409B43 JACK
(Screw terminal)
PRICE .... $16.00 per C

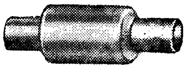


410B41 JACK
(Solder terminal)
PRICE .... $14.50 per C

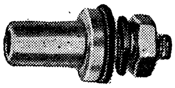


411B40 CONNECTOR
(Crimping terminal)
PRICE .... $12.00 per C

405B93 rubber cover for
411B40
PRICE .... $20.00 per C



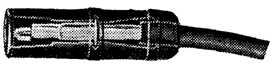
413B49—SPLICING LINK
PRICE .... $19.00 per C



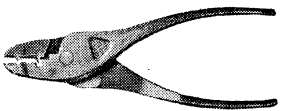
415B49 METAL PANEL JACK
PRICE .... $47.00 per C

414B41
Eyelet Panel
JACK
$3.35 per C

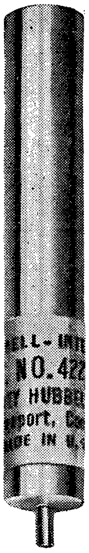
423B99
EYELET
(spacing washer)
$.90 per C



416B93 RUBBER COVER
For use with type B Plugs.
PRICE .... $20.00 per C



121Y91 INTERLOCK PLIERS
For use on crimping terminals of "A" and "B" Plugs.
PRICE .... $3.00 ea. Net



422B91
EYELET SETTING
PUNCH

PRICE $1.25 ea. Net
This punch may be used in a press or with a hammer, to mount 414B41 Jacks in insulated boards or strips.

Instructions:

1. Prepare insulated panel with .120 inch dia. holes. Normally use 5/16 inch center to center. For higher voltage increase spacing center to center.
2. Assemble correct number of washers to Jack. See chart below.
3. Insert assembly through hole with lug on underside.
4.. "Set" Jack with punch.

Panel Thickness	Washers Needed
.187	None
.171	1
.156	2
.140	3
.125	4
.109	5
.093	6
.078	7
.062	8

HARVEY HUBBELL, INC BRIDGEPORT, CONN., U.S.A.

THE ABOVE PROVISIONAL LIST PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

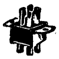
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

"300" SERIES PLUGS AND SOCKETS
General Specifications

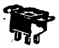
2 Contacts to 33 Contacts. All plugs and sockets are polarized.
2 Contact Plugs and Sockets are round, others rectangular.
Plugs of one size cannot fit into sockets of another size.
Phosphor bronze "knife-switch" type socket contacts engage both sides of flat plug contacts—double contact area.
Molded Bakelite insulation.
Formed metal caps. Formed fibre linings in caps.
Small size, with good separation between contacts.
Plug or socket for panel mounting.
Plug or socket with cap.
Simple, fool-proof assembly.
Finish on caps—Black Crystal.
Plug prongs—$\frac{5}{32}$" wide by $\frac{3}{64}$" thick.
Rated voltage—730 volts RMS.
Current capacity—10 amperes.
Contact resistance—.002 ohms average.

Plug with Angle Brackets


P304AB

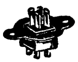
No.	Contacts	Ea.
P-302-AB	(2)	$ .25
P-303-AB	(3)	.31
P-304-AB	(4)	.35
P-306-AB	(6)	.43
P-308-AB	(8)	.50
P-310-AB	(10)	.57
P-312-AB	(12)	.64

Socket with Angle Brackets


S304AB

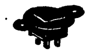
No.	Contacts	Ea.
S-302-AB	(2)	$ .28
S-303-AB	(3)	.33
S-304-AB	(4)	.37
S-306-AB	(6)	.46
S-308-AB	(8)	.57
S-310-AB	(10)	.68
S-312-AB	(12)	.79

Plug with Flush Plate


P304FP

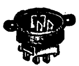
No.	Contacts	Ea.
P-302-FP	(2)	$ .44
P-303-FP	(3)	.48
P-304-FP	(4)	.53
P-306-FP	(6)	.59
P-308-FP	(8)	.67
P-310-FP	(10)	.74
P-312-FP	(12)	.81

Socket with Flush Plate


S304FP

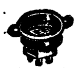
No.	Contacts	Ea.
S-302-FP	(2)	$ .45
S-303-FP	(3)	.50
S-304-FP	(4)	.55
S-306-FP	(6)	.63
S-308-FP	(8)	.74
S-310-FP	(10)	.85
S-312-FP	(12)	.96

Plug with Recessed Plate


P304RP

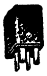
No.	Contacts	Ea.
P-302-RP	(2)	$ .51
P-303-RP	(3)	.56
P-304-RP	(4)	.61
P-306-RP	(6)	.69
P-308-RP	(8)	.80
P-310-RP	(10)	.91
P-312-RP	(12)	1.01

Socket with Recessed Plate


S304RP

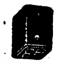
No.	Contacts	Ea.
S-302-RP	(2)	$ .53
S-303-RP	(3)	.58
S-304-RP	(4)	.63
S-306-RP	(6)	.75
S-308-RP	(8)	.88
S-310-RP	(10)	1.01
S-312-RP	(12)	1.16

Plug, Flared Hole in Cap


P304FHT

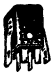
No.	Contacts	Ea.
P-302-FHT	(2)	$ .43
P-303-FHT	(3)	.47
P-304-FHT	(4)	.52
P-306-FHT	(6)	.59
P-308-FHT	(8)	.67
P-310-FHT	(10)	.76
P-312-FHT	(12)	.86

Socket, Flared Hole in Cap


S304FHT

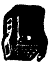
No.	Contacts	Ea.
S-302-FHT	(2)	$ .44
S-303-FHT	(3)	.48
S-304-FHT	(4)	.53
S-306-FHT	(6)	.63
S-308-FHT	(8)	.75
S-310-FHT	(10)	.87
S-312-FHT	(12)	.99

Plug, Flared Hole in Cap and with Latches


P304FHT-L

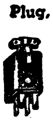
No.	Contacts	Ea.
P-302-FHT-L	(2)	$ .58
P-303-FHT-L	(3)	.63
P-304-FHT-L	(4)	.68
P-306-FHT-L	(6)	.75
P-308-FHT-L	(8)	.83
P-310-FHT-L	(10)	.92
P-312-FHT-L	(12)	1.01

Socket, Flared Hole in Cap and with Keepers


S304FHT-K

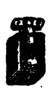
No.	Contacts	Ea.
S-302-FHT-K	(2)	$ .59
S-303-FHT-K	(3)	.64
S-304-FHT-K	(4)	.69
S-306-FHT-K	(6)	.79
S-308-FHT-K	(8)	.91
S-310-FHT-K	(10)	1.03
S-312-FHT-K	(12)	1.16

Plug, Cable Clamp in Cap


P304CCT

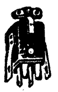
No.	Contacts	Ea.
P-302-CCT	(2)	$ .58
P-303-CCT	(3)	.63
P-304-CCT	(4)	.68
P-306-CCT	(6)	.75
P-308-CCT	(8)	.83
P-310-CCT	(10)	.92
P-312-CCT	(12)	1.01

Socket, Cable Clamp in Cap


S304CCT

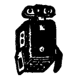
No.	Contacts	Ea.
S-302-CCT	(2)	$ .59
S-303-CCT	(3)	.64
S-304-CCT	(4)	.69
S-306-CCT	(6)	.79
S-308-CCT	(8)	.91
S-310-CCT	(10)	1.03
S-312-CCT	(12)	1.16

Plug, Cable Clamp in Cap and with Latches


P304CCT-L

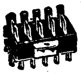
No.	Contacts	Ea.
P-302-CCT-L	(2)	$ .74
P-303-CCT-L	(3)	.78
P-304-CCT-L	(4)	.84
P-306-CCT-L	(6)	.91
P-308-CCT-L	(8)	.98
P-310-CCT-L	(10)	1.08
P-312-CCT-L	(12)	1.18

Socket, Cable Clamp in Cap and with Keepers


S304CCT-K

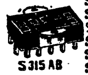
No.	Contacts	Ea.
S-302-CCT-K	(2)	$ .75
S-303-CCT-K	(3)	.80
S-304-CCT-K	(4)	.85
S-306-CCT-K	(6)	.95
S-308-CCT-K	(8)	1.07
S-310-CCT-K	(10)	1.19
S-312-CCT-K	(12)	1.31

Plug with Angle Brackets


P315AB

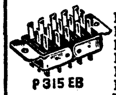
No.	Contacts	Ea.
P-315-AB	(15)	$ .84
P-318-AB	(18)	1.05
P-321-AB	(21)	1.32
P-324-AB	(24)	1.60
P-327-AB	(27)	1.88
P-330-AB	(30)	2.16
P-333-AB	(33)	2.43

Socket with Angle Brackets


S315AB

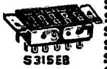
No.	Contacts	Ea.
S-315-AB	(15)	$ .98
S-318-AB	(18)	1.18
S-321-AB	(21)	1.46
S-324-AB	(24)	1.74
S-327-AB	(27)	2.02
S-330-AB	(30)	2.30
S-333-AB	(33)	2.57

Plug with End Brackets


P315EB

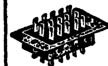
No.	Contacts	Ea.
P-315-EB	(15)	$ .84
P-318-EB	(18)	1.05
P-321-EB	(21)	1.32
P-324-EB	(24)	1.60
P-327-EB	(27)	1.88
P-330-EB	(30)	2.16
P-333-EB	(33)	2.43

Sockets with End Brackets


S315EB

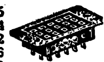
No.	Contacts	Ea.
S-315-EB	(15)	$ .98
S-318-EB	(18)	1.18
S-321-EB	(21)	1.46
S-324-EB	(24)	1.74
S-327-EB	(27)	2.02
S-330-EB.	(30)	2.30
S-333-EB	(33)	2.57

Plug with Shallow Brackets


P315SB

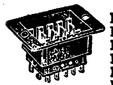
No.	Contacts	Ea.
P-315-SB	(15)	$1.25
P-318-SB	(18)	1.54
P-321-SB	(21)	1.82
P-324-SB	(24)	2.16
P-327-SB	(27)	2.43
P-330-SB	(30)	2.78
P-333-SB	(33)	3.06

Sockets with Shallow Brackets


S315SB

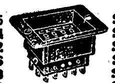
No.	Contacts	Ea.
S-315-SB	(15)	$1.41
S-318-SB	(18)	1.68
S-321-SB	(21)	1.96
S-324-SB	(24)	2.30
S-327-SB	(27)	2.57
S-330-SB	(30)	2.93
S-333-SB	(33)	3.21

Plug with Deep Bracket


P315DB

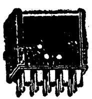
No.	Contacts	Ea.
P-315-DB	(15)	$1.25
P-318-DB	(18)	1.54
P-321-DB	(21)	1.82
P-324-DB	(24)	2.16
P-327-DB	(27)	2.43
P-330-DB	(30)	2.78
P-333-DB	(33)	3.06

Socket with Deep Bracket


S315DB

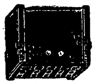
No.	Contacts	Ea.
S-315-DB	(15)	$1.41
S-318-DB	(18)	1.68
S-321-DB	(21)	1.96
S-324-DB	(24)	2.30
S-327-DB	(27)	2.57
S-330-DB	(30)	2.93
S-333-DB	(33)	3.21

Plug with Flared Hole in Top of Cap


P315FHT

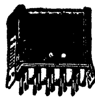
No.	Contacts	Ea.
P-315-FHT	(15)	$1.11
P-318-FHT	(18)	1.40
P-321-FHT	(21)	1.67
P-324-FHT	(24)	2.02
P-327-FHT	(27)	2.30
P-330-FHT	(30)	2.65
P-333-FHT	(33)	2.93

Socket, Flared Hole in Top of Cap


S315FHT

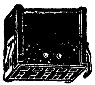
No.	Contacts	Ea.
S-315-FHT	(15)	$1.25
S-318-FHT	(18)	1.54
S-321-FHT	(21)	1.82
S-324-FHT	(24)	2.17
S-327-FHT	(27)	2.44
S-330-FHT	(30)	2.79
S-333-FHT	(33)	3.07

Plug, Flared Hole in Top of Cap and with Latches


P315FHT-L

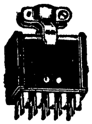
No.	Contacts	Ea.
P-315-FHT-L	(15)	$1.25
P-318-FHT-L	(18)	1.54
P-321-FHT-L	(21)	1.82
P-324-FHT-L	(24)	2.17
P-327-FHT-L	(27)	2.44
P-330-FHT-L	(30)	2.79
P-333-FHT-L	(33)	3.07

Socket, Flared Hole in Top of Cap and with Keepers


S315FHT-K

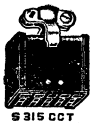
No.	Contacts	Ea.
S-315-FHT-K	(15)	$1.41
S-318-FHT-K	(18)	1.68
S-321-FHT-K	(21)	1.96
S-324-FHT-K	(24)	2.31
S-327-FHT-K	(27)	2.59
S-330-FHT-K	(30)	2.94
S-333-FHT-K	(33)	3.22

Plug, Cable Clamp in Top of Cap


P315CCT-

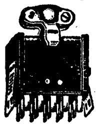
No.	Contacts	Ea.
P-315-CCT	(15)	$1.32
P-318-CCT	(18)	1.60
P-321-CCT	(21)	1.88
P-324-CCT	(24)	2.22
P-327-CCT	(27)	2.51
P-330-CCT	(30)	2.93
P-333-CCT	(33)	3.14

Socket, Cable Clamp in Top of Cap


S315CCT

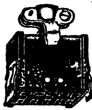
No.	Contacts	Ea.
S-315-CCT	(15)	$1.46
S-318-CCT	(18)	1.74
S-321-CCT	(21)	2.02
S-324-CCT	(24)	2.38
S-327-CCT	(27)	2.65
S-330-CCT	(30)	3.07
S-333-CCT	(33)	3.28

Plug, Cable Clamp in Top of Cap and with Latches


P315CCT-L

No.	Contacts	Ea.
P-315-CCT-L	(15)	$1.46
P-318-CCT-L	(18)	1.74
P-321-CCT-L	(21)	2.02
P-324-CCT-L	(24)	2.38
P-327-CCT-L	(27)	2.65
P-330-CCT-L	(30)	3.07
P-333-CCT-L	(33)	3.28

Socket, Cable Clamp in Top of Cap and with Keepers


S315CCT-K

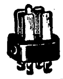
No.	Contacts	Ea.
S-315-CCT-K	(15)	$1.61
S-318-CCT-K	(18)	1.89
S-321-CCT-K	(21)	2.17
S-324-CCT-K	(24)	2.52
S-327-CCT-K	(27)	2.79
S-330-CCT-K	(30)	3.22
S-333-CCT-K	(33)	3.42

"400" SERIES PLUGS AND SOCKETS (Formerly "Heavy Duty")

General Specifications

2, 4, 6, 8, 10 and 12 Contacts.
All plugs and sockets are polarized.
Phosphor bronze "knife-switch" type socket contacts engage both sides of flat plug contacts—double contact area.
Molded Bakelite insulation.
Fibre linings in caps.
Plug or socket for panel mounting.
Plug or socket with caps.
Finish on caps—Black Crystal.
Plug prong cross section 1/4" x 1/16".
Locking fittings available for panel types or extension cables as shown.
Rated voltage—1100 volts RMS.
Current capacity—15 amperes.
Contact resistance—.001 ohms average.

PLUG—Less Angle Brackets not Drilled or Tapped Unless Specified


P-404-LAB

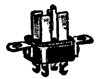
No.	Contacts	Ea.
P-402-LAB	(2)	$ .35
P-404-LAB	(4)	.48
P-406-LAB	(6)	.63
P-408-LAB	(8)	.76
P-410-LAB	(10)	.91
P-412-LAB	(12)	1.05

SOCKET—Less Angle Brackets. Not Drilled or Tapped Unless Specified

S-404-LAB

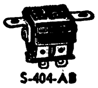
No.	Contacts	Ea.
S-402-LAB	(2)	$ .43
S-404-LAB	(4)	.63
S-406-LAB	(6)	.84
S-408-LAB	(8)	1.05
S-410-LAB	(10)	1.25
S-412-LAB	(12)	1.46

PLUG—with Angle Brackets for 1/16" Panel


P-404-AB 1/16"

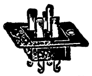
No.		Contacts	Ea.
P-402-AB	1/16"	(2)	$ .63
P-404-AB	1/16"	(4)	.76
P-406-AB	1/16"	(6)	.91
P-408-AB	1/16"	(8)	1.05
P-410-AB	1/16"	(10)	1.19
P-412-AB	1/16"	(12)	1.32

SOCKET—with Angle Brackets


S-404-AB

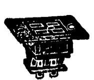
No	Contacts	Ea.
S-402-AB	(2)	$ .70
S-404-AB	(4)	.91
S-406-AB	(6)	1.11
S-408-AB	(8)	1.32
S-410-AB	(10)	1.54
S-412-AB	(12)	1.74

PLUG—with Shallow Brackets


P 404 SB

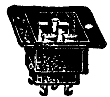
No.	Contacts	Ea.
P-402-SB	(2)	$ .76
P-404-SB	(4)	.98
P-406-SB	(6)	1.19
P-408-SB	(8)	1.40
P-410-SB	(10)	1.61
P-412-SB	(12)	1.82

SOCKET—with Shallow Brackets


S 404 SB

No.	Contacts	Ea.
S-402-SB	(2)	$ .84
S-404-SB	(4)	1.11
S-406-SB	(6)	1.40
S-408-SB	(8)	1.67
S-410-SB	(10)	1.95
S-412-SB	(12)	2.22

PLUG—with Deep Bracket


P-404-DB

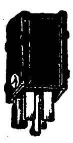
No.	Contacts	Ea.
P-402-DB	(2)	$ .76
P-404-DB	(4)	.98
P-406-DB	(6)	1.19
P-408-DB	(8)	1.40
P-410-DB	(10)	1.61
P-412-DB	(12)	1.82

SOCKET—with Deep Brackets

S 404 DB

No.	Contacts	Ea.
S-402-DB	(2)	$ .84
S-404-DB	(4)	1.11
S-406-DB	(6)	1.40
S-408-DB	(8)	1.67
S-410-DB	(10)	1.95
S-412-DB	(12)	2.22

PLUGS


P-404-FHT

PLUG—Flared Hole in Top

No.	Contacts	Ea.
P-402-FHT	(2)	$ .70
P-404-FHT	(4)	.91
P-406-FHT	(6)	1.11
P-408-FHT	(8)	1.32
P-410-FHT	(10)	1.53
P-412-FHT	(12)	1.73

PLUG—Flared Hole in End

No.	Contacts	Ea.
P-402-FHE	(2)	$ .70
P-404-FHE	(4)	91
P-406-FHE	(6)	1 11
P-408-FHE	(8)	1.32
P-410-FHE	(10)	1.53
P-412-FHE	(12)	1.73

SOCKETS

SOCKET—Flared Hole in Top

No.	Contacts	Ea.
S-402-FHT	(2)	$ .77
S-404-FHT	(4)	1.06
S-406-FHT	(6)	1.33
S-408-FHT	(8)	1.61
S-410-FHT	(10)	1.89
S-412-FHT	(12)	2.17

SOCKET — Flared Hole in End

No.	Contacts	Ea.
S-402-FHE	(2)	$ .77
S-404-FHE	(4)	1.06
S-406-FHE	(6)	1.33
S-408-FHE	(8)	1.61
S-410-FHE	(10)	1.89
S-412-FHE	(12)	2.17

PLUGS

P-404-CCT

PLUG—Cable Clamp in Top

No.	Contacts	Ea.
P-402-CCT	(2)	$ .98
P-404-CCT	(4)	1.19
P-406-CCT	(6)	1.40
P-408-CCT	(8)	1.60
P-410-CCT	(10)	1.80
P-412-CCT	(12)	2.01

PLUG—Cable Clamp in End

No.	Contacts	Ea.
P-402-CCE	(2)	$ .98
P-404-CCE	(4)	1.19
P-406-CCE	(6)	1.40
P-408-CCE	(8)	1.60
P-410-CCE	(10)	1.80
P-412-CCE	(12)	2.01

SOCKETS

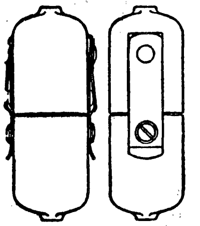
SOCKET—Cable Clamp in Top

No.	Contacts	Ea.
S-402-CCT	(2)	$1.06
S-404-CCT	(4)	1.33
S-406-CCT	(6)	1.61
S-408-CCT	(8)	1.89
S-410-CCT	(10)	2.17
S-412-CCT	(12)	2.44

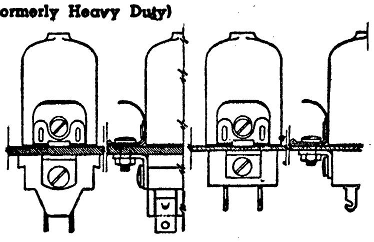
SOCKET—Cable Clamp in End

No.	Contacts	Ea.
S-402-CCE	(2)	$1.06
S-404-CCE	(4)	1.33
S-406-CCE	(6)	1.61
S-408-CCE	(8)	1.89
S-410-CCE	(10)	2.17
S-412-CCE	(12)	2.44

LOCKS FOR 400 SERIES PLUGS AND SOCKETS (Formerly Heavy Duty)

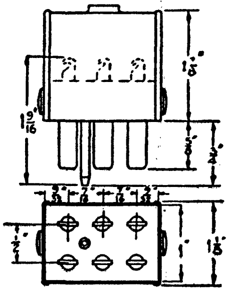

ILLUSTRATING No. 93 LOCK. May be attached to any 400 Series plug for extension cables. If plugs are ordered with this lock, specify "with No. 93 locks."

	Ea.
No. 93 Lock when attached to plug, add to list per pair	$ .43
No. 93 Locks ONLY per pair	.43

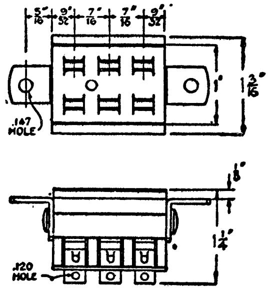

ILLUSTRATING No. 63 LOCK. May be used on all panel mount 400 Series plugs and sockets when surface is flush with top of panel. Cannot be used on type DB plugs.

	Ea.
No. 63 Locks ONLY, per pair	$ .43

Dimensions of 400 Series Plugs and Sockets



P-406-FHT



S-408-AB

"500" SERIES PLUGS AND SOCKETS

For Complete Listing of 500 SERIES, Write for No. 500 Catalog

Designed for 5,000 volts and 25 amperes per contact. Circuit characteristics, however, may alter this rating one way or the other.

Long leakage path from terminal to terminal, and terminal to ground. Contacts are brass and phosphor bronze, silver plated. Metal parts of caps and brackets are steel, parkerized (rust-proofed). Plug and socket blocks are interchangeable in caps and brackets.

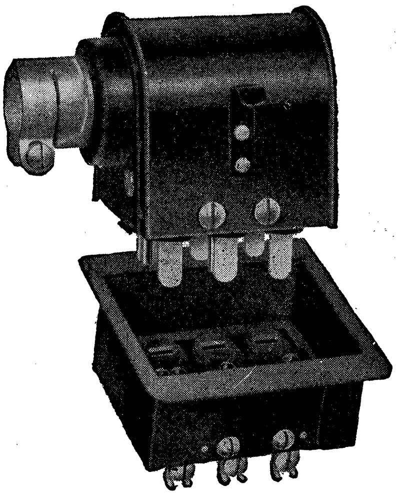
All sizes are polarized in a manner to prevent a smaller plug being inserted in a larger socket. Thus different sizes may be used on one installation without danger of making wrong connections.

Extreme care has been taken to make terminal connections under cap very accessible both for original wiring and subsequent inspection. The cap is insulated with canvas bakelite. Plug prong cross section $\frac{5}{16}$" x $\frac{3}{32}$".

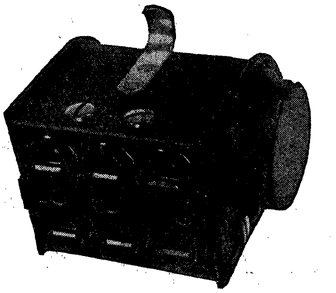
IMPORTANT: For safety with high voltages DEEP BRACKETS should always be used on one plug or socket, when the other plug or socket has a CAP. SHALLOW BRACKETS are for use only in connecting two units, each unit having plug or socket with SHALLOW BRACKET.

Cable entrance: Because of the great variation in type and size of cables, we have considered it best not to supply cable clamps of any kind. The cap end is made to accommodate standard BX clamps which may be obtained at any electrical jobbing house. The cap end will be furnished with round hole from ½" diameter and 1¼" diameter in steps of ⅛", if the size required is given on order. If no size is given, plain cap end with center punch locating center will be shipped.

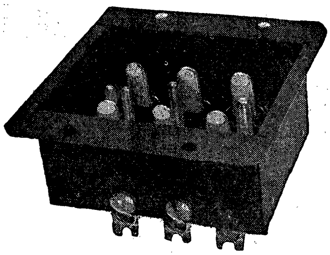
P-506-CE
(Plug with Cap)
(BX Clamp shown but not furnished)



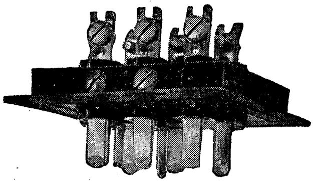
S-506-DB
(Socket with Deep Bracket)



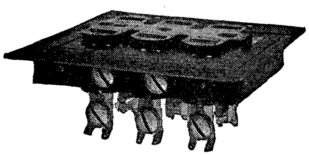
S-506-CE
(Socket with Cap)



P-506-DB
(Plug with Deep Bracket)

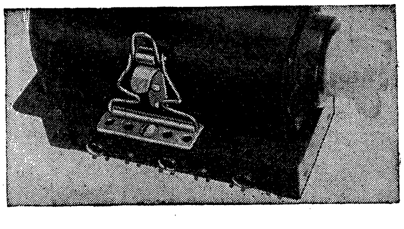


P-506-SB
(Plug with Shallow Bracket)



S-506-SB
(Socket with Shallow Bracket)

LOCKS FOR 500 SERIES PLUGS AND SOCKETS



Locks shown above are used in connection with any DEEP BRACKET and cap combination.

The locks securely hold the units together, but they can be released instantly.

The mounting plates are made to fit all DEEP BRACKETS, and are fastened by the same screws or rivets that hold the deep brackets to the panel. Can not be used on shallow brackets. Sold in pairs only.

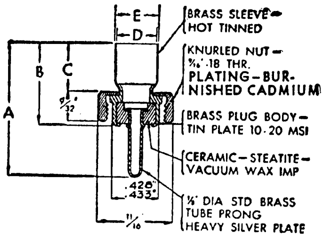
No. 500-L Locks.........................Per pair $0.99

PLUG With Cap Code	Price Ea.	PLUG With Deep Bracket Code	Price Ea.	PLUG With Shallow Bracket Code	Price Ea.
P-502-CE	**$3.03**	**P-502-DB**	**$2.66**	**P-502-SB**	**$2.66**
P-504-CE	**4.36**	**P-504-DB**	**3.82**	**P-504-SB**	**3.82**
P-506-CE	**5.69**	**P-506-DB**	**4.96**	**P-506-SB**	**4.96**
P-508-CE	**7.02**	**P-508-DB**	**6.12**	**P-508-SB**	**6.12**
P-510-CE	**8.35**	**P-510-DB**	**7.26**	**P-510-SB**	**7.26**
P-512-CE	**9.68**	**P-512-DB**	**8.42**	**P-512-SB**	**8.42**

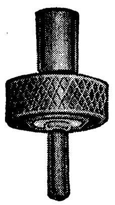
SOCKET With Cap Code	Price Ea.	SOCKET With Deep Bracket Code	Price Ea.	SOCKET With Shallow Bracket Code	Price Ea.
S-502-CE	**$3.03**	**S-502-DB**	**$2.66**	**S-502-SB**	**$2.66**
S-504-CE	**4.36**	**S-504-DB**	**3.82**	**S-504-SB**	**3.82**
S-506-CE	**5.69**	**S-506-DB**	**4.96**	**S-506-SB**	**4.96**
S-508-CE	**7.02**	**S-508-DB**	**6.12**	**S-508-SB**	**6.12**
S-510-CE	**8.35**	**S-510-DB**	**7.26**	**S-510-SB**	**7.26**
S-512-CE	**9.68**	**S-512-DB**	**8.42**	**S-512-SB**	**8.42**

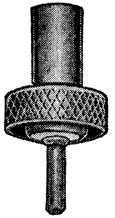
SERIES 101 PLUGS

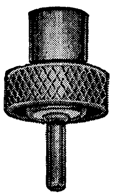
The entire No. 101 Series of Plugs are identical with the exception of the cable ferrule which is furnished in four sizes as listed below. All metal parts are of brass. These Plugs fit all of the No. 101 Series Sockets. Assembly meets Navy Specifications. A low loss Plug and Socket ideal for high frequency connections.

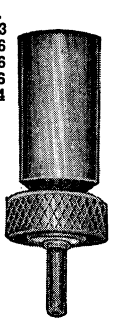

E
D
B
C
A
9/32"
.428"
.433"
11/16
BRASS SLEEVE— HOT TINNED
KNURLED NUT— 9/16"-18 THR.
PLATING—BURNISHED CADMIUM
BRASS PLUG BODY— TIN PLATE 10-20 MSI
CERAMIC—STEATITE— VACUUM WAX IMP
1/8" DIA STD BRASS TUBE PRONG HEAVY SILVER PLATE

Code No.	A	B	C	D	E	Ea.
P-101-1/4"	1-1/4"	3/4"	7/16"	1/4"	9/32"	**$0.63**
P-101-.290	1-1/4"	3/4"	7/16"	.290	.319	**.76**
P-101-5/16"	1-3/8"	7/8"	9/16"	5/16"	11/32"	**.76**
P-101-3/8"	1-3/16"	11/16"	3/8"	3/8"	13/32"	**.76**
P-101-1/2"	1-7/8"	1-3/8"	1-1/16"	1/2"	9/16"	**.84**


P-101-1/4"

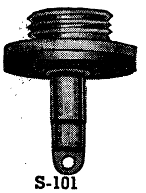

P-101-5/16"

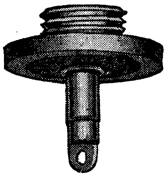

P-101-3/8"

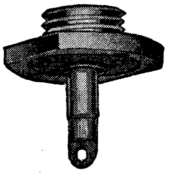

P-101-1/2"

SERIES 101 SOCKETS

The No. 101 Series Sockets are furnished in three types as shown below. Base is of Brass, Nickel Plated with Chrome Flash. Brass contact is Silver Plated. Insulation of low loss natural color XXX Bakelite. Meets Navy Specifications. The S-101-D is similar to the S-101 except that the Bakelite is recessed in the base. S-101-D Mod. is the same as S-101-D except that two sides of the base are milled as shown. Mounting Holes No. 101 —No. 41 drill on 11/16" centers. Mounting holes No. 101-D and 101-D Mod. No. 30 drill on 13/16" centers.


S-101
Price Each—$0.56


S-101-D
Price Each—$0.84


S-101-D Mod
Price Each—$0.84

SERIES 201

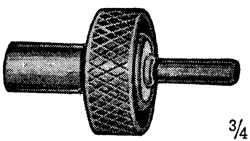
PLUGS

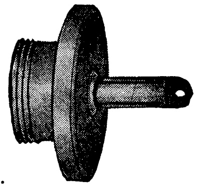
The No. 201 Series Plugs are of the same design as the No. 101 but are of heavier stock and larger. Made in one size only with 3/8" ferrule. All metal parts are of Brass, same finish as No. 101 Series and Wax Impregnated Ceramic insulation. Overall length 1-9/16". Prong diameter 5/32". Fits only the 201 Socket.

SOCKETS

The 201 Socket is similar to the S-101-D except larger. Brass base is nickel plated with Chrome Flash. Brass contact is Silver Plated. Insulation is of low loss natural color XXX Bakelite. Both Plug and Socket meet Navy Specifications.

Mounting holes — No. 30 drill on 1" centers.





3/4"—27 thread.

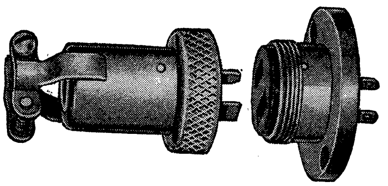
Code	Ea.	Code	Ea.
P-201-3/8	**$0.98**	**S-201**	**$1.05**

SERIES 202

PLUGS — SOCKETS

The 202 Series Plugs and Sockets are made in two contacts only. Metal parts are of Brass with burnished Cadmium Plate. Insulation is of Molded Bakelite. Phosphor Bronze "Knife Switch" type Socket Contacts engage both sides of flat Plug Contacts—double contact area. Formed Fibre linings in caps. Polarized. Knurled nut has 3/4"—27 thread.

Socket Mounting Holes. No. 30 drill on 1" centers.



P-202-CCT—$0.77 (as shown above)
S-202-CCT—$0.79

P-202-FHT—$0.63 (without Cable Clamps)
S-202-FHT—$0.64

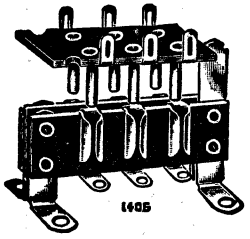
S-202-B—$0.91
P-202-B—$0.89

1400 SERIES PLUGS AND SOCKETS

This series of "disconnect" plugs and sockets has the distinct advantage of low cost for a separate unit handling many circuits. Due to exposed metal parts, it is recommended for use when the complete unit is within a housing.

Reduces costs of servicing units. Advantageous in shipping when it is desirable to pack units separately. Polarized—assures correct coupling. Spring temper brass sockets assure perfect contact. Standard units are listed below from 5 to 16 contacts. However we can supply units having as many as 30 or more contacts.

On No. 1420 or larger we recommend the plug be divided into two or more units, as a single long plug is not mechanically strong. The socket will be made in one assembly.



No. 1405	(5 Contacts)	**Ea. $0.39**	**No. 1411**	(11 Contacts)	**Ea. $0.75**
No. 1406	(6 Contacts)	**Ea. .45**	**No. 1412**	(12 Contacts)	**Ea. .81**
No. 1407	(7 Contacts)	**Ea. .51**	**No. 1413**	(13 Contacts)	**Ea. .87**
No. 1408	(8 Contacts)	**Ea. .57**	**No. 1414**	(14 Contacts)	**Ea. .94**
No. 1409	(9 Contacts)	**Ea. .63**	**No. 1415**	(15 Contacts)	**Ea. .99**
No. 1410	(10 Contacts)	**Ea. .69**	**No. 1416**	(16 Contacts)	**Ea. 1.06**

For units with more than 16 contacts, add 7c to the No. 1416 price for each additional contact.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

BARRIER TYPE TERMINAL STRIPS

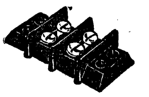
Increased insulation is provided by having Barriers placed between each Terminal. These Barriers follow around the edge of the Strips and terminate at the base. They not only make a long leakage path but prevent direct shorts from frayed wires at the terminals. Mounting holes are at the ends as illustrated. The base is molded Bakelite.

The Terminals and Binder Screws are of brass, nickel plated. **Marker Strips** may be ordered and imprinted to supply terminal designations. These Marker Strips mount beneath Terminal Strips and also afford insulation from metal mounting surface. **See page 21 for imprinting charges.** See pages 24 and 25 for dimensions.

5-40 x $\frac{3}{16}$ Binder Head Screws

No. 140 TERMINAL STRIPS

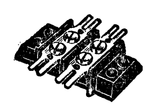
Metal to Metal Spacing over Bakelite ¼″



No. 2-140

No. 140

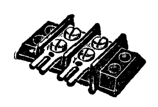
Code	Ea.
1-140	$ .15
2-140	.24
3-140	.33
4-140	.42
5-140	.51
6-140	.59
7-140	.68
8-140	.77
9-140	.86
10-140	.95
11-140	1.03
12-140	1.12
13-140	1.21
14-140	1.31
15-140	1.40
16-140	1.49
17-140	1.57
18-140	1.66
19-140	1.75
20-140	1.84
21-140	1.93



No. 2-140-W

No. 140-W

Code	Ea.
1-140-W	$ .19
2-140-W	.32
3-140-W	.44
4-140-W	.57
5-140-W	.69
6-140-W	.83
7-140-W	.95
8-140-W	1.08
9-140-W	1.21
10-140-W	1.33
11-140-W	1.45
12-140-W	1.58
13-140-W	1.71
14-140-W	1.84
15-140-W	1.96
16-140-W	2.09
17-140-W	2.21
18-140-W	2.34
19-140-W	2.46
20-140-W	2.60
21-140-W	2.72



No. 2-140-¾ W

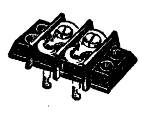
No. 140-¾ W

Code	Ea.
1-140-¾ W	$ .19
2-140-¾ W	.32
3-140-¾ W	.44
4-140-¾ W	.57
5-140-¾ W	.69
6-140-¾ W	.83
7-140-¾ W	.95
8-140-¾ W	1.08
9-140-¾ W	1.21
10-140-¾ W	1.33
11-140-¾ W	1.45
12-140-¾ W	1.58
13-140-¾ W	1.71
14-140-¾ W	1.84
15-140-¾ W	1.96
16-140-¾ W	2.09
17-140-¾ W	2.21
18-140-¾ W	2.34
19-140-¾ W	2.46
20-140-¾ W	2.60
21-140-¾ W	2.72

MARKER STRIPS for 140, 140-W and 140-¾ W

The standard Marker Strips are of black fibre $\frac{1}{32}$″ thick and character designations are imprinted in white. Bakelite Marker Strips can be supplied at an increase in price, and are designated by code MSX instead of MS. Prices on application.

Code	Per 100
MS-1-140	$ 2.48
MS-2-140	3.30
MS-3-140	4.13
MS-4-140	4.95
MS-5-140	5.78
MS-6-140	6.60
MS-7-140	7.43
MS-8-140	8.25
MS-9-140	9.08
MS-10-140	9.90
MS-11-140	10.73
MS-12-140	11.55
MS-13-140	12.38
MS-14-140	13.20
MS-15-140	14.03
MS-16-140	14.85
MS-17-140	15.68
MS-18-140	16.50
MS-19-140	17.33
MS-20-140	18.15
MS-21-140	18.98



No. 2-140-Y

No. 140-Y

Code	Ea.
1-140-Y	$ .19
2-140-Y	.32
3-140-Y	.44
4-140-Y	.57
5-140-Y	.69
6-140-Y	.83
7-140-Y	.95
8-140-Y	1.08
9-140-Y	1.21
10-140-Y	1.33
11-140-Y	1.45
12-140-Y	1.58
13-140-Y	1.71
14-140-Y	1.84
15-140-Y	1.96
16-140-Y	2.09
17-140-Y	2.21
18-140-Y	2.34
19-140-Y	2.46
20-140-Y	2.60
21-140-Y	2.72

MARKER STRIPS for 140-Y

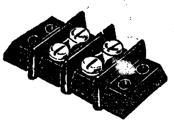
The standard Marker Strips are of black fibre $\frac{1}{32}$″ thick and character designations are imprinted in white. Bakelite Marker Strips can be supplied at an increase in price, and are designated by code MSX instead of MS. Prices on application.

Code	Per 100
MS-1-140-Y	$ 5.78
MS-2-140-Y	6.60
MS-3-140-Y	7.43
MS-4-140-Y	8.25
MS-5-140-Y	9.08
MS-6-140-Y	9.90
MS-7-140-Y	10.73
MS-8-140-Y	11.55
MS-9-140-Y	12.38
MS-10-140-Y	13.20
MS-11-140-Y	14.03
MS-12-140-Y	14.85
MS-13-140-Y	15.68
MS-14-140-Y	16.50
MS-15-140-Y	17.33
MS-16-140-Y	18.15
MS-17-140-Y	18.98
MS-18-140-Y	19.80
MS-19-140-Y	20.63
MS-20-140-Y	21.45
MS-21-140-Y	22.28

6-32 x ¼ Binder Head Screws

No. 141 TERMINAL STRIPS

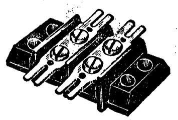
Metal to Metal Spacing over Bakelite ⅜″



No. 2-141

No. 141

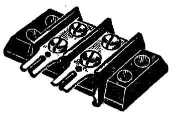
Code	Ea.
1-141	$ .20
2-141	.31
3-141	.42
4-141	.54
5-141	.65
6-141	.75
7-141	.88
8-141	.99
9-141	1.10
10-141	1.22
11-141	1.33
12-141	1.44
13-141	1.56
14-141	1.67
15-141	1.78
16-141	1.90
17-141	2.01
18-141	2.12
19-141	2.24
20-141	2.35



No. 2-141-W

No. 141-W

Code	Ea.
1-141-W	$ .24
2-141-W	.41
3-141-W	.57
4-141-W	.74
5-141-W	.90
6-141-W	1.07
7-141-W	1.23
8-141-W	1.40
9-141-W	1.56
10-141-W	1.73
11-141-W	1.89
12-141-W	2.06
13-141-W	2.22
14-141-W	2.39
15-141-W	2.55
16-141-W	2.72
17-141-W	2.88
18-141-W	3.05
19-141-W	3.21
20-141-W	3.38



No. 2-141-¾-W

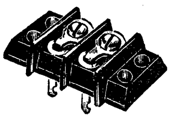
No. 141-¾ W

Code	Ea.
1-141-¾ W	$ .24
2-141-¾ W	.41
3-141-¾ W	.57
4-141-¾ W	.74
5-141-¾ W	.90
6-141-¾ W	1.07
7-141-¾ W	1.23
8-141-¾ W	1.40
9-141-¾ W	1.56
10-141-¾ W	1.73
11-141-¾ W	1.89
12-141-¾ W	2.06
13-141-¾ W	2.22
14-141-¾ W	2.39
15-141-¾ W	2.55
16-141-¾ W	2.72
17-141-¾ W	2.88
18-141-¾ W	3.05
19-141-¾ W	3.21
20-141-¾ W	3.38

MARKER STRIPS for 141, 141-W and 141-¾ W

Standard Marker Strips are of black fibre $\frac{1}{32}$″ thick. See column above for designation for Bakelite Marker Strips.

Code	Per 100
MS-1-141	$ 2.75
MS-2-141	3.85
MS-3-141	4.95
MS-4-141	6.05
MS-5-141	7.15
MS-6-141	8.25
MS-7-141	9.35
MS-8-141	10.45
MS-9-141	11.55
MS-10-141	12.65
MS-11-141	13.75
MS-12-141	14.85
MS-13-141	15.95
MS-14-141	17.05
MS-15-141	18.15
MS-16-141	19.25
MS-17-141	20.35
MS-18-141	21.45
MS-19-141	22.55
MS-20-141	23.65



No. 2-141-Y

No. 141-Y

Code	Ea.
1-141-Y	$ .24
2-141-Y	.41
3-141-Y	.57
4-141-Y	.74
5-141-Y	.90
6-141-Y	1.07
7-141-Y	1.23
8-141-Y	1.40
9-141-Y	1.56
10-141-Y	1.73
11-141-Y	1.89
12-141-Y	2.06
13-141-Y	2.22
14-141-Y	2.39
15-141-Y	2.55
16-141-Y	2.72
17-141-Y	2.88
18-141-Y	3.05
19-141-Y	3.21
20-141-Y	3.38

MARKER STRIPS for 141-Y

Standard Marker Strips are of black fibre $\frac{1}{32}$″ thick. See column above for designation for Bakelite Marker Strips.

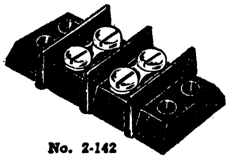
Code	Per 100
MS-1-141-Y	$ 6.05
MS-2-141-Y	7.15
MS-3-141-Y	8.25
MS-4-141-Y	9.35
MS-5-141-Y	10.45
MS-6-141-Y	11.55
MS-7-141-Y	12.65
MS-8-141-Y	13.75
MS-9-141-Y	14.85
MS-10-141-Y	15.95
MS-11-141-Y	17.05
MS-12-141-Y	18.15
MS-13-141-Y	19.25
MS-14-141-Y	20.35
MS-15-141-Y	21.45
MS-16-141-Y	22.55
MS-17-141-Y	23.65
MS-18-141-Y	24.75
MS-19-141-Y	25.85
MS-20-141-Y	26.95

BARRIER TYPE TERMINAL STRIPS

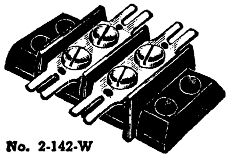
8-32 x 5/16" Binder Head Screws

No. 142 TERMINAL STRIPS

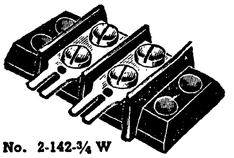
Metal to Metal Spacing over Bakelite 9/16"



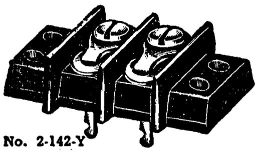
No. 2-142



No. 2-142-W



No. 2-142-¾ W

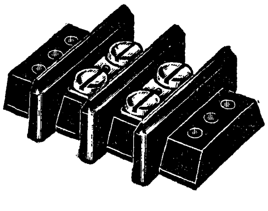


No. 2-142-Y

No. 142 Code	Ea.	No. 142-W Code	Ea.	No. 142-¾ W Code	Ea.	MARKER STRIPS for 142, 142-W, 142-¾ W Code	Per 100	No. 142-Y Code	Ea.	MARKER STRIPS for 142-Y Code	Per 100
1-142	$ .23	1-142-W	$ .30	1-142-¾ W	$ .30	MS-1-142	$ 3.03	1-142-Y	$ .30	MS-1-142-Y	$ 6.33
2-142	.36	2-142-W	.50	2-142-¾ W	.50	MS-2-142	4.40	2-142-Y	.50	MS-2-142-Y	7.70
3-142	.51	3-142-W	.70	3-142-¾ W	.70	MS-3-142	5.78	3-142-Y	.70	MS-3-142-Y	9.08
4-142	.65	4-142-W	.90	4-142-¾ W	.90	MS-4-142	7.15	4-142-Y	.90	MS-4-142-Y	10.45
5-142	.78	5-142-W	1.11	5-142-¾ W	1.11	MS-5-142	8.53	5-142-Y	1.11	MS-5-142-Y	11.83
6-142	.92	6-142-W	1.31	6-142-¾ W	1.31	MS-6-142	9.90	6-142-Y	1.31	MS-6-142-Y	13.20
7-142	1.07	7-142-W	1.52	7-142-¾ W	1.52	MS-7-142	11.28	7-142-Y	1.52	MS-7-142-Y	14.58
8-142	1.20	8-142-W	1.72	8-142-¾ W	1.72	MS-8-142	12.65	8-142-Y	1.72	MS-8-142-Y	15.95
9-142	1.34	9-142-W	1.93	9-142-¾ W	1.93	MS-9-142	14.03	9-142-Y	1.93	MS-9-142-Y	17.33
10-142	1.49	10-142-W	2.12	10-142-¾ W	2.12	MS-10-142	15.40	10-142-Y	2.12	MS-10-142-Y	18.70
11-142	1.62	11-142-W	2.33	11-142-¾ W	2.33	MS-11-142	16.78	11-142-Y	2.33	MS-11-142-Y	20.08
12-142	1.76	12-142-W	2.53	12-142-¾ W	2.53	MS-12-142	18.15	12-142-Y	2.53	MS-12-142-Y	21.45
13-142	1.90	13-142-W	2.74	13-142-¾ W	2.74	MS-13-142	19.53	13-142-Y	2.74	MS-13-142-Y	22.83
14-142	2.04	14-142-W	2.94	14-142-¾ W	2.94	MS-14-142	20.90	14-142-Y	2.94	MS-14-142-Y	24.20
15-142	2.18	15-142-W	3.15	15-142-¾ W	3.15	MS-15-142	22.28	15-142-Y	3.15	MS-15-142-Y	25.58
16-142	2.32	16-142-W	3.34	16-142-¾ W	3.34	MS-16-142	23.65	16-142-Y	3.34	MS-16-142-Y	26.95
17-142	2.45	17-142-W	3.54	17-142-¾ W	3.54	MS-17-142	25.03	17-142-Y	3.54	MS-17-142-Y	28.33

No. 150 TERMINAL STRIPS

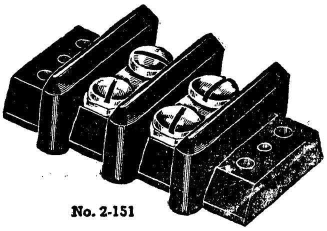
1 13/16" wide by 25/32" high. Terminals are mounted on 11/16" centers. Screws: 10-32 x 5/16" brass, burnished nickel plate. Fits standard 50 Amp. solder lug for 6 Ga. stranded wire. Metal to metal spacing over bakelite ⅝"



No. 150 Code	Ea.	No. 150-W Code	Ea.	No. 150-¾ W Code	Ea.	MARKER STRIPS For 150 Series Code	Per 100
1-150	$ .55	1-150-W	$ .66	1-150-¾ W	$ .66	MS-1-150	$ 6.60
2-150	.94	2-150-W	1.13	2-150-¾ W	1.13	MS-2-150	8.14
3-150	1.32	3-150-W	1.60	3-150-¾ W	1.60	MS-3-150	9.68
4-150	1.71	4-150-W	2.07	4-150-¾W	2.07	MS-4-150	11.22
5-150	2.09	5-150-W	2.53	5-150-¾ W	2.53	MS-5-150	12.76
6-150	2.48	6-150-W	3.00	6-150-¾ W	3.00	MS-6-150	14.30
7-150	2.86	7-150-W	3.46	7-150-¾ W	3.46	MS-7-150	15.84
8-150	3.25	8-150-W	3.92	8-150-¾W	3.92	MS-8-150	17.38
9-150	3.63	9-150-W	4.40	9-150-¾ W	4.40	MS-9-150	18.92
10-150	4.02	10-150-W	4.87	10-150-¾ W	4.87	MS-10-150	20.46

No. 151 TERMINAL STRIPS

2" wide by 15/16" high. Terminals are mounted on ⅞" centers. Screws: 12-32 x ⅜" brass, burnished nickel plate. Fits standard 70 Amp. solder lug for 4 Ga. stranded wire. Metal to metal spacing over bakelite ¾".

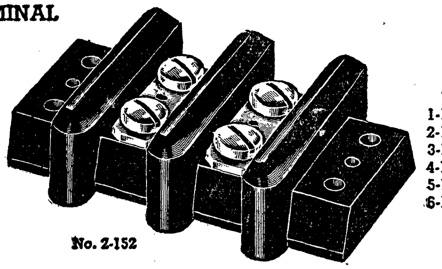


No. 2-151

No. 151 Code	Ea.	No. 151-W Code	Ea.	No. 151-¾ W Code	Ea.	MARKER STRIPS for 151 Series Code	Per 100
1-151	$ .94	1-151-W	$1.10	1-151-¾ W	$1.10	MS-1-151	$ 6.68
2-151	1.71	2-151-W	2.04	2-151-¾ W	2.04	MS-2-151	10.18
3-151	2.48	3-151-W	2.97	3-151-¾ W	2.97	MS-3-151	13.48
4-151	3.25	4-151-W	3.91	4-151-¾ W	3.91	MS-4-151	16.78
5-151	4.02	5-151-W	4.84	5-151-¾ W	4.84	MS-5-151	20.08
6-151	4.79	6-151-W	5.78	6-151-¾ W	5.78	MS-6-151	23.38
7-151	5.56	7-151-W	6.71	7-151-¾ W	6.71	MS-7-151	26.68
8-151	6.33	8-151-W	7.65	8-151-¾ W	7.65	MS-8-151	29.98

No. 152 TERMINAL STRIPS

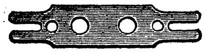
2½" wide by 1⅛" high. Terminals are mounted on 1⅛" centers. Screws: ¼"-28 x ½" brass, burnished nickel plate. Fits standard 90 Amp. solder lug for 2 Ga. stranded wire. Metal to metal spacing over bakelite 1".



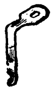
No. 2-152

No. 152 Code	Ea.	No. 152-W Code	Ea.	No. 152¾ W Code	Ea.	MARKER STRIPS for 152 Series Code	Per 100
1-152	$1.27	1-152-W	$1.49	1-152-¾ W	$1.49	MS-1-152	$ 7.15
2-152	2.42	2-152-W	2.86	2-152-¾ W	2.86	MS-2-152	12.65
3-152	3.58	3-152-W	4.24	3-152-¾ W	4.24	MS-3-152	18.15
4-152	4.73	4-152-W	5.61	4-152-¾ W	5.61	MS-4-152	23.65
5-152	5.89	5-152-W	6.99	5-152-¾ W	6.99	MS-5-152	29.15
6-152	7.04	6-152-W	8.36	6-152-¾ W	8.36	MS-6-152	34.65

"W" Solder Terminal for Barrier Strips



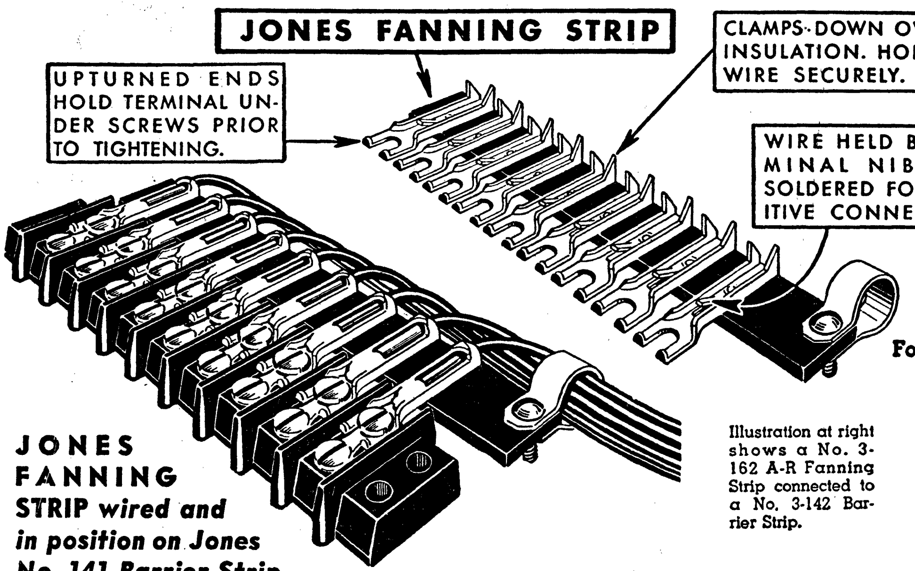
Code	For use with Barrier Strip	Per 100	Code	For use with Barrier Strip	Per 100
No. W-140	No. 140	$3.80	No. W-150	No. 150	$8.86
No. W-141	No. 141	5.06	No. W-151	No. 151	15.18
No. W-142	No. 142	6.33	No. W-152	No .152	22.77



"Y" Solder Terminal

Code	For use with Barrier Strip	Per 100
No. Y-140	No. 140	$3.80
No. Y-141	No. 141	5.06
No. Y-142	No. 142	6.33

FANNING STRIPS FOR CONNECTING TO BARRIER TERMINAL STRIPS


JONES FANNING STRIP
UPTURNED ENDS HOLD TERMINAL UNDER SCREWS PRIOR TO TIGHTENING.
CLAMPS DOWN OVER INSULATION. HOLDS WIRE SECURELY.
WIRE HELD BY TERMINAL NIB AND SOLDERED FOR POSITIVE CONNECTION.

JONES FANNING STRIP *wired and in position on Jones No. 141 Barrier Strip*

Eliminates Color Coding
●
Speeds up Assembly
●
Improves Appearance
●
Insures Correct Connections
●

For Right Angle Mounting

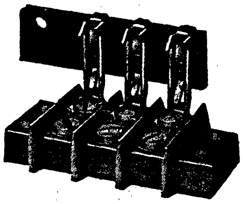
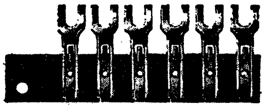


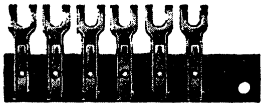
Illustration at right shows a No. 3-162 A-R Fanning Strip connected to a No. 3-142 Barrier Strip.

Jones Fanning Strip Terminals are of .032" Brass, Cadmium Plated. The Bakelite strips are furnished with a hole in either the right or left end for fastening the cable with a cable clamp or lacing twine. Simplifies cable or harness wiring, assuring positive connections. Makes replacement of units an easy matter and assures correct connections after servicing.

In many instances where there is not sufficient room for the standard Fanning Strips we can supply those listed formed for right angle mounting permitting use when Barrier mounts flush with the side of the chassis. Specify Series 160A, 161A and 162A instead of 160, 161 and 162. Prices slightly higher.



6-161-L (Cable Clamp on Left)



6-161-R (Cable Clamp on Right)

THE 160 SERIES

The following Fanning Strips fit the 140 Series Barrier Strips. Terminals are mounted on $\frac{3}{32}$" Bakelite, ½" wide and on ⅜" centers.

Code	Ea.	Code	Ea.
2-160-L	$ .13	2-160-R	$ .13
3-160-L	.20	3-160-R	.20
4-160-L	.25	4-160-R	.25
5-160-L	.32	5-160-R	.32
6-160-L	.39	6-160-R	.39
7-160-L	.45	7-160-R	.45
8-160-L	.51	8-160-R	.51
9-160-L	.57	9-160-R	.57
10-160-L	.64	10-160-R	.64
11-160-L	.70	11-160-R	.70
12-160-L	.76	12-160-R	.76
13-160-L	.83	13-160-R	.83
14-160-L	.89	14-160-R	.89
15-160-L	.96	15-160-R	.96
16-160-L	1.01	16-160-R	1.01
17-160-L	1.08	17-160-R	1.08
18-160-L	1.16	18-160-R	1.16
19-160-L	1.21	19-160-R	1.21
20-160-L	1.28	20-160-R	1.28
21-160-L	1.33	21-160-R	1.33

THE 161 SERIES

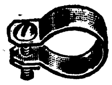
The following Fanning Strips fit the 141 Series Barrier Strips. Terminals are mounted on $\frac{3}{32}$" Bakelite, ⅝" wide and on $\frac{7}{16}$" centers.

Code	Ea.	Code	Ea.
2-161-L	$ .14	2-161-R	$ .14
3-161-L	.21	3-161-R	.21
4-161-L	.26	4-161-R	.26
5-161-L	.33	5-161-R	.33
6-161L-	.40	6-161-R	.40
7-161-L	.46	7-161-R	.46
8-161-L	.52	8-161-R	.52
9-161-L	.58	9-161-R	.58
10-161-L	.65	10-161-R	.65
11-161-L	.72	11-161-R	.72
12-161-L	.77	12-161-R	.77
13-161-L	.84	13-161-R	.84
14-161-L	.91	14-161-R	.91
15-161-L	.97	15-161-R	.97
16-161-L	1.03	16-161-R	1.03
17-161-L	1.09	17-161-R	1.09
18-161-L	1.17	18-161-R	1.17
19-161-L	1.22	19-161-R	1.22
20-161-L	1.29	20-161-R	1.29

THE 162 SERIES

The following Fanning Strips fit the 142 Series Barrier Strips. Terminals are mounted on $\frac{3}{32}$" Bakelite, ⅝" wide and on $\frac{7}{16}$" centers.

Code	Ea.	Code	Ea.
2-162-L	$ .17	2-162-R	$ .17
3-162-L	.23	3-162-R	.23
4-162-L	.29	4-162-R	.29
5-162-L	.35	5-162-R	.35
6-162-L	.43	6-162-R	.43
7-162-L	.48	7-162-R	.48
8-162-L	.55	8-162-R	.55
9-162-L	.61	9-162-R	.61
10-162-L	.68	10-162-R	.68
11-162-L	.74	11-162-R	.74
12-162-L	.80	12-162-R	.80
13-162-L	.86	13-162-R	.86
14-162-L	.94	14-162-R	.94
15-162-L	.99	15-162-R	.99
16-162-L	1.06	16-162-R	1.06
17-162-L	1.11	17-162-R	1.11



CABLE CLAMPS

Cable Clamps are available for the Fanning Strips listed at the left and are furnished in 6 different sizes as listed below. Cable Clamp is of Brass Nickle Plated, with 6-32 round head Nickle Plated Brass Screws. For convenience the Cable Clamps are furnished unassembled.

CABLE CLAMP SIZES AVAILABLE

No.	I. D.
CC-161-4	¼"
CC-161-6	⅜"
CC-161-8	½"
CC-161-10	⅝"
CC-161-12	¾"
CC-161-14	⅞"

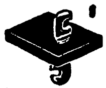
List price 12 c each.

Be sure to give code number when ordering.

On small sizes Lacing Twine can be used for anchoring cable to the Fanning Strip instead of Cable Clamp.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES



1

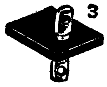
NO. 1 TERMINAL STRIPS

Terminal 1/8" Round Copper, Flattened at Ends, Tin Plated

A convenient and compact strip where solder connections are desired.

Insulation: Canvas Base Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-1	**(2 Terminals)**	**$ .13**	**No. 6-1**	**(6 Terminals)**	**$ .19**
No. 3-1	**(3 Terminals)**	**.14**	**No. 7-1**	**(7 Terminals)**	**.20**
No. 4-1	**(4 Terminals)**	**.15**	**No. 8-1**	**(8 Terminals)**	**.21**
No. 5-1	**(5 Terminals)**	**.17**	**No. 9-1**	**(9 Terminals)**	**.22**



3

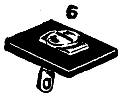
NO. 3 TERMINAL STRIPS

Terminal 1/8" Round Copper, Flattened at Each End, Tin Plated

Similar to No. 1, except closer spacing and furnished with holes instead of hooks.

Insulation: Canvas base Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-3	**(2 Terminals)**	**$ .15**	**No. 6-3**	**(6 Terminals)**	**$ .21**
No. 3-3	**(3 Terminals)**	**.17**	**No. 7-3**	**(7 Terminals)**	**.22**
No. 4-3	**(4 Terminals)**	**.19**	**No. 8-3**	**(8 Terminals)**	**.23**
No. 5-3	**(5 Terminals)**	**.20**	**No. 9-3**	**(9 Terminals)**	**.24**



6

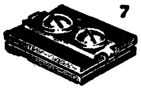
NO. 6 TERMINAL STRIPS

Terminal .04[illegible] Brass, Cadmium Plated

Screw and solder term[illegible] [illegible]stantial and reasonably priced.

Screw: 6-32 x 5/16" brass, binder head, [illegible]shed nickel plate. Insulation: XP Bakelite, 3/4" wide, [illegible]k. Terminals spaced on 1/2" centers. Mounting holes 1/2" from cen[illegible] end terminals.

Code		Ea.	Code		Ea.
No. 2-6	**(2 Terminals)**	**$ .17**	**No. 6-6**	**(6 Terminals)**	**$ .36**
No. 3-6	**(3 Terminals)**	**.22**	**No. 7-6**	**(7 Terminals)**	**.41**
No. 4-6	**(4 Terminals)**	**.26**	**No. 8-6**	**(8 Terminals)**	**.46**
No. 5-6	**(5 Terminals)**	**.32**	**No. 9-6**	**(9 Terminals)**	**.51**



7

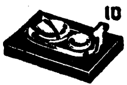
NO. 7 TERMINAL STRIPS

Terminal .046" Brass, Burnished Nickel Plate

A two screw insulated terminal strip that can be mounted directly on metal surface.

Screws: 6-32 x 3/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 3/16" thick (total). Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-7	**(2 Terminals)**	**$ .24**	**No. 6-7**	**(6 Terminals)**	**$ .68**
No. 3-7	**(3 Terminals)**	**.35**	**No. 7-7**	**(7 Terminals)**	**.79**
No. 4-7	**(4 Terminals)**	**.46**	**No. 8-7**	**(8 Terminals)**	**.89**
No. 5-7	**(5 Terminals)**	**.57**	**No. 9-7**	**(9 Terminals)**	**1.00**



10

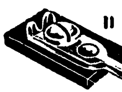
NO. 10 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Sturdy screw and solder terminal with both screw and solder connections on top of bakelite panel. Solder terminal turned up.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 5/8" wide, 3/32" thick. Terminals spaced on 5/8" centers. Mounting holes 5/8" from center of end terminals. Will take up to No. 15 B & S gauge wire (.057").

Code		Ea.	Code		Ea.
No. 2-10	**(2 Terminals)**	**$ .25**	**No. 6-10**	**(6 Terminals)**	**$ .74**
No. 3-10	**(3 Terminals)**	**.37**	**No. 7-10**	**(7 Terminals)**	**.86**
No. 4-10	**(4 Terminals)**	**.50**	**No. 8-10**	**(8 Terminals)**	**.98**
No. 5-10	**(5 Terminals)**	**.62**	**No. 9-10**	**(9 Terminals)**	**1.10**



11

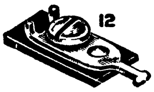
NO. 11 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Similar to No. 10, except larger in size and the solder tab is flat, but will be bent up, if specified.

Screws: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/8" thick. Terminals mounted on 3/4" centers. Mounting holes 3/4" from center of end terminals. Will take up to No. 12 B & S gauge wire (.080").

Code		Ea.	Code		Ea.
No. 2-11	**(2 Terminals)**	**$ .34**	**No. 6-11**	**(6 Terminals)**	**$ .87**
No. 3-11	**(3 Terminals)**	**.47**	**No. 7-11**	**(7 Terminals)**	**1.00**
No. 4-11	**(4 Terminals)**	**.61**	**No. 8-11**	**(8 Terminals)**	**1.13**
No. 5-11	**(5 Terminals)**	**.74**	**No. 9-11**	**(9 Terminals)**	**1.28**



12

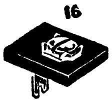
NO. 12 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Similar to No. 11, except larger. Solder tab is flat; but will be bent up, if specified.

Screw: 10-32 x 3/8" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, 3/16" thick. Terminals mounted on 7/8" centers. Mounting holes 7/8" from center of end terminals. Will take up to No. 9 B & S gauge wire (.114").

Code		Ea.	Code		Ea.
No. 2-12	**(2 Terminals)**	**$ .48**	**No. 6-12**	**(6 Terminals)**	**$1.25**
No. 3-12	**(3 Terminals)**	**.67**	**No. 7-12**	**(7 Terminals)**	**1.45**
No. 4-12	**(4 Terminals)**	**.87**	**No. 8-12**	**(8 Terminals)**	**1.65**
No. 5-12	**(5 Terminals)**	**1.07**	**No. 9-12**	**(9 Terminals)**	**1.84**



16

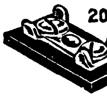
NO. 16 TERMINAL STRIPS

Terminal .028" Brass; Cadmium Plated

A popular priced screw and solder terminal with many desirable features.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 3/4" wide, 3/16" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-16	**(2 Terminals)**	**$ .14**	**No. 6-16**	**(6 Terminals)**	**$ .34**
No. 3-16	**(3 Terminals)**	**.20**	**No. 7-16**	**(7 Terminals)**	**.39**
No. 4-16	**(4 Terminals)**	**.24**	**No. 8-16**	**(8 Terminals)**	**.44**
No. 5-16	**(5 Terminals)**	**.29**	**No. 9-16**	**(9 Terminals)**	**.48**



20

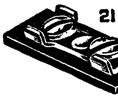
NO. 20 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Strong two screw terminal with ears to hold wire securely under screw.

Screws: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals. Will take up to No. 13 B & S gauge wire (.071").

Code		Ea.	Code		Ea.
N[illegible]-20	**(2 Terminals)**	**$ .34**	**No. 6-20**	**(6 Terminals**	**$1.01**
No. [illegible]	**(3 Terminals)**	**.51**	**No. 7-20**	**(7 Terminals)**	**1.20**
No. 4-2[illegible]	**(4 Terminals)**	**.68**	**No. 8-20**	**(8 Terminals)**	**1.35**
No. 5-20	**[illegible] Terminals)**	**.85**	**No. 9-20**	**(9 Terminals)**	**1.53**



21

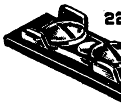
NO. 21 TERMINAL STRIPS

[illegible]minal 1/16" Brass, Burnished Nickel Plate

Simila[illegible] [illegible]o No. 20, except larger.

Screw: [illegible]32 x 5/16" brass, binder head, burnished nickel pl[illegible]. Insulation: XP Bakelite, 1 1/8" wide, 1/8" thick. Terminals mounted on 3/4" centers. Mounting holes 3/4" from center of [illegible]nd terminals. Will take up to No. 11 B & S gauge wire (.090").

Code		Ea.	Code		Ea.
No. 2-21	**(2 Terminals)**	**$ .48**	**[illegible]o. 6-21**	**(6 Terminals)**	**$1.25**
No. 3-21	**(3 Terminals)**	**.68**	**No. 7-21**	**(7 Terminals)**	**1.45**
No. 4-21	**(4 Terminals)**	**.87**	**No. 8-21**	**(8 Terminals)**	**1.65**
No. 5-21	**(5 Terminals)**	**1.07**	**No. 9-21**	**(9 Terminals)**	**1.84**



22

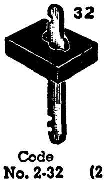
NO. 22 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Similar to No. 21, except larger.

Screws: 10-32 x 3/8" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1 1/4" wide, 3/16" thick. Terminals mounted on 7/8" centers. Mounting holes 7/8" from center of end terminals. Will take up to No. 8 B & S gauge wire (.128").

Code		Ea.	Code		Ea.
No. 2-22	**(2 Terminals)**	**$ .64**	**No. 6-22**	**(6 Terminals)**	**$1.61**
No. 3-22	**(3 Terminals)**	**.88**	**No. 7-22**	**(7 Terminals)**	**1.85**
No. 4-22	**(4 Terminals)**	**1.12**	**No. 8-22**	**(8 Terminals)**	**2.09**
No. 5-22	**(5 Terminals)**	**1.36**	**No. 9-22**	**(9 Terminals)**	**2.22**



32

No. 32 TERMINAL STRIPS

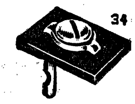
Terminal .050" Brass, Tin Plated

An ideal terminal strip (solder type) for medium heavy wiring. One or more wires may be connected to this terminal.

Insulation: XX Bakelite, 5/8" wide, 1/4" thick. Terminals mounted on 9/16" centers. Mounting holes 9/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-32	**(2 Terminals)**	**$ .24**	**No. 6-32**	**(6 Terminals)**	**$ .68**
No. 3-32	**(3 Terminals)**	**.35**	**No. 7-32**	**(7 Terminals)**	**.79**
No. 4-32	**(4 Terminals)**	**.46**	**No. 8-32**	**(8 Terminals)**	**.89**
No. 5-32	**(5 Terminals)**	**.57**	**No. 9-32**	**(9 Terminals)**	**1.00**

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES



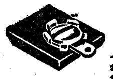
NO. 34 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

Very substantial and neat appearing terminal. Ample length solder terminal below panel, with screw connection above.

Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, ⅛" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-34	**(2 Terminals)**	**$ .24**	**No. 6-34**	**(6 Terminals)**	**$ .48**
No. 3-34	**(3 Terminals)**	**.31**	**No. 7-34**	**(7 Terminals)**	**.55**
No. 4-34	**(4 Terminals)**	**.36**	**No. 8-34**	**(8 Terminals)**	**.61**
No. 5-34	**(5 Terminals)**	**.43**	**No. 9-34**	**(9 Terminals)**	**.67**



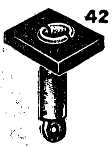
NO. 36A TERMINAL STRIPS

Terminal .031" Brass, Cadmium Plated

A popular priced screw and solder terminal with both screw and solder tab on same side of bakelite panel.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅝" wide, 1/16" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-36A	**(2 Terminals)**	**$ .14**	**No. 6-36A**	**(6 Terminals)**	**$ .34**
No. 3-36A	**(3 Terminals)**	**.20**	**No. 7-36A**	**(7 Terminals)**	**.39**
No. 4-36A	**(4 Terminals)**	**.24**	**No. 8-36A**	**(8 Terminals)**	**.44**
No. 5-36A	**(5 Terminals)**	**.29**	**No. 9-36A**	**(9 Terminals)**	**.48**



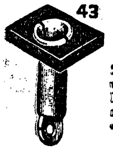
NO. 42 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Similar in construction to No. 53. Takes ⅛" prong. May be used with No. 99 terminal strips (same terminal spacing).

Insulation: XP Bakelite, ½" wide, 3/32" thick. Terminals mounted on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-42	**(2 Terminals**	**$ .24**	**No. 6-42**	**(6 Terminals)**	**$ .44**
No. 3-42	**(3 Terminals)**	**.29**	**No. 7-42**	**(7 Terminals)**	**.48**
No. 4-42	**(4 Terminals)**	**.34**	**No. 8-42**	**(8 Terminals)**	**.53**
No. 5-42	**(5 Terminals)**	**.39**	**No. 9-42**	**(9 Terminals)**	**.58**



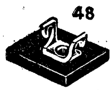
NO. 43 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Same as No. 42, except that it takes 5/32" prongs. May be used with No. 100 terminal strips.

Insulation: XP Bakelite, ⅝" wide, 3/32" thick. Terminals mounted on ⅝" centers. Mounting holes ⅝" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-43	**(2 Terminals)**	**$ .31**	**No. 6-43**	**(6 Terminals)**	**$ .55**
No. 3-43	**(3 Terminals)**	**.36**	**No. 7-43**	**(7 Terminals)**	**.61**
No. 4-43	**(4 Terminals)**	**.43**	**No. 8-43**	**(8 Terminals)**	**.67**
No. 5-43	**(5 Terminals)**	**.48**	**No. 9-43**	**(9 Terminals)**	**.73**



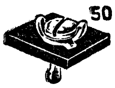
NO. 48 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

A low priced double solder terminal.

Insulation: XP Bakelite, ½" wide, 1/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-48	**(2 Terminals)**	**$ .09**	**No. 6-48**	**(6 Terminals)**	**$ .23**
No. 3-48	**(3 Terminals)**	**.12**	**No. 7-48**	**(7 Terminals)**	**.26**
No. 4-48	**(4 Terminals)**	**.15**	**No. 8-48**	**(8 Terminals)**	**.31**
No. 5-48	**(5 Terminals)**	**.20**	**No. 9-48**	**(9 Terminals)**	**.34**



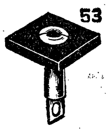
NO. 50 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

One of the most popular screw and solder terminals. Made of heavy stock with ears to firmly hold wires under screw.

Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite ⅞" wide, ⅛" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-50	**(2 Terminals)**	**$ .23**	**No. 6-50**	**(6 Terminals)**	**$ .47**
No 3-50	**(3 Terminals)**	**.29**	**No. 7-50**	**(7 Terminals)**	**.53**
No. 4-50	**(4 Terminals)**	**.35**	**No. 8-50**	**(8 Terminals)**	**.59**
No. 5-50	**(5 Terminals)**	**.41**	**No. 9-50**	**(9 Terminals)**	**.65**



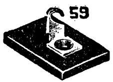
NO. 53 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

A reliable socket type contact for many uses. Takes 3/32" prongs. May be used with No. 98 terminal strips (same terminal spacing).

Insulation: XP Bakelite, ½" wide, 3/32" thick. Terminals mounted on ⅜" centers. Mounting holes ⅜" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-53	**(2 Terminals)**	**$ .21**	**No. 6-53**	**(6 Terminals)**	**$ .35**
No. 3-53	**(3 Terminals)**	**.24**	**No. 7-53**	**(7 Terminals)**	**.39**
No. 4-53	**(4 Terminals)**	**.28**	**No. 8-53**	**(8 Terminals)**	**.43**
No. 5-53	**(5 Terminals)**	**.32**	**No. 9-53**	**(9 Terminals)**	**.46**



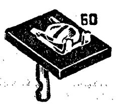
NO. 59 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

An inexpensive solder terminal. One wire may be brought up through hole and soldered, leaving vertical tab for other connection.

Insulation: XP Bakelite, ⅜" wide, 1/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-59	**(2 Terminals)**	**$ .09**	**No. 6-59**	**(6 Terminals)**	**$ .23**
No. 3-59	**(3 Terminals)**	**.12**	**No. 7-59**	**(7 Terminals)**	**.26**
No. 4-59	**(4 Terminals)**	**.15**	**No. 8-59**	**(8 Terminals)**	**.31**
No. 5-59	**(5 Terminals)**	**.20**	**No. 9-59**	**(9 Terminals)**	**.34**



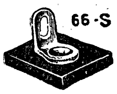
NO. 60 TERMINAL STRIPS

Terminal .050" Brass, Cadmium Plated

Screw terminal above panel—solder terminal below. Solder tab is notched.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, ⅛" thick. Terminals spaced on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-60	**(2 Terminals)**	**$ .20**	**No. 6-60**	**(6 Terminals)**	**$ .45**
No. 3-60	**(3 Terminals)**	**.26**	**No. 7-60**	**(7 Terminals)**	**.51**
No. 4-60	**(4 Terminals)**	**.33**	**No. 8-60**	**(8 Terminals)**	**.57**
No. 5-60	**(5 Terminals)**	**.39**	**No. 9-60**	**(9 Terminals)**	**.63**



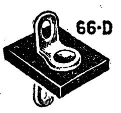
NO. 66-S TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

A heavy solder terminal with large oval hole for several wires.

Insulation: XP Bakelite, ¾" wide, 3/32" thick. Terminals mounted on ⅝" centers. Mounting holes ⅝" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-66-S	**(2 Terminals)**	**$ .10**	**No. 6-66-S**	**(6 Terminals)**	**$ .24**
No. 3-66-S	**(3 Terminals)**	**.13**	**No. 7-66-S**	**(7 Terminals)**	**.28**
No. 4-66-S	**(4 Terminals)**	**.17**	**No. 8-66-S**	**(8 Terminals)**	**.32**
No. 5-66-S	**(5 Terminals)**	**.21**	**No. 9-66-S**	**(9 Terminals)**	**.35**



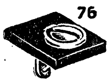
NO. 66-D TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

Two No. 66 terminals mounted on opposite sides of panel and riveted together by solid rivet. Ideal strip for heavy work.

Insulation: XP Bakelite, ¾" wide, 3/32" thick. Terminals mounted on ⅝" centers. Mounting holes ⅝" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-66-D	**(2 Terminals)**	**$ .12**	**No. 6-66-D**	**(6 Terminals)**	**$ .32**
No. 3-66-D	**(3 Terminals)**	**.17**	**No. 7-66-D**	**(7 Terminals)**	**.36**
No. 4-66-D	**(4 Terminals)**	**.22**	**No. 8-66-D**	**(8 Terminals)**	**.41**
No. 5-66-D	**(5 Terminals)**	**.26**	**No. 9-66-D**	**(9 Terminals)**	**.46**



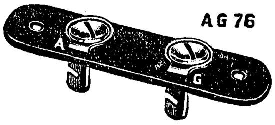
NO. 76 TERMINAL STRIPS

Terminal .028" Brass, Cadmium Plated

Cup shaped top holds wire securely under screw. A compact and good appearing terminal.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ¾" wide, 1/16" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

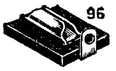
Code		Ea.	Code		Ea.
No. 2-76	**(2 Terminals)**	**$ .17**	**No. 6-76**	**(6 Terminals)**	**$ .36**
No. 3-76	**(3 Terminals)**	**.22**	**No. 7-76**	**(7 Terminals)**	**.41**
No. 4-76	**(4 Terminals)**	**.26**	**No. 8-76**	**(8 Terminals)**	**.46**
No. 5-76	**(5 Terminals)**	**.32**	**No. 9-76**	**(9 Terminals)**	**.51**


AG 76

AG-76

Standard Antenna-Ground strip using No. 76 terminals. Insulation: 1/16" Bakelite, 11/16" wide. Mounting centers 1 11/16". Ends rounded. Letters A and G are filled in white.

No. AG-76........................Ea. $ .14

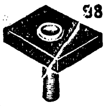

96

NO. 96 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

Perhaps the most popular socket terminal ever sold. Takes standard tube prongs (No. 99 or No. 100). Furnished for No. 99 prongs (1/8") unless otherwise specified. Insulation: XP Bakelite, 5/8" wide, 1/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-96	(2 Terminals)	$ .10	No. 6-96	(6 Terminals)	$ .24
No. 3-96	(3 Terminals)	.13	No. 7-96	(7 Terminals)	.28
No. 4-96	(4 Terminals)	.17	No. 8-96	(8 Terminals)	.32
No. 5-96	(5 Terminals)	.21	No. 9-96	(9 Terminals)	.35

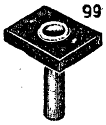

98

NO. 98 TERMINAL STRIPS

Terminal 3/32" Round, Brass, Cadmium Plated

Standard tube base prong of 3/32" diameter. To be used with No. 53 terminal strips.
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 3/8" centers.

Code		Ea.	Code		Ea.
No. 2-98	(2 Terminals)	$ .09	No. 6-98	(6 Terminals)	$ .23
No. 3-98	(3 Terminals)	.12	No. 7-98	(7 Terminals)	.26
No. 4-98	(4 Terminals)	.15	No. 8-98	(8 Terminals)	.31
No. 5-98	(5 Terminals)	.20	No. 9-98	(9 Terminals)	.34

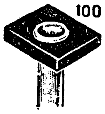

99

NO. 99 TERMINAL STRIPS

Terminal 1/8" Round, Brass, Cadmium Plated

Similar to No. 98, except that it is 1/8" in diameter. To be used with No. 42 terminal strips, and also with No. 96 terminal strips.
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 1/2" centers.

Code		Ea.	Code		Ea.
No. 2-99	(2 Terminals)	$ .12	No. 6-99	(6 Terminals)	$ .32
No. 3-99	(3 Terminals)	.17	No. 7-99	(7 Terminals)	.36
No. 4-99	(4 Terminals)	.22	No. 8-99	(8 Terminals)	.41
No. 5-99	(5 Terminals)	.26	No. 9-99	(9 Terminals)	.46


100

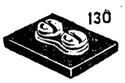
NO. 100 TERMINAL STRIPS

Terminal 5/32" Round, Brass, Cadmium Plated

Similar to No: 99, except 5/32" in diameter. To be used with No. 43 terminal strip, and No. 96 terminal strip.

Insulation: XP Bakelite, 5/8" wide, 3/32" thick. Terminals mounted on 5/8" centers.

Code		Ea.	Code		Ea.
No. 2-100	(2 Terminals)	$ .19	No. 6-100	(6 Terminals)	$ .44
No. 3-100	(3 Terminals)	.25	No. 7-100	(7 Terminals)	.50
No. 4-100	(4 Terminals)	.32	No. 8-100	(8 Terminals)	.56
No. 5-100	(5 Terminals)	.37	No. 9-100	(9 Terminals)	.62

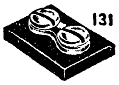

130

NO. 130 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

An inexpensive terminal strip with two screw terminals. Screws: 5-40 x 3/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/16" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-130	(2 Terminals)	$ .19	No. 6-130	(6 Terminals)	$ .57
No. 3-130	(3 Terminals)	.28	No. 7-130	(7 Terminals)	.67
No. 4-130	(4 Terminals)	.37	No. 8-130	(8 Terminals)	.76
No. 5-130	(5 Terminals)	.47	No. 9-130	(9 Terminals)	.86

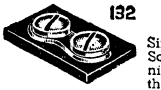

131

NO. 131 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 130, except larger.
Screws: 6-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-131	(2 Terminals)	$ .23	No. 6-131	(6 Terminals)	$ .67
No. 3-131	(3 Terminals)	.34	No. 7-131	(7 Terminals)	.77
No. 4-131	(4 Terminals)	.45	No. 8-131	(8 Terminals)	.88
No. 5-131	(5 Terminals)	.56	No. 9-131	(9 Terminals)	.99

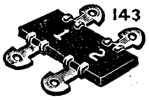

132

NO. 132 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 131, except larger.
Screws 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1 1/8" wide, 1/8" thick. Terminals mounted on 3/4" centers. Mounting holes 3/4" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-132	(2 Terminals)	$ .28	No. 6-132	(6 Terminals)	$ .76
No. 3-132	(3 Terminals)	.40	No. 7-132	(7 Terminals)	.88
No. 4-132	(4 Terminals)	.52	No. 8-132	(8 Terminals)	1.00
No. 5-132	(5 Terminals)	.64	No. 9-132	(9 Terminals)	1.12


143

No. 143 TERMINAL STRIPS

Terminal .040" Brass, Tin Plated

A strong two-way solder terminal. Solder tabs lie flat. Crimps securely around edges of panel.

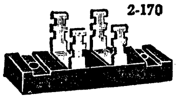
Special Strips

These strips can be made up special, with terminals mounted on any centers, from 3/8" up.

Standard Strips

Insulation: XP Bakelite, 3/8" wide, 3/32" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.
Terminals may be numbered or lettered in white, as illustrated. (See page 18 for imprinting cost.)

Code		Ea.	Code		Ea.
No. 2-143	(2 Terminals)	$ .12	No. 6-143	(6 Terminals)	$ .26
No. 3-143	(3 Terminals)	.15	No. 7-143	(7 Terminals)	.31
No. 4-143	(4 Terminals)	.20	No. 8-143	(8 Terminals)	.34
No. 5-143	(5 Terminals)	.23	No. 9-143	(9 Terminals)	.37

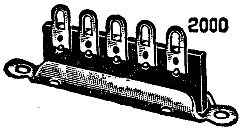

2-170

No. 170 TERMINAL STRIPS

Terminal .032" Brass, Tin Plated

A heavy solder Terminal.
Insulation: Black molded Bakelite, 5/16" wide, 1/4" thick. Terminals mounted on 3/8" centers. Mounting holes are 3/8" from center of end Terminals.

Code		Ea.	Code		Ea.
No. 1-170	(1 Terminal)	$ .20	No. 6-170	(6 Terminals)	$ .44
No. 2-170	(2 Terminals)	.24	No. 7-170	(7 Terminals)	.48
No. 3-170	(3 Terminals)	.29	No. 8-170	(8 Terminals)	.53
No. 4-170	(4 Terminals)	.34	No. 9-170	(9 Terminals)	.58
No. 5-170	(5 Terminals)	.39	No. 10-170	(10 Terminals)	.63


2000

NO. 2000 TERMINAL STRIPS

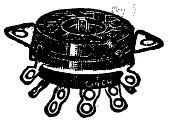
Terminals .019" Brass, Tin Plated

Compact and sturdy junction terminal strip. Useful in assembling radio chassis, wiring, etc.
Insulation: Bakelite. Brackets: Steel, cadmium plated. Terminals spaced on 5/16" centers.

Code		Mounting Hole Centers:	Per 100
No. 2002	(2 Terminals)	1"	$7.74
No. 2003	(3 Terminals)	1—5/16"	8.47
No. 2004	(4 Terminals)	1—5/8"	9.20
No. 2005	(5 Terminals)	1—15/16"	9.92
No. 2006	(6 Terminals)	2—1/4"	10.65
No. 2007	(7 Terminals)	2—9/16"	11.37
No. 2008	(8 Terminals)	2—7/8"	12.10
No. 2009	(9 Terminals)	3—3/16"	12.83
No. 2010	(10 Terminals)	3—1/2"	13.55
No. 2011	(11 Terminals)	3—13/16"	14.28
No. 2012	(12 Terminals)	4—1/8"	15.00
No. 2013	(13 Terminals)	4—7/16"	15.73

CINCH SOCKETS ARE STANDARD

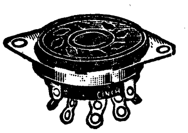
MOLDED OCTAL
1-5/16" MOUNTING CENTERS



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Solder coated brass contacts and sturdy steel press-on type saddle with 4 ground lugs. Mounts in 1" chassis hole.

No.	Description	List Price
8AB	**Black**	**Each $ .15**
8AM	**Mica-Filled**	**Each .22**

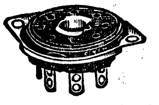
MOLDED OCTAL
1½" MOUNTING CENTERS



Same as 8A series molded octal above except has clinch-on type saddle with 4 ground lugs and mounts in 1⅛" chassis hole. Available in black, mica - filled bakelite, or ceramic.

No.	Description	List Price
8EB	**Black**	**Each $ .15**
8EM	**Mica-Filled**	**Each .22**
8EC	**Ceramic**	**Each .51**

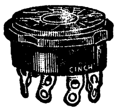
MOLDED LOKTAL

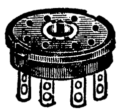


Steel mounting saddle with solder coated brass contacts and center guide clip with locking spring. 1 5/16" mounting centers. Molded from high dielectric black bakelite or mica-filled low loss bakelite. Mounts in 1" chassis hole.

No.	Description	List Price
8LB	**Black**	**Each $ .22**
8LM	**Mica-Filled**	**Each .29**

CHASSIS CLINCH
OCTAL AND LOKTAL

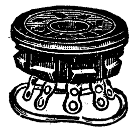




Designed to save valuable chassis space. Mounted in specially punched 1" chassis holes, and are rigidly fastened by lugs sheared from the chassis. No mounting plate or ring required. Molded from high dielectric black bakelite. Solder coated brass contacts and center guide clip.

No.	Description	List Price
8CC	**Octal**	**Each $ .13**
8CCL	**Loktal**	**Each .18**

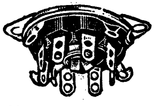
RING MOUNT OCTAL



Molded from high dielectric black bakelite. Solder coated brass contacts. Used extensively on test equipment, public address amplifiers and on other apparatus where sockets are exposed. Molded keyway in side engages key in chassis hole, preventing socket from turning. Mounts in 1 11/64" chassis hole. Crimped retainer ring is furnished with these sockets.

No.	Description	List Price
8R1	**For 1/16" thick chassis**	**Each $ .19**
8R2	**For ⅛" thick chassis**	**Each .19**

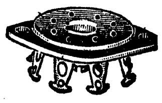
MOLDED LOKTAL



Has same characteristics as molded loktal shown in left column, except saddle has 4 ground lugs.

No.	Description	List Price
8LB1	**Black**	**Each $ .22**
8LM1	**Mica-Filled**	**Each .29**

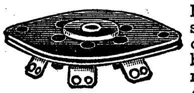
WAFER LOKTAL
1-5/16" MOUNTING CENTERS



Laminated bakelite socket. Sturdy and positive grip solder coated contacts and center guide clip with locking spring. Mounts in 1 1/16" chassis hole. Has two .136 diameter mounting holes.

No.	List Price
8LWS	**Each $ .17**

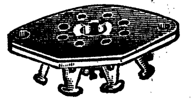
GLASS TUBE SOCKETS



Laminated bakelite sockets with solder coated positive grip brass contacts. 1½" mounting centers. .140 diameter mounting holes. Designed to fit four, five and seven prong tubes.

No.	Description	List Price
4WX	**4 Prong**	**Each $ .13**
5WY	**5 Prong**	**Each .13**
6WZ	**6 Prong**	**Each .14**
7WU	**7 Prong**	**Each .15**
7WA	**7 Prong (Large)**	**Each .15**

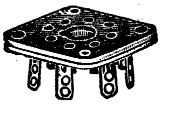
WAFER LOKTAL
1½" MOUNTING CENTERS



Laminated bakelite socket. Solder coated brass contacts and center guide clip with locking spring. Mounts in 1¼" diameter chassis hole. Two .136 diameter mounting holes.

No.	List Price
8LWL	**Each $ .17**

WAFER OCTAL

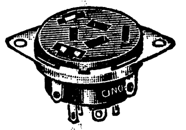


Laminated bakelite sockets with solder coated brass positive grip contacts. Designed to fit all standard eight prong tubes. Available with 1 5/16" or 1½" mounting centers. Both styles have .136 diameter mounting holes.

No.	Description	List Price
8W1	**1 5/16" Mounting Centers**	**Each $ .15**
8W2	**1½" Mounting Centers**	**Each .15**

CINCH CAPACITOR "PLUG-IN" SOCKETS

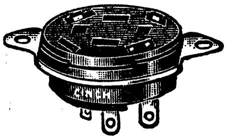
Motion picture, telephone, airborne radio, broadcasting equipment, electric organs, and other electrical equipment need instant replacement when failures in electronic circuits occur at the capacitor connections. Cinch "Know How" has solved this problem.



SMALL

Designed for use with Mallory and Magnavox 1" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel mounting saddle has 4 ground lugs. 1½" mounting centers. 3 recessed center contacts for extended prongs of condenser and two outer contacts flush with surface for short prongs of condenser. All contacts are solder coated for fast, easy soldering.

No.	List Price
2C5	**Each $ .55**



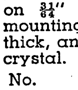
LARGE

Designed for use with Mallory and Magnavox 1⅜" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel saddle has 1 27/32" mounting centers. Four recessed center contacts for extended prongs of condenser and three outer contacts flush with surface for short prongs of condenser. All contacts are solder coated.

No.	List Price
2C7	**Each $ .68**

CRYSTAL SOCKETS

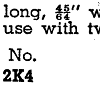
2 PRONG
31/64" CENTERS



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated beryllium copper contacts on 31/64" centers. .120" diameter recessed mounting hole. Socket body is 25/32" long, 5/16" thick, and 35/64" high. For use with FT243 type crystal.

No.	Description	List Price
2KB	**Black**	**Each $ .33**
2KM	**Mica-Filled**	**Each .37**

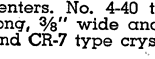
4 PRONG



Molded from mica-filled low loss bakelite. Silver plated beryllium copper contacts on 31/64" centers. .140 diameter mounting hole recessed 9/64" from surface in 5/16" diameter hole. Socket body is 25/32" long, 45/64" wide, and ½" high. Designed for use with two No. FT243 type crystals.

No.	List Price
2K4	**Each $ .44**

2 PRONG
½' CENTERS



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated phosphor bronze contacts on ½" centers. No. 4-40 tap mounting hole. 1⅛" long, ⅜" wide and 7/16" high. For No. CR-1 and CR-7 type crystals.

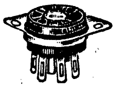
No.	Description	List Price
2K1B	**Black**	**Each $ .44**
2K1M	**Mica-Filled**	**Each .50**

CINCH-JONES SALES ★

7 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED SADDLE TYPE

Bottom Mount

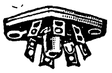


Molded from high dielectric black bakelite or mica-filled low loss bakelite. Cadmium plated steel saddle with 7/8" mounting centers. .093 diameter mounting holes. Solder coated positive grip brass contacts. Designed for mounting through bottom of chassis in 5/8" diameter hole. For use with all standard seven pin miniature tubes.

No.	Description	List Price
7EB	**Black**	**Each $ .24**
7EM	**Mica-Filled**	**Each .31**

WAFER TYPE

7/8" Mounting Centers

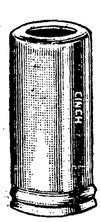


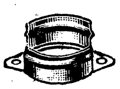
Laminations consists of 1/16" top plate and 3/64" bottom plate from high grade chocolate XP bakelite. .095 diameter mounting holes. Solder coated brass contacts. Available with or without solder center shield and ground strap.

No.	Description	List Price
7W1	**With center shield & ground strap**	**Each $ .23**
7W2	**With center shield only**	**Each .21**
7W3	**Without center shield & ground strap**	**Each .21**
7W4	**Same as 7W1 except has two (2) 1/16" Top Plates**	**Each .25**

TUBE SHIELD AND BASE

Snap-On Type



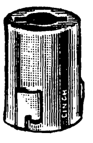


Shield fits over and outside of retaining spring. Indentation on shield locks into ridge on base. Spring steel shield is 1 53/64" long. Base is made of hardened carbon steel supplying adequate spring retentivity on shield. Base has 7/8" mounting centers with mounting holes that coincide with those for miniature 7 pin sockets as established by R.M.A. standards. For use with saddle type and wafer sockets with 7/8" mounting centers illustrated on this page.

No.	List Price
7S1	**Each $ .18**

TUBE SHIELDS

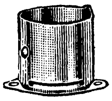
"J" Slot Type



Durable steel shields complete with tube securing spring. "J" slot feature designed to fit securely with Cinch shield base type sockets, such as 7X series shown in next column. Also fit 7SB type shield bases shown below. Available in three lengths:

No.	Description	List'Price
7S2	**1 3/8" Long**	**Each $ .18**
7S3	**1 3/4"'Long**	**Each .19**
7S4	**2 1/4"'Long**	**Each .28**

SHIELD BASES FOR ABOVE SHIELDS

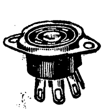


Durable steel shield bases designed for use with "J" slot type shields illustrated above. Available in two sizes: 7/16" high or 3/4" high. Both types have 7/8" mounting centers.

No.	Description	List Price
7SB	**7/16" High**	**Each $ .12**
7SB1	**3/4" High**	**Each .19**

MOLDED SADDLE TYPE

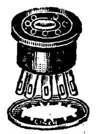
Top Mount



Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. Cadmium plated steel saddle with 7/8" mounting centers and .093 diameter mounting holes. Solder coated brass contacts. Designed for mounting through top of chassis in 5/8" diameter hole. Will securely hold all standard seven pin miniature tubes.

No.	Description	List Price
7AB	**Black**	**Each $ .24**
7AM	**Mica-Filled**	**Each .31**
7AC	**Ceramic**	**Each .55**

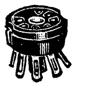
RING MOUNT TYPE



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Solder coated brass contacts and center shield. Mounts in 5/8" diameter round or "D" shaped hole. Complete with retainer ring.

No.	Description	List Price
7RB	**Black**	**Each $ .23**
7RM	**Mica-Filled**	**Each .30**

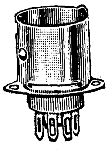
CHASSIS CLINCH TYPE



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed to save valuable chassis space. Mounted in specially punched 5/8" chassis hole and are rigidly fastened by lugs sheared from the chassis. No mounting plate or ring is required.

No.	Description	List Price
7CCB	**Black**	**Each $ .21**
7CCM	**Mica-Filled Bakelite**	**Each .26**

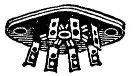
SHIELD BASE TYPE



Shield base is attached to socket body for mounting through top of chassis. Molded from high dielectric black bakelite, mica-filled low loss bakelite or ceramic material. Solder coated brass contacts and center shield. Cadmium plated steel shield base with 7/8" mounting centers. Use No. 7S2, 7S3, or 7S4 shields illustrated to left with these sockets.

No.	Description	List Price
7XB	**Black**	**Each $ .44**
7XM	**Mica-Filled Bakelite**	**Each .50**
7XC	**Ceramic**	**Each .72**

WAFER TYPE with 1" & 1-5/16" Mtg. Centers



Newly developed 7 pin miniatures to replace octal sockets for auto radios, television, and other sets. Newly designed contacts will hold tube firmly in place without using a tube shield despite constant vibration. Same pin circle as standard 7 pin miniature sockets with 7/8" mounting centers for all standard 7 pin miniature tubes. Available with or without center guide pin and ground strap.

1" Mounting Centers

No.	Description	List Price
7WL1	**With center pin and ground strap**	**Each $ .19**
7WL2	**With center pin only**	**Each .18**
7WL3	**Without center pin or ground strap**	**Each .17**

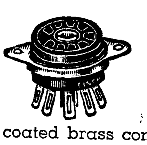
1-5/16" Mounting Centers

No.	Description	List Price
7WL4	**With center pin**	**Each .19**
7WL5	**Without center pin**	**Each .18**

9 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED — SADDLE TYPE

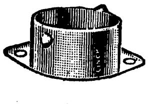
Bottom Mount



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through bottom of chassis in 3/4" diameter hole. 1 1/8" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

No.	Description	List Price
9EB	**Black**	**Each $ .36**
9EM	**Mica-Filled Bakelite**	**Each .42**

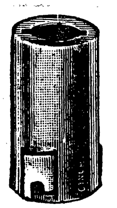
SHIELD BASE



Durable steel shield base designed for use with shields illustrated to right. 1 1/8" mounting centers. May be used with any 9 pin wafer or saddle type sockets shown in right column.

No.	List Price
9SB	**Each $ .24**

TUBE SHIELDS

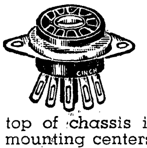


Made from durable steel. Complete with tube securing spring. "J" slot feature designed to fit securely with Cinch 9X series shield base type sockets illustrated to the right. Will also fit No. 9SB shield base shown at left. Available in three lengths.

No.	Description	List Price
9S1	**1 1/2" Long**	**Each $ .29**
9S2	**1 15/16" Long**	**Each .31**
9S3	**2 3/8" Long**	**Each .40**

MOLDED—SADDLE TYPE

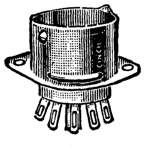
Top Mount



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through top of chassis in 3/4" diameter hole. 1 1/8" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

No.	Description	List Price
9AB	**Black**	**Each $ .36**
9AM	**Mica-Filled**	**Each .42**

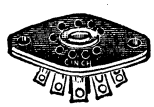
SHIELD BASE TYPE



Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. One-piece cadmium plated steel shield base and saddle with .093 diameter mounting holes on 1 1/8" centers. Solder coated brass contacts and center shield. Mounts through top of chassis in 3/4" diameter hole. Use Cinch 9S type shields with these sockets.

No.	Description	List Price
9XB	**Black**	**Each $ .63**
9XM	**Mica**	**Each .68**
9XC	**Ceramic**	**Each .96**

WAFER TYPE

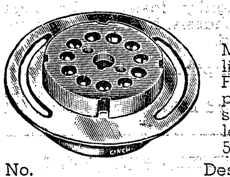


Has two laminations consisting of 1/16" top plate and 3/64" bottom plate made from 1 1/8" mounting centers with .093 diameter holes. Solder coated brass contacts and center shield.

No.	List Price
9W	**Each $ .33**

CINCH SOCKETS ARE STANDARD FOR TELEVISION!

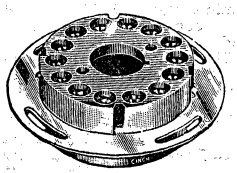
Television is growing by leaps and bounds. To meet the increasing demand Cinch "Know How" has engineered and perfected Magnal, Duodecal, and Diheptal sockets for cathode ray and television tubes. Other television products illustrated on this page include second anode connectors and Corona insulating shields.



MAGNAL—11 PRONG

Molded from mica-filled low loss bakelite. Socket is $1\frac{23}{32}$" wide and $1\frac{9}{64}$" high. Full floating silver plated beryllium copper contacts designed to insure easy insertion of tubes and yet provided excellent electrical connections. For use with 5BP1 and 2AP1 type cathode ray tubes.

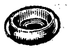
No.	Description	List Price
3M11	**Mica Socket**	**Each $6.60**
3R11	**Steel Mounting Ring**	**Each .46**



DIHEPTAL 14 PRONG

Molded from high dielectric black bakelite or mica-filled low loss bakelite. $2\frac{7}{32}$" wide and 1⅛" high. Possesses same features as Cinch Magnal socket shown above.

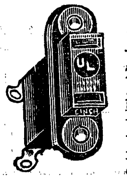
No.	Description	List Price
3B14	**Black Socket**	**Each $2.20**
3M14	**Mica Socket**	**Each 2.75**
3R14	**Steel Mounting Ring**	**Each .46**



CORONA SHIELDS

Specifically designed for Television and high voltage wiring. These cadmium plated brass shields will provide excellent protection at proper positions in electrical connections. Outside diameter .470. Hole diameter .136. Thickness .172.

No.	List Price
3C1	**Per C $3.03**

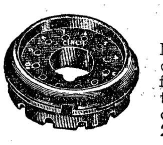


110-250 VOLT SOCKET

(Underwriters Listed)

When space is at a premium use this 110-250 volt 2 prong socket. Rated at 15 Amp., 110 V. or 10 Amp., 250 V. Molded from high dielectric black bakelite. Solder coated brass contacts on ½" centers designed to accept any 2 prong standard electric plug. Mounts in $\frac{25}{64}$" x $\frac{25}{32}$" hole. .144 diameter mounting holes on 1⅛" centers. Ideal for radio chassis and many other applications.

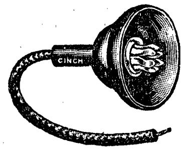
No.	List Price
2R2	**Each $ .22**



DUODECAL—12 PRONG

No larger in diameter than the tube base and only slightly longer than the tube pin. A new feature incorporates wire strain relief as an integral part of the contact. Molded from high dielectric black bakelite. For use with 10BP4, 2BP1, 5TP4, etc., type tubes.

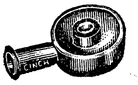
No.	List Price
3B12	**Each $ .88**



SECOND ANODE CONNECTORS

For television tubes—Silver plated snap button type plug well insulated by 1½" diameter rubber protective cap. Snaps into opening on side of tube. Available in three lengths wire leads.

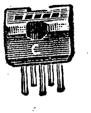
No.	Description	List Price
3A2	**12" Wire Lead**	**Each $ .99**
3A3	**15" Wire Lead**	**Each 1.16**
3A4	**18" Wire Lead**	**Each 1.38**



SECOND ANODE CONNECTOR

For diheptal based tubes. Cadmium plated brass contact surrounded by rubber insulator ¾" wide and $1\frac{3}{16}$" long. Snaps over .096 diameter prong on side of diheptal tubes.

No.	List Price
3A1	**Each $ .83**

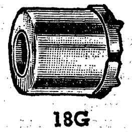


SUB-MINIATURE HEARING AID SOCKETS

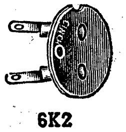
Used extensively for hearing aids, radio controlled model airplanes and numerous other applications which require sub-miniature tubes. Molded from mica-filled low loss bakelite with silver plated beryllium copper contacts. For Raytheon type CK series sub-miniature tubes. Available with 5, 6, or 7 contacts. Four prong tubes use No. 2H5 five prong socket.

No.	Description	List Price
2H5	**5 Prong**	**Each $ .41**
2H6	**6 Prong**	**Each .43**
2H7	**7 Prong**	**Each .45**

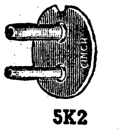
CONNECTOR PLUGS AND SOCKETS



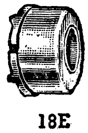
18G



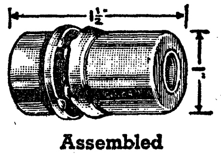
6K2



5K2



18E



Assembled

These low cost plugs and sockets are ideal for a multitude of applications. A "Cinch" where space is at a premium. Complete assembly of plug, socket, male and female shell will close to a compact unit of 1½" long. Polorized—Nickel plated brass tube pins—Solder coated brass contacts. Plugs, sockets and shells have lock feature which prevents turning in shells.

PLUGS

Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
5K2	2	**6K2**	**18E**	**.08 ea.**
5K3	3	**6K3**	**18E**	**.09 ea.**
5K4	4	**6K4**	**18E**	**.10 ea.**
5K5	5	**6K5**	**18E**	**.11 ea.**
5K6	6	**6K6**	**18F**	**.13 ea.**

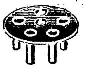
SOCKETS

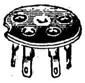
Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
6K2	2	**5K2**	**18G**	**.07 ea.**
6K3	3	**5K3**	**18G**	**.08 ea.**
6K4	4	**5K4**	**18G**	**.09 ea.**
6K5	5	**5K5**	**18G**	**.10 ea.**
6K6	6	**5K6**	**18H**	**.11 ea.**

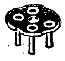
CINCH-JONES SALES ★

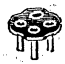
CINCH BATTERY PLUGS

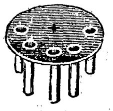
Cinch manufactures a complete line of dependable plugs to fit all types of batteries. Made with nickel plated brass tube pins mounted on high grade chocolate bakelite. The chart below indicates the correct plug for most popular batteries. In addition to the battery plugs illustrated in this catalogue, Cinch manufactures a complete line of wafer plugs for radio chassis, speakers, and numerous other electrical applications. Send us a sample or sketch of the plug you may require.

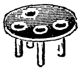

5AB1

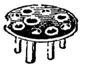

6K4

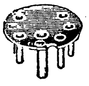

5AB2

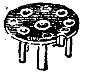

5AB3

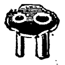

5AB4

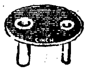

5AB5

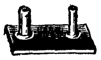

5AB6

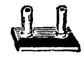

5AB7


5AB8


5A1


5A2


5A3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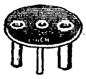
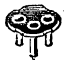
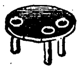
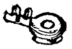
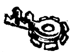
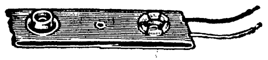

5A5

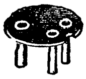

5B1

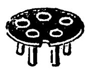

5B2


5M


5F


5MFA


5C1

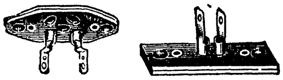

5C2

THIS REFERENCE CHART WILL ASSIST YOU IN SELECTING THE CORRECT PLUG FOR POPULAR BATTERIES

Part Number	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.	List Price
5A1	1½ "A"	4F, 4FL, 6F, 8F, 8FL, TE	741, 742 743, 1052P	VS004, VS005, VS007, VS008	P94, P96, P8F1	P94A, P94L, PX, P96A, P98A, P98L	Ea. $ .06
5A2	3 "A"	20F2	X125	VS025	P8024	P9403	Ea. .07
5A3	4½ "A"	G-3	746	VS002	P100	P-83A	Ea. .06
5A4	6 "A"	2F4, 2F4L, F4PI, T5	A509, 718, 744, 747	VS009, VS010, VS011	P4F4R	P694A, P696L, P698A, P698L	Ea. .06
5A5	7½ "A"	G-5	687	VS003		P85A	Ea. .09
5B1	45 "B" Small	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	Ea. .07
5B2	45 "B" Large	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	Ea. .08
5M	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Per C 4.40
5F	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Per C 5.50
5MFA	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Ea. .30
5C1	4½ "C"	2370PI	X771	VS030	P3D	P231W	Ea. .10
5C2	22½ "C"	5156PI	768	VS031	P15B5	P5151	Ea. .11
5AB1	1½ "A"-90 "B"	17GD60, 5DA60, 6TA60	758	VS022, VS043	P60D11L	AB82, 10793	Ea. .10
6K4	9 "A"-90 "B"	G6B60	752	VS047			Ea. .09
5AB2	1½ "A"-63-90 "B"	6FA60, 4GA41, 4GA42		VS037	P60A-4L P41A4G	AB419	Ea. .08
5AB3	6 "A"-90 "B"	2F4A60		VS044	P60A8F4	AB694	Ea. .09
5AB4	6 "A"-90 "B"	F4B60		VS048			Ea. .13
5AB5	6 "A"-90 "B"	D4A60, 2F4B60, F4A41		VS046	P41AFL	10896, AB648	Ea. .10
5AB6	7½ "A"-90 "B"	G5A42, F5A60		VS038	P87, P841	AB794	Ea. .11
5AB7	9 "A"-90 "B"	F6A60, G6M60	753, 754	VS018, VS019	P841A	AB878, AB994	Ea. .13
5AB8	9 "A"-90 "B"	4FA60					Ea. .11

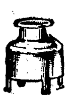
LAMINATED SOCKETS

Cinch also manufactures a complete line of wafer sockets, round or rectangular, for a variety of applications; for batteries, speakers, and various other radio connections. Let us know your requirements.



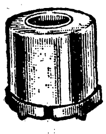
PLUG CAPS AND SHELLS

For above Battery Plugs and for Connector Plugs and Sockets on page T-34.



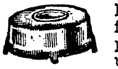
Cadmium plated brass shell with rolled edge on 5⁄16" diameter neck opening. Outside diameter at base .625. Four ⅛" prongs coincide with notches on plugs. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List Price
18A	**Each $ .03**



Cadmium plated steel shells complete with fibre insulator. Available with ⅜" or ½" diameter hole with rolled edge. Inside diameter 31⁄32". 29⁄32" high. For use with Cinch No. 6K2, 6K3, 6K4, 6K5, and 6K6 type sockets.

No.	Description	List Price
18G	**⅜" Diameter Hole**	**Each $ .07**
18H	**½" Diameter Hole**	**Each .07**

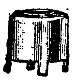


Brass shell with black nickel finish. ¼" hole on top. Complete with fibre insulator. For use with Cinch No. 5AB1, 5AB5, 5B2, 5A2, and 5A5 type battery plugs.

No.	List Price
18C	**Each $ .06**

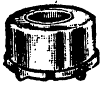
Part No. 18D same as 18C except has 5⁄32" diameter hole drilled between center hole and outside edge.

No.	List Price
18D	**Each $ .07**



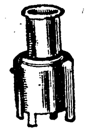
Cadmium plated brass shell with 23⁄64" diameter opening on top of shell. Outside diameter at base .625. Four ⅛" prongs coincide with notches on plugs. ½" high. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List Price
18B	**Each $ .04**



Cadmium plated brass shells complete with fibre insulator. Available with ⅜" or ½" diameter hole with rolled edge. Inside diameter 31⁄32". ½" high. For use with Cinch No. 5C1, 5C2, 5AB6, 5AB7, 5AB8, 5K2, 5K3, 5K4, 5K5, and 5K6 type plugs.

No.	Description	List Price
18E	**⅜" Diameter Hole**	**Each $ .08**
18F	**½" Diameter Hole**	**Each .08**



Cadmium plated brass shell complete with fibre insulator. Same as Cinch No. 18B shell except has ½" neck with ⅜" hole riveted to base. For use with same plugs as No. 18B.

No.	List Price
18J	**Each $ .11**

CINCH-JONES SALES ★

PIN PLUGS — JACKS — CONNECTORS — STRIPS — TERMINALS

PHONO PLUGS

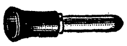
R.C.A. type. For a multitude of applications: record players, auto radios, receivers, recording and reproducing equipment, experimental units, etc. Nickel plated 1/8" diameter tube pin. Available in two lengths: 9/16" and 11/16". Use No. 13A with type 81A and 81B phono jacks. Use No. 13E with type 81E extension jack.

No.	Description	List Price
13A	**9/16" Pin**	**Each $ .09**
13E	**11/16" Pin**	**Each .09**

ANTENNA PLUG

Motorola type. Nickel plated 1/8" tube pin extends 17/32" from cadmium plated split brass shall whose 8 cutting edges provide positive grounded connection when inserted into a Cinch No. 81C or 81F connector.

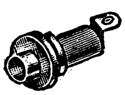
No.	List Price
13B	**Each $ .13**



INSULATED PIN PLUG

Nickel plated 1/8' brass tube pin 9/16" long, assembled to 13/32" long fibre insulator. May be used with Cinch No. 81A and 81B type phono jacks or with No. 49 series contact strips illustrated in right column.

No.	List Price
13C	**Each $ .10**



STAND-OFF TERMINALS

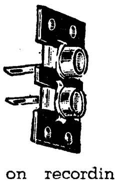
Insulated terminals for television and other high voltage electronic equipment. Provides excellent insulation for passing high voltages with through chassis. Molded from mica-filled low loss bakelite. Available in two lengths: 9/32" or 13/32". Diameter of cylinder is .110. Mounts in 5/32" dia. hole. Actual size illustration of No. 16L.

No.	Description	List Price
16S	**9/32"**	**Each $ .83**
16L	**13/32"**	**Each .83**

SHIELDED EXTENSION JACK

Cadmium plated brass shell 2 7/16" long with black bakelite insert providing insulation for solder coated brass positive grip contact. Use Cinch No. 13E Phono plug with this jack.

No.	List Price
81E	**Each $ .28**

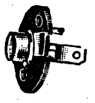


DOUBLE PHONO JACK

Two positive grip phono jacks mounted on 1/16" bakelite panel with 1 3/16" mounting centers. Jacks are spaced on 1/2" centers. Panel is 1 1/2" x 1/2". Used on recording units, receivers, etc. Use Cinch No. 13A phono plug with this jack.

No.	List Price
81B	**Each $ .18**

SINGLE PHONO JACK



Precision engineered for many uses, such as: R.C.A. type recording units, receivers, and auto sets. Single prong positive grip phono jack mounted on 1/16" chocolate bakelite disc with 11/16" mounting centers Use Cinch No. 13A phono plug with this jack.

No.	List Price
81A	**Each $ .13**

ANTENNA CONNECTOR

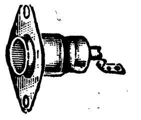
Shell Type

Same as No. 81F on right except without flange. This connector may be soldered in position. Use Cinch No. 13B antenna plug with this jack.

No.	List Price
81C	**Each $ .13**

ANTENNA CONNECTOR

Flange Type



Motorola type shielded jack Sturdy steel flange with 15/16" mtg. centers with .136 dia. mtg. holes. Solder coated shell, flange and contact. Can be mounted with screws or rivets. Used extensively on auto radios. Use Cinch No. 13B antenna plug with this jack.

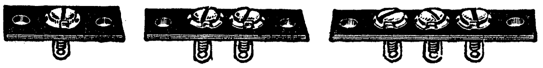
No.	List Price
81F	**Each $ .20**

ADAPTER SHELL

Converts Motorola pin plug to Delco bayonet type receptacle. Cadmium plated brass shell 1 3/32" long. Use with No. 13B Antenna plug.

No.	List Price
81K	**Each $ .15**

SCREW TYPE TERMINAL STRIPS

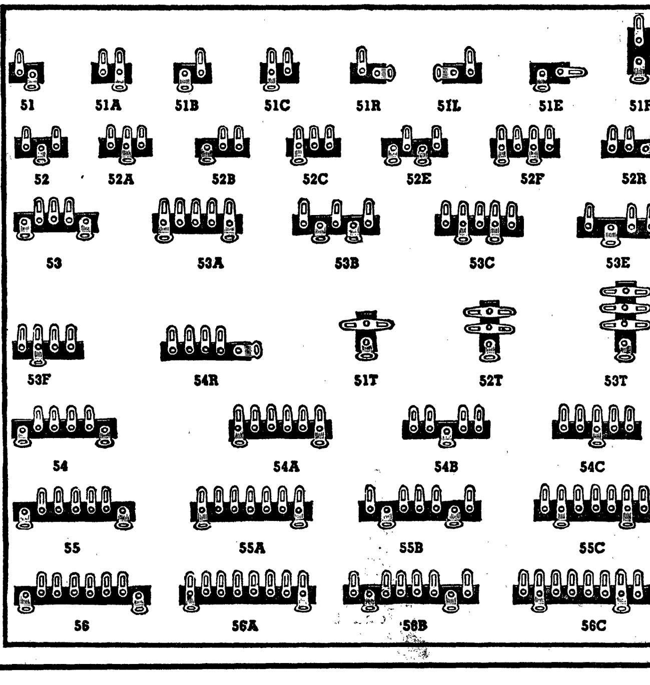


Ideal for chassis or breadboard layouts. Solder coated brass terminals. .136 diameter mounting holes. Strips with 1 to 6 lugs are of 1/16" bakelite; 7 to 10 terminals mounted on 3/32" bakelite. Ends of screws are captivated to prevent removal. Terminals are spaced on 7/16" centers.

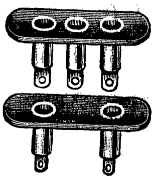
No.	Lugs	Mounting Centers	List Price
17- 1	**1**	**7/8"**	**Each $ .06**
17- 2	**2**	**1 5/16"**	**Each .09**
17- 3	**3**	**1 3/4"**	**Each .13**
17- 4	**4**	**2 3/16"**	**Each .17**
17- 5	**5**	**2 5/8"**	**Each .20**
17- 6	**6**	**3 1/16"**	**Each .24**
17- 7	**7**	**3 1/2"**	**Each .30**
17- 8	**8**	**3 15/16"**	**Each .34**
17- 9	**9**	**4 3/8"**	**Each .39**
17-10	**10**	**4 13/16"**	**Each .43**

LUG TYPE TERMINAL STRIPS

These bakelite strips are handy for neatly supporting resistors, condensers, etc., in circuit wiring. Solder coated brass lugs are spaced on 3/8" centers with .140 diameter mounting holes. Chocolate bakelite strips are 1/16" thick and 3/8" wide.

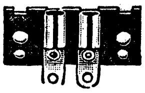


PHONO TIP JACKS



Double and triple tip jacks for speakers, headphones, etc. 9/64" dia. mounting holes on 1 11/16" centers. Nickel plated. Brass shells are 17/32" long. Solder coated contact 25/32" long. Contacts for double jack are on 7/8" centers. Triple jack contacts on 7/16" centers. Mounted on 1/16" chocolate XP grade bakelite.

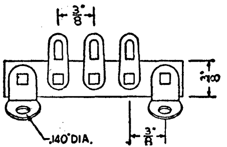
No.	Description	List Price
81D	**Double**	**Each $ .17**
81T	**Triple**	**Each .28**



CONTACT STRIPS

For connections which must be changed quickly and easily. Solder coated spring steel contacts spaced on 3/8" centers and mounted on 1/16" bakelite. Contacts are sized for 1/8" diameter tube pins such as Cinch No. 13C illustrated in first column on this page.

No.	Contacts	Mounting Centers	List Price
49-1	**1**	**3/4"**	**Ea. $ .06**
49-2	**2**	**1 1/8"**	**Ea. .09**
49-3	**3**	**1 1/2"**	**Ea. .11**
49-4	**4**	**1 7/8"**	**Ea. .14**
49-5	**5**	**2 1/4"**	**Ea. .17**
49-6	**6**	**2 5/8"**	**Ea. .20**

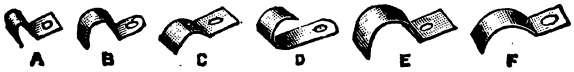


No.	Mtg. Centers	List Price
51		**$2.75 c**
51A		**2.86 c**
51B		**2.75 c**
51C		**2.86 c**
51R		**2.75 c**
51L		**2.75 c**
51E		**2.75 c**
51F		**2.75 c**
51T		**3.03 c**
52		**3.74 c**
52A		**3.85 c**
52B		**3.74 c**
52C		**3.85 c**
52E	**3/4"**	**5.17 c**
52F	**3/4"**	**5.39 c**
52R		**3.74 c**
52T		**4.18 c**
53	**1 1/2"**	**6.27 c**
53A	**1 1/2"**	**6.49 c**
53B	**3/4"**	**6.27 c**
53C	**3/4"**	**6.49 c**
53E		**4.84 c**
53F		**4.95 c**
53T		**5.61 c**
54	**1 7/8"**	**7.48 c**
54A	**1 7/8"**	**7.70 c**
54B		**6.05 c**
54C		**6.16 c**
54R		**6.05 c**
55	**2 1/4"**	**8.58 c**
55A	**2 1/4"**	**8.80 c**
55B	**1 1/2"**	**8.58 c**
55C	**1 1/2"**	**8.80 c**
56	**2 5/8"**	**10.34 c**
56A	**2 5/8"**	**10.56 c**
56B	**1 7/8"**	**10.34 c**
56C	**1 7/8"**	**10.56 c**

CINCH-JONES SALES ★

RADIO HARDWARE

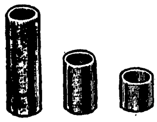
CABLE CLAMPS



Cadmium plated sturdy steel cable clamps designed for securing cables ranging from 1/16" diameter to ⅝" diameter. Illustrations are half size.

No.	Dia. of arc	Hole Dia.	Over-all Width	Over-all Length	Hole cent. to arc cent.	List Price	
85A	⅛"	.149	11/32"	15/32"	¼"	$3.30 C	$28.60 M
85B	5/16"	.140	5/16"	23/32"	⅜"	2.31 C	20.35 M
85C	5/16"	.144	⅜"	21/32"	⅜"	2.09 C	16.50 M
85D	5/16"	.136	5/16"	27/32"	½"	1.49 C	12.65 M
85E	½"	.147	½"	15/16"	7/16"	2.86 C	25.85 M
85F	⅝"	.171	⅜"	1"	½"	1.54 C	13.20 M

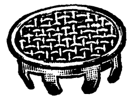
METAL SPACER SLEEVES



Zinc plated brass spacer sleeves. Six (6) popular sizes for spacing chassis, panels, etc. Illustrations are full size.

No.	Length	Outside Dia.	Inside Dia.	List Price
43A	3/16"	¼"	3/16"	$1.65 C
43B	¼"	¼"	3/16"	1.93 C
43C	⅜"	¼"	3/16"	1.93 C
43D	½"	¼"	3/16"	1.93 C
43E	¾"	¼"	3/16"	2.20 C
43F	15/16"	¼"	3/16"	2.48 C

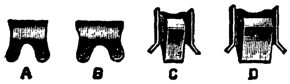
SCREEN TYPE PLUG BUTTON



For portable radios, transmitters, amplifiers, etc. Provides ventilation wherever required in radio, television and electronic equipment. Bright zinc plated steel button snaps in 1" diameter hole. Half size illustration.

No.	Description	List Price
41V	**for 1" Hole**	**$16.50 C**

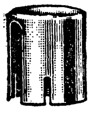
KNOB SPRINGS



For fastening knobs to shafts. Four (4) popular sizes. Fabricated from high grade spring steel. Heat treated to retain spring retentivity.

No.	Description	List Price	
83A		$ .88 C	$ 7.15 M
83B		1.10 C	9.35 M
83C	**For 3/16" Shaft**	1.21 C	10.45 M
83D	**For ¼" Shaft**	1.60 C	13.20 M

GRID CAP SHIELD

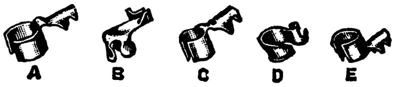


Fits firmly over the grid cap, completely shielding the tube. Cadmium plated shield is 1" high with ⅞" slot opening for grid leads.

No.	List Price
60S	**Each $ .11**

GRID CAPS

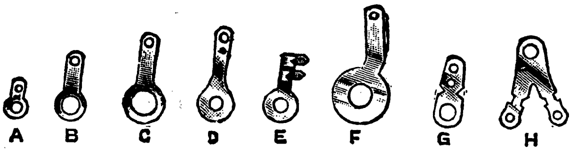
For glass or metal tubes. Made of heavy gage brass, solder coated for fast, easy soldering.



No. 60A is for 23/64" diameter tube caps. All others designed for ¼" diameter tube caps.

	List Price	
60A	$1.27 C	$10.45 M
60B	1.16 C	9.35 M
60C	1.32 C	11.00 M
60D	1.27 C	10.45 M
60E	1.10 C	8.80 M

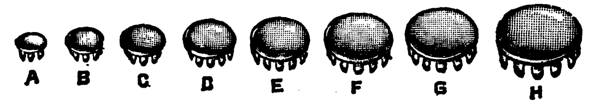
SOLDER LUGS



Popular flat type solder lugs for a multitude of wiring applications. Eight (8) different styles. All solder coated for fast, easy soldering. Illustrations are half size.

No.	Length	Diameter Large Hole	Diameter Small Hole	List Price	
14A	11/32"	.110	.078	$ .61 C	$ 4.95 M
14B	⅝"	.165	.093	.77 C	6.60 M
14C	41/64"	.250	.093	.66 C	5.50 M
14D	55/64"	.145	.093	.83 C	7.15 M
14E	11/16"	.125	None	1.43 C	12.10 M
14F	1¼"	.260	.093	2.26 C	19.25 M
14G	11/16"	.140	.093	.61 C	4.95 M
14H	53/64"	.141	.093	1.32 C	11.00 M

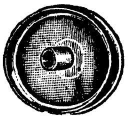
PLUG BUTTONS



Used to cover punched or drilled holes in metal, wood, fibre, tubes, plastic, cardboard, etc. Nickel plated steel plug buttons for eight popular size holes. Other sizes available, let us know your requirements. Spring tension prongs hold plug bottom firmly in position. Illustrations are ⅓ actual size.

No.	For hole Diameter	Cap Diameter	List Price
41A	¼"	13/32"	$2.75 C
41B	⅜"	½"	2.75 C
41C	½"	21/32"	3.03 C
41D	⅝"	51/64"	3.85 C
41E	¾"	15/16"	3.85 C
41F	⅞"	1 1/16"	4.68 C
41G	1"	1 5/32"	6.05 C
41H	1¼"	1 7/16"	6.60 C

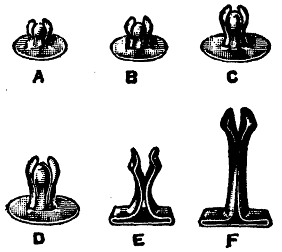
DIAL PULLEYS



Precision engineered aluminum idler dial pulleys. Five (5) popular sizes.

No.	Outside Dia.	String Dia.	Hub Dia.	List Price
70A	⅜"	5/16"	⅛"	$1.54 C
70B	17/32"	7/16"	⅛"	2.09 C
70C	39/64"	½"	⅛"	2.20 C
70D	¾"	⅝"	3/16"	3.30 C

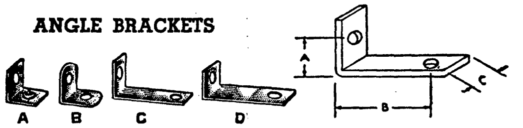
SNAP-IN TRIMOUNTS



For holding two or more thicknesses of material firmly together. Can easily be removed a multitude of applications such as fastening dials, built-in aerials, cabinet backs, etc. Actual size illustrations of six (6) popular types.

No.	For Hole Diameter	Cap Diameter	Length	List Price	
40A	.125	9/32"	13/64"	$ .99 C	$ 8.25 M
40B	.136	23/64"	9/32"	1.21 C	9.90 M
40C	.144	⅜"	17/64"	1.32 C	11.00 M
40D	.171	⅜"	17/64"	1.54 C	13.20 M
40E	.156	23/64"	13/32"	1.71 C	14.30 M
40F	.125	⅜"	⅝"	1.43 C	12.10 M

ANGLE BRACKETS

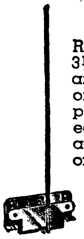


Cadmium plated brass and steel brackets for a variety of radio and other electronic applications. Illustrations are half size.

No.	"A" Dim.	"B"	"C"	"A" Hole	"B" Hole	list Price	
33A	7/32"	3/16"	9/32"	.136	6-32 Tap	$2.75 C	$23.10 M
33B	7/32"	7/32"	5/16"	.140	.140	1.65 C	13.75 M
33C	5/16"	¾"	¼"	.156	.140	1.32 C	11.00 M
33D	7/32"	25/32"	⅜"	.136	.187	2.09 C	17.60 M

DIAL POINTERS

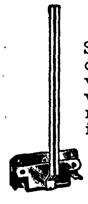
NEW! WIRE TYPE INDICATOR



Red enameled indicator 3½" long. May be cut to any length and curved or bent to any desired position. May be inserted from front or rear and projected upward or downward. Wire may then be tightly crimped into carriage. Aluminum carriage rides easily on rail. Simply installed by hooking dial cable over extrusions on rear of carriage.

No. **11A** List Price **Each $ .15**

BROAD BAND TYPE INDICATOR

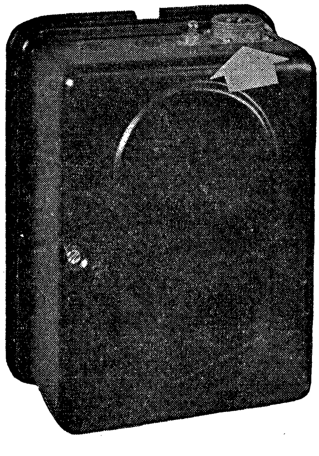


Similar to wire type indicator except has ¼" wide aluminum band, white enameled with red center stripe. Band is 2¾" long and may be cut or bent as desired. Indicator band is welded to aluminum carriage which rides on dial rail. Easily installed by hooking dial cable over outside extrusions and under center extrusion on rear of carriage.

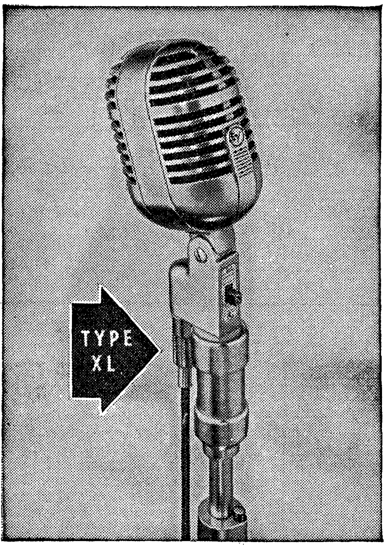
No. **11B** List Price **Each $ .26**

CANNON PLUGS

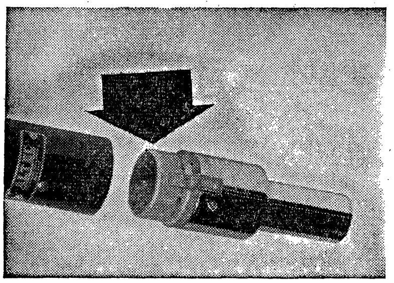
APPLICATIONS



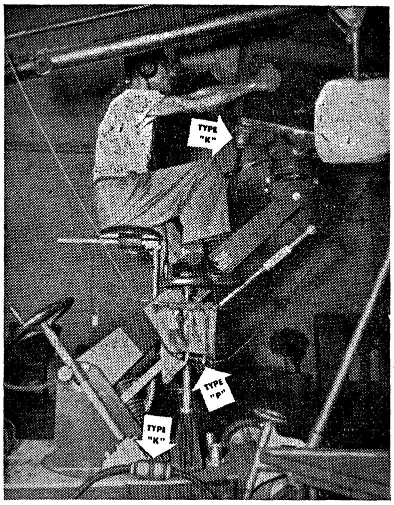
Type "K" Receptacle on Automatic Electric's Recorder Connector



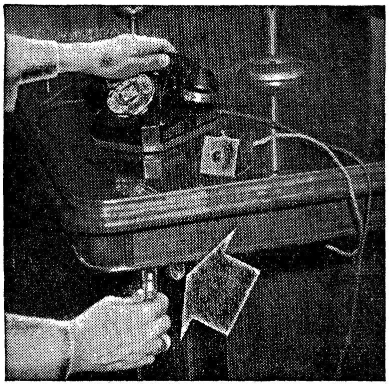
Type "XL" Plug on Electro-Voice's #731 Microphone



Type "P" insert and barrel assembly on Altec-Lansing mike



Types "K" and "P" Plugs on television camera

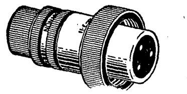


Type "X" Plug and Receptacle on intercom telephone

TYPE XK FITTINGS

CANNON "TYPE XK" PLUGS AND RECEPTACLES — A quality line of Connectors, same inserts and similar in design to the "Type X" Series, but equipped with the fast-acting, sturdy Acme Threaded Coupling Ring and therefore, ideal for use on equipment which is subjected to considerable vibration and tension on cables, such as on sound trucks and other portable units. XK-1 500v; XK-3 200v; XK-4, 133v Service.

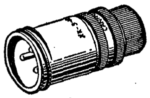
TYPE "XK-11" STRAIGHT CORD PLUG (With Socket Insert)



Shell is of die-cast zinc, cad. plated finish. Equipped with quick-acting coupling ring. Solder pot connections are easily accessible. Takes 3/16" to 9/32" cable. Built for long, dependable service. Mates with -12, -14.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	XK-1-11	$5.50
3	15-amp.	0.083	XK-3-11	5.50
4	3-10-amp. 1-15-amp.	0.085	XK-4-11	7.80

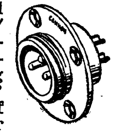
TYPE "XK-12" STRAIGHT CORD PLUG (With Pin Insert)



For use in conjunction with Straight Cord Plug (Socket Insert) or Wall Receptacle (Socket Insert) with coupling nut. Shell is made of die-cast zinc, cad. plated finish. Takes 3/16" to 9/32" cable.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	XK-1-12	$3.15
3	15-amp.	0.083	XK-3-12	3.15
4	3-10-amp. 1-15-amp.	0.085	XK-4-12	4.75

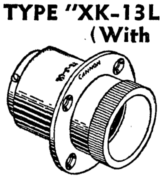
TYPE "XK-14" WALL RECEPTACLE (With Pin Insert)



Body fits in a ¾" hole and extends 13/32" behind a 1/16" flange. Flange is 1½" in diameter, drilled for four #4-40 oval-head mounting screws on a ⅝" radius, 90° apart. Shell is made of brass, nickel finish. Solder pots extend 9/32" beyond body. Has external acme thread on shell and mates with straight cord plug XK-11.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.045	XK-1-14	$3.15
3	15-amp.	0.047	XK-3-14	3.15
4	3-10-amp. 1-15-amp.	0.049	XK-4-14	4.75

TYPE "XK-13L" WALL RECEPTACLE (With Socket Insert)

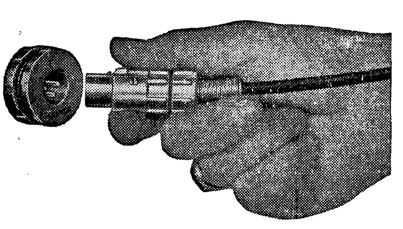


Body fits in 1 1/64" hole and extends 1 1/16" behind flange. Flange is 1½" in diameter and drilled for four #4-40 oval-head mounting screws on a ⅝" radius, 90° apart. Shell is made of brass, nickel finish. Solder pots on contacts extend ⅛" beyond body. Mates with a straight cord plug (Pin Insert) XK-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.144	XK-1-13L	$5.90
3	15-amp.	0.146	XK-3-13L	6.05
4	3-10-amp. 1-15-amp.	0.148	XK-4-13L	7.60

CANNON ELECTRIC COMPANY

TYPE XL FITTINGS

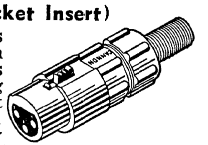


"XL-3-14N" Receptacle and "XL-3-11" Plug in engaging position. Compare small size of plug with hand.

The Cannon Electric Type "XL" Connector combines various features found in other Cannon types into a small fitting comparable only in size to the Type "X" for low level sound transmission circuits. Among the leading features are the following: (1) convenient latchlock device to hold connector tight. (2) lightweight. (3) polarizing means (4) compression gland with relief spring or integral clamp, if desired. (5) streamlined design. (6) tapped metal for insert retaining screw. (7) provision for special grounding contact and grounding to shell. Contacts are 15-amp. for No. 14 B&S stranded wire in 3 contact insert; 10-amp. in 4 contact insert. Shell is zinc or steel, with various finishes available, bright nickle being standard. Satin-chrome finish available on steel shells. Flashover Voltage 1400-1600v.

ZINC SHELL TYPES

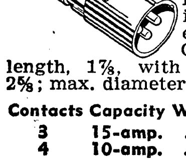
TYPE "XL-11" STRAIGHT CORD PLUG (Socket Insert)



Type XL-3-11 is equipped with latch lock device and has raised polarizing boss. No. 1 contact engages before Nos. 2 and 3, and may be used for grounding purposes, if desired. $\frac{9}{32}$ cable accommodation. Overall dimensions: length, 2 $\frac{3}{32}$, with relief spring, 2 $\frac{27}{32}$ approx.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0992	XL-3-11	1.55
4	10-amp.	.0992	XL-4-11	2.15

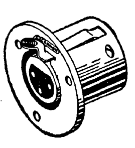
TYPE "XL-12" STRAIGHT CORD PLUG (Pin Insert)



Type XL-12 plug has alignment rib in addition to polarizing groove. Cable accommodation is $\frac{9}{32}$. Insert is removable for soldering or inspection. Overall dimensions: length, 1⅞, with cable relief spring, 2⅝; max. diameter ¾. Insert dia. ⅝".

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0792	XL-3-12	1.50
4	10-amp.	.0792	XL-4-12	2.00

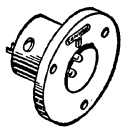
TYPE "XL-13" RECEPTACLE
(Socket Insert)



A wall mounting receptacle similar to XL-14 except that it has socket insert assembly and latch locking device. Overall Dimensions: flange diameter, $1\frac{7}{16}$; flange thickness $\frac{3}{32}$; rear of flange to solder pot extension $1\frac{9}{16}$; dia. barrel, $\frac{15}{16}$; three mounting holes drilled .136

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.132	XL-3-13	1.55
4	10-amp.	.132	XL-4-13	2.15

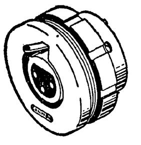
TYPE "XL-14" RECEPTACLE
(Pin Insert)



This wall mounting receptacle has three mounting holes having .136 diameter. Overall dimensions: flange diameter, $1\frac{7}{16}$; width flange, $\frac{3}{32}$; length behind flange to solder pot extension, $1\frac{1}{64}$; barrel diameter, ¾. Material zinc, bright nickel finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0592	XL-3-14	1.20
4	10-amp.	.0592	XL-4-14	1.70

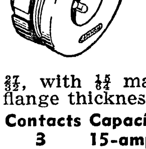
TYPE "XL-13N" RECEPTACLE
(Socket Insert)



Similar to XL-14N except has socket insert assembly, with latch-lock device, and polarizing boss on insert barrel. No. 1 contact engages before Nos. 2 and 3 and may be used for grounding circuit, if desired. Overall dimensions: flange and barrel and nut are identical to XL-14N, length from face of flange including solder pot extension, $1\frac{17}{64}$.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.2112	XL-3-13N	1.55
4	10-amp.	.2112	XL-4-13N	2.15

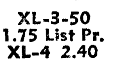
TYPE "XL-14N" RECEPTACLE
(Pin Insert)



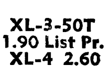
Designed to be mounted in a panel and has lock nut, accommodating up to $\frac{5}{16}$ inch panel. Two fittings may be mounted on a single gang plate. Overall Dimensions: flange diameter, $1\frac{7}{16}$; barrel diameter, 1; width flange to barrel, $\frac{27}{32}$, with $\frac{15}{64}$ max. solder pot extension; flange thickness, $\frac{5}{32}$.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.2048	XL-3-14N	1.45
4	10-amp.	.2048	XL-4-14N	1.95

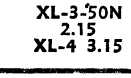
TYPE "XL" ADAPTER RECEPTACLES



XL-3-50
1.75 List Pr.
XL-4 2.40

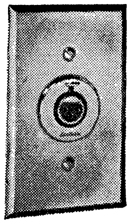


XL-3-50T
1.90 List Pr.
XL-4 2.60



XL-3-50N
2.15
XL-4 3.15

SINGLE GANG WALL RECEPTACLES

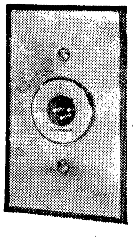


Type XL-3-35
(Socket Insert)

Face plate similar to type used in P-35. Takes an XL-3-13N Receptacle. Wt. 0.3479.

Cat. No.	List Price
XL-3-35	4.40
XL-4-35	4.85

TWO-GANG TYPES ALSO AVAILABLE



Type XL-3-36
(Pin Insert)

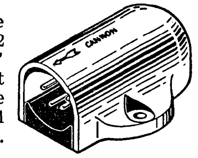
Takes an XL-3-14N Receptacle. Bright nickel finish.

Cat. No.	List Price
XL-3-36	4.45
XL-4-36	4.95

TWO GANG WALL RECEPTACLES

		List
XL-3-35-2G	(2 socket inserts)	9.35
XL-4-35-2G	(2 socket inserts)	10.55
XL-3-36-2G	(2 pin inserts)	9.30
XL-4-36-2G	(2 pin inserts)	10.25

TYPE XL-42 RECEPTACLE
(Pin Insert)

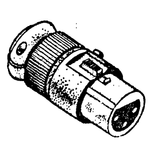


The -42 Receptacle is similar to the X-42 shown under "X" Fittings, except that it has the XL type insert. For special mounting purposes.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.063	XL-3-42	1.50
4	10-amp.	0.063	XL-4-42	1.65

STEEL SHELL PLUGS INTEGRAL CLAMP TYPES

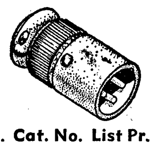
TYPE XL-3-11SC PLUG
(Socket Insert)



The steel shell type is built for rugged service and has cable entry of ¼" min., 5/16" max. 6/32" shorter overall shell than zinc type. Otherwise same construction, mating with regular XL receptacle. Bright nickel finish standard.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.1333	XL-3-11SC	3.40
4	10-amp.	.1333	XL-4-11SC	4.00

TYPE XL-3-12SC PLUG
(Pin Insert)



Corresponds to XL-3-12 except that shell is steel with integral clamp. For 5/16" max. entry. Shell is 7/32" shorter in overall length than corresponding zinc shell.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.1250	XL-3-12SC	3.35
4	10-amp.	.1250	XL-4-12SC	3.85

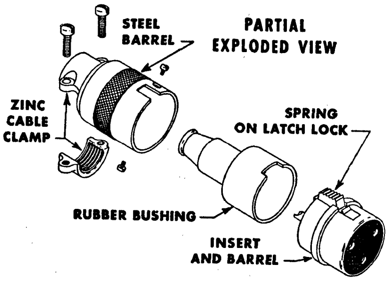
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

CANNON ELECTRIC COMPANY

TYPE P FITTINGS

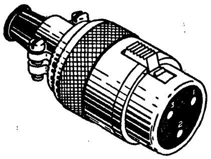
CANNON "TYPE P" FITTINGS. Universally used in sound and allied applications. "Type P" Fittings include a size and type for every requirement, with a high standard of quality. All 90° Plugs have split-shell construction for quick, easy access for wiring or inspection. Splash-proof but not weather-proof. Plug and receptacle dust caps are available. Laboratory tests show an average voltage-drop of not more than 10 millivolts, with current flowing at the rated capacity. Insulating material is black phenolic which has a 0.7% absorption in 24 hours of immersion in water and a dielectric strength of 550 volts per mil at 60 cycles. Two to 6 contact inserts accommodate No. 10 B&S stranded wire; 8 contact insert No. 14 wire.

New shell designs of the P-CG-11S and P-CG-12S, cord plugs, replace both old type shells of zinc and steel, and such improvements as shorter length, new rubber bushing, improved latch and spring, integral clamp. Shell material is steel, integral clamp zinc.



NEW TYPES WILL MATE WITH CORRESPONDING FITTINGS, SAME AS OLD DESIGN

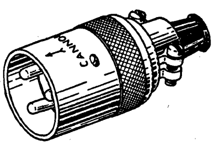
TYPE P-CG-11S CORD PLUG
COMBINATION STEEL & ZINC
(With Socket Insert)



This new type plug with steel shell and integral zinc clamp is $\frac{11}{64}$" shorter than the old type and has an overall length of 2$\frac{29}{64}$". The new rubber bushing allows a $\frac{5}{16}$" D. cable entry, and on P4, P5, P6 and P8 ½" D. max. cable entry. Satin chrome finish.

Poles	Capacity	Wt. Lbs.	Cat. No.	List Price
2	30-amp.	0.202	P2-CG-11S	$6.15
3	30-amp.	0.202	P3-CG-11S	6.30
4	30-amp.	0.202	P4-CG-11S	6.65
5	30-amp.	0.206	P5-CG-11S	7.00
6	30-amp.	0.208	P6-CG-11S	7.20
8	15-amp.	0.208	P8-CG-11S	7.70

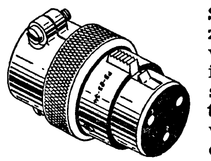
TYPE P-CG-12S CORD PLUG
COMBINATION STEEL & ZINC
(With Pin Insert)



Similar construction and materials to the -11S, except for pin insert. New rubber bushing on P4 to P8 fittings is contained within the shell and lines the solder pot cavity. Same cable entry sizes as -11S. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.163	P2-CG-12S	$5.00
3	30-amp.	0.159	P3-CG-12S	5.15
4	30-amp.	0.159	P4-CG-12S	5.30
5	30-amp.	0.163	P5-CG-12S	5.40
6	30-amp.	0.167	P6-CG-12S	5.65
8	15-amp.	0.163	P8-CG-12S	6.00

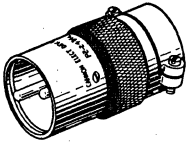
TYPE "P-23" STRAIGHT CORD PLUG (With Socket Insert), HEAVY DUTY



Shell is die-cast zinc for severe service, but employing all features such as the latch type locking device which is standard on "Type P." It has integral clamp for ¾" cable. Also made for $\frac{9}{16}$" & ⅝" cable if specified. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.166	P2-23	$8.90
3	30-amp.	0.170	P3-23	9.20
4	30-amp.	0.174	P4-23	9.65
5	30-amp.	0.178	P5-23	10.10
6	30-amp.	0.182	P6-23	10.40
8	15-amp.	0.178	P8-23	11.05

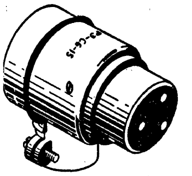
TYPE "P-24" STRAIGHT CORD PLUG (With Pin Insert), HEAVY DUTY



Corresponds with "Type P-23" Plug (Socket insert). Built for hard service. The skirt is of steel, body die-cast zinc. Has Integral Clamp, for ¾", ⅝" or $\frac{9}{16}$" cable, if specified. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.170	P2-24	$9.00
3	30-amp.	0.173	P3-24	9.20
4	30-amp.	0.176	P4-24	9.35
5	30-amp.	0.179	P5-24	9.55
6	30-amp.	0.182	P6-24	9.95
8	15-amp.	0.179	P8-24	10.40

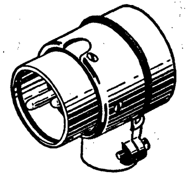
TYPE "P-CG-15" 90° CORD PLUG
(With Socket Insert)



Has Split Shell and all other "Type P" features found in "Type P-15, 90° Plug" except cable connection, which is an Integral Clamp for ½" or smaller cable. Made of cast aluminum alloy, finished in tin plate. New, heavier clamp.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.220	P2-CG-15	$6.90
3	30-amp.	0.224	P3-CG-15	7.15
4	30-amp.	0.228	P4-CG-12	7.50
5	30-amp.	0.232	P5-CG-15	7.80
6	30-amp.	0.236	P6-CG-15	8.00
8	15-amp.	0.232	P8-CG-15	8.50

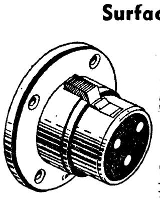
TYPE "P-CG-16" 90° CORD PLUG
(With Pin Insert)



Corresponds with Type P-CG-15 90° Plug. (Socket insert), having Integral Clamp for ½" or smaller cable. Barrel is of steel and shell of cast aluminum alloy, tin plate finish. Removable cap for easy access to contacts for wiring or inspection. New heavier clamp.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.195	P2-CG-16	$6.45
3	30-amp.	0.198	P3-CG-16	6.55
4	30-amp.	0.201	P4-CG-16	6.65
5	30-amp.	0.204	P5-CG-16	6.80
6	30-amp.	0.207	P6-CG-16	7.10
8	15-amp.	0.204	P8-CG-16	7.40

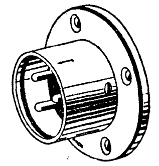
TYPE "P-17" PANEL RECEPTACLE
(With Socket Insert)
Surface Mounting



P-17 has Latch Locking Device and all other "Type P" features. Made of die-cast zinc. Satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points 90° apart on $\frac{13}{16}$ radius for four #4-40 oval head M.S. Body extends 1" in front of ⅛" mounting flange.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.125	P2-17	$7.70
3	30-amp.	0.129	P3-17	8.00
4	30-amp.	0.133	P4-17	8.40
5	30-amp.	0.137	P5-17	8.90
6	30-amp.	0.141	P6-17	9.20
8	15-amp.	0.137	P8-17	9.85

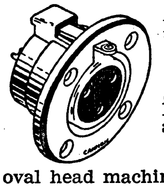
TYPE "P-18" PANEL RECEPTACLE
(with Pin Insert) Surface Mounting



Corresponds to "Type P-17", Panel Receptacle. Shell is made of brass, satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points on $\frac{13}{16}$ radius for four #4-40 oval head machine screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.156	P2-18	$4.15
3	30-amp.	0.159	P3-18	4.35
4	30-amp.	0.162	P4-18	4.50
5	30-amp.	0.165	P5-18	4.70
6	30-amp.	0.168	P6-18	5.05
8	15-amp.	0.165	P8-18	5.55

TYPE "P-13" PANEL RECEPTACLE
(with Socket Insert) Flush Mounting



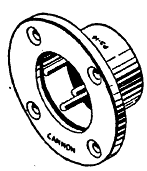
Has Latch Locking Device which operates from front of panel. Made of die-cast zinc, satin chrome finish. Flange is 2" in diameter and drilled and countersunk at four points on $\frac{13}{16}$ radius for four #4-40 oval head machine screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.202	P2-13	$5.15
3	30-amp.	0.206	P3-13	5.35
4	30-amp.	0.210	P4-13	5.65
5	30-amp.	0.214	P5-13	6.00
6	30-amp.	0.218	P6-13	6.20
8	15-amp.	0.214	P8-13	6.65

CANNON ELECTRIC COMPANY

TYPE P FITTINGS

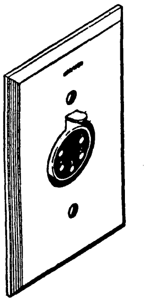
TYPE "P-14" RECEPTACLE (Pin Insert), FLUSH MOUNTING



Flange is 2" in diameter, drilled with four .120" diameter holes to take four #4-40 oval-head mounting screws, arranged 90° apart on a radius of 13/16". Shell is die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.104	P2-14	$2.70
3	30-amp.	0.107	P3-14	2.80
4	30-amp.	0.110	P4-14	3.00
5	30-amp.	0.113	P5-14	3.10
6	30-amp.	0.116	P6-14	3.35
8	15-amp.	0.113	P8-14	3.70

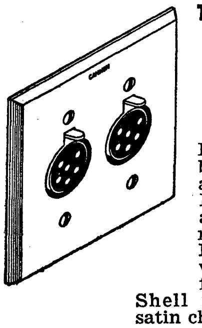
TYPE "P-35" SINGLE GANG WALL RECEPTACLE (With Socket Insert)



Furnished with brackets for standard switch box. Shell is die-cast zinc, satin chrome finish. Plate is 4½" high and 2¾" wide. Latch Locking Device operates from front of panel.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.341	P2-35	$8.95
3	30-amp.	0.345	P3-35	9.15
4	30-amp.	0.349	P4-35	9.45
5	30-amp.	0.353	P5-35	9.80
6	30-amp.	0.357	P6-35	10.00
8	15-amp.	0.353	P8-35	10.45

TYPE "P-35-2G" TWO-GANG WALL RECEPTACLE (With Socket Inserts)



Furnished with brackets for standard switch box. Plate is 4½" high and 4 9/16" wide. Both receptables have Latch Locking Device, operated from front of panel. Shell is die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.448	P2-35-2G	$18.00
3	30-amp.	0.456	P3-35-2G	18.55
4	30-amp.	0.464	P4-35-2G	19.50
5	30-amp.	0.472	P5-35-2G	20.40
6	30-amp.	0.480	P6-35-2G	20.95
8	15-amp.	0.472	P8-35-2G	22.25

MINIMUM FLASHOVER VOLTAGES ON P INSERTS

P-8 1300V—P-2 1600V—P-3 1600V

(All others more than 1600 volts.)

TYPE "P-36" SINGLE GANG WALL RECEPTACLE (With Pin Insert)

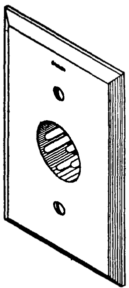


Plate is 4½" high and 2¾" wide. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.277	P2-36	$6.95
3	30-amp.	0.280	P3-36	7.10
4	30-amp.	0.283	P4-36	7.20
5	30-amp.	0.286	P5-36	7.40
6	30-amp.	0.289	P6-36	7.60
8	15-amp.	0.286	P8-36	7.90

TYPE "P-36-2G" TWO-GANG WALL RECEPTACLE (With Pin Insert)

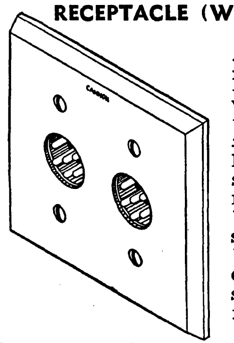
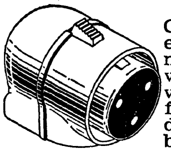


Plate is 4½" high and 4 9/16" wide. Drilled to take four #6-32 oval-head mounting screws. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.554	P2-36-2G	$14.25
3	30-amp.	0.563	P3-36-2G	14.65
4	30-amp.	0.572	P4-36-2G	14.95
5	30-amp.	0.579	P5-36-2G	15.35
6	30-amp.	0.588	P6-36-2G	16.10
8	15-amp.	0.579	P8-36-2G	17.05

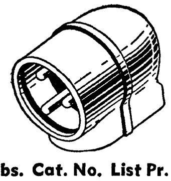
TYPE "P-41" 90° MICROPHONE OR PANEL RECEPTACLE (With Socket Insert)



Can be mounted in equipment or instrument panel. Equipped with Latch Locking Device. Cap is removable for easy wiring. Shell is die-cast zinc, finished in black wrinkle enamel.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.249	P2-41	$11.55
3	30-amp.	0.253	P3-41	11.80
4	30-amp.	0.257	P4-41	12.25
5	30-amp.	0.261	P5-41	12.75
6	30-amp.	0.265	P6-41	13.05
8	15-amp.	0.261	P8-41	13.70

TYPE "P-42" 90° MICROPHONE OR PANEL RECEPTACLE (With Pin Insert)

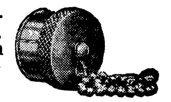


For mounting on equipment or instrument panel. Cap is removable for easy wiring. Shell is made of die-cast zinc with black wrinkle enamel finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.176	P2-42	$8.40
3	30-amp.	0.179	P3-42	8.65
4	30-amp.	0.182	P4-42	8.80
5	30-amp.	0.185	P5-42	9.00
6	30-amp.	0.188	P6-42	9.35
8	15-amp.	0.185	P8-42	9.85

ACCESSORY ITEMS

DUST CAPS



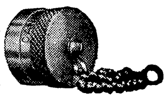
ONE-THIRD ACTUAL SIZE

Fits all "Type P" fittings with pin inserts. Made of brass, cadmium plated, with nickel silver bead chain.

Lbs.	Cat. No	List
0.081	PPC	$2.80
0.082	PCI*	3.30

*Type PCI is insulated inside for application where contacts are "hot."

TYPE PRC DUST CAP



ONE-THIRD ACTUAL SIZE

Fits all "Type P" fittings with socket inserts. Made of brass, cadmium plated with nickel silver bead chain.

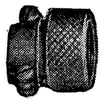
Lbs.	Cat. No	List
0.095	PRC	$2.37

REPLACEMENT ITEMS

A number of Type P and Type O Connectors formerly catalogued have been omitted from the list. These include various Special Items. It is the policy of the company at the present time to list such items as obsolete or replacement fittings, which are available only upon special request. If, however, they are required for replacement purposes, write for Type P & O Replacement Page for listing and catalog number.

Net List

TYPE "PCG" CLAMP GLAND NUT

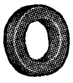


ONE-THIRD ACTUAL SIZE

Made of die-cast zinc, cadmium plated. Complete with gasket.

Wt. Lbs	Cat. No.	List Price
0.037	PCG	$1.45

TYPE "P" GLAND GASKET

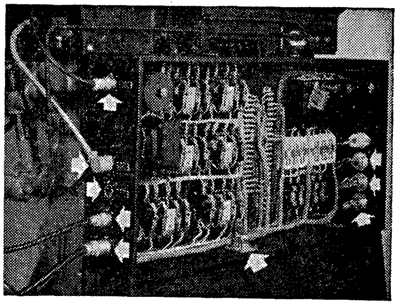


ONE-THIRD ACTUAL SIZE

As used in Straight Glands and Clamp Glands. Made of soft white rubber.

Cat. No.	List Price
P Gasket	$ .22

APPLICATION

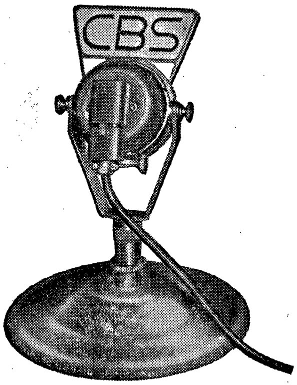


Type "P" CONNECTORS on Mitchell Camera Background Projector

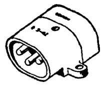
CANNON ELECTRIC COMPANY

TYPE O FITTINGS

CANNON "TYPE O" PLUGS AND RECEPTACLES. This series consists of a line of 3-contact oval-shaped plugs and receptacles, equiped with Latch Locking Device. Contacts are silver-plated, full-floating, non-twisting, carry 30-amp. capacity. Solder terminals are tinned for ease of wiring. 30-amp. contacts accommodate No. 30-amp. contacts accommodate No. 10 B&S stranded wire. 2400v flashover.



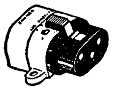
TYPE "03-42" MICROPHONE OR PANEL RECEPTACLE (With Pin Insert)



Has flat base, with two lugs for mounting with #4-40 oval-head screws. Made of die-cast zinc, and cadmium plated.

Contact	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.271	03-42	$8.65

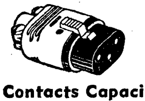
TYPE "03-41" 90° MICROPHONE OR PANEL RECEPTACLE (Socket Insert)



Flat base is flanged and is attached to microphone or panel by means of two #4-40 oval-head mounting screws. Made of die-cast zinc, cad. plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.274	03-41	$8.65

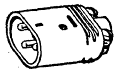
TYPE "03-11" STRAIGHT CORD PLUG (With Socket Insert)



Has Integral Clamp for $\frac{9}{32}$″ or smaller cable. Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.113	03-11	$6.10

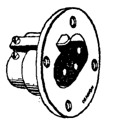
TYPE "03-12" STRAIGHT CORD PLUG (With Pin Insert)



Corresponds with No. 03-11 "Type O" Straight Cord Plug (Socket Insert). Has integral cable clamp, for $\frac{9}{32}$″ or smaller cable. Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.104	03-12	$6.10

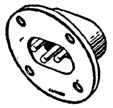
TYPE "03-13" FLUSH WALL RECEPTACLE (With Socket Insert)



Flange is 2″ in diameter, drilled with four holes to take #4-40 oval-head mounting screws, 90° apart on a radius of $\frac{13}{16}$″. Made of die-cast zinc, cadmium plated. Latch Locking Device is operated from panel front.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.148	03-13	$7.15

TYPE "03-14" FLUSH WALL RECEPTACLE (With Pin Insert)

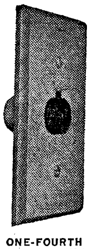


The flange is 2″ in diameter, drilled with four holes to take #4-40 oval-head mounting screws, 90° apart, on a radius of $\frac{13}{16}$″. Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.107	03-14	$7.15

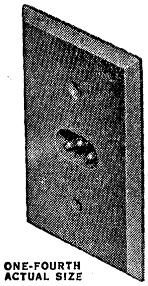
REPLACEMENT FITTINGS

List — Any Quantity



ONE-FOURTH ACTUAL SIZE

03-35
$8.75 List

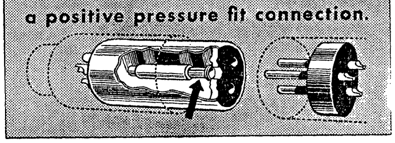


ONE-FOURTH ACTUAL SIZE

03-36
$8.75 List

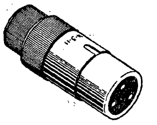
TYPE X FITTINGS

The arrow shows spring clip on full-floating socket contact which gives a positive pressure fit connection.



CANNON "TYPE X" PLUGS AND RECEPTACLES—The "Type X" Series of small connectors offers inexpensive fittings of reliable quality for sound service, radio, public address systems and geophysical research. In addition to compactness, many exclusive Cannon features are embodied in this series, such as full floating contacts in all socket inserts. Solder pot cable connections are easily accessible. Cable glands are removable. Contacts are so positive that no latching device is needed for ordinary uses. Operating voltage X-4, 500V, X-2, X-3, 100V.

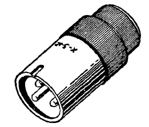
TYPE "X-11" CORD PLUG (With Socket Insert)



Sturdily built for dependable service. Light in weight. Shell is diecast zinc, nickel finish. Will take $\frac{3}{16}$″ to $\frac{9}{32}$″ cable. Used in conjunction with the following: X-14 Wall Receptacle, X-12 Straight Cord Plug, and X-42 Microphone Receptacle X-44L Receptacle.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	X-1-11	2.30
3	15-amp.	0.083	X-3-11	2.30
4	3-10-amp.	0.085	X-4-11	4.25
4	1-15-amp.			

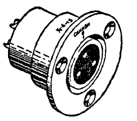
TYPE "X-12" CORD PLUG (With Pin Insert)



For use in conjunction with X-11 Straight Cord Plug (Socket Insert) or X-13 Wall Receptacle (Socket Insert). Shell is die-cast zinc, nickel finish. Will take $\frac{3}{16}$″ to $\frac{9}{32}$″ cable.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.061	X-1-12	2.05
3	15-amp.	0.063	X-3-12	1.65
4	3-10-amp.	0.065	X-4-12	3.00
4	1-15-amp.			

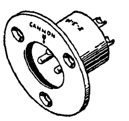
TYPE "X-13" WALL RECEPTACLE (With Socket Insert)



Body fits in ⅞″ hole and extends $1\frac{3}{16}$″ behind flange. Flange is 1⅜″ in diameter and drilled for three #4-40 oval-head screws on $\frac{17}{32}$″ radius 120° apart. Shell is die-cast zinc, nickel finish. To be used in conjunction with the following X-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	X-1-13	2.30
3	15-amp.	0.083	X-3-13	2.30
4	3-10-amp.	0.085	X-4-13	4.25
4	1-15-amp.			

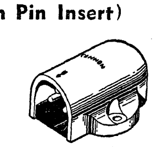
TYPE "X-14" WALL RECEPTACLE (With Pin Insert)



Body fits in ¾″ hole and extends $\frac{23}{32}$″ behind the flange, which is 1⅜″ in diameter and drilled for three #4-40 oval-head screws on $\frac{17}{32}$ radius, 120° apart. Shell is zinc, nickel plated finish. Used in conjunction with straight cord plug (Socket Insert) X-11. Solder pots extend ¼″ beyond rear of body.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.040	X-1-14	1.65
3	15-amp.	0.042	X-3-14	1.65
4	3-10-amp.	0.044	X-4-14	3.00
4	1-15-amp.			

TYPE "X-42" MICROPHONE RECEPTACLE (With Pin Insert)



Has all the features of "Type X" Straight Cord Plugs and Wall Receptacles but it is mounted on a flat base. Shell is die-cast zinc, nickel finish. Use with X-11 straight Cord Plug (Socket Insert) Mounting holes are .144″ in diameter and 1″ apart.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.063	X-3-42	1.65
4	15-amp.	0.063	X-4-42	3.65

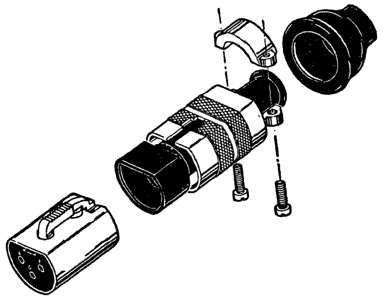
CANNON ELECTRIC COMPANY

UA FITTINGS

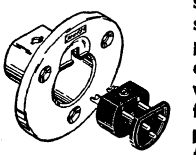
The UA Series of audio connectors designed in cooperation with the RMA Committee has all the features of Type P, O and XL and, in addition, the following: (1) gold-plated contacts for long life and "no noise" (2) double protection rubber relief collar and rubber bushings (3) flat-top polarization for finger-touch action (4) stronger and better latch lock (5) steel plug shells and insert barrel (6) spring-action insert removal — no screws.

Insulators are high dielectric, molded general-purpose Durez. 15-amp. contacts with 2400 v. minimum flash-over; for No. 14 B&S stranded wire. Max. cable entry is ½". Write for special UA Bulletin for complete details.

SEMI-EXPLODED VIEW UA-11

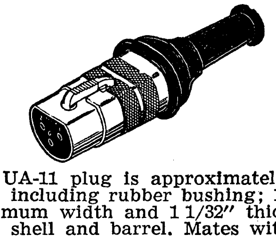


SEMI-EXPLODED VIEW UA-14



showing rubber cushion that fits over pin contacts to avoid shocks, provide protection from moisture, improve insulation factors.

TYPE UA-3-11 PLUG
(Socket Insert)

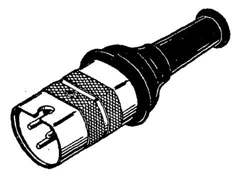


The UA-11 plug is approximately 3½" long, including rubber bushing; 1 3/16" maximum width and 1 1/32" thickness. Steel shell and barrel. Mates with UA-12, UA-32 and UA-42.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.15	UA-3-11	5.35

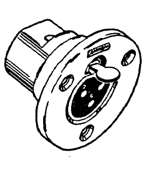
TYPE UA-3-12 PLUG
(Pin Insert)

The UA-12 plug is approximately 3¼" long, including rubber relief collar. Steel shell. Mates with UA-3-11, UA-3-13, UA-3-31.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.11	UA-3-12	4.40

TYPE UA-3-13 RECEPTACLE
(Socket Insert)

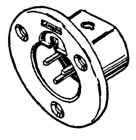


The UA-13 Receptacle has a round flange compared to the rectangular flange of the UA-31. Three mounting holes are provided, .120 dia. countersunk for #4 flat head machine screws. Mates with UA-3-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.14	UA-3-13	4.10

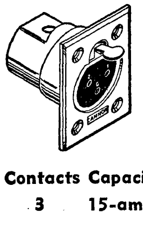
TYPE UA-3-14 RECEPTACLE
(Pin Insert)

The UA-14 Receptacle has a similar flange construction as the UA-13. Barrel extends 23/32" behind flange with 15/64" solder pot extension. A 63/64" dia. (1") hole is required to mount. Mates with UA-3-11.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.08	UA-3-14	2.50

TYPE UA-3-31 RECEPTACLE
(Socket Insert)

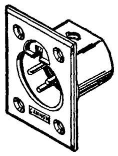


The UA-31 Receptacle has a rectangular flange construction, and extends 1 3/32" behind flange plus 3/16" max. solder pot extension and requires a 1" hole for 63/64" dia., barrel. Mates with UA-3-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.13	UA-3-31	4.10

TYPE UA-3-32 RECEPTACLE
(Pin Insert)

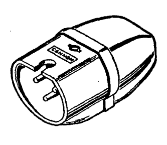
The UA-3-32 Receptacle is similar to UA-31. Barrel extends 25/32" plus 15/64" max. solder pot extension behind flange, and requires a 1" hole for 63/64" dia. barrel. Mates with XL-3-11.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.07	UA-3-32	2.50

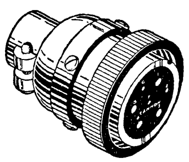
TYPE UA-3-42 RECEPTACLE
(Pin Insert)

The UA-42 is a special mounting receptacle adaptable to microphones and other applications where it is advisable to mount receptacle parallel to the equipment, etc. Similar to XL-42 and X-42 types.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.08	UA-3-42	4.95

MISCELLANEOUS



Used on telephone recorder connectors made by Western Electric, Automatic Electric, etc.

BP-M7-21C-½ Plug (CA16881)	**$4.86 List**
BP-M7-32S Receptacle (CA4128)	**$1.97 List**

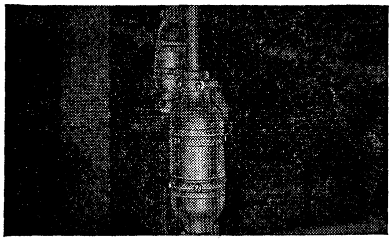
TELEVISION CAMERA PLUG

Used on Dumont, G.E. and other television cameras.

TV-R24C-22-⅞ Plug (CA17898)	**$24.96 List**

CANNON ELECTRIC DEVELOPMENT COMPANY

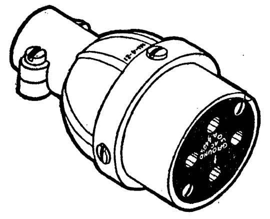
TYPE M1 FITTINGS



APPLICATION

"TYPE M1-4" PLUGS AND RECEPTACLES. For Power and Heavy Duty Circuits Four-Contact Plugs and Receptacles are U.L. approved for 250/dc, 600/ac 30-amp. service. Cable fittings have a clamp for 13/16" or smaller cable. Shells are of aluminum alloy. Cadmium plated. Pins and sockets cannot be forced out of alignment or broken by forcing together out of correct alignment. Pin contacts are brass of the split-compression type. The majority of drawings of M1-4 connectors shown are approximately 1/3 actual size. See M2-1950 or M3-1952 Bulletins for complete dimensional data and engineering information. UL APPROVED.

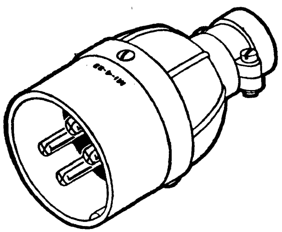
TYPE "M1-4-21" STRAIGHT CORD PLUGS (With Socket Insert)



Shell has integral clamp accommodating 11/16" cable or smaller.

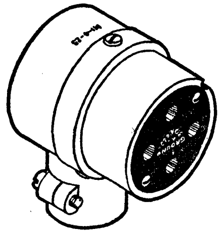
Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.750	M1-4-21	12.25

TYPE "M1-4-22" STRAIGHT CORD PLUGS (With Pin Insert)



Shell has integral clamp accommodating 11/16" cable or smaller.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.938	M1-4-22	12.25

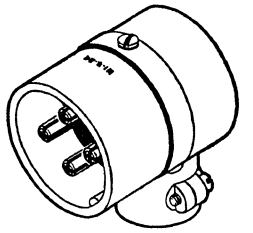


TYPE "M1-4-23" 90° CORD PLUGS (With Socket Insert)

Integral clamp for 11/16" cable or smaller.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.781	M1-4-23	12.25

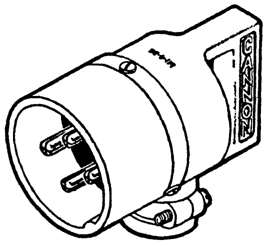
TYPE "M1-4-24" 90° CORD PLUGS (With Pin Insert)



Integral clamp for 11/16" cable or smaller.

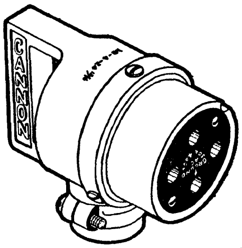
Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.782	M1-4-24	12.25

TYPE "M1-4-25" 90° HANDLE TYPE CORD PLUGS (With Socket Insert)

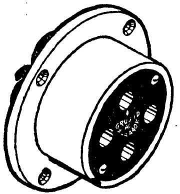


Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	1.094	M1-4-25	14.70

TYPE "M1-4-26" 90° HANDLE TYPE CORD PLUGS (With Pin Insert)



Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.859	M1-4-26	14.70

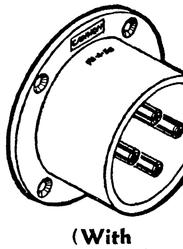


TYPE "M1-4-29" ROUND SURFACE RECEPTACLE (Socket Contacts)

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.422	M1-4-29	12.25

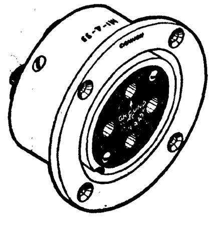
Type "M1-4-30" ROUND SURFACE WALL RECEPTACLES

Flange 3½" diameter. Four mounting holes, 90° apart on a 1 19/32" radius for #6 oval head screws.



(With Pin Insert)

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.532	M1-4-30	12.25



(With Socket Insert)

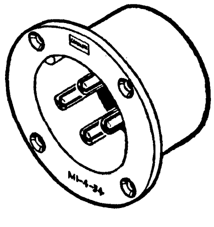
Type "M1-4-33" ROUND FLUSH WALL MOUNTING RECEPTACLES

Flange 3½" diameter. Four mounting holes, 90° apart on a 1 19/32" radius for #6-32 flat head screws.

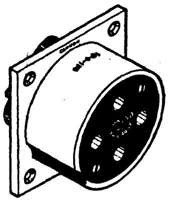
Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.578	M1-4-33	16.00

TYPE "M1-4-34" ROUND FLUSH WALL RECEPTACLES (With Pin Insert)

Flange 3½" diameter. Four mounting holes, 90° apart on a 1 19/32" radius for #6 flat head mounting screws.



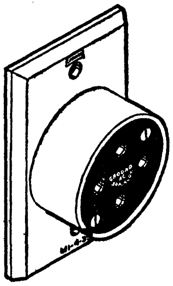
Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.438	M1-4-34	12.25



TYPE "M1-4-31" SQUARE SURFACE WALL RECEPTACLES (With Socket Insert)

Flange 2⅝" square. Four mounting holes 2.099 apart. Four #6 oval head screws.

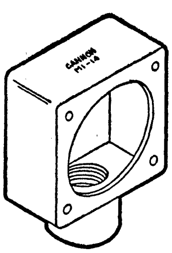
Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.406	M1-4-31	12.25



TYPE "M1-4-35" SURFACE RECEPTACLES (With Socket Insert)

Designed to fit Single-Gang Switch Box. Plate 4½" high and 2¾" wide. Two #6 flat head screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.468	M1-4-35	12.25



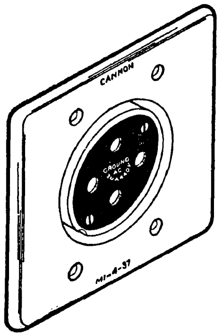
SURFACE BOX FOR M1-31 and M1-32 WALL RECEPTACLES

Tapped for ½" conduit.

Lbs.	Cat. No.	List
0.563	M1-14	3.70

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

M1 — CONTINUED

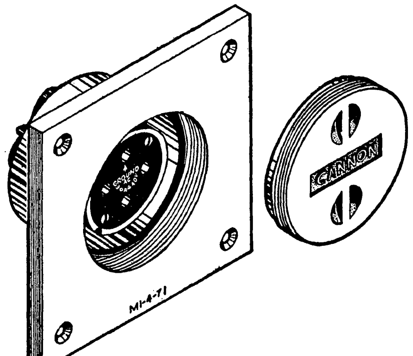


TYPE "M1-4-37" 2-GANG FLUSH RECEPTACLES (With Socket Insert)

Designed to fit Deep 2-Gang Switch Box.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	0.781	M1-4-37	17.15

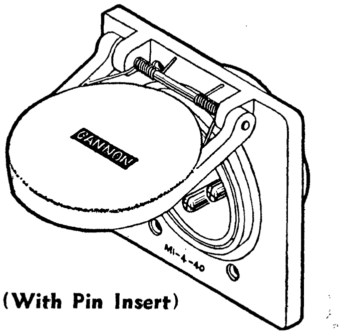
TYPE "M1-4-71" BRASS FLOOR RECEPTACLES (With Socket Insert)



Face plate is 5" square.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	2.203	M1-4-71	36.80

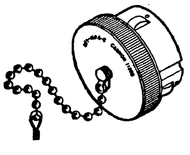
TYPE "M1-4-40" 2-GANG FLUSH DOOR RECEPTACLES



(With Pin Insert)

Has hinged spring door to keep out foreign substances. Face plate is 4½"x4⅝".

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
4	30-amp.	1.125	MI-4-40	18.40



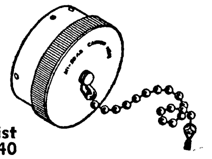
"TYPE M1" DUST CAPS

For Fittings with Pin Inserts.

lbs.	Cat. No.	List
.250	M1-59A	7.40

"TYPE M1" DUST CAPS

For Fittings with Socket Insert.

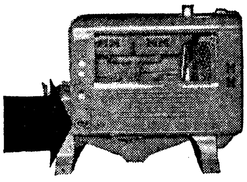


Lbs.	Cat. No.	List
.250	M1-60A	7.40

BATTERY CONNECTORS

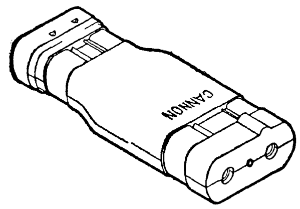
Cannon Battery Connectors shown below are limited to two plug and one receptacle types. Their major use is for connection and disconnection of battery circuits for oil field engine starting shown in application photo. Shells of plugs are rubber; Receptacle aluminum alloy, cadmium plate finish.

For detailed drawings and data, see Battery Bulletin.



APPLICATION

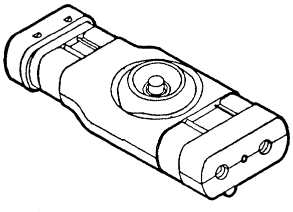
TYPE GB-3-21CF PLUG (With Socket Contacts)



Two 3/0 contacts, rated 600-amp., one NO. 8 contact, 40-amp. mates with GB-3-34CDS Receptacle.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
3	600 & 40-amp.	1.16	GB-3-21CF	11.75

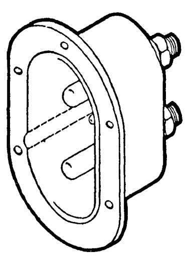
TYPE GB-3-21CFS PLUG (With Socket Contacts)



The main difference between this and above plug is the switch which eliminates arcing upon engagement or disengagement.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
3	600 & 40-amp.	1.16	GB-3-21CFS	14.95

TYPE GB-3-34CDS RECEPTACLE (With Pin Contacts)

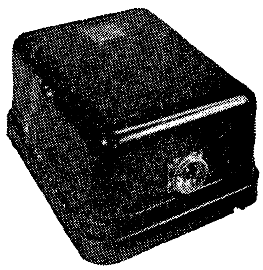


Mating receptacle to above two plugs.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List
3	600 & 40-amp.	1.031	GB-3-34CDS	4.50

"K" (BP) TYPES

For telephone recording connectors made by large suppliers of telephone equipment. The SK (BP) Plug and Receptacle are used widely for telephone equipment.

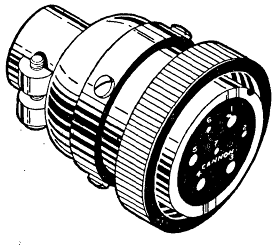


APPLICATION

The BP nomenclature is an auxilliary number in place of the "SK" and has been given the part because of this specialized use. Also shown in the "K" Bulletin.

TYPE BP (SK)-M7-21C-½ PLUG (With Socket Insert)

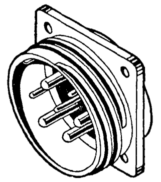
1½" clamp entry, mates with receptacle shown below.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List
3 4	10-amp. 30-amp.	0.66	BP-M7-21C-½	4.73

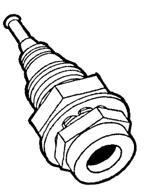
TYPE BP (SK)-M7-32S RECEPTACLE (With Pin Insert)

Mounting receptacle for BP-M7-21C-½" plug shown above. Center line to center line mounting holes 1.038".



Contacts	Capacity	Wt. Lbs.	Cat. No.	List
3 4	10-amp. 30-amp.	0.04	BP-M7-32S	1.98

TEST POINT JACKS



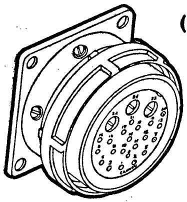
High quality phone tip jack to accomodate standard ATMA 0.081 dia. phone tip for laboratory use. Rugged construction, nylon insulation for maximum life under hard usage. See Bulletin TJ-1 for details.

Contacts	Capacitance	Wt. Lbs.	Cat. No.	List
1	5-7ufd	0.0063	45E	0.90

CANNON ELECTRIC DEVELOPMENT COMPANY

TYPE LK-R24C-31S RECEPTACLE

(with socket insert)

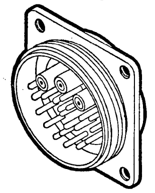


Wall or box-mounting receptacle with four 0.169 dia. mounting holes 2.077", 2 9/16" flange.

Contacts	Cat. No.	Wt. lbs.	List
24	LK-R24C-31S	0.372	10.61

TYPE LK-R24C-32S RECEPTACLE

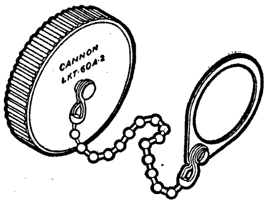
(with pin insert)



Similar to above receptacle except for exterior thread.

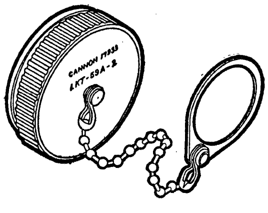
Contacts	Cat. No.	Wt. lbs.	List
24	LK-R24C-32S	0.182	8.00

LKT DUST CAPS



For pin insert assemblies.
Chain 6 ¾" long, Eyelet 1 ½" dia.

Cat. No.	Wt. lbs.	List
LKT-60A-2	0.113	3.80



For socket insert assemblies.

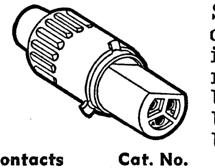
Cat. No.	Wt. lbs.	List
LKT-59A-2	0.147	3.03

"U" SUBMINIATURE

The "U" Series is sub-miniature in size, with hermetically sealed vitrious insulated receptacles, Silcon insulated plugs. Steel shells, cadmium plate, bleached iridite finish. Contacts 1, 3, 6, and 12; 5-amp. contacts, 1700v flashover dc, 1000 (ac rms) solder pot terminals standard, eyelet optional. Illustrations shown approximately actual size.

TYPE UC-3-11 PLUG

(socket insert)

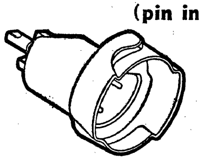


Silcan (silicone) resilient insulation, mates with UC-3-50-002, UC-3-50N-302, UC-3-12-002.

Contacts	Cat. No.	Wt. lbs.	List
3	UC-3-11	0.0088	2.67

TYPE UC-3-50-002 RECEPTACLE

(pin insert)

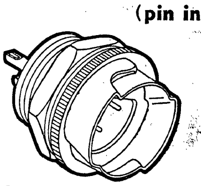


For solder applications; hermetically sealed. Mates with UC-3-11 Plug.

Contacts	Cat. No.	Wt. lbs.	List
3	UC-3-50-002	0.0026	1.57

TYPE UC-3-50N-302 RECEPTACLE

(pin insert)

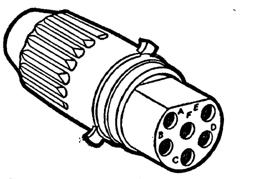


Locknut for Mechanical application including a lockwasher. Mates with UC-3-11.

Contacts	Cat. No.	Wt. lbs.	List
3	UC-3-50N-302		2.55

TYPE UD-6-11 PLUG

(socket insert

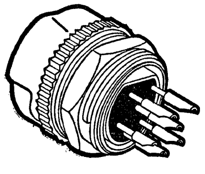


Silcan (silicone) insulator. Mates with UD-6-12-002, UD-6-50-002, UD-6-50N-302.

Contacts	Cat. No.	Wt. lbs.	List
6	UD-6-11	0.0161	3.27
12	UE-12-11		4.23

TYPE UD-6-50N-302 RECEPTACLE

(pin insert)

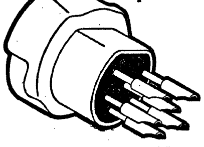


Vitreous insulation. Locknut for panel mounting application. Mates with UD-6-11, UD-12-50N-302.

Contacts	Cat. No.	Wt. lbs.	List
6	UD-6-50N-302		3.02
12	UD-12-50N-302		3.88

TYPE UD-6-50-302 RECEPTACLE

(pin insert)



Vitreous insulation; hermetically sealed with solder application.

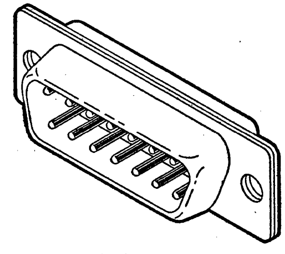
Contacts	Cat. No.	Wt. lbs.	List
6	UD-6-50-002	0.0053	1.97
12	UE-12-50-002		2.67

"D" SUBMINIATURE

Type "D" sub-miniatures are small, compact, light-weight connectors in 4 sizes, having 15, 25, 37, or 50 gold plated contacts of 5-amp. current, flashover 1700v. dc peak, 1200v ac rms. Wire size #20; steel shell, finish cadmium plate, bleached iridite. Rack type can be used to connect and make a movable plug with addition of junction shell. Insulation is high dielectric Nylon FM 10.001, keystone polarization. Contact resistance 4.56 (max 8) milliohms per ampere. See "D" Bulletin for complete data.

TYPE DA-15P CONNECTOR

(pin insert)

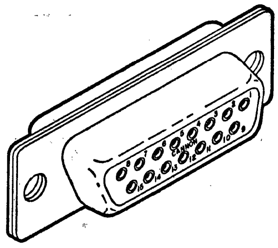


(approx. actual size)

Contacts	Cat. No.	Wt. lbs.	List
15	DA-15P	0.013	2.57

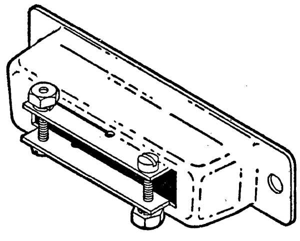
TYPE DA-15S CONNECTOR

(socket insert)



Contacts	Cat. No.	Wt. lbs.	List
15	DA-15S	0.014	3.10

JUNCTION SHELLS

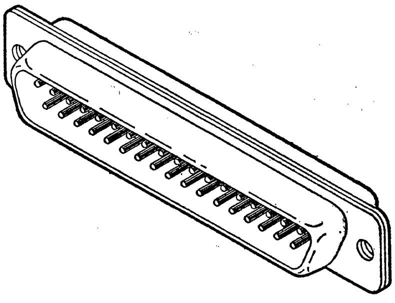


Fit Pin or Socket Assemblies.

Cat. No.	Wt. lbs.	List
DA-J/S	0.010	.35
DB-J/S	0.014	.40
DC-J/S	0.014	.45
DD-J/S	0.016	.50

TYPE DB-25P CONNECTOR

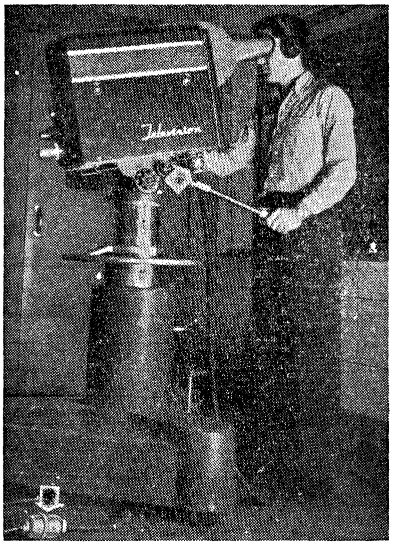
(pin insert)



Contacts	Cat. No.	Wt. lbs.	List
25	DB-25P	0.023	3.67
25	DP-25S	0.031	4.57
37	DC-37P	0.035	5.20
37	DC-37S	0.035	6.53
50	DD-50P	0.035	6.77
50	DD-50S	0.040	8.60

TV (LK & LKT) CONNECTORS

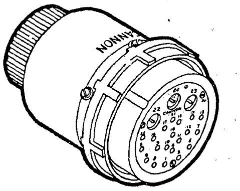
The TV (LK & LKT) connectors shown on pages 11 and 12 are used on television cameras and related equipment, and are a part of the Cannon "K" series. The assemblies with the "LK" prefix are standard "K", those prefixes with "LKT" have special shells and/or cable entry construction.



Cannon TV Connectors in Television Studio

The R24C insert has the following arrangement of 24 contacts: 3 #16 coaxials, 21 #14 contacts. Drawings of the connectors shown are approximately ¼ actual size, and are isometric (not perspective). Shells are aluminum alloy cadmium plated; insulators are melamine, contacts brass.

TYPE LK-R24C-21-⅞T STRAIGHT PLUG (with socket insert)

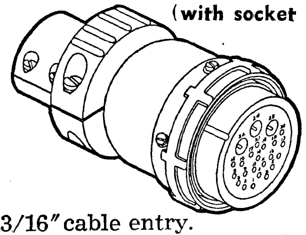


Earlier TV Plug design with short shell.

LKT-R24C-21-⅞T is to be preferred for superior clamp gland entry. Newest coupling nut design shown.

Contacts	Cat. No.	Wt. lbs.	List
24	LKT-R24C-21-⅞T	0.662	15.30

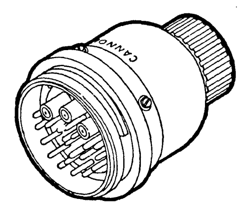
TYPE LK-R24C-21-⅞T-1 PLUG (with socket insert)



13/16″ cable entry.

Contacts	Cat. No.	Wt. lbs.	List
24	LK-R24C-21-⅞T-1	0.976	18.17

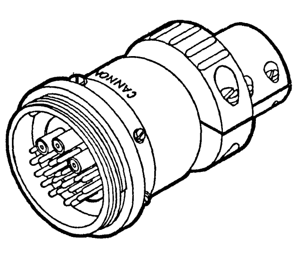
TYPE LK-R24C-22-⅞T PLUG (with pin insert)



Similar to LK-R24C-21-⅞T with pin insert, exterior thread, and rubber bumper ring.

Contacts	Cat. No.	Wt. lbs.	List
24	LK-R24C-22-⅞T	0.756	15.66

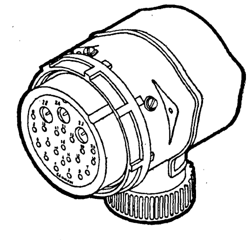
TYPE LK-R24C-22-⅞T-1 PLUG (with pin insert)



Similar to LK-R24C-21-⅞T-1 with pin insert, exterior thread and rubber bumper ring. #13/16″ cable entry.

Contacts	Cat. No.	Wt. lbs.	List
24	LK-R24C-22-⅞T-1	0.976	18.60

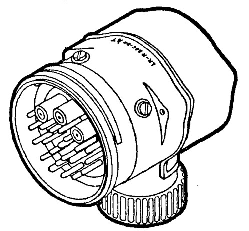
TYPE LK-R24C-23-⅞T ANGLE 90° PLUG (with socket insert)



The angle 90° style of the—⅞T fitting, with removable cap for inspection. ⅞″ cable entry.

Contacts	Cat. No.	Wt. lbs.	List
24	LK-R24C-23-⅞T	0.662	13.20

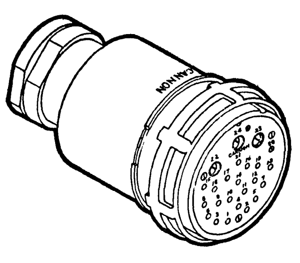
TYPE LK-R24C-24-⅞T ANGLE 90° PLUG (with pin insert)



Similar to LK-R24-C-23-⅞T with pin insert assembly, exterior thread.

Contacts	Cat. No.	Wt. lbs.	List
24	LK-R24C-24-⅞T		14.08

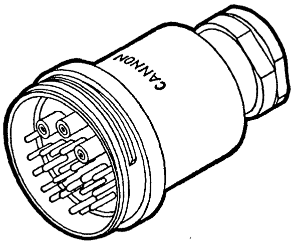
TYPE LKT-R24C-21-⅞ PLUG (with socket insert)



Special long end bell and coupling means include gland nut, friction washer, bushing, gland washer and packing ring to support cable.

Contacts	Cat. No.	Wt. lbs.	List
24	LKT-R24C-21-⅞	1.01	19.75

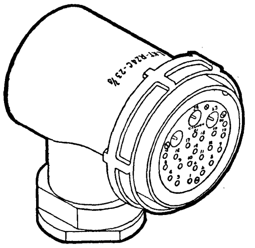
TYPE LKT-R24C-22-⅞ PLUG (with pin insert)



Same basic construction as LKT-R24C-21-⅞, except pin insert exterior thread, rubber bumper ring.

Contacts	Cat. No.	Wt. lbs.	List
24	LKT-R24C-22-⅞	0.860	19.90

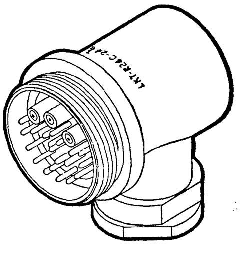
TYPE LKT-R24C-23-⅞ ANGLE 90° PLUG (with socket insert)



Similar to above fittings except for shell style which is a special 90° type shell. ⅞″ cable entry.

Contacts	Cat. No.	Wt. lbs.	List
24	LKT-R24C-23-⅞	1.04	31.03

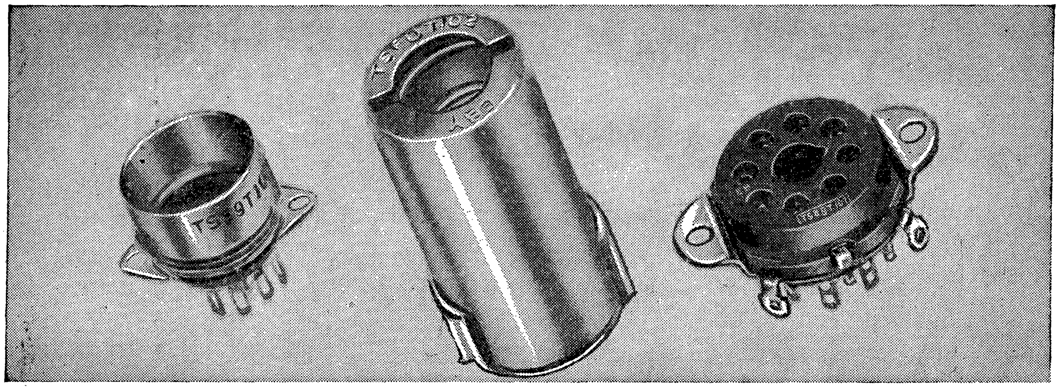
TYPE LKT-R24C-24-⅞ ANGLE 90° PLUG (with pin insert)



Similar to above except for pin insert, exterior thread and rubber bumper ring.

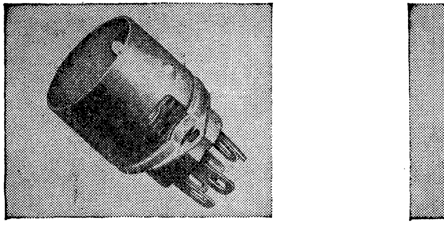
Contacts	Cat. No.	Wt. lbs.	List
24	LKT-R24C-24-⅞	0.772	31.70

JAN SOCKETS & SHIELDS



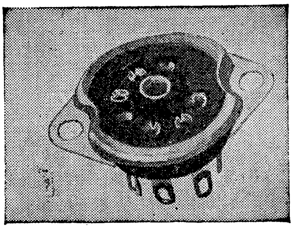
JAN NO. S-28 A	JAN NO. S-28 A1	EBY NO.	DESCRIPTION	LIST PRICE
TSE 7T 102	TS 102 C 01	9715	7 Pin Shield Base, Ceramic	**$ .90 Ea.**
TSE 7T 101	TS 102 P 01	9736	7 Pin Shield Base, Mica-filled	**.55 Ea.**
TSE 9T 102	TS 103 C 01	9717	9 Pin Shield Base, Ceramic	**1.00 Ea.**
TSE 9T 101	TS 103 P 01	9718	9 Pin Shield Base, Mica-filled	**.70 Ea.**
TSF 0T 101	TS 102 U 01	9700	7 Pin Tube Shield—1⅜″	**.25 Ea.**
TSF 0T 102	TS 102 U 02	9701	7 Pin Tube Shield—1¾″	**.25 Ea.**
TSF 0T 103	TS 102 U 03	9702	7 Pin Tube Shield—2¼″	**.31 Ea.**
TSF 0T 104	TS 103 U 01	9703	9 Pin Tube Shield—1½″	**.31 Ea.**
TSF 0T 105	TS 103 U 02	9704	9 Pin Tube Shield—1 15/16″	**.33 Ea.**
TSF 0T 106	TS 103 U 03	9710	9 Pin Tube Shield—2⅜″	**.40 Ea.**
TSB 8T 102	TS 101 C 01	9756	Octal, Saddle, Ceramic	**1.15 Ea.**
TSB 8T 101	TS 101 P 01	9753	Octal, Saddle, Mica-filled	**.75 Ea.**

STANDARD MINIATURE SOCKETS & SHIELDS



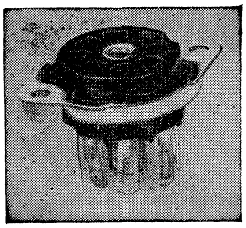
SHOCK SHIELD TYPE

Cat. No.		List each
8322	7 Pin, black bake., ⅞″ M.C.	$0.30
8329	7 Pin, mica-filled, ⅞″ M.C.	.35
8328	7 Pin, ceramic, ⅞″ M.C.	.55
9723	9 Pin, black bake., 1⅛″ M.C.	.45
9714	9 Pin, mica-filled, 1⅛″ M.C.	.50
9716	9 Pin, ceramic, 1⅛″ M.C.	.95



SADDLE TYPE, TOP MOUNT

Cat. No.		List each
8323	7 Pin, black bake., ⅞″ M.C.	$0.15
8327	7 Pin, mica-filled, ⅞″ M.C.	.20
8326	7 Pin, ceramic, ⅞″ M.C.	.45
9001	9 Pin, black bake., 1⅛″ M.C.	.20
9430	9 Pin, mica-filled, 1⅛″ M.C.	.25
9735	9 Pin, ceramic, 1⅛″ M.C.	.75



SADDLE TYPE, BOTTOM MOUNT

Cat. No.		List each
8578	7 Pin, black bake., ⅞″ M.C.	$0.15
9064	7 Pin, mica-filled, ⅞″ M.C.	.20
9012	9 Pin, black bake., 1⅛″ M.C.	.20
9401	9 Pin, mica-filled, 1⅛″ M.C.	.25
9713	9 Pin, ceramic, 1⅛″ M.C.	.75

SHIELDS FOR SADDLE TYPE SOCKET

Cat. No.		List Price, ea.
8757	Shield for 7 pin, 1¾″ high	$0.10
8758	Adaptor for above	.05
8759	Shield for 9 pin, 2-1/16″ high	$0.15
8760	Adaptor for above	.05

See JAN table above for shields for shock shield type sockets.

OCTAL SADDLE SOCKETS

No. 9067—Black bake., cadmium plated steel saddle, 4 gnd. lugs. Cadmium plated brass contacts. 1 5/16″ M.C. ....List, ea. $0.14

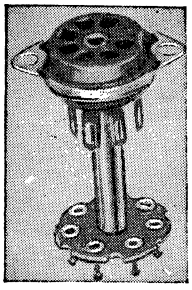
No. 8451—Loctal type, same specifications as above ....List, ea. .17

OCTAL ALL-MOLDED SOCKETS

No. 8490—Black bake., cadmium plated brass contacts. 1 5/16″ mounting centers......List, ea. $0.15

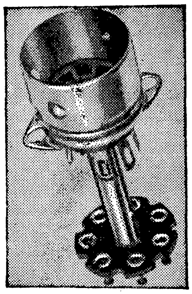
No. 8191—Loctal type, same specifications as above ....List, ea. .15

EBY SALES COMPANY



TURRET SOCKETS

Widely recognized for their usefulness in simplifying wiring and sub-assembly work. Space-saving and economical, lead lengths are reduced to a minimum thereby reducing capacitance. Available with 7 and 9 pin mica-filled miniature sockets. Spacer is brass cadmium plated; terminals are brass, silver plated; base is phenolic.



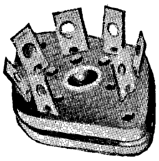
7 PIN

Cat. No.		List Price each
9801	Saddle Mt., 1⅛″ shaft	$1.25
9802	Saddle Mt., 1½″ shaft	1.25
*9805	Shield Mt., 1⅛″ shaft	1.40
*9806	Shield Mt., 1½″ shaft	1.40

9 PIN

Cat. No.		List Price each
9809	Saddle Mt., 1⅛″ shaft	$1.50
9810	Saddle Mt., 1½″ shaft	1.50
9813	Shield Mt., 1⅛″ shaft	1.65
9814	Shield Mt., 1½″ shaft	1.65

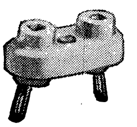
*Supplied in two parts—A saddle mount socket and a separate shield base for assembly on the job.



LAMINATED MINIATURE SOCKETS

Cat. No.		List Price each
49-1	7 Pin, ⅞″ M.C., 11/16″ wide	$0.10
49-2	W/center shield & ground strap	.11
49-21	9 Pin, 1⅛″ M.C., 1″ wide	.13
49-22	W/center shield & ground strap	.14

Additional sizes available.

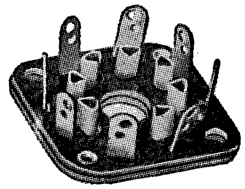


CRYSTAL SOCKET

CR-7 For crystals having .050 diameter pins and .486 spacing between pins. Steatite, grade L-5 JAN-1-10.

No. Cat.		List Price Each
8879	Phosphor bronze cadium plated contacts	$0.25
9006	Beryllium copper silver plated contacts	.35

LAMINATED OCTAL SOCKET



Cat. No. 46-5-E 8 prong:

Dimensions:

Mounting Centers	1-5/16″
Overall Width	1-13/32″
Overall Length	1⅝″

List Price $0.10 ea.

Cat No. 46-1-E 8 prong:

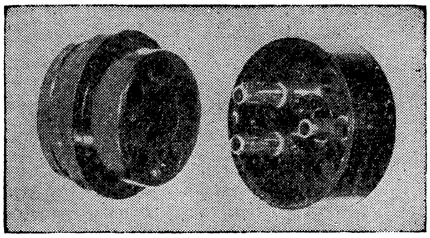
Dimensions:

Mounting Centers	1½″
Overall Width	1-13/32″
Overall Length	1-27/32″

List Price $0.10 ea.

GLASS TUBE TYPE:

Cat. No.		Mounting Centers	Width	Length	List Price each
34-1AA	4 prong	1½″	1⅜″	1⅞″	$0.12
34-1-B	5 prong	1½″	1½″	1⅞″	0.13
34-1-C	6 prong	1½″	1½″	1⅞″	0.14



SPEAKER CONNECTORS

Made of general purpose bakelite, plug is one piece construction, with protective flange that prevents touching of live contacts. Female is supplied with separate contacts for rapid assembly.

60-3M	3 Prong Male	List Price **$.11 Ea.**
60-4M	4 Prong Male	List Price **.12 Ea.**
60-5M	5 Prong Male	List Price **.13 Ea.**
60-5F	5 Contact Female for use with 3, 4, or 5 prong male	List Price **.12 Ea.**

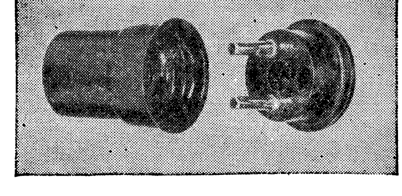
Above with wire leads available on request.

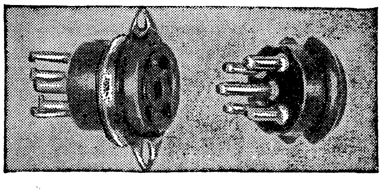
PHONO CONNECTORS

Designed for use in combining radio and phonograph sections of instrument, made of general purpose bakelite. Female is supplied with separate contacts, for use with 2, 3 or 4 prong male.

75-2M	2 Prong Male	List Price **$.10 Ea.**
75-3M	3 Pronge Male	List Price **.10 Ea.**
75-4M	4 Prong Male	List Price **.10 Ea.**
75-4F	4 Contact Female	List Price **.14 Ea.**

Above with wire leads available on request.





ALL-PURPOSE CONNECTOR

A new, compact connector made of general purpose bakelite for use where space is an important factor. Female, for use with 2, 3, 4 or 5 prong male, has saddle mount.

119-2M	2 Prong Male	List Price **$.10 Ea.**
119-3M	3 Prong Male	List Price **.10 Ea.**
119-4M	4 Prong Male	List Price **.10 Ea.**
119-5M	5 Prong Male	List Price **.10 Ea.**
119-5F	5 Contact Female	List Price **.15 Ea.**

TERMINAL STRIPS & SCREW TERMINALS

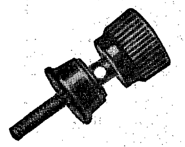
A complete selection of terminal lug strips and screw terminals are available on request. Write for our complete catalog.

EBY SALES COMPANY

INSULATED BINDING POSTS

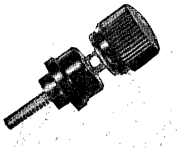
Knob and base are molded bakelite, with brass inserts and have non-removable tops.

Following have knurled base to prevent post twisting



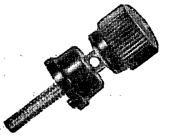
Spec's.	No. 30 Junior	No. 37 Ensign	No. 40 Commander	No. 43 Admiral
Knob Diam.	½" x 7/16" H.	½" x 7/16" H.	9/16" x ½" H.	⅝" x 17/32" H.
Base Diam.	½" x ¼" H.	½" x ¼" H.	⅝" x ¼" H.	23/32" x ¼" H.
Stem	6-32, ⅝"	6-32, ⅝"	8-32, ⅞"	8-32, ¾"
Neck Diam.	3/16"	3/16"	13/64"	13/64"
Neck Hole	3/32"	3/32"	3/32"	None
List Price	$.35 Ea.	$.40 Ea.	$.55 Ea.	$.70 Ea.

Following have boss on base to insulate stem from metal panel. Boss is flat on two sides. Stem length is from bottom of boss.



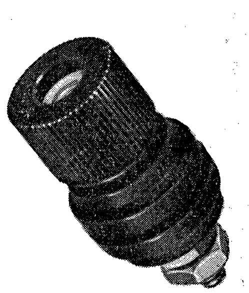
Spec's.	No. 38 Ensign	No. 41 Commander	No. 44 Admiral	No. 46 Admiral
Knob Diam.	½" x 7/16" H.	9/16" x ½" H.	⅝" x 17/32" H.	11/16"x19/32"H.
Base Diam.	17/32"x¼"H.	⅝" x ¼" H.	23/32" x ¼" H.	23/32" x ¼" H.
Stem	6-32, ½"	8-32, ⅝"	8-32, 9/16"	8-32, 9/16"
Neck Diam.	3/16"	13/64"	13/64"	13/64"
Neck Hole	3/32"	3/32"	None	None
List Price	$.45 Ea.	$.60 Ea.	$.60 Ea.	$.75 Ea.

Following have dowel pin on base.



Spec's.	No. 39 Ensign	No. 42 Commander	No. 45 Admiral	No. 47 Admiral
Knob Diam.	½" x 7/16" H.	9/16" x ½" H.	⅝" x 17/32" H.	11/16"x19/32"H.
Base Diam.	½" x ¼" H.	⅝" x ¼" H.	23/32" x ¼" H.	23/32" x ¼" H.
Stem	6-32, 9/16"	8-32, ¾"	8-32, ¾"	8-32, ¾"
Neck Diam.	3/16"	13/64"	13/64"	13/64"
Neck Hole	3/32"	3/32"	None	None
List Price	$.45 Ea.	$.60 Ea.	$.60 Ea.	$.75 Ea.

No. 51

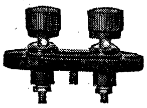


UNIVERSAL TYPE

Designed to give the added convenience of a banana plug connection. The brass bushing is fitted to take any of the standard banana plugs. Supplied with insulating base and two hex nuts as illustrated. Available in red and black.

$.67 Ea.

TWIN BINDING POSTS

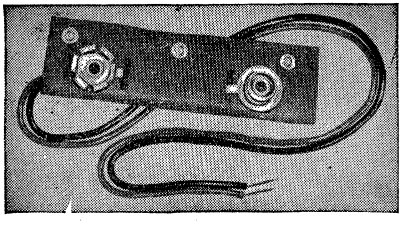


No. 21-R. All-molded Bakelite, non-removable tops. Both posts completely insulated. Center mounting screw 6/32" x ¼" long. Base is 2" long, 11/16" wide and 3/16" thick. Center distance between posts is ⅞". **List Price $0.85 Ea.**

No. 21-S. Same as above with one post insulated. One mounting screw at end of base, ground post is second mounting screw. **List Price $0.90 Ea.**

Individual metal and spring type binding posts are also available in a variety of sizes and styles. Write for our complete catalog.

BATTERY STRAPS



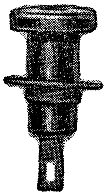
67-2 Battery snap fastener for 67½ volt B Battery. + and — terminal connections securely staked on tough fibreboard insulator. **List Price** ....**$0.28 Ea.**

69-2 Same as above for 90 volt battery. **List Price** ....**$0.30 Ea.**

TIP JACKS

No. 49. Top diameter ½" x 5/32" thick. Threaded brass body 5/16" — 40 x ¾" long. One hexagon nut and two insulating washers furnished. Hole for washers is 19/64". Red or black bakelite top.

List Price: Red and Black..............**$0.20 Ea.**

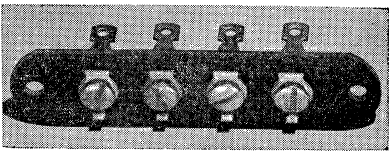


No. 52. Top diameter ½" x ⅛" thick. Body is 5/16" x ¾" long. Special steel assembly washers, cadmium plated, are furnished. Red or black bakelite.

List Price: Red ....**$0.13 Ea.**
Black ...... **0.11 Ea.**

No. 76. Same style as No. 52. Top diam. ⅝" x 5/32" thick. Body is .500 x 27/32" long. **List Price: Red....$0.20 Black....$0.17**

SCREW TERMINAL STRIPS

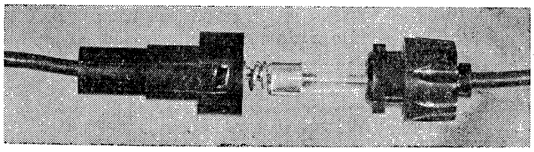


Brass contacts, steel screws cadmium plated. 1/16" laminated bakelite plates. Spacing between terminals ½".

			List
*No. 56-2	2	terminals	$.10 ea.
*No. 56-3	3	"	.13 ea.
*No. 56-4	4	"	.17 ea.
*No. 56-5	5	"	.20 ea.
No. 56-6	6	"	.45 ea.
No. 56-7	7	"	.50 ea.
No. 56-8	8	"	.60 ea.
No. 56-9	9	"	.65 ea.

*Available with 7/16" terminal spacing.

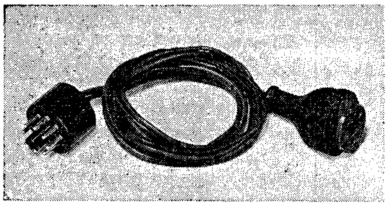
FUSE HOLDER



Molded fuse holder for use in automobile radios, television sets and other applications requiring "in the line" fuse holders. Wrap-around fuse clip assures a firm positive gripping contact. EBY "key" locking system affords greater mechanical strength and eliminates breakage. Furnished complete with wire leads and fuse. .... List, ea. **$.45**

TELEVISION ACCESSORIES by EBY

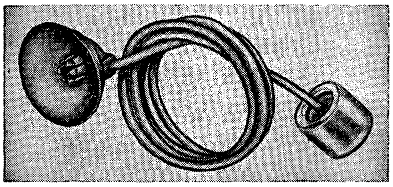
YOKE HARNESS



49-8H. Provides extension from yoke and coil assembly to chassis. Wired for RCA sets as supplied. List, ea. **$2.00**

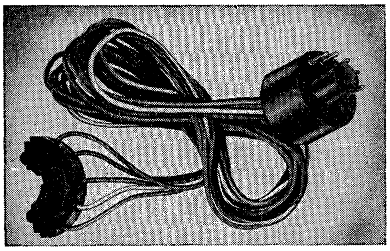
49-9H. Same as above but with eight leads for various other applications .... List, ea. **$2.25**

ANODE HARNESS



49-10H. Provides extension from anode connection to chassis. Used together with 49-8H and 49-12DH harnesses to facilitate servicing. Finest quality anode connector and heavy gauge polystyrene socket. .... List, ea. **$1.60**

TELEVISION TUBE HARNESS



49-12DH. Composed of a kinescope socket and a CRT base with four foot leads. Its purpose is to provide an extension from the cathode ray tube to chassis to facilitate repair and conversion work. .... List, ea. **$2.00**

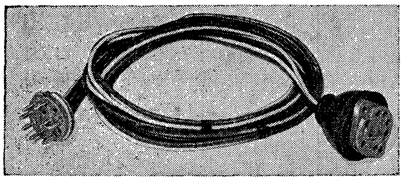
49-13DH. Same as above, but with full socket and six leads for electro-static as well as magnetic tubes. .... List, ea. **$2.15**

TEST HARNESS KITS

K-301. Contains the 49-9H, 49-10H, and 49-12DH harnesses shown above. Packed in a handy, sturdy, clear plastic box. List, ea. **$5.75**

K-302. Contains 49-9H, 49-10H, and 49-13DH....List, ea. **$6.00**

PHILCO TYPE HARNESSES



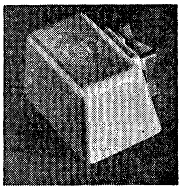
These harnesses have been especially designed for use in servicing Philco receivers:

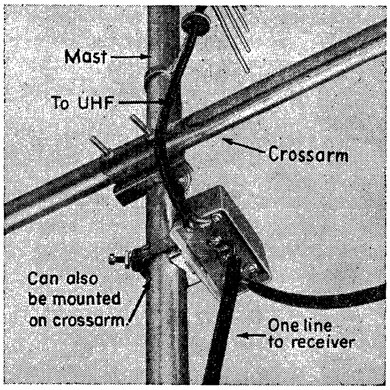
49-6H. A 7 lead yoke extension for Philco sets. List, ea. **$2.25**

49-7H. An 11 lead interchassis coupling extension. List, ea. **$3.00**

CROSSOVER NETWORK

9805-1. Permits use of a single transmission line to the receiver eliminating the running of UHF and VHF lines to the receiver and the switching of antenna at the receiver.

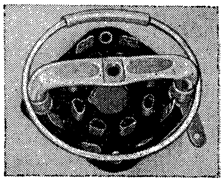




Isolates the UHF antenna from the VHF antenna automatically eliminating interference. Housed in a tough, durable, weather resistant plastic case — complete with mounting brackets and strap. List, ea. **$4.95**

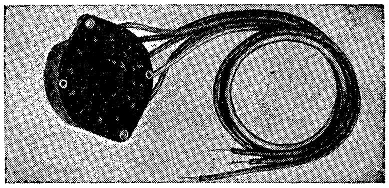
HIGH VOLTAGE SOCKET

021-HV. Octal socket for use in high voltage circuit with 1B3 tube. Laminated bakelite with steel yoke that holds spring steel corona ring. .... List, ea. **$.47**



DUO-DECAL SOCKET

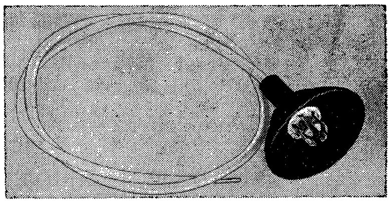
49-12DD. Laminated television socket with plastic cover for complete insulation. Pins No. 1, 2, 10, 11 and 12 wired for quick installation. For use with standard Cathode Ray tubes .... List, ea. **$.70**



49-13DD. Same as above but wired for electro-static as well as magnetic tubes .... List, ea. **$.80**

ANODE CONNECTOR

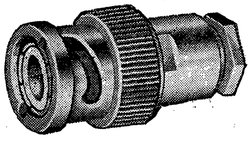
AC-1. An important replacement part for service and repair work. 1½ inch diameter rubber hood protects silver plated snap contacts which insure a positive, unyielding grip. Heavily insulated lead is 18" long .... List, ea. **$.50**



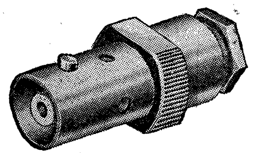
DAGE RADIO FREQUENCY CONNECTORS

Standard Prices and Special Quotations Available Immediately on Request

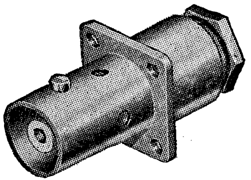
TYPE BNC



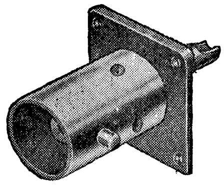
UG-88B/U



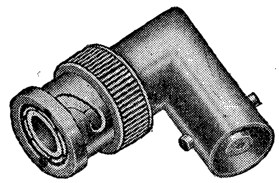
UG-89B/U



UG-262/U



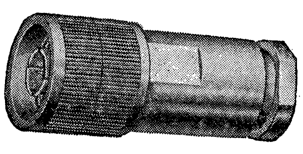
UG-290/U



UG-306/U

ARMED SERVICES TYPE	DAGE No.	DESCRIPTION	IMPED-ANCE	USED WITH CABLE
UG-88/U	056-1	Plug	52 ohms	RG-55, 58, 58A |U
UG-88B/U	359-1	Plug	52 ohms	RG-55, 58, 58A/U
UG-89/U	130-1	Jack	52 ohms	RG-55, 58, 58A/U
UG-89B/U	415-1	Plug	52 ohms	RG-55, 58, 58A/U
UG-90/U	239-1	Panel Jack	52 ohms	RG-55, 58, 58A/U
UG-185/U	145-1	Receptacle	52 ohms	
UG-201/U	379-1	Adapter (BNC female to to N male)	52 ohms	
UG-260/U	073-1	Plug	Unmatched	RG-59, 62, 71/U
UG-260A/U	416-1	Plug	Unmatched	RG-59, 62, 71/U
UG-261/U	124-1	Jack	Unmatched	RG-59, 62, 71/U
UG-261A/U	417-1	Jack	Unmatched	RG-59, 62, 71/U
UG-262/U	121-1	Panel Jack	Unmatched	RG-59, 62, 71/U
UG-262A/U	371-1	Panel Jack	Unmatched	RG-59, 62, 71/U
UG-273/U	470-1	Adapter BNC-UHF	Unmatched	
UG-274/U	134-1	Adapter Tee	52 ohms	
UG-290/U	055-1	Receptacle	52 ohms	
UG-291/U	122-1	Panel Jack	52 ohms	RG-55, 58, 58A/U
UG-291A/U	413-1	Panel Jack	52 ohms	
UG-306/U	135-1	Adapter Right Angle	52 ohms	
UG-349/U	136-1	Adapter BNC to N	52 ohms	
UG-414/U	551-1	Receptacle, Double End	52 ohms	
UG-447/U	055-3	Similar to UG-290/U—Tapped holes replaced by .109$^{+.001}_{-.003}$ Dia. holes	52 ohms	
UG-492/U	547-1	Receptacle, Double End, Pressurized	52 ohms	
UG-535/U	240-1	Receptacle	52 ohms	
UG-589/U	549-1	Plug	Unmatched	Wire W-142
UG-625/U	081-1	Receptacle	52 ohms	
UG-657/U	237-1	Receptacle, Pressurized	52 ohms	
UG-924/U	501-1	Plug, Binding Post		
CW-123A/U	366-1	Cap and Chain		
CW-155A/U	399-1	Cap		
MX-554/U	534-1	Resistor Plug	Optional	

TYPE N



UG-18B/U

ARMED SERVICES TYPE	DAGE No.	DESCRIPTION	IMPED-ANCE	USED WITH CABLE
UG-18B/U	131-1	Plug	50 ohms	RE-5, 5A, 6, 21/U
UG-19B/U	132-1	Panel Jack	50 ohms	RE-5, 5A, 6, 21/U
UG-20B/U	140-1	Jack	50 ohms	RE-5, 5A, 6, 21/U
UG-21B/U	037-1	Plug	50 ohms	RG-8, 9, 9A, 10/U
G-21C/U	400-1	Plug	50 ohms	RG-8, 9, 9A, 10/U
UG-22B/U	047-1	Panel Jack	50 ohms	RG-8, 9, 9A, 10/U

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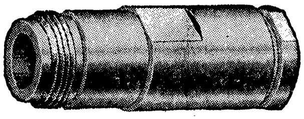
RADIO FREQUENCY CONNECTORS DAGE

Dage RF Connectors Are Made in Strict Conformity with Military Specifications

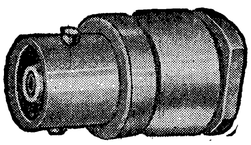
TYPE N
CONTINUED



UG-23B/U

ARMED SERVICES TYPE	DAGE No.	DESCRIPTION	IMPED-ANCE	USED WITH CABLE
UG-23B/U	062-1	Jack	50 ohms	RG-8, 9, 9A, 10/U
UG-58A/U	019-1	Receptacle	50 ohms	
UG-83/U	565-1	Adapter N-UHF	Unmatched	
UG-201/U	379-1	Adapter (N male to BNC female)	50 ohms	
UG-349/U	136-1	Adapter, N to BNC	50 ohms	
UG-536/U	385-1	Plug	52 ohms	RG-55, 58, 58A/U
UG-940A/U	582-1	Type N with MX-146 2/U	50 ohms	RG-10, 12/U
MX-913/U	583-1	Cap and Chain Assembly		

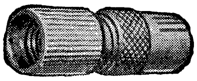
TYPE C



UG-572/U

ARMED SERVICES TYPE	DAGE No.	DESCRIPTION	IMPED-ANCE	USED WITH CABLE
UG-568/U	306-1	Receptacle	50 ohms	
UG-569/U	307-1	Receptacle, Bulkhead	50 ohms	
UG-570/U	308-1	Jack, Bulkhead	50 ohms	RG-8, 9, 9A, 10/U
UG-571/U	309-1	Panel Jack	50 ohms	RG-8, 9, 9A, 10/U
UG-572/U	310-1	Jack	50 ohms	RG-8, 9, 9A, 10/U
UG-573/U	288-1	Plug	50 ohms	RG-8, 9, 9A, 10/U

TYPE MC



MC-10

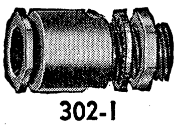
ARMED SERVICES TYPE	DAGE No.	DESCRIPTION	IMPED-ANCE	USED WITH CABLE
MC-10	149-1	Plug	52 ohms	RG-58/U
MC-20	148-1	Receptacle	52 ohms	
MC-50	528-1	Plug	Unmatched	RG-59/U, 62/U, 71/U
MC-60	148-3	Receptacle	Unmatched	
MC-90	149-4	Plug (Has separate insulator & contact)	52 ohms	RG-58/U
MC-210	148-2	Receptacle	52 ohms	
MC-250	149-2	Plug (Has separate contact & Teflon insulator)	52 ohms	RG-58/U

TYPE BN

ARMED SERVICES TYPE	DAGE No.	DESCRIPTION	IMPED-ANCE	USED WITH CABLE
UG-206/U	407-1			

SPECIAL

TYPE BNC



302-1

TYPE N

ARMED SERVICES TYPE	DAGE No.	DESCRIPTION	IMPED-ANCE	USED WITH CABLE
Special	365-1	Panel Jack BNC	Unmatched	
Special	302-1	BNC Coax. Termination Panel	Unmatched	RG-59, 62, 71/U
Special	406-1	BNC Coax. Termination Panel	52 ohms	RG-55, 58, 58A/U
Special	345-1	Panel Jack N	50 ohms	RG-55, 58, 58A/U
Special	429-1	Plug N	50 ohms	RG-55, 58, 58A/U

Dage precision RF Connectors are designed and produced with the utmost care.

Dage complete manufacturing facilities enable skilled craftsmen to produce quickly all types of coaxial connectors.

Dage and its representatives welcome your order, or your request for quotations or technical information.

For quality, quantity—*right now*—specify Dage RF Connectors.

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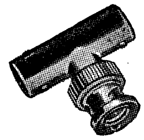
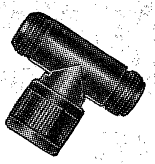
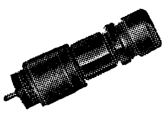
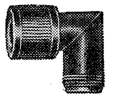
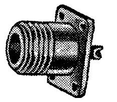
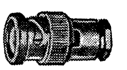
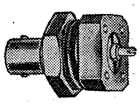
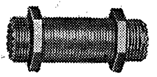
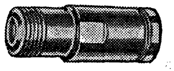


WALTHAM



R.F CONNECTORS

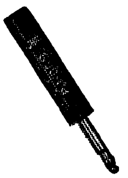
Remember, Waltham manufactures the complete connector, including all component parts, in a new, modern factory where "quality control" results in products of the highest engineering calibre.

—All connectors manufactured to J.A.N. Specifications.

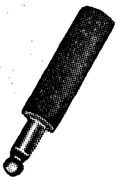
ITEM NO.	DESCRIPTION	TYPE	ITEM NO.	DESCRIPTION	TYPE	ITEM NO.	DESCRIPTION	TYPE
1	UG 9/U PLUG	(N)	46	UG 87/U RECEPTACLE	(BN)	91	UG 260/U PLUG	(BNC)
2	UG 10/U PANEL JACK	(N)	47	UG 88/U PLUG	(BNC)	92	UG 260A/U PLUG	(BNC)
3	UG 11/U JACK	(N)	48	UG 88B/U PLUG	(BNC)	93	UG 261/U JACK	(BNC)
4	UG 12/U PLUG	(N)	49	UG 89/U JACK	(BNC)	94	UG 261A/U JACK	(BNC)
5	UG 13/U PANEL JACK	(N)	50	89B/U JACK	(BNC)	95	UG 262/U PANEL JACK	(BNC)
6	UG 14/U JACK	(N)	51	UG 91A/U PLUG	(N)	96	UG 262A/U PANEL JACK	(BNC)
7	UG 15/U PLUG	(N)	52	UG 92A/U JACK	(N)	97	UG 273/U ADAPTER	(BNC to UHF)
8	UG 16/U PANEL JACK	(N)	53	UG 93A/U PANEL JACK	(N)	98	UG 274/U ADAPTER TEE	(BNC)
9	UG 18B/U PLUG	(N)	54	UG 94A/U PLUG	(N)	99	UG 290/U RECEPTACLE	(BNC)
10	UG 19B/U PANEL JACK	(N)	55	UG 95A/U JACK	(N)	100	UG 291/U PANEL JACK	(BNC)
11	UG 20B/U JACK	(N)	56	UG 96A/U PANEL JACK	(N)	101	UG 291A/U PANEL JACK	(BNC)
12	UG 21/U PLUG	(N)	57	UG 97A/U ADAPTER RT. ANGLE	(LN)	102	UG 306/U ADAPTER RT. ANGLE	(BNC)
13	UG 21B/U PLUG	(N)	58	UG 98A/U RECEPTACLE	(LN)	103	UG 309/U ADAPTER	(BNC to HN)
14	UG 21C/U PLUG	(N)	59	UG 100A/U PLUG	(LN)	104	UG 342/U PLUG RT. ANGLE	(BN)
15	UG 21D/U PLUG	(N)	60	UG 101A/U PANEL JACK	(LN)	105	UG 347/U RECEPTACLE	
16	UG 22B/U PANEL JACK	(N)	61	UG 102A/U PLUG	(UHF)	106	UG 348/U RECEPTACLE	
17	UG 22C/U PANEL JACK	(N)	62	UG 103A/U RECEPTACLE	(UHF)	107	UG 414/U ADAPTER STRAIGHT	(BNC)
18	UG 22D/U PANEL JACK	(N)	63	UG 104A/U ADAPTER RT. ANGLE	(UHF)	108	UG 421/U PLUG	(UHF)
19	UG 23B/U JACK	(N)	64	UG 105A/U ADAPTER STRAIGHT	(UHF)	109	UG 422/U RECEPTACLE	(UHF)
20	UG 23C/U Jack	(N)	65	UG 107B/U ADAPTER TEE	(N)	110	UG 496/U	
21	UG 27A/U RT. ANGLE ADAPTER	(N)	66	UG 146/U ADAPTER	(N to UHF)	111	UG 516/U ADAPTER	(LN to N)
22	UG 27B/U RT. ANGLE ADAPTER	(N)	67	UG 159A/U JACK BULKHEAD	(N)	112	UG 535/U RECEPTACLE RT. ANGLE	(BNC)
23	UG 28A/U ADAPTER TEE	(N)	68	UG 160A/U JACK BULKHEAD	(N)	113	UG 536/U PLUG	(N)
24	UG 29B/U ADAPTER STRAIGHT	(N)	69	UG 160B/U JACK BULKHEAD	(N)	114	UG 564/U ADAPTER	(C to N)
25	UG 30/U ADAPTER BULKHEAD PRESS	(N)	70	UG 167A/U PLUG	(N)	115	UG 565/U ADAPTER	(C to N)
26	UG 30B/U ADAPTER BULKHEAD PRESS	(N)	71	UG 167B/U PLUG	(N)	116	UG 566/U ADAPTER	(C)
27	UG 35/U RECEPTACLE PULSE		72	UG 167C/U PLUG	(N)	117	UG 567/U ADAPTER	(C)
28	UG 39/U COVER FLANGE		73	UG 173/U ADAPTER REDUCING	(UHF)	118	UG 568/U RECEPTACLE	(C)
29	UG 40/U CHOKE FLANGE		74	UG 175/U ADAPTER REDUCING	(UHF)	119	UG 569/U RECEPTACLE	(C)
30	UG 53/U COVER FLANGE		75	UG 176/U ADAPTER REDUCING	(UHF)	120	UG 570/U JACK	(C)
31	UG 54/U CHOKE FLANGE		76	UG 180A/U PLUG	(PULSE)	121	UG 571/U PANEL JACK	(C)
32	UG 57B/U ADAPTER, STRAIGHT	(N)	77	UG 181A/U JACK BULKHEAD	(PULSE)	122	UG 572/U JACK	(C)
33	UG 58/U RECEPTACLE	(N)	78	UG 182A/U JACK	(PULSE)	123	UG 573/U PLUG	(C)
34	UG 58A/U RECEPTACLE	(N)	79	UG 185/U RECEPTACLE	(BNC)	124	UG 589/U PLUG	(BNC)
35	UG 59A/U PLUG	(HN)	80	UG 188/U PLUG	(N)	125	UG 625/U RECEPTACLE	(BNC)
36	UG 59B/U PLUG	(HN)	81	UG 201/U ADAPTER	(BNC to N)	126	MX 913/U CAP & CHAIN	(C)
37	UG 59C/U PLUG	(HN)	82	UG 206/U RECEPTACLE	(BN)	127	CW 123/U CAP & CHAIN	(C)
38	UG 60A/U JACK	(HN)	83	UG 212A/U ADAPTER RT. ANGLE	(HN)	128	CW 123A/U CAP & CHAIN	
39	UG 60B/U JACK	(HN)	84	UG 213/U ADAPTER	(N to LN)	129	CW 155/U CAP	(BNC)
40	UG 60C/U JACK	(HN)	85	UG 213A/U ADAPTER	(N to LN)	130	CW 155A/U CAP	(BNC)
41	UG 61A/U PANEL JACK	(HN)	86	UG 224/U ADAPTER BULKHEAD	(UHF)	131	SO 239 RECEPTACLE	(UHF)
42	UG 61B/U PANEL JACK	(HN)	87	UG 241/U ADAPTER	(BN to UHF)	132	PL 258 ADAPTER STRAIGHT	(UHF)
43	UG 61C/U PANEL JACK	(HN)	88	UG 242/U ADAPTER, TEE	(BN)	133	PL 259 PLUG	(UHF)
44	UG 83/U ADAPTER	(N to UHF)	89	UG 254A/U RECEPTACLE PRESS	(BNC)	134	PL 259A PLUG	(UHF)
45	UG 85/U PLUG	(BN)	90	UG 255/U ADAPTER	(BNC to UHF)	135	PL 274 PLUG	(UHF)
						136	UG 920/U ADAPTER RT. ANGLE	(HN)

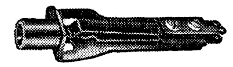
WALTHAM HOROLOGICAL CORPORATION

MANUFACTURERS OF TELEPHONE PLUGS AND CONNECTORS

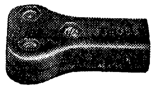


WALTHAM
TELEPHONE PLUGS and JACKS





Waltham Telephone Plugs are nationally recognized as the "Standard of Quality" — they are manufactured from the finest materials by skilled craftsmen using the newest, most modern equipment. Our engineering staff is available for consultation without obligation on any plug or connector problem.



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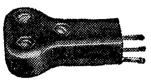

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PJ-051

PJ-055B

PJ-068

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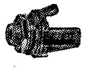

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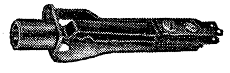

JJ-022

Manufactured in strict accordance with
JAN P-642 Specifications.

We are a Signal Corps approved and accepted source for the following plugs and jacks:

PJ-047B
PJ-051
PJ-054B
PJ-055B
PJ-068
PJ-291
PJ-292
PJ-540B

Style D
JJ-022
JJ-024
JJ-026
JJ-033
JJ-034
JJ-048
JJ-055

All plugs can be supplied with red shells — specify when ordering.

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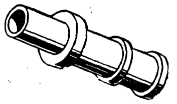
STANDARD TERMINAL LUGS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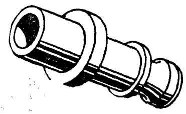
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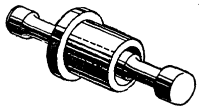
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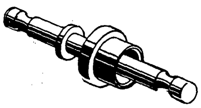
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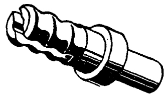
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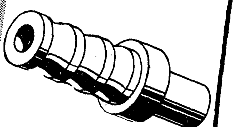
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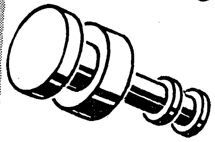
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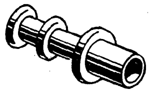
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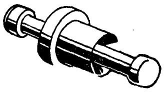
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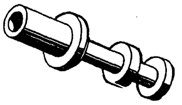
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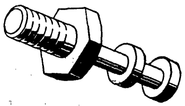
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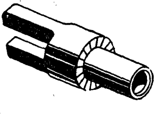
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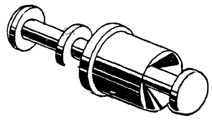
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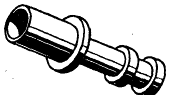
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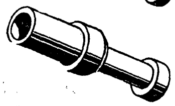
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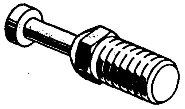
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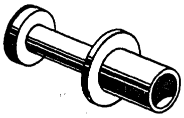
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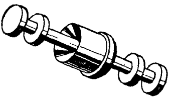
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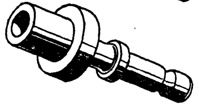
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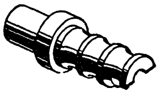
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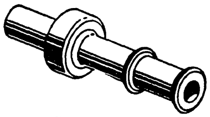
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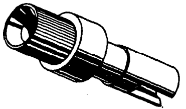
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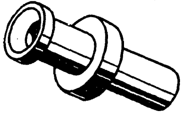
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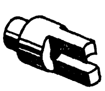
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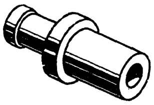
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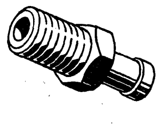
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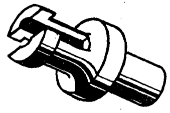
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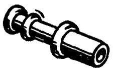
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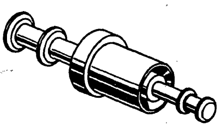
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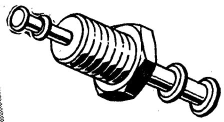
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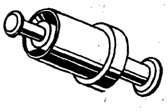
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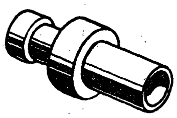
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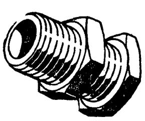
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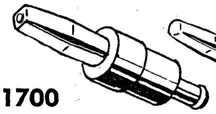
PLUGS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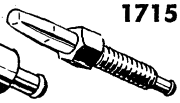
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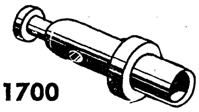
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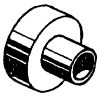
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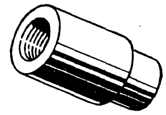
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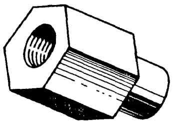
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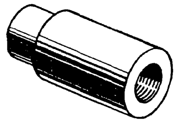
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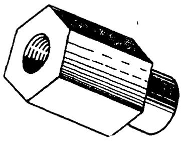
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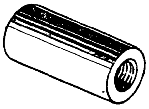
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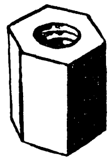
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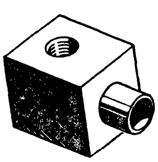
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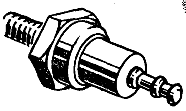
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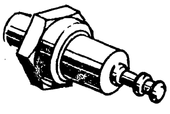
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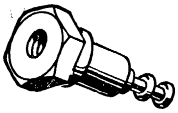
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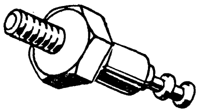
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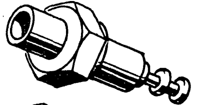
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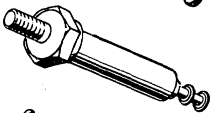
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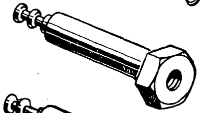
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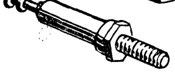
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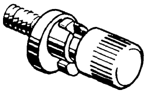
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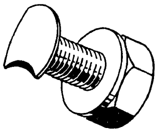
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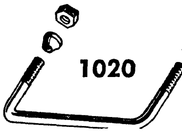
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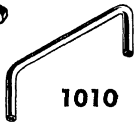
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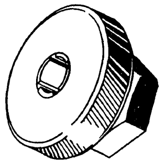
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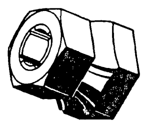
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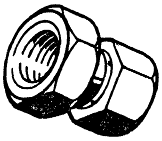
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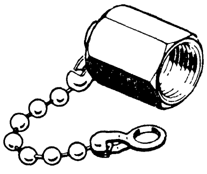
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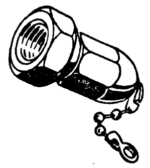
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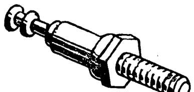
INSULATED TERMINALS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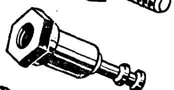
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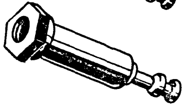
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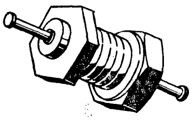
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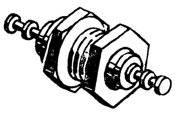
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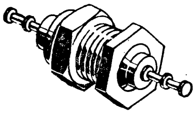
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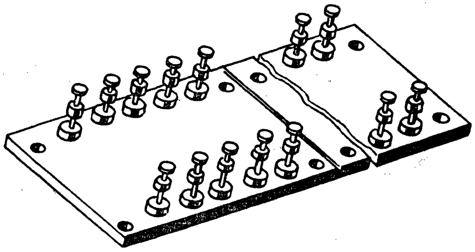

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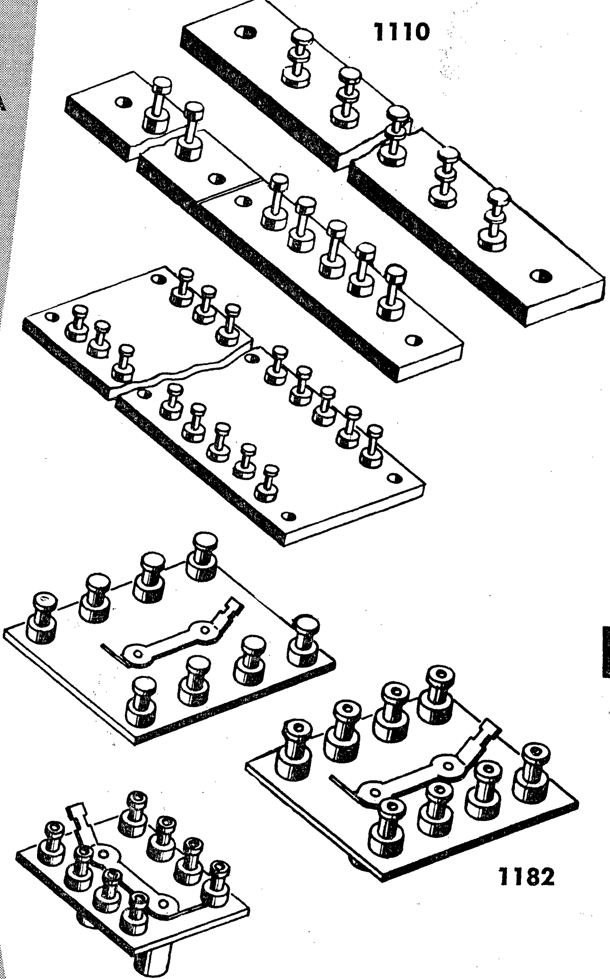
TERMINAL BOARDS



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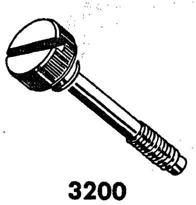

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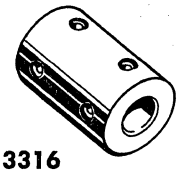
CAPTIVE SCREW



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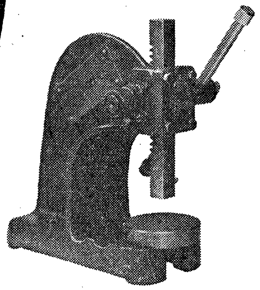
SHAFT COUPLING



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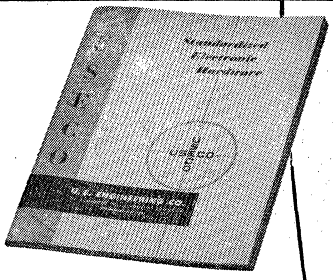

Engineering Manual furnished when requested on business letterhead.

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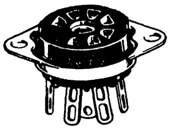
JAN SOCKETS AND SHIELDS

Part No.	DESCRIPTION	Designation Per JAN/S28A-1	List Price Each
235 BC	7 Pin Mica	TS 102P01	.59
238 BC	7 Pin Ceramic	TS 102C01	.97
169 BC	9 Pin Mica	TS 103P01	.77
176 BC	9 Pin Ceramic	TS 103C01	1.20
335 PHSPTD	Octal Mica	TS 101P01	.80
336 PHSPTD	Octal Mica—with Bushings	TS 101P02	1.12
338 PHSPTD	Octal Ceramic	TS 101C01	1.20
337 PHSPTD	Octal Ceramic—with Bushings	TS 101C02	1.54
342 PHSPTD	Octal Mica—GRC	TS 101P0	.78
121	7 Pin Shield 1-3/8"	TS 102U01	.25
120	7 Pin Shield 1-3/4"	TS 102U02	.25
149	7 Pin Shield 2-1/4"	TS 102U03	.31
193	9 Pin Shield 1-1/2"	TS 103U01	.31
191	9 Pin Shield 1-15/16"	TS 103U02	.34
195	9 Pin Shield 2-3/8"	TS 103U03	.39

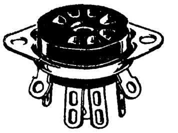


RTMA SADDLE TYPE

Bottom Mounting

Insulator Material	Model No.	List Price Ea.
	7 PIN	
Gen. Purp.	**100**	**.14**
Mica Filled	**105**	**.17**
Ceramic	**220**	**.45**
	9 PIN	
Gen. Purp.	**270**	**.20**
Mica Filled	**271**	**.24**
Ceramic	**272**	**.63**

Contact Material — Brass, Cad. Plated

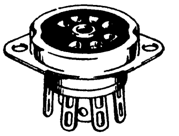


RMA SADDLE TYPE

with Ground Lugs
Bottom Mounting

Insulator Material	Model No.	List Price Ea.
	7 PIN	
Gen. Purp.	**300**	**.15**
Mica Filled	**305**	**.19**
Ceramic	**320**	**.46**
	9 PIN	
Gen. Purp.	**370**	**.20**
Mica Filled	**371**	**.25**
Ceramic	**372**	**.65**

Contact Material — Brass, Cad. Plated

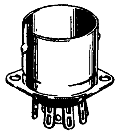


JAN SADDLE TYPE

Top Mounting

Insulator Material	Model No.	List Price Ea.
	7 PIN	
Gen. Purp.	**240**	**.14**
Mica Filled	**241**	**.17**
Ceramic	**113**	**.45**
	9 PIN	
Gen. Purp.	**196**	**.20**
Mica Filled	**197**	**.24**
Ceramic	**170**	**.63**

Contact Material — Brass, Cad. Plated

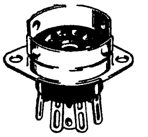


JAN BASE SHIELD TYPE

Top Mounting

Insulator Material	Model No.	List Price Ea.
	7 PIN	
Gen. Purp.	**ST 234**	**.30**
Mica Filled	**ST 235**	**.35**
Ceramic	**ST 238**	**.56**
	9 PIN	
Gen. Purp.	**ST 167**	**.41**
Mica Filled	**ST 169**	**.47**
Ceramic	**ST 176**	**.95**

Contact Material — Brass, Cad. Plated

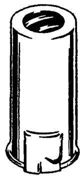


SNAP-ON JAN TYPE

Top Mounting

Insulator Material	Model No.	List Price Ea.
	7 PIN	
Gen. Purp.	**250**	**.16**
Mica Filled	**251**	**.20**
Ceramic	**252**	**.47**
	9 PIN	
Gen. Purp.	**450**	**.24**
Mica Filled	**451**	**.29**
Ceramic	**452**	**.69**

Contact Material — Brass, Cad. Plated



JAN TYPE SHIELDS

Per Jan/S-28

Material
Steel, Cad. Plated

Model No.	Height	List Price Ea.
	7 PIN	
127	**1⅜"**	**.18**
126	**1¾"**	**.19**
148	**2¼"**	**.28**
	9 PIN	
192	**1½"**	**.29**
190	**1-15/16"**	**.31**
194	**2⅜"**	**.35**

Fig. 1

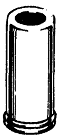


Fig. 2

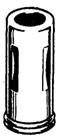
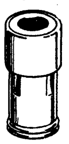


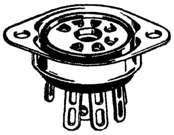
Fig. 3



SNAP-ON TYPE SHIELDS

Material
Steel

Fig.	Model No.	Desc.	Height	List Price Ea.
		7 PIN		
1	**200**		**1-53/64"**	**.08**
2	**224**	**Slit**	**1-53/64"**	**.12**
3	**225**	**Slit & Lead**	**1-53/64"**	**.49**
		9 PIN		
1	**227**		**2-1/16"**	**.10**
2	**228**	**Slit**	**2-1/16"**	**.14**
3	**229**	**Slit & Lead**	**2-1/16"**	**.57**

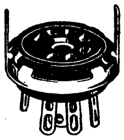


7 PIN SHOCK PROOF TYPE

Bottom Mounting

Insulator Material	Model No.	List Price Ea.
Gen. Purp.	**140**	**.32**
Mica Filled	**143**	**.38**
Ceramic	**145**	**.58**

Contact Material
Brass, Cad. Plated

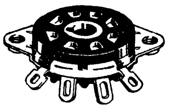


7 PIN NON-MICROPHONIC TYPE

Bottom Mounting

Insulator Material	Model No.	List Price Ea.
Gen. Purp.	**134**	**.30**
Mica Filled	**135**	**.35**
Ceramic	**157**	**.56**

Contact Material
Brass, Cad. Plated



JAN OCTAL SOCKET

Bottom Mounting

Insulator Material	Model No.	List Price Ea.
	Without Tapped Bushing	
Gen. Purp.	**328**	**.46**
Mica Filled	**335**	**.53**
Ceramic	**338**	**.80**
	With Tapped Bushing	
Gen. Purp.	**329**	**.72**
Mica Filled	**336**	**.81**
Ceramic	**337**	**1.09**

Contact Material — Brass, Cad. Plated

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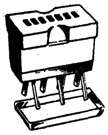


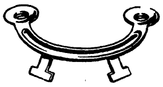
FLAT TYPE SUB-MINIATURE

Insulator Material	Model No.	List Price Ea.
	5 PIN	
Mica Filled	**765 BC**	**.52**
	7 PIN	
Mica Filled	**767 BC**	**.61**
	MOUNTING RINGS	
5 Pin	**756**	**.03**
7 Pin	**768**	**.04**

VENTILATED SHIELD

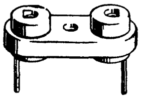
*Brass, Nickel Plated
**Steel, Cad. Plated

Model No.	Height	List Price Ea.
	7 PIN	
121V*	**1⅜"**	**.36**
120V*	**1¾"**	**.36**
149V*	**2¼"**	**.42**
127V**	**1⅜"**	**.29**
126V**	**1¾"**	**.30**
148V**	**2¼"**	**.39**
	9 PIN	
193V*	**1½"**	**.42**
191V*	**1-15/16"**	**.45**
195V*	**2⅜"**	**.50**
192V**	**1½"**	**.40**
190V**	**1-15/16"**	**.42**
194V**	**2⅜"**	**.46**



7 PIN
9 PIN
STRAP NUT

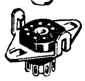
Model No.	Material	Use	List Price Ea.
288	**Brass**	**7 Pin**	**.17**
290	**Brass**	**9 Pin**	**.18**



CRYSTAL SOCKET

Model No.	Contact Material	List Price Ea.
430	**Brass, Cad. Plated**	**.23**
430PH	**Phos. Bronze, Cad. Pl.**	**.24**
430BC	**Ber'm. Cop., Silver Pl.**	**.32**

Insulator Material
Ceramic, Grade 5, Glazed



ROUND OCTAL SUB-MINIATURE

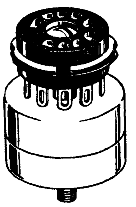
Sub-Miniature Socket

Insulator Material	Model No.	List Price Ea.
Mica	**701BC**	**1.03**

Contact Material—Ber'm. Cop., Silver Pl.

SUB-MINIATURE SHIELD

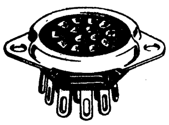
Steel	**752**	**.22**



9 PIN RMA HIGH VOLTAGE TYPE

Contact Material
Brass, Cad. Plated

Insulator Material	Model No.	List Price Ea.
Mica Filled	**403-1**	**.21**
Gen. Purp.	**410-1**	**.17**

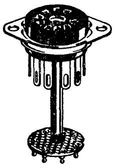


14 PIN FLAT SADDLE TYPE

Top Mounting

Insulator Material	Model No.	List Price Ea.
Mica	**417PHSPTD**	**.79**
Gen. Purp.	**418PHSPTD**	**.70**

Contact Material
Phos. Bronze, Silver Plated, Tin Dipped

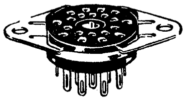


RMA TYPE TURRET SOCKET

Base
Glass Melamine

Insulator Material	Model No.	List Price Ea.
	7 PIN	
Mica	**T17-116PHSPTD**	**2.01**
	9 PIN	
Mica	**T17-277PHSPTD**	**2.09**

Contact Material
Phos. Bronze, Silver Plated, Tin Dipped



20 PIN SADDLE TYPE

Bottom Mounting

Insulator Material	Model No.	List Price Ea.
Mica	**571PHSPTD**	**3.78**

Contact Material
Phos. Bronze, Silver Plated, Tin Dipped

1. All socket contacts available in phos. bronze (Ph) and Beryllium Copper (BC). All BC contacts are silver plated and tin dipped.
2. Unless otherwise specified, and except for Jan sockets, all saddles and base shields are steel, cadmium plated.
3. Standard mounting hole is .093 except for JAN type sockets which are .125. Specify if otherwise desired.

KEL-F SOCKETS

Per JAN/S28A-1

SPECIFICATION
Except for KEL-F Insulator

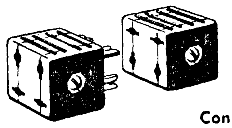
Model No.		List Price Ea.
	7 PIN	
214BC		**1.89**
	9 PIN	
215BC		**2.37**

AMERICA'S QUALITY LINE • RADIO, TELEVISION, ELECTRONIC COMPONENTS

ELCO • ELCO SALES COMPANY, 190 W. GLENWOOD AVENUE
Philadelphia 40, Pa. GArfield 6-6620 • **ELCO**

Elco Varicon Miniature-Connectors provide the simplest, quickest, most positive means for connecting electronic or electric circuits. Varicons introduce "Keying Control", making it impossible to connect unmatched parts. Contact combinations in any number demanded by your specific needs are possible with Varicons; and any connector may be assembled by you or us from stock parts.

Prices below are for Varicons in General Purpose Phenolic. Varicons are also available in Low-Loss Mica Phenolic, Alkyd, and General Purpose Phenolic in assorted colors, prices for which will be furnished upon request. For general specifications of ALL Varicons, refer to description beneath Connector Kit at lower right hand corner of this page. For any other information regarding these "Miniature Connectors that work like Giants" your inquiry will meet with our immediate reply.

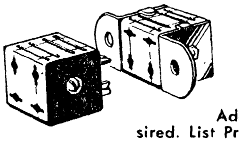


VARICONS

Plain with no hardware

Numerals preceding "M" or "F" in Model Nos. designate number of Contacts in Connector.

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
X2M12	.25	X2F12	.24
X4M12	.34	X4F12	.32
X6M12	.43	X6F12	.39
X8M12	.52	X8F12	.47
X10M12	.61	X10F12	.55
X12M12	.70	X12F12	.63
X14M12	.80	X14F12	.71
X16M12	.90	X16F12	.80
X18M12	1.00	X18F12	.89

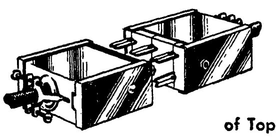


VARICONS

With bracket

Add Numeral Explanation.
Add "DT" as a prefix if Double Tier is desired. List Price can be computed by doubling the List Price of the appropriate Single Tier VARICON with Bracket and adding .03 ea.

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
X2M12-B	.28	X2F12-B	.27
X4M12-B	.39	X4F12-B	.37
X6M12-B	.50	X6F12-B	.46
X8M12-B	.61	X8F12-B	.56
X10M12-B	.72	X10F12-B	.66
X12M12-B	.83	X12F12-B	.76
X14M12-B	.95	X14F12-B	.86
X16M12-B	1.07	X16F12-B	.97
X18M12-B	1.18	X18F12-B	1.08

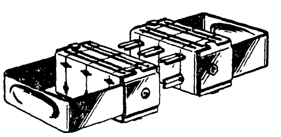


VARICONS

With cover top clamp

Hole can be located on End instead of Top by changing suffix "CTC" to "CEC"

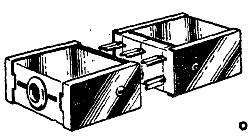
MALE Model No.	Price	FEMALE Model No.	List Price Ea.
X6M12-CTC	.82	X6F12-CTC	.78
X8M12-CTC	.94	X8F12-CTC	.89
X10M12-CTC	1.07	X10F12-CTC	1.01
X12M12-CTC	1.21	X12F12-CTC	1.14
X14M12-CTC	1.37	X14F12-CTC	1.28
X16M12-CTC	1.53	X16F12-CTC	1.43
X18M12-CTC	1.69	X18F12-CTC	1.59
DTX20M12-CTC	2.07	DTX20F12-CTC	1.95
DTX24M12-CTC	2.32	DTX24F12-CTC	2.18
DTX28M12-CTC	2.59	DTX28F12-CTC	2.41
DTX32M12-CTC	2.87	DTX32F12-CTC	2.67
DTX36M12-CTC	3.13	DTX36F12-CTC	2.93



VARICONS

With handles

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
X6M12-H	.65	X6F12-H	.61
X8M12-H	.76	X8F12-H	.71
X10M12-H	.87	X10F12-H	.81
X12M12-H	.98	X12F12-H	.91
X14M12-H	1.15	X14F12-H	1.06
X16M12-H	1.27	X16F12-H	1.17
X18M12-H	1.43	X18F12-H	1.33
DTX20M12-H	1.72	DTX20F12-H	1.60
DTX24M12-H	1.99	DTX24F12-H	1.85
DTX28M12-H	2.23	DTX28F12-H	2.05
DTX32M12-H	2.54	DTX32F12-H	2.34
DTX36M12-H	2.83	DTX36F12-H	2.63



VARICONS

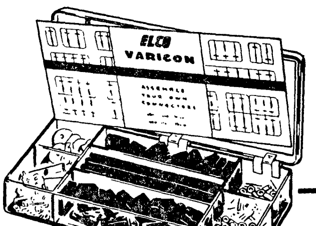
With covers — top hole

Hole can be situated on End instead of Top by changing suffix "CT" to "CE"

MALE Model No.	Price	FEMALE Model No.	List Price Ea.
X6M12-CT	.66	X6F12-CT	.62
X8M12-CT	.78	X8F12-CT	.73
X10M12-CT	.91	X10F12-CT	.85
X12M12-CT	1.05	X12F12-CT	.98
X14M12-CT	1.21	X14F12-CT	1.12
X16M12-CT	1.37	X16F12-CT	1.27
X18M12-CT	1.53	X18F12-CT	1.43
DTX20M12-CT	1.86	DTX20F12-CT	1.74
DTX24M12-CT	2.11	DTX24F12-CT	1.97
DTX28M12-CT	2.38	DTX28F12-CT	2.20
DTX32M12-CT	2.66	DTX32F12-CT	2.46
DTX36M12-CT	2.92	DTX36F12-CT	2.72

KITS

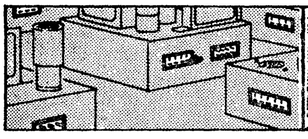
VARICON MINIATURE-CONNECTOR KITS now make it possible to assemble your own connectors when you want them! In General Purpose Phenolic, Low-Loss Mica Phenolic, Alkyd. Write for prices.



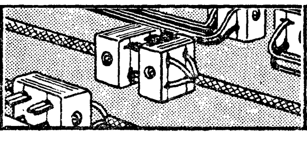
GENERAL SPECIFICATIONS

Current Rating 30 amps., 115 volts
Rated Voltage 1330 Volts RMS
(withstanding voltage between closest terminals 4000 volts)
Contact Resistance .0001 ohm
Low Capacitance
All Male & Female components are identical
300 ohm line spacing
Contacts in use are always under pressure, cannot be overstressed or overstrained.

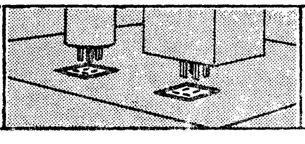
CHASSIS APPLICATIONS



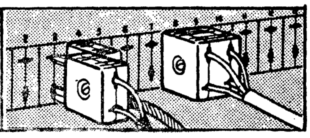
CABLE APPLICATIONS



PLUG-IN APPLICATIONS



PANEL APPLICATIONS



Vector SOCKET-TURRETS

BACKGROUND FOR CIRCUITRY

Vector Socket-Turrets and Plug-In units provide a unique method for mounting electronic circuit components, saving space and increasing efficiency. Catalog numbers shown in bold face type are the most popular types.

OCTAL, MINIATURE and NOVAL SOCKET-TURRETS

Sockets are standard bottom mounting with steel saddles carrying 4 ground lugs. Body is mica-filled phenolic carrying wrap-around brass contacts, cadmium plated. Terminal posts are ½″ O.D. with 1/16″ wall, made of Grade XXXP laminated tan phenolic joined to socket. Six plated brass terminals at far end of turret plus three, six or none near socket. Mounting holes required are: for Octal 1″ ctr. hole, side holes spaced 1-5/16″ for 0.134″ saddle holes (a larger type is also available—See 'A' below); for 7 pin miniature, ⅝″ ctr. hole, side holes spaced ⅞″ for ⅛″ saddle holes; for 9 Pin Noval, ¾″ ctr. holes, side holes spaced 1⅛″ for ⅛″ saddle holes.

Catalog Numbers			*Height	Description
10-O-12T	10-MB-12T	10-NB-12T	2½″	12 term. in 2 rings spaced 1⅜″
10-O-9T	....	....	2½″	9 term. in 2 rings spaced 1⅜″
8-O-12T	8-M-12T	8-N-12T	2″	12 term. in 2 rings spaced 1″
8-O-9T	8-M-9T	8-N-9T	2″	9 term. in 2 rings spaced 1″
6-O-6T	6-M-6T	6-N-6T	1½″	6 term. in 1 ring only
....	S7	S9	....	Shield Base for attaching shields

*Height measured from chassis to far end of turret.

For variations not always available from distributors but obtainable at the factory:

Add 'A' to No. for large octal socket (1½ Mtg. Ctrs., 1⅛″ hole).

Add 'J' to No. for 'MFE' socket casting, beryllium contacts, silver plated, hot tin dipped.

Add 'U' to No. for 4-40 U nuts which slip on saddle for easy mounting.

Add 'G' to No. for impregnation of turret for moisture and fungus protection.

Substitute 'L' for 'O' in No. if loctal socket required, (1-1/16″ hole, 1-5/16″ mtg. ctrs.).

Note: Letters are printed on all above turrets to indicate terminal positions. A-F inclusive appear on remote end, G-L inclusive on row near socket (H, J, L for 3 terminal rows). "A" and "G" over "1" of socket. Socket-Turrets are covered by Patent Nos. 2,604,584 & 2,624,775.

SADDLE NUTS: A 'U' type nut which slips over standard socket saddles has been especially designed to promote easy mounting on the chassis. For #4-40 machine screws. Order as #440-U nut or simply add 'U' to number of socket ordered.

TEST ADAPTERS

Vector Test Adapters are ideal for making measurements from the tube side of electronic equipment, where it is inconvenient to reach into the wiring compartment. The adapter is simply inserted between tube and socket completing the circuit and providing test tabs connecting with tube elements.

The T-789 set combines the 7-pin and 9-pin miniatures and octal in a plastic case. Or adapters may be obtained separately as follows:

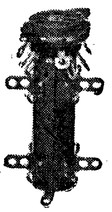
Catalog No.	Tube Type	Body Dia.	Skirt Dia.	Length less Prongs	Lead Shielding
T-7-M	7 Pin Min.	0.74″	1.03″	1.47″	None
T-8-O	8 Pin Octal	1.26″	1.56″	1.50″	None
T-9-N	9 Pin Noval	0.87″	1.16″	1.47″	None
T-789	Set of above three types in case (1.75″ x 3.75″ x 2.62″)				

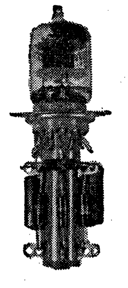
TUBE BASE PLUGS

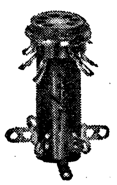
These plugs fit the 7 and 9 pin miniature sockets and are useful for many experimental or plug-in purposes.

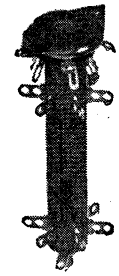
Cat. No.	Type	Dimensions (Fig. 1) A	B	C	D	E	F	G	H	Retainer Ring No.
P7	7 Pin Min.	1⅛″	17/32″	5/16″	.291	3/16″	.621	.568	.126	None
P9	9 Pin Noval	1⅛″	17/32″	5/16″	.291	3/16″	.748	.700	.126	None

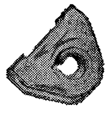
Vector Electronic Company

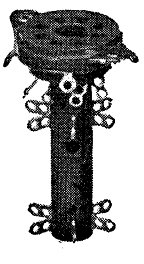

8-M-12T

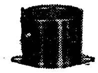

WIRED UNIT

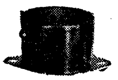

6-M-6T

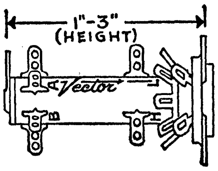

10-NB-12TU

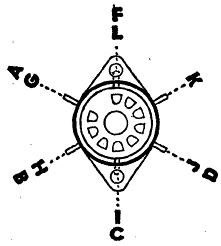

440-U NUT

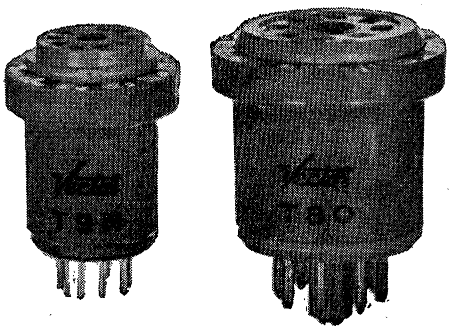

10-O-12TU


S7


S9







TEST ADAPTERS

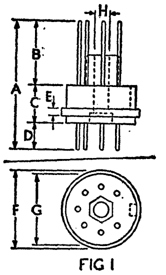
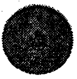


FIG 1

P7

P9



Vector PLUG-IN UNITS

FOR UNITIZED CIRCUITS

Amplifiers, counters, oscillators and the like can be readily assembled completely on Plug-Ins, permitting quick changes of circuits. Making a Plug-In unit involves little more than soldering in a few capacitors and resistors.

ECONOMICAL AND CONVENIENT

Plugs are standard mica-filled, ring mounted octal style with 8 prongs as standard. (9 or 11 prong plugs also available—see below). Sockets are standard mica-filled phenolic in octal, 7 Pin miniature or 9 Pin noval as ordered. Contacts are cadmium plated brass. Terminal turrets are Grade XXXP phenolic tubing 1/2" O.D. with 1/16" wall, carrying 12 plated brass terminals. Aluminum covers may be quickly detached by removing screws at base, making inside completely accessible. Miniature and noval types carry military type tube shield base. Main tube shield not furnished. Types in bold face are most widely used and generally preferred for distributor stock.

SINGLE TUBE TYPES

CATALOG NUMBERS			CAN SIZE		TERM. SPACE
Octal	7 Pin	9 Pin	A	B	C
	B8 -M	B8 -N	1.37"	2.0"	0.87"
B10-0	**B10-M**	**B10-N**	1.37"	2.5"	1.37"
B12-0	B12-M	B12-N	1.37"	3.0"	1.87"
C8 -0	C8 -M	C8 -N	2.0"	2.0"	0.87"
C10-O	C10-M	C10-N	2.0"	2.5"	1.37"
C12-0	**C12-M**	**C12-N**	2.0"	3.0"	1.87"
A8 -0	A8 -M	A8 -N	No Can		0.87"
A10-0	A10-M	A10-N	No Can		1.37"
A12-0	A12-M	A12-N	No Can		1.87"

TWO TUBE TYPES

....	C8 -MM	C8 -NN	2.0"	2.0"	0.62"
....	C10-MM	C10-NN	2.0"	2.5"	0.87"
....	**C-12-MM**	**C12-NN**	2.0"	3.0"	1.37"

TYPES WITHOUT SOCKETS

Any of the types tabulated may be obtained less sockets but with terminal turrets and plugs. These are useful for a multitude of PLUG-IN applications where tubes are not involved.

CAT. NO.	CAN SIZE		CAT. NO.	CAN SIZE	
	A	B		A	B
B- 8T	1-3/8"	2"	C- 8T	2"	2"
B-10T	1-3/8"	2-1/2"	C-10T	2"	2-1/2"
B-12T	1-3/8"	3"	C-12T	2"	3"

TYPES WITH CAN AND PLUG ONLY

CAT. NO.	CAN SIZE		CAT. NO.	CAN SIZE	
	A	B		A	B
B- 8	1-3/8"	2"	C- 8	2"	2"
B-10	1-3/8"	2-1/2"	C-12	2"	2-1/2"
B-12	1-3/8"	3"	**C-12**	2"	3"

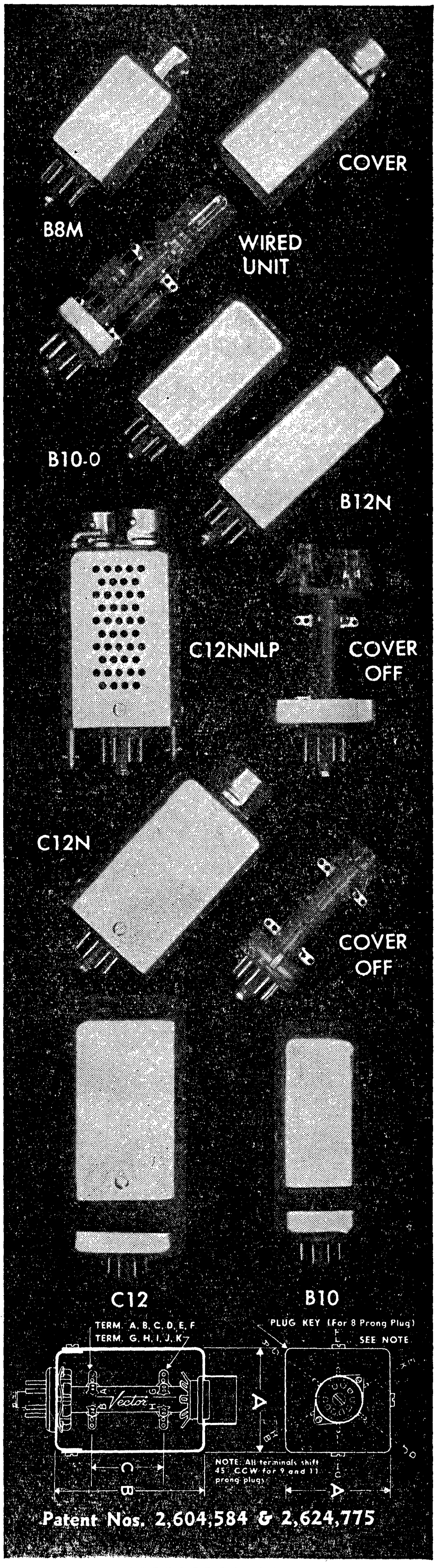
SPECIAL FEATURES. Variations obtainable at the factory:
Add "H" to No. for 9 prong octal type plug.
Add "K" to No. for 11 prong octal style plug.
Add "J" to No. for "MFE" socket casting, beryllium contacts, silver plated, tin dipped.
Add "G" to No. for impregnation of turret for moisture and fungus protection.
Add "P" to No. for perforation of covers for ventilation.
Anodized finishes, natural or in color to order.
Studs to lock 2" sq. units firmly in sockets are available.

NOTE: Letters are printed on turrets to indicate terminal positions. A-F inclusive appear on 6 terminals at plug end, G-L inclusive on socket end, "A" & "G" in line with "I" of socket and "I" of plug. Key of 8 prong plug points toward corner of can but key of 9 & 11 prong plug points to side of can.

OTHER TYPES

Special round can Plug-Ins are available as follows: Type G2, 1 1/4" O.D. with Octal 8 or 11 pin plug; Type G2.1, 3/4" O.D. with 9 pin min. plug; Type G2.2, 5/8" O.D. with 7 pin min. plug. Larger rectangular units are also available with following cross-sectional dimensions: Type D, 2" x 3"; Type E, 1 1/2" x 3 3/4"; Type F, 2-5/16" x 4 3/8". Height of all units, 3" or less. Terminal strip mountings can be supplied instead of turrets if preferred.

Vector Electronic Company



Patent Nos. 2,604,584 & 2,624,775

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**

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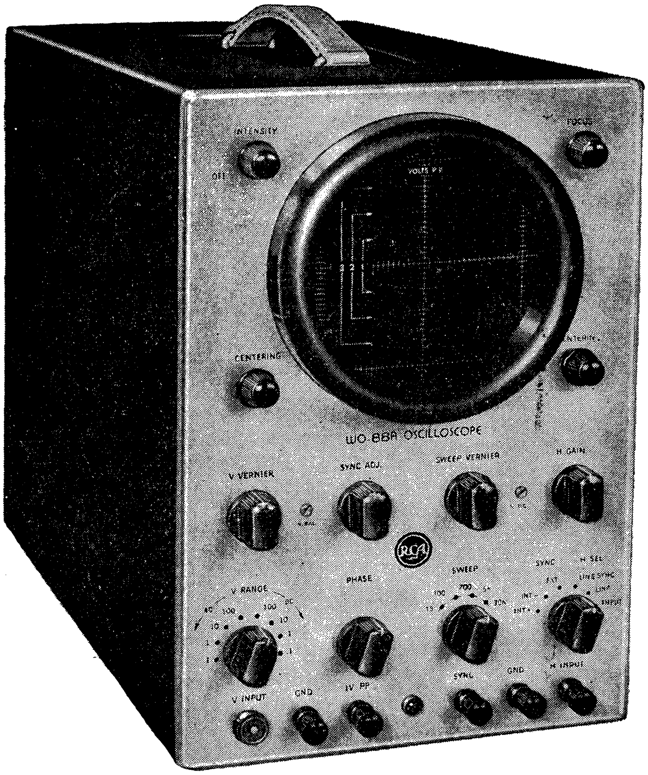
RCA TEST EQUIPMENT for SERVICE • INDUSTRY SCHOOLS • LABORATORIES

5″ OSCILLOSCOPE WO-88A



If your present 'scope is a temperamental performer on the service bench, or if your business is limited by "substitute" TV servicing methods, you owe it to yourself to find out about the "88".

"Superlative in its price class" best describes this new 5″ 'scope.

Tops on the list of quality features is the 88's "picture-perfect" square-wave response and its remarkably faithful reproduction of horizontal and vertical sync and blanking pulses, sweep alignment traces, and other complex wave-shapes encountered in TV servicing.

A direct-coupled push-pull, two-stage vertical amplifier with frequency-compensated and voltage-calibrated attenuators gives the "88" plenty of deflection sensitivity with a uniform frequency response maintained over the entire range of the attenuators. And sync action is exceptionally stable over the entire range of the 'scope.

You'll find such quality extras as—front-panel source of calibrating voltage, graph screen scaled directly in peak-to-peak volts, "plus" and "minus" sync, 60-cycle sweep with wide angle phasing control, special maintenance control adjustments accessible from outside of cabinet, high-impedance input, and many others in the new RCA "88".

Frequency Response (minimum values):

Vertical Amplifier:	
From 0 to 100 Kc	flat
At 500 Kc	within —3 db
At 1 Mc	within —10 db
Rise Time	0.5 microsecond or better
Horizontal Amplifier: (reference frequency 1000 cps)	
At 10 cps	within —1 db
At 200 Kc	within —6 db

Deflection Sensitivity (minimum limits):

	Volts Per Inch rms	Volts Per Inch p-p
Vertical Amplifier:		
With WG-218 Direct Probe and Cable	0.025	0.07
With WG-216B Low-Capacitance Probe	0.25	0.7
Horizontal Amplifier	0.6	1.7
Calibrating Voltage	0.35	1.0

Input Resistance and Capacitance:

Vertical Amplifier:	
With WG-218 Direct Probe and Cable	1 megohm shunted by 75 µµf
With WG-216B Low Capacitance Probe	10 megohms shunted by 9.5 µµf
Horizontal Amplifier:	
At Input Terminals	2.2 megohms shunted by 55 µµf
Sweep-Circuit Frequency	(Four Ranges) 15 cps to 30 Kc
Tube Complement	1-6X4, 1-12AU7, 2-6AU6, 1-1V2, 2-12AT7, 1-5UP1
Power Supply	105/125 volts, 50/60 cps
Dimensions	9″ w, 13½″ h, 16½″ d
Weight	25 lbs.
Finish	Blue-gray hammeroid case, frosted-aluminum panel

$169.50 (Suggested User Price) complete with matched probes and cables, including the WG-216B Low-Capacitance Probe.

RCA TEST EQUIPMENT for SERVICE • INDUSTRY SCHOOLS • LABORATORIES

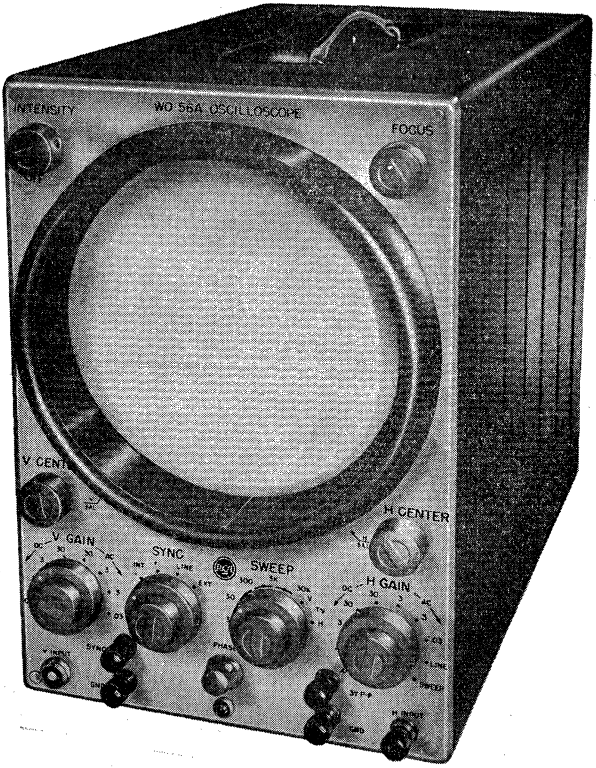
7″ OSCILLOSCOPE WO-56A

There's just something "extra" about the WO-56A that makes the professional technician itch to get at the controls.

And just look at those controls! Dual concentric knobs for all coarse and fine adjustments eliminate unnecessary hunting and fumbling when you're locking in on a tricky wave form.

Yes, here's a 'scope designed for you—the user. From the large 7″ mu-metal-shielded CRT in a compact, space-saving cabinet to performance standards which include high sensitivity and wide frequency range—the WO-56A delivers for laboratory, factory and shop.

Identical vertical and horizontal direct-coupled, push-pull amplifiers have frequency-compensated and voltage-calibrated attenuator networks. A horizontal trace expansion of 3 times screen diameter with comparable vertical centering permits observation of minute trace detail. You'll like the special TV preset sweep facilities, the retractable light shield, 60-cycle sweep and wide angle phasing control, "plus" and "minus" sync for locking-in "upright" or "inverted" wave shapes, high input impedance, peak-to-peak calibrating voltage, and many other time saving features.



Frequency Response:

Vertical Amplifier:	
Flat from 0 to 500 Kc	within —2 db
Flat from 0 to 1 Mc	within — 6 db

Input Resistance and Capacitance:

Vertical Amplifier:	
With Direct Probe and Cable WG-218	1 megohm shunted by 75 $\mu\mu f$
With Low-Capacitance Probe WG-216B	10 megohms shunted by 9.5 $\mu\mu f$
Horizontal Amplifier	1 megohm shunted by 35 $\mu\mu f$
Sync Input	1 megohm shunted by 35 $\mu\mu f$

Deflection Sensitivity:

	Millivolts Per Inch rms	Millivolts Per Inch p-p
Vertical Amplifier:		
With Direct Probe and Cable WG-218	10.6	30.0
With Low-Capacitance Probe WG-216B	106.0	300.0
Horizontal Amplifier	21.2	60.0

Sweep Frequencies:

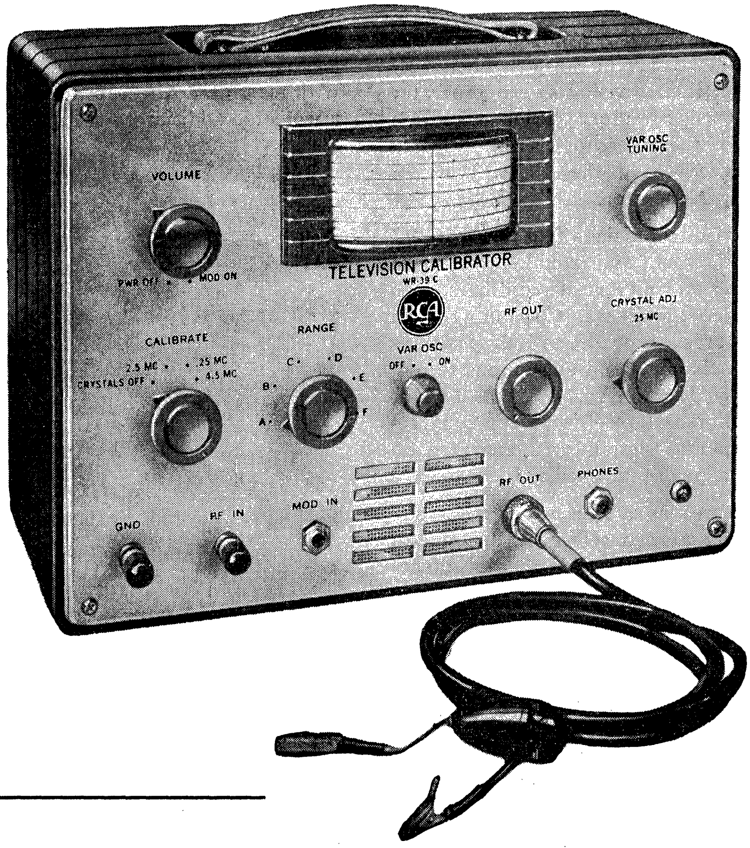
Variable	3 cps to 30,000 cps
Preset:	
"TV/V" Position	approx. 30 cps
"TV/H" Position	approx. 7875 cps

Power Supply	105/125 volts, 50/60 cps
Tube Complement	4-6BH6, 5-12AU7, 1-6X4, 1-1V2, 1-7JP1
Dimensions	13⅜″ h, 9″ w, 16⅝″ d
Weight	31 lbs.
Finish	Blue-gray hammeroid case, satin-aluminum panel

$237.50 (Suggested User Price) complete with matched probes and cables, including the WG-216B Low-Capacitance Probe.

RCA TEST EQUIPMENT for SERVICE • INDUSTRY SCHOOLS • LABORATORIES

TELEVISION CALIBRATOR WR-39C



Variable-Frequency Oscillator:	
Fundamental Frequency Range	19-110 Mc in 4 bands 170-240 Mc in 2 bands
Range using second harmonics	38-220 Mc in 4 bands 340-480 Mc in 2 bands
Output attenuator range	100% to 1%
Crystal Marker Accuracy:	
.25 Mc position	±0.03%
2.5 Mc position	±0.01%
4.5 Mc position	±0.03%
Internal Modulation Frequencies	0.25 Mc, 4.5 Mc, audio
Wide Band Modulator:	
Frequency range	60 cps to 30 Mc
Voltage at "MOD IN" jack	0.05 volts (approx.)
Detector Sensitivity:	
External Signal Beating:	
With VFO	1000 microvolts
With Crystals	10,000 microvolts
Tube Complement	2-6J6, 2-6BH6, 1-6AS6, 1-6C4, 1-OA2, 1-6X4
Power Supply	105/125 volts, 50/60 cps
Dimensions	10" h, 13½" w, 7½" d
Weight	16 lbs.
Finish	Blue-gray hammeroid case, satin-aluminum panel

$242.50 (Suggested User Price) includes rf-output cable, phone plug

You're looking at one of the most advanced television servicing instruments of its kind—the RCA WR-39C Television Calibrator. It's a beauty, isn't it?

A quality instrument from electrical performance to attractive styling, the WR-39C is a fine example of expert engineering and functional design. It's all the things you've ever wanted in a TV calibrator, and more.

Included in this one compact, portable unit: (1) a crystal-calibrated TV marker generator with dual picture and sound markers, for all TV VHF frequencies (usable harmonic output in UHF regions); (2) a bar-pattern generator for linearity adjustments; (3) a miniature re-broadcast transmitter for checking all 12 VHF channels; (4) a heterodyne frequency meter, including amplifier and speaker; (5) a signal generator operating on fundamentals in all 12 VHF TV channels for TV and if ranges; (6) a dual crystal standard with three crystals provided.

The WR-39C is a basic television instrument for shop, lab and factory alignment applications, marking scope patterns, making linearity adjustments, setting local-oscillator frequencies, aligning traps, calibrating signal generators, aligning FM receivers and measuring unknown frequencies.

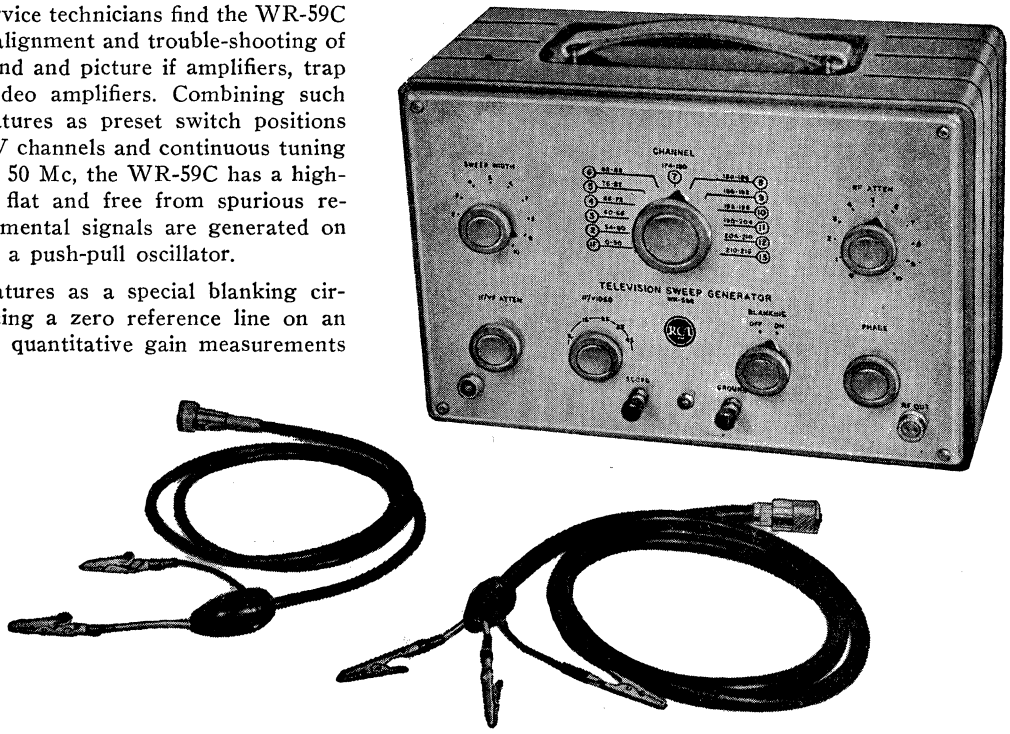
Net

TELEVISION SWEEP GENERATOR WR-59C

Say goodbye to sweep-generator problems! Ever have difficulty with visual alignment of TV receivers and front ends? Who hasn't! Then why not find out about the television sweep generator preferred and used by most major television manufacturers for the rigors of continuous production-line service . . . the RCA WR-59C Television Sweep Generator.

Professional service technicians find the WR-59C tops for visual alignment and trouble-shooting of TV tuners, sound and picture if amplifiers, trap circuits, and video amplifiers. Combining such outstanding features as preset switch positions for all VHF TV channels and continuous tuning from 300 Kc to 50 Mc, the WR-59C has a high-output voltage flat and free from spurious responses. Fundamental signals are generated on all channels by a push-pull oscillator.

Such bonus features as a special blanking circuit for producing a zero reference line on an oscilloscope for quantitative gain measurements and for balancing discriminator circuits, and a phase-controlled sweep voltage at power-line frequency for 'scopes lacking sweep and phase controls, a dual-piston attenuator with a range down to 5 microvolts . . . make this instrument a welcome addition to the most professional of service shops.

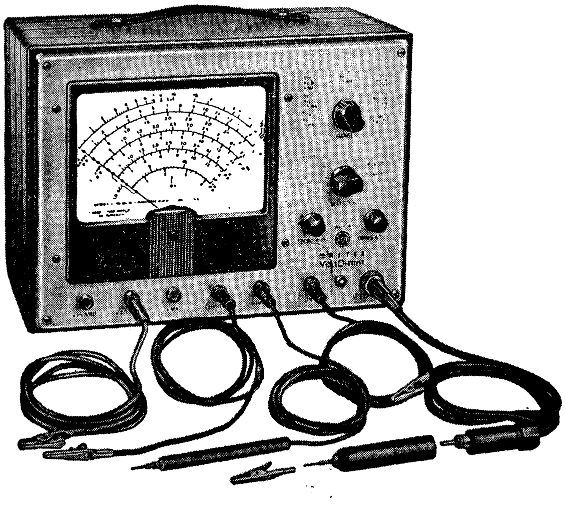


RF	TV Channels 2 to 13-preset Maximum Sweep Frequency is not less than 12 Mc
IF	300 Kc to 50 Mc, continuous tuning
Sweep Width	continuously variable for both IF and RF ranges
Output Voltage (rms)	0.1 volt min.
Cable Termination:	
RF Positions	300 ohms balanced
IF Position	100 ohms
Maximum Attenuator Ratio:	
RF Positions	20000 to 1
IF Position	4000 to 1
Maximum Amplitude Variation of Sweep Envelope (at maximum rated sweep width)	All positions less than ±1 db

Horizontal Sweep for Oscilloscope:	
Phase Adjustment Range	160°
Frequency	Power Line
Tube Complement	2-6J6, 2-6C4, 1-6AT6, 1-6X4
Power Supply	105/125 volts, 50/60 cps
Dimensions	9¾" h, 13½" w, 7½" d
Weight	20 lbs.
Finish	Blue-gray hammeroid case, satin-aluminum panel

$274.50 (Suggested User Price) includes balanced 300-ohm rf output cable and resistance terminated if/vf-output cable.

MASTER VOLTOHMYST WV-87A



Featuring a 7½" meter, the new WV-87A Master VoltOhmyst is the deluxe member of the RCA VoltOhmyst family. It's peak-to-peak scales are particularly useful for television, radar, and other types of pulse work.

The WV-87A measures dc voltages accurately in high-impedance circuits, even with ac present. It also reads rms values of sine waves and the peak-to-peak values of complex waves or recurrent pulses, even in the presence of dc.

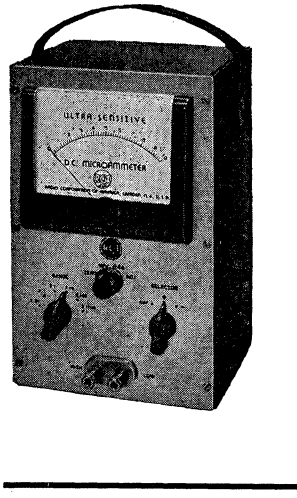
Like all RCA VoltOhmysts, the WV-87A features ±1% multiplier and shunt resistors, a ±2% meter movement, high-input resistance, zero-center scale adjustment for discriminator alignment, dc polarity-reversing switch, and a sturdy metal case for good rf shielding.

The RCA WV-87A Master VoltOhmyst has the accuracy and stability necessary for many laboratory applications. Its large, easy-to-read meter also makes it especially desirable as a permanently mounted instrument in the factory and repair shop.

DC Voltmeter:	
Ranges	0 to 1.5, 5, 15, 50, 150, 500, 1500 volts
Input Resistance All Ranges	11 megohms
Sensitivity on 1.5-V Range	7.3 megohms/volt
Overall Accuracy	±3% of full scale
AC Voltmeter:	
Ranges:	
RMS Values of Sine Waves	0 to 1.5, 5, 15, 50, 150, 500, 1500 volts
Peak-to-Peak Values of Sine Waves and Complex Waves	0 to 4, 14, 42, 140, 420, 1400, 4200 volts
Overall Accuracy	±5% of full scale
Input Resistance and Capacitance (With Direct Probe and Cable WG-218) 1.5, 5, 15, 50, 150, V Ranges	0.83 meg. shunted by 85 μμf
Frequency Response (up to and including the 500-volt range)	
for Source impedances of approximately 100 ohms or lower	30 cps to 3 Mc
For Source impedances of approximately 1000 ohms or lower	30 cps to 500 Kc
Ohmmeter:	
0 to 1000 Megohms in 7 Ranges	Rx1, Rx10, Rx100, Rx1000, Rx10K, Rx100K, Rx1 Meg
Direct-Current Meter:	
Ranges, Nine	0 to 0.5, 1.5, 5, 15, 50, 150, 500 milliamperes; 0 to 1.5, 15 amperes
Overall accuracy	±3% of full scale
Tube and Battery Complement	2-6AL5, 1-12AU7, 1-VS036
Power Supply	105/125 volts, 50/60 cps
Dimensions	10" h, 13½" w, 7" d
Weight	8 pounds
Finish	Blue-gray hammeroid case, satin-aluminum panel

$112.50 (Suggested User Price) Complete with probes and cables, including: Direct Probe and Cable, DC Probe, Ohms Probe and Cable, Positive Current Lead, Negative Current Lead, Ground Lead.

ULTRA-SENSITIVE DC MICROAMMETER WV-84A



DC Microammeter:	
Ranges, Six	0 to 0.01, 0.1, 1, 10, 100, 1000μa
Overall Accuracy:	
On X.01 Range	±5% of full scale
On all other ranges	±4% of full scale
Voltage drop on all ranges	0.5 volts
DC Voltmeter:	
Ranges and Input Resistance:	
0 to 1-Volt Range	100 megohms
0 to 10-Volt Range	1000 megohms
0 to 100-Volt Range	1005 megohms
Megohmmeter:	
Ranges, Two	900 to 9000, 9000 to 90000 megohms
Tube and Battery Complement	2 RCA-3S4, 2 RCA-VS106 1½ volts, 2 RCA-VS102 22½ volts
Dimensions	9½" H x 6¼" W x 5$\frac{11}{16}$" D
Weight	9½ lbs. (including batteries)

$100.00 (Suggested User Price) includes two precision multiplier resistors, less batteries.

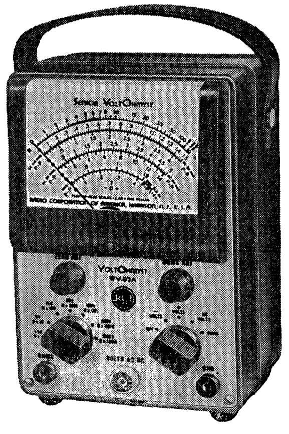
A battery operated microammeter, the RCA WV-84A is capable of reading from 0.002 to 1000 microamperes in six ranges. The WV-84A can be used with an external battery to measure resistance values as high as 90,000 megohms or may be used with an external resistor as a voltmeter with an input resistance of at least 100 megohms per volt.

Circuit features of the WV-84A include negligible loading of the circuit under test, meter movement electronically protected against burn-out, and a self-contained battery power supply which makes the instrument completely portable.

The WV-84A is finding increased use by research laboratories in many fields—chemistry, medicine, electro-mechanics, electronics, nucleonics—for conducting experiments involving feeble currents. Industrial users find it an excellent instrument for making current and voltage measurements in electrolysis and corrosion investigations. The WV-84A may also be used for checking currents in light meters, in ultra-violet and infra-red detectors, and in spectrophotometric devices.

SENIOR VOLTOHMYST WV-97A

DC Voltmeter:
Seven Continuous Ranges.....0 to 1.5, 5, 15, 50, 150, 500, 1500 volts
Input resistance (including 1 megohm in DC Probe):
All Ranges....................11 megohms
Sensitivity for the 1.5-volt Range......7.3 megohms-per-volt
Overall Accuracy.......±3% of full scale
AC Voltmeter—Fourteen Continuous Ranges:
Peak-to-Peak Ranges......0 to 4, 14, 42, 140, 420, 1400, 4200 volts
RMS Ranges (for sine waves)..0 to 1.5, 5, 15, 50, 150, 500, 1500 volts
Input Resistance and Capacitance with WG-218 Direct Probe and Cable:
1.5, 5, 15, 50, 150-volt Ranges..0.83 megohm shunted by 70 μμf
500-volt Range..............1.3 megohms shunted by 60 μμf
1500-volt Range.............1.5 megohms shunted by 60 μμf
Frequency Response (with WG-218 Direct Probe and Cable)*:
1.5, 5, 15, 50, 150, 500-volt Ranges.....flat from 30 cps to 3 Mc
Overall Accuracy, All Ranges...........±5% of full scale
Ohmmeter:
Seven Continuous Ranges..0 to 1000 megohms
Center Scale Values....10, 100, 1000, 10,000 ohms; 0.1, 1, 10 megohms
Tube and Battery Complement.........2-6AL5, 1-12AU7, 1-VS036
Power Supply.........105/125 volts, 50/60 cps
Dimensions.............7⅞" h, 5¾" w, 4½" d
Weight ....5½ pounds
Finish..............Blue-gray hammeroid case, satin-aluminum panel
*For impedance of 100 ohms



Especially useful as a television signal tracer, the WV-97A features a high-impedance, high-frequency, full-wave rectifier for direct readings of peak-to-peak voltages up to 4,200 volts. With this instrument, you can readily obtain quantitative measurements of practically all of the important complex-waveform voltages found in video, sync, and deflection circuits.

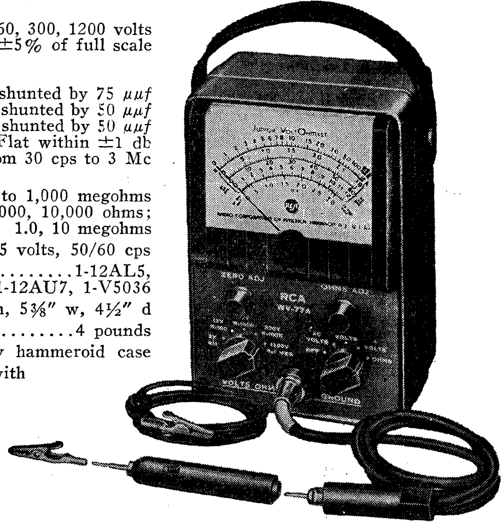
The WV-97A is a deluxe instrument having such refinements as seven non-skip ranges on all functions, uniform "3 to 1" ratio between scales, wide frequency range, and extended voltage range.

Like all RCA VoltOhmysts, it has high input resistance, electronic protection against burn-out, zero-center scale, molded plastic meter case, rugged 200 microampere meter movement, ±1% multiplier resistors, and other outstanding VoltOhmyst extras.

$67.50 (Suggested User Price) including Direct Probe and Cable, DC Probe, Ohms Lead, and Ground Lead.

JUNIOR VOLTOHMYST▲ WV-77A

DC Voltmeter:
Ranges.........0 to 3, 12, 60, 300, 1200 volts
Input Resistance (with DC Probe), All Ranges..................11 megohms
Accuracy:
With function selector set on "+VOLTS"....±3% of full scale
With function selector set on "—VOLTS"....±5% of full scale
AC Voltmeter:
Ranges (rms)...0 to 3, 12, 60, 300, 1200 volts
Accuracy..................±5% of full scale
Input Characteristics:
3, 12, and 60-volt Ranges...0.2 megohms shunted by 75 μμf
300-volt.....1.0 megohms shunted by 50 μμf
1200-volt....2.0 megohms shunted by 50 μμf
Frequency Response*....Flat within ±1 db from 30 cps to 3 Mc
Ohmmeter:
Ranges, Five............0 to 1,000 megohms
Center-Scale Values...10, 1000, 10,000 ohms; 1.0, 10 megohms
Power Supply.........105/125 volts, 50/60 cps
Tube and Battery Complement........1-12AL5, 1-12AU7, 1-V5036
Dimensions..............8" h, 5⅜" w, 4½" d
Weight ....4 pounds
Finish..............Blue-gray hammeroid case
*On 3, 12 and 60-volt ranges with source impedance 100 ohms.



Unquestionably the greatest value in all-electronic, ac-operated vacuum-tube voltohmmeters . . . the Junior VoltOhmyst provides versatility, accuracy, and dependability at low cost.

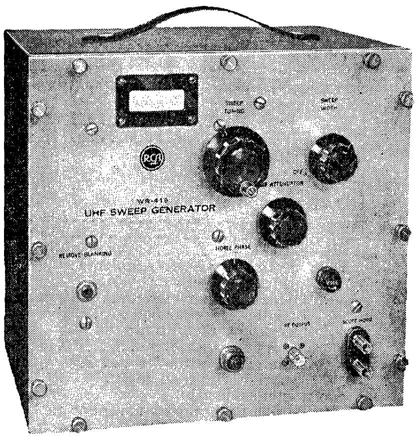
The WV-77A embodies all of the standard VoltOhmyst features such as high input resistance, low-input capacitance on dc functions, ability to measure dc in the presence of ac and vice versa, burn-out proof meter circuit, metal-case shielding against rf, ±1% multiplier resistors, dc polarity reversing switch, negative feedback bridge circuit, zero-center scale, plus wide frequency response and extended voltage ranges, positive-polarity ohms probe for quick testing of electrolytic capacitors, and many other features.

Factory-built, factory-tested, and calibrated against the finest laboratory standards, the Junior VoltOhmyst is deserving of its popularity.

$47.50 (Suggested User Price) Complete with Probes and Cables.

▲Reg. U. S. Pat Off.

UHF SWEEP GENERATOR WR-41B



Sweep Oscillator:

Frequency Range (Continuously Variable)	Center frequencies from 470 to 890 Mc
Sweep Width (Continuously Variable)	45 Mc Max.
Accuracy of Dial Calibration	within ±10 Mc

Output System:

Attentuor Type	Waveguide-below-cutoff
Attenuator Range	100 db
Impedance	50 ohms
Output Voltage (Across 50-ohm Load)	at least 0.5 volt
Amplitude Variation (For Sweep Width up to 45 Mc)	0.1 db/Mc Max.

Tube Complement	1-6AV6, 1-6X4, 1-5675
Power Supply	105/125 volts, 50/60 cps
Dimensions	13" w, 12" h, 9" d
Weight	30 pounds
Finish	Dark, cobalt-gray hammeroid

$595.00* includes WG-227 rf-output cable and WG-224 300-ohm matching pad.

Favored by the TV receiver manufacturers for production-line testing of UHF receivers and converters, the WR-41B is a fine instrument for the better service shops. Its range of applications includes sweep-alignment and testing of tuners, filters, and transformers; and standing-wave measurements on transmission lines and antennas.

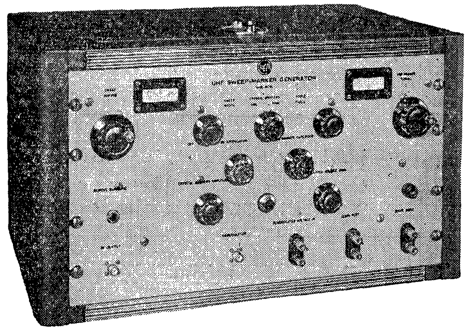
The WR-41B provides fundamental oscillator output over its entire frequency range. The signal source is a "pencil" triode in a cylinder-type oscillator circuit. Other quality features include hand-calibrated dial, extreme flatness of output, extra-wide sweep, return-trace blanking.

Available Accessories:

$ 8.00*	WG-223, Matching Pad (50 to 75 ohms)
$ 8.75*	WG-225, UHF Absorption Trap (450 to 750 Mc)
$ 8.75*	WG-226, UHF Absorption Trap (600 to 900 Mc)
$40.00*	WG-228, Mounting Plate (for UHF Traps)

*(Suggested User Price)

UHF SWEEP-MARKER GENERATOR WR-40A



A precision instrument designed for laboratory applications, the RCA WR-40A combines in one instrument a sweep-frequency oscillator, a marker oscillator, and a crystal calibrator for use in the design development of tuners, filters, antenna systems, and amplifiers for operation in the 470 Mc to 890 Mc UHF television band. A system of mixer and adder stages is used for superimposing markers upon the response curve after the signal has passed through the unit under test, thus minimizing distortion of the response curve. The WR-40A features return-trace blanking, controllable from the front panel, crystal-controlled markers at 1 Mc and 10 Mc intervals throughout the tuning range, and a variable marker accurate to within ±0.5%. A built-in demodulator may be used to monitor directly output from the sweep oscillator or to demodulate the output from the unit under test.

Electrical:

Sweep Oscillator:

Frequency Range (Continuously Variable)	Center frequencies from 470 to 890 Mc
Maximum Sweep Width (Continuously Variable)	45 Mc
Accuracy	within ±10 Mc

Output System:

Attenuator Type	Waveguide-below-cutoff
Attenuator Range	100 db
Output Impedance	50 ohms*
Output Voltage (Across 50-ohm Load)	0.5 volt minimum
Amplitude Variations (For Sweep Width up to 45 Mc)	0.1 db/Mc or better

Variable Marker Oscillator:

Frequency Range (Continuously Variable)	470 to 890 Mc
Accuracy (After 30-minute Warm-up)	±0.5%

Crystal Calibrator:

Calibration Points	All harmonics of 1 Mc and 10 Mc within the 470 to 890 Mc band
Accuracy	±0.005%

Power Supply:

Voltage	105-125 volts
Frequency	50-60 cps
Power	100 watts

Mechanical:

Overall Dimensions	22½" w, 12¾" h, 14⅞" d
Front Panel and Chassis	Fits standard 19" Relay Rack
Net Weight	55 pounds
Finish of Case	Dark, cobalt-grey hammeroid

*Matching Pads are provided for 75 ohms and 300 ohms.

$1450.00 (Suggested User Price) includes WG-227 output Cable and WG-223 and WG-224 Matching Pads.

RCA TEST EQUIPMENT for SERVICE • INDUSTRY SCHOOLS • LABORATORIES

TV ISOTAP WP-25A

Speed Up Your Servicing

. . . use the RCA TV Isotap to avoid wasted time and uncertainty in TV troubleshooting. Use the 500-va autotransformer winding for testing power transformer types of TV receivers. Use the 275-volt ampere isolated secondary winding for testing transformerless types of TV and ac-dc radio receivers.

Service sets at normal line voltage for quick check of circuit voltages—break down intermittent components by operating set at extra-high line voltage—make sure set functions satisfactorily at low-line voltage.

Prevent Damage to Your Test Equipment

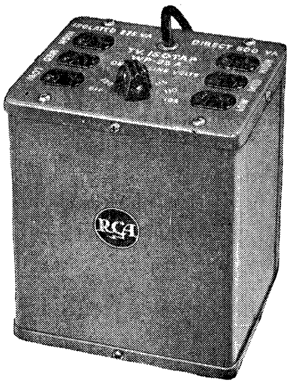
. . . use the RCA TV Isotap to avoid expensive damage to your valuable test equipment. Eliminate possibility of crossed line plugs on transformerless receivers and test equipment and prevent costly short circuits.

Minimize Shock Hazard

. . . use the RCA TV Isotap to avoid the shock hazard in servicing transformerless types of radio and TV receivers. WP-25A provides complete isolation and greatly minimizes shock hazards.

Cut Down Costly Returns

. . . by using the RCA TV Isotap to avoid service recalls which are often caused by a difference of line voltage in the customer's home. With the WP-25A you can check the set in the shop at high, medium, and low-line voltages.



- Supply Line:
  - Voltage Range..........105-130 volts
  - Switch Positions.......105, 110, 115, 120, 125, 130, OFF
  - Frequency ....50-60 cps
- Output Voltages:
  - Direct Receptacles (with 500 max va load and selector set to value of supply-line voltage):
    - LOW ....105 volts
    - MED ....115 volts
    - HIGH ....130 volts
  - Isolated Receptacles (with resistive load of 275 max va and selector set to value of supply-line voltage):
    - LOW ....105 volts
    - MED ....115 volts
    - HIGH ....130 volts
- Load Ratings (40° C Ambient):
  - Continuous Operation:
    - Direct Receptacles .....500 va max
    - Isolated Receptacles ....275 va max
  - Intermittent Operation:
    - Direct Receptacles .....750 va max
    - Isolated Receptacles ....450 va max
  - Regulation (no load to full continuous load):
    - Direct Receptacles ....approx. 1.5%
    - Isolated Receptacles ....approx. 6%
- Dimensions........5¾" h, 5" w, 4⅜" d
- Weight ....12 lbs.
- Finish........Dark cobalt, gray lacquer

$17.95 (Suggested User Price)

RADIO BATTERY TESTER WV-37A

Now you can test portable-radio batteries under actual load or "turned-on" conditions without the necessity of placing batteries in the set. The RCA WV-37A's built-in load circuits eliminate the time-consuming method required to test batteries with the conventional voltmeter. And the RCA WV-37A also gives you a more accurate indication of true battery voltage than does the conventional voltmeter alone.

The selector switch on the front panel has nine prefixed positions to accommodate popular portable-radio batteries ranging from 1.5 volts to 90 volts. Eight blank test positions are provided to enable you to set up testing conditions of your own choosing for testing additional battery types.

Red and black plastic test prods joined to 36-inch test leads are permanently attached to the tester. Weighing less than 3½ lbs. the WV-37A measures a full 9½" long, by 6" wide, by 1½" deep.

You'll find the new RCA WV-37A Radio Battery Tester a worthy addition to your service shop. Use it on the sales counter for checking used batteries or assuring the customer that replacement stock is fresh . . . on the service bench for accurate battery voltage indication under normal load conditions—on shelf stock to keep a "running-check" on the condition of your shelf battery stock.

$24.95 (Suggested User Price)

Nine prefixed switch positions for testing popular portable-radio-type batteries

•

Rugged, easy-to-read, 4½" meter, all metal case, ±2% meter movement

•

Built-in load circuits provide "in-use" testing conditions

•

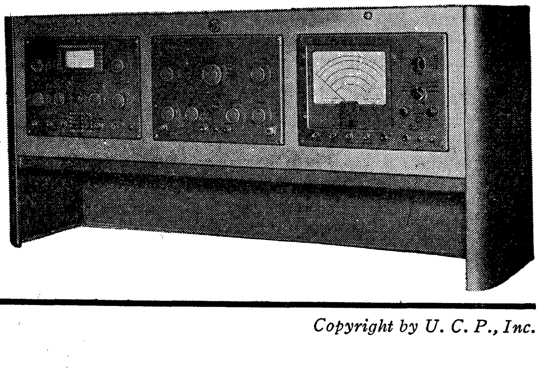
Double meter-scale simultaneously indicates percentage of rated battery voltage and relative "good" . . . "useable" . . . or "replace" condition

•

Extra positions for adaption of tester to new or different battery types . . . prevents obsolescence

DELUXE RACK WS-17A

The WS-17A is a deluxe three position test equipment rack. Add beauty and convenience to your test set-up with this streamlined rack. Sturdy all-steel construction with attractive satin-aluminum and blue-gray hammeroid finish. **$59.50** (Suggested User Price)



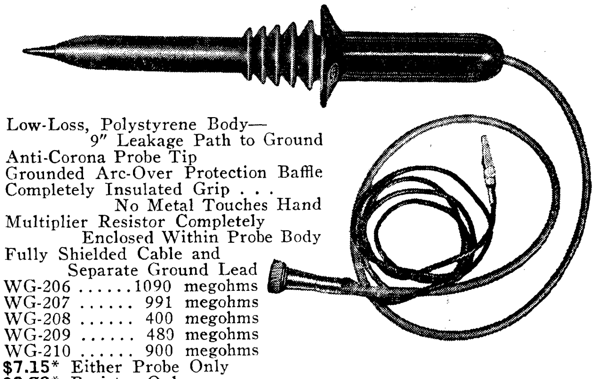
RCA TEST EQUIPMENT for SERVICE • INDUSTRY SCHOOLS • LABORATORIES

HIGH VOLTAGE PROBES WG-289, 290

RCA High Voltage Probes WG-289 and WG-290 are identical except for their connectors. The WG-289 is provided with microphone-type connector for use with the VoltOhmysts and other voltmeters having microphone-type connectors. The WG-290 is equipped with phone-tip connectors for use with voltmeters having phone-tip jacks.

These High Voltage Probes are capable of extending the dc voltage range of your meter to 50,000 volts. When used with a VoltOhmyst the input resistance is increased to 1000 megohms, an important feature when working in high-impedance circuits where loading seriously affects the stability of the circuit under test.

A choice of five multiplier resistors is available enabling these probes to be used with practically all popular electronic and non-electronic voltohmmeters.



Low-Loss, Polystyrene Body—
9" Leakage Path to Ground
Anti-Corona Probe Tip
Grounded Arc-Over Protection Baffle
Completely Insulated Grip . . .
No Metal Touches Hand
Multiplier Resistor Completely
Enclosed Within Probe Body
Fully Shielded Cable and
Separate Ground Lead

WG-206	1090 megohms
WG-207	991 megohms
WG-208	400 megohms
WG-209	480 megohms
WG-210	900 megohms

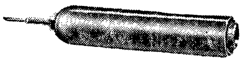
$7.15* Either Probe Only
$2.80* Resistor Only
*(Suggested User Price)

SPECIAL PURPOSE PROBES

LOW-CAPACITANCE PROBE WG-216B

The WG-216B is a "slip-on" type probe, designed for use with either the WG-218 or WG-220 Direct Probe in conjunction with an oscilloscope. When the WG-216B is used with either the RCA WO-56A or WO-88A oscilloscopes, the total input resistance is 10 megohms shunted by a capacity of less than 10 $\mu\mu f$. **$7.00***

DC PROBE WG-217



The WG-217 is a "slip-on" type probe, designed for use with either the WG-218 or WG-220 as a DC Probe for VoltOhmysts or other types of voltohmmeters. The WG-217 contains a 1-megohm isolating resistor, and has a shunt capacitance of less than 2 $\mu\mu f$. **$2.75***

DEMODULATOR PROBE WG-291

The WG-291 Demodulator Probe has an input range of 500 Kc to 250 Mc with an input capacitance of only 2.25 $\mu\mu f$. It separates the modulation from the RF carrier in an amplitude-modulated wave by means of a rectifier and a filter having a short time constant and an output frequency range of 30 to 5,000 cps. The WG-291 has a maximum input voltage of 20 rms volts and a maximum dc voltage rating of 250 volts. **$7.95***

DC/DIRECT PROBE WG-222

The WG-222 is a "slip-on" type probe with a built-in 1-megohm isolating resistor and a unique switching facility. By virtue of the switch arrangement, it is possible to measure dc or resistance, without changing probes. The WG-222 slips on the front of either the WG-218 or WG-220 and may be used with VoltOhmysts or other vacuum-tube voltmeters requiring a 1-megohm isolating resistor. **$3.50***

DIRECT PROBE AND CABLE WG-218, WG-220

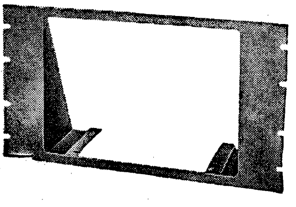
The WG-218 is a shielded input cable for use with volt-ohmmeters and oscilloscopes. It is fitted with a probe tip at one end and a microphone-type connector at the other end for connection to instruments having microphone-type cable connectors. The WG-220 is the same electrically as the WG-218 but is fitted with pin-plug tips for connection to instruments having tip jacks or binding posts. Either Probe **$3.75***

CRYSTAL-DIODE PROBE WG-264

The WG-264 Crystal-Diode Probe consists of a germanium rectifier and RC network in a plastic housing . . . which conveniently slips on the Direct Probe of VoltOhmysts, such as the WV-97A. RF voltages at frequencies up to 250 Mc may be accurately measured with the WG-264. The ac voltage range extends from 20 millivolts to 20 volts rms; dc voltages up to 250 volts can be present. **$7.75***

*(Suggested User Price)

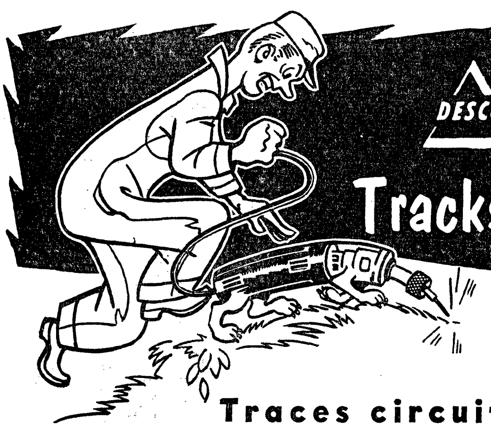
RACK-ADAPTER PANEL WS-18A



The WS-18A Rack Adapter Panel may be used for mounting any of the matched RCA Test Instruments in standard 19" relay racks. Add convenience, standardization and the professional touch to your test bench set-up. Umber-gray finish, all steel construction.

$11.50 (Suggested User Price)

Net



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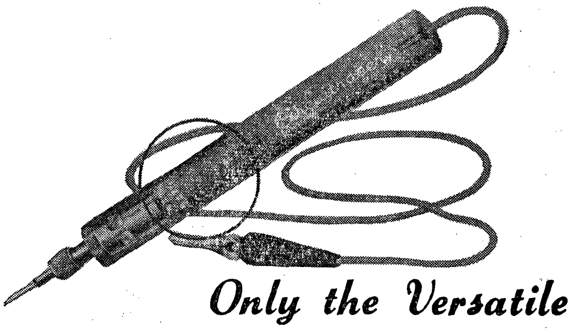
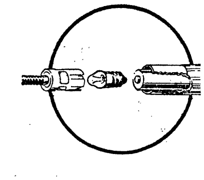
Tracks 'em Down Dead or Alive!

Traces circuits
Dead or Live to 600
Volts A.C. or D.C.

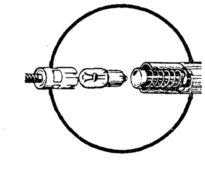


Only the Versatile **DESCO** *Circuitracer Offers You a 3-in-1 Electrical Test Laboratory ... Pocket Size!*



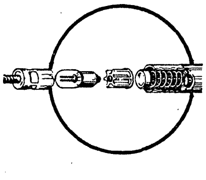
1. *As a Continuity Tracer for Dead Circuits*

Grounds, short circuits, open circuits and continuity can be readily determined in many devices such as: switches . . . relays . . . circuitbreakers . . . fuses . . . thermostats . . . low resistance devices . . . wire assemblies . . . fields . . . armatures, etc.



2. *As a Low Voltage Live Circuit Tester*

You easily locate hot wires . . . locate grounds . . . Make tests on relays . . . small transformer output . . . automotive circuits and accessories . . . aircraft and marine equipment and wiring . . . switchboard and inter-com circuits . . . low voltage generator output, etc.



3. *As a High Voltage Live Circuit Tester*

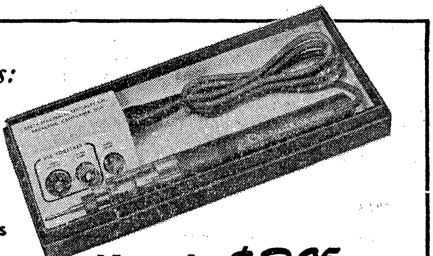
You easily locate and identify live circuits . . . test live switches and plugs . . . check live relays and circuitbreakers . . . test transformer output and test generator and alternator output.

Circuitracer Advantages:

—Traces circuits easier than expensive, delicate voltohmeters.
—Saves time! Signal light clearly visible in the tip at point of contact.
—Sturdy . . . with durable plated brass parts; long flexible test lead wire; shock-proof case.
—Used by electricians, electronics technicians, motor repairmen, auto, aircraft and marine electricians. Indispensable wherever electrical equipment is made, used or serviced.

Complete Kit Includes:

- Circuitracer (less batteries)
- Neon Lamp (for 60 to 600 volt range)
- Special neon lamp resistor
- Lamp for testing dead circuits
- Instruction booklet
- Sturdy, attractive kit box



Net only ***$3.95***

Engineered **WITH THE PRACTICAL MAN IN MIND!**

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MEASUREMENTS CORPORATION

Laboratory Standards

QUALITY ELECTRONIC
MEASURING INSTRUMENTS
FOR ACCURATE, DEPENDABLE SERVICE

SINCE 1939, MEASUREMENTS CORPORATION has developed and manufactured a precision line of Laboratory Standards designed for radio, television and other fields of the electronic industry. While our production departments are building instruments currently required by laboratories, manufacturers and the Armed Services, MEASUREMENTS' engineering division is engaged in extensive research on new equipment for the art

Critical engineering control of all phases of manufacturing, from the selection of component parts, through the production departments, to the final mechanical and electrical inspection, assures every customer of quality instruments that are guaranteed to give accurate, dependable service.

STANDARDS ARE ONLY AS RELIABLE AS THE REPUTATION OF THEIR MAKER

STANDARD SIGNAL GENERATORS

MODEL	FREQUENCY RANGE	OUTPUT RANGE	MODULATION
65-B	75 Kc.-30 Mc.	0.1 microvolt to 2.2 volts	AM. 0 to 100% 400 cycles or 1000 cycles External mod., 50-10,000 cycles
78	15-25 Mc.; 195-225 Mc. 15-25 Mc.; 90-125 Mc. other ranges on order	1 to 100,000 microvolts	AM. 8200-400 cycles 625-400 cycles Fixed at approximately 30%
78-FM	86 Mc.-108 Mc.	1 to 100,000 microvolts	Deviation 0-300 kc, 2 ranges FM. 400-8200 cycles External modulation to 15 Kc.
80	2 Mc.-400 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30% 400 cycles or 1000 cycles External mod., 50-10,000 cycles.
82	20 cycles to 200 Kc. 80 Kc. to 50 Mc.	0-50 volts 0.1 microvolt to 1 volt	Continuously variable 0-50% from 20 cycles to 20 Kc.
84	300 Mc.-1000 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30%, 400, 1000, or 2500 cycles. Internal pulse modulator. External mod., 50-30,000 cycles.
84-TV	300 Mc. to 1000 Mc.	Continuously Variable from 0.1 Microvolt to 1.0 Volt	Continuously variable 0 to 30% External modulation 20 to 20,000 cycles.
90	20 Mc.-250 Mc.	0.3 microvolt to 0.1 volt	Continuously variable, 0 to 100% Sinusoidal modulation 30 cycles-5 Mc. Composite TV modulation.

PULSE GENERATOR

MODEL	FREQUENCY RANGE	PULSE WIDTH	OUTPUT
79-B	60 to 100,000 cycles	Continuously variable from 0.5 to 40 microseconds	Approximately 150 volts positive with respect to ground. "Sync Output" 75 volts positive with respect to ground.

SQUARE WAVE GENERATOR

MODEL	FREQUENCY RANGE	WAVE SHAPE	OUTPUT
71	Continuously variable 6 to 100,000 cycles	Rise time less than 0.2 microseconds with negligible overshoot	Step attenuator: 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

U.H.F. RADIO NOISE and FIELD STRENGTH METER

MODEL	FREQUENCY RANGE	INPUT VOLTAGE RANGE
58	15 Mc. to 150 Mc.	1 to 100,000 microvolts in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

VACUUM TUBE VOLTMETERS

MODEL	VOLTAGE RANGE	FREQUENCY RANGE	INPUT IMPEDANCE
62	0-1, 0-3, 0-30 and 0-100 volts AC or DC	30 cycles to over 150 Mc.	Approximately 7 mmfd.
62-U.H.F.	0-1, 0-3, 0-30 and 0-100 volts AC or DC	100 Kc. to 500 Mc.	Approximately 2 mmfd.
67	.0005 to 300 volts peak-to-peak	5 to 100,000 sine-wave cycles per second	1 megohm shunted by 30 mmfd.

MEGACYCLE METER

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	MODULATION
59	2.2 Mc. – 400 Mc.	Within ±2%	CW or 120 cycles fixed at approximately 30%. Provision for external modulation

CRYSTAL CALIBRATORS

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	HARMONIC RANGE
111	250 Kc. – 1000 Mc.	0.001%	.25 Mc. Oscillator: .25-450 Mc. 1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc.
111-B	100 Kc. — 1000 Mc.	0.001%	.1 Mc. Oscillator: .1-450 Mc. 1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc.

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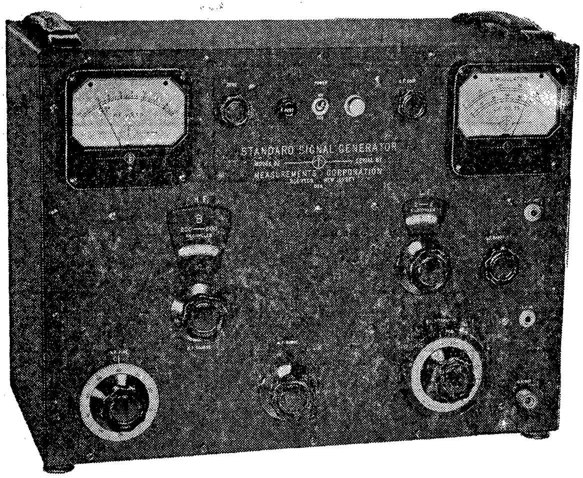
MEASUREMENTS CORPORATION *Laboratory Standards*

STANDARD SIGNAL GENERATOR - Model 82

20 CYCLES - 50 Mc.



FREQUENCY RANGE: 20 cycles to 200 kilocycles in four ranges. 80 kilocycles to 50 megacycles in seven ranges. Position available for special range.

FREQUENCY ACCURACY: Each range is individually calibrated. 20 cycles to 200 kilocycles, accurate to ±5%. 80 kilocycles to 50 megacycles, accurate to ±1%.

OUTPUT VOLTAGE AND IMPEDANCE: 0-50 volts across 7500 ohms from 20 cycles to 200 kilocycles. (The output voltage and impedance in this range can be reduced by an external attenuator). 0.1 microvolt to 1 volt across 50 ohms over most of the range from 80 kilocycles to 50 megacycles.

MODULATION: Continuously variable 0-50% from 20 cycles to 20 kilocycles from low frequency variable oscillator or external source.

HARMONIC OUTPUT: Less than 1% from 20 cycles to 20 kilocycles; 3% or less from 20 kilocycles to 50 megacycles.

LEAKAGE AND STRAY FIELD: Less than 1 microvolt from 80 kilocycles to 50 megacycles.

POWER SUPPLY: 117 volts, 50-60 cycles. 75 watts.

DIMENSIONS: 15" high x 19" wide x 12" deep overall.

WEIGHT: 50 pounds.

STANDARD SIGNAL GENERATOR - Model 80

2 Mc. - 400 Mc.

FREQUENCY RANGE: 2 to 400 megacycles in 6 bands, individually calibrated direct reading dial.

FREQUENCY ACCURACY: ± 0.5%.

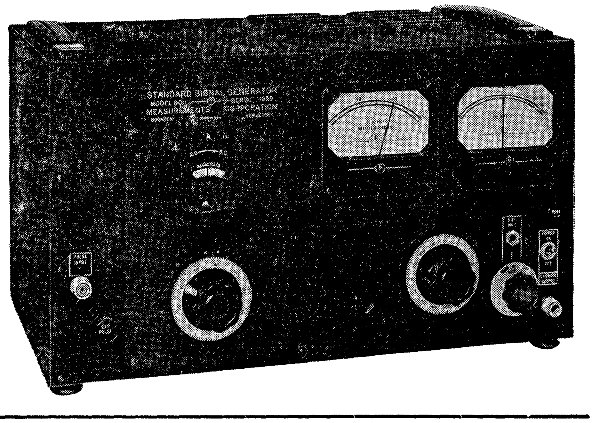
OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

OUTPUT IMPEDANCE: 50 ohms.

MODULATION: Amplitude modulation is continuously variable from 0 to 30%. Modulation depth is indicated by a meter on the panel. Internal modulation, 400 and 1000 cycles. Modulation may also be applied from an external source. Pulse modulation may be applied to the oscillator from an external source through a special connector.

LEAKAGE AND STRAY FIELD: Attenuator leakage less than 0.1 microvolt. Power line leakage less than 0.5 microvolt. Stray fields less than two microvolts.

POWER SUPPLY: 117 volts, 50 to 60 cycles. 70 watts.



PULSE GENERATOR
MODEL 79-B
SERIAL
MEASUREMENTS
CORPORATION
BOONTON NEW JERSEY

PULSE GENERATOR MODEL 79-B

This instrument is specially adapted for plate pulsing of the Model 80 Standard Signal Generator.

REPETITION RATE: 60 to 100,000 pulses per second.

PULSE WIDTH: Continuously variable from 0.5 to 40 microseconds.

OUTPUT VOLTAGE: Approximately 150 volts positive with respect to ground.

"SYNC" OUTPUT: 75 volts positive with respect to ground. Displaced by ½ period from pulse output.

"SYNC" INPUT: May be synchronized with as little as 2 volts peak from an external source.

POWER SUPPLY: 117 volts, 50-60 cycles. 115 watts.

DIMENSIONS: 10" high x 13⅝" wide x 10½" deep, overall.

WEIGHT: Approximately 31 pounds.

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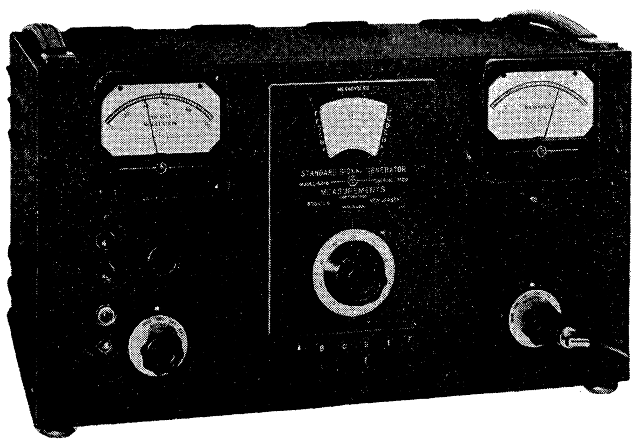
STANDARD SIGNAL GENERATOR - Model 65-B

75 Kc. - 30 Mc.



FREQUENCY RANGE: 75 kilocycles to 30 megacycles in 6 push button ranges.

FREQUENCY CALIBRATION: The frequency dial is direct reading and individually hand calibrated for each range. It is accurate to ± 0.5%.

OUTPUT VOLTAGE: Continuously variable from 0.1 microvolt to 2.2 volts.

OUTPUT IMPEDANCE: 5 ohms to 0.2 volt, rising to 15 ohms at 2.2 volts.

MODULATION: Continuously variable from 0 to 100%. Modulation depth is indicated directly by a meter on the panel. Modulation may be obtained either from an internal source of 400 or 1000 cycles or from an external source.

ENVELOPE DISTORTION: Less than 4% at 100% modulation at 1 megacycle.

LEAKAGE: Less than 0.1 microvolt leakage with attenuator set for 0 output.

POWER SUPPLY: 117 volts, 50-60 cycles. 115 watts.

DIMENSIONS: 11" high x 20" long x 10¼" deep, overall.

WEIGHT: Approximately 55 pounds.

FM STANDARD SIGNAL GENERATOR - Model 78-FM

86 Mc. - 108 Mc.

FREQUENCY RANGE: 86 to 108 megacycles, individually calibrated dials. Accurate to ± 0.5%.

OUTPUT VOLTAGE: 1 to 100,000 microvolts.

LEAKAGE: Less than 1 microvolt.

MODULATION: Deviation continuously variable from 0 to 300 kc. Indicated on directly calibrated dial. 400 cycle internal audio oscillator. Can be modulated from an external source providing 6 volts across 5000 ohms.

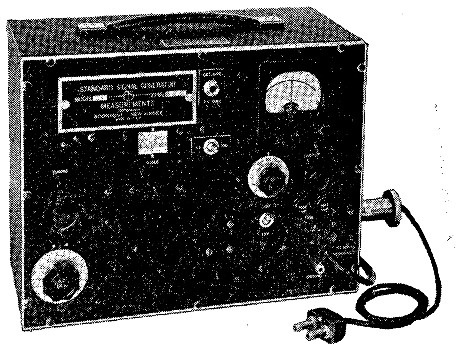
FIDELITY: Flat within two db from DC to 15,000 cycles. Distortion is less than 1% at 75 kilocycles deviation. Transient response is excellent.

POWER SUPPLY: 117 volts, 50 to 60 cycles. 36 watts.

DIMENSIONS: 10" high x 13" wide x 7" deep, overall.

WEIGHT: Approximately 25 pounds.

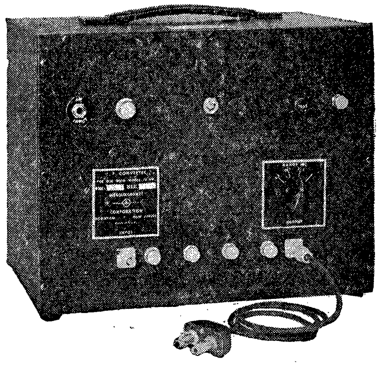
Special one-band Model 78-FM Signal Generators, with a tuning ratio of approximately 1.2 to 1, are available for use within the limits of 30 to 165 megacycles.



I. F. CONVERTER - Model M-275

This instrument was designed for use with the Model 78-FM Standard Signal Generator to provide carrier output at the IF frequencies used in FM and Television receivers.

(Special Frequencies up to 23 Mc. available on order)



CARRIER FREQUENCIES: 4.5, 10.7, 21.7 Mc.

OUTPUT VOLTAGE: 10 microvolts to 1.0 v. when used with Model 78-FM.

BAND WIDTHS: 5% down, ± 250 Kc. from center frequency.

AMPLITUDE MODULATION: Provision for external AM up to approximately 80%, combined with, or exclusive of, FM. There is negligible spurious FM due to AM. The envelope distortion is less than 10% at 80% modulation.

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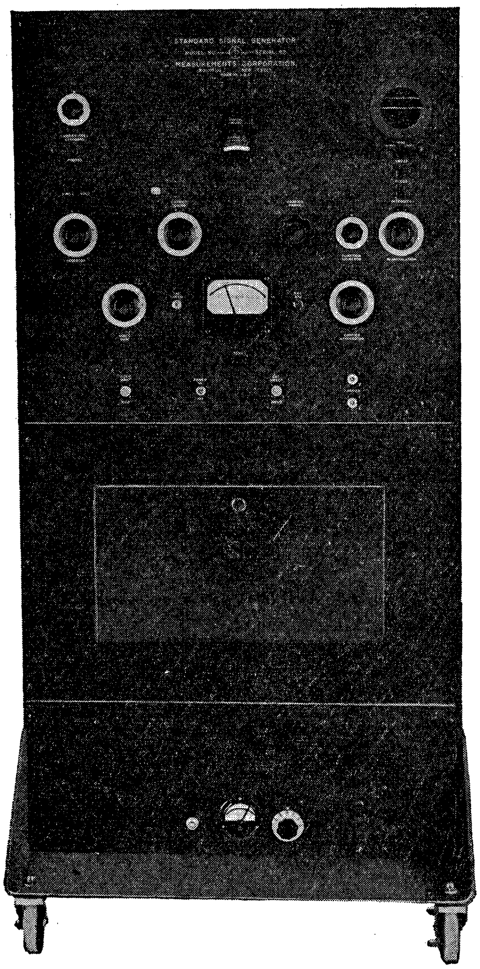
MEASUREMENTS CORPORATION
Laboratory Standards

TELEVISION SIGNAL GENERATOR



MODEL 90

The first commercial wide-band, wide-range Signal Generator to be developed to meet the exacting standards of high definition television use.

CARRIER FREQUENCY:

RANGE: Continuously variable from 20 to 250 megacycles, in eight ranges.

ACCURACY: Built-in crystal frequency standard permits setting to .01%. Dial scale may be set to 0.1%.

STABILITY: Warm-up drift less than .05%. Less than .01% after warm-up.

LEAKAGE: Less than 10 microvolts.

MODULATION:

Continuously variable from zero to 100%.

ENVELOPE: Sinusoidal, or composite television. Bandwidth to 3 db is 4 Mc. Rise time from 10% to 90% modulation 0.15 microsecond. Overshoot less than 5%. Slope less than 5% on 60 cycle square wave.

INPUT IMPEDANCE: 75 ohms ± 10% (RMA Standard)

INPUT LEVEL: 1.5 volts peak to peak minimum level for 100% modulation. Black negative polarity.

MODULATION PERCENTAGE: Zero to 110%; plate modulation.

OUTPUT:

LEVEL: Continuously variable from 0.3 microvolt to 0.1 volt balanced to ground (measured at 100% modulation level).

IMPEDANCE: (a) 107 ohms line to line (balanced).
(b) 53.5 ohms line to ground (unbalanced).
(c) Suitable pads may be employed to alter these impedances.

DIMENSIONS:

OVERALL: Height—58¾″; Width—28¼″; Depth—25½″.

WEIGHT: Model 90—302 pounds.
External Voltage Regulator: 92 pounds.

POWER SUPPLY: 117 volts, 60 cycles. 700 watts.

VACUUM TUBE VOLTMETER - Model 62

RANGE: Push button selection of 5 ranges—1, 3, 10, 30 and 100 volts full scale AC or DC.

ACCURACY: ±2% of full scale on each range, both DC and sine-wave AC.

INDICATION: Linear for DC and calibrated to indicate RMS values of a sine-wave or 71% of the peak value of a complex wave on AC.

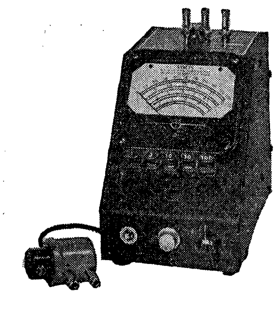
FREQUENCY ERROR: Less than 10% from 30 cycles to over 150 megacycles. Resonant frequency of the probe with input terminals shorted is 350 megacycles.

INPUT IMPEDANCE: The input capacitance is approximately 7 mmf. The input resistance is a function of frequency.

POWER SUPPLY: 117 volts AC, 50 to 60 cycles.

DIMENSIONS: 4¾″ wide x 6″ high x 8½″ deep overall.

WEIGHT: Approximately 8 pounds.



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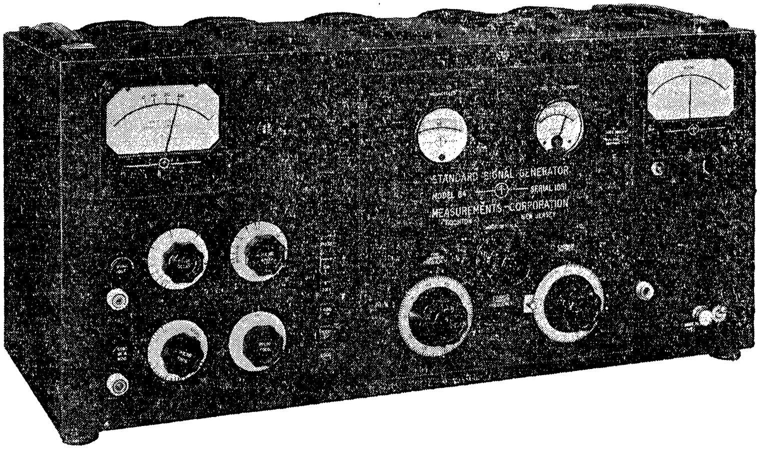
STANDARD SIGNAL GENERATOR - Model 84

300 Mc. - 1000 Mc.



FREQUENCY RANGE: 300 to 1000 megacycles, individually calibrated direct reading dial.

FREQUENCY ACCURACY: ± 0.5%.

OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

OUTPUT IMPEDANCE: 50 ohms.

AMPLITUDE MODULATION: Continuously variable from 0 to 30% indicated directly on panel meter. Internal sine-wave oscillator; choice of 400, 1000, or 2500 cycles is provided. External modulation up to 30 kilocycles may be applied.

PULSE MODULATION: Repetition rate continuously variable from 60 to 100,000 cycles. Pulse width continuously variable from 1 to 50 microseconds indicated on directly calibrated dial. Pulse delay (with respect to synchronizing output) continuously variable from 0 to 50 microseconds indicated on directly calibrated dial. May be synchronized with an external sine-wave or pulse source.

POWER SUPPLY: 117 volts, 60 cycles. 230 watts (with regulator).

DIMENSIONS: 12" high x 26" wide x 10" deep, overall.

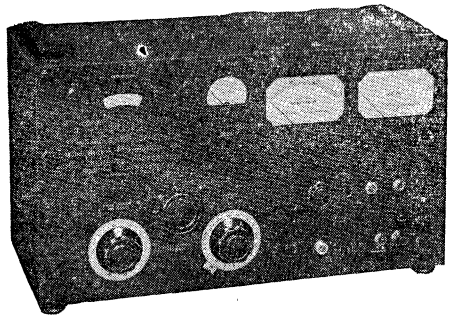
WEIGHT: Approximately 135 pounds, including external line voltage regulator.

ACCESSORIES: Included with each instrument are four connecting cables and external voltage regulator.

U. H. F.-TV STANDARD SIGNAL GENERATOR

-Model 84-TV

300-1000 Mc.



Model 84-TV Standard Signal Generator has been developed to meet the need for a reliable signal source for the UHF Television band. Research requirements as well as production testing needs are met with accuracy, stability and ease of operation.

Frequency Data: The frequency range is 300 to 1000 megacycles, in one band. The individually calibrated dial reads directly in megacycles, and is accurate to ±0.5%.

Output Voltage and Impedance: The carrier output voltage is continuously variable from 0.1 microvolt to 1.0 volt across 53.5 ohms, subject to correction chart. The full 1 volt output, however, may not be possible above 900 megacycles. Output impedance, as seen at the panel connector, is approximately 53 ohms resistive.

Modulation: Continuously variable from zero to 30% from an internal 400-cycle oscillator. Provision is made for applying external modulation from 50 to 20,000 cycles. Approximately 5 volts r.m.s. across 100,000 ohms is required for 30% modulation.

Power Source: Optimum performance is obtained from a 117 volts, 50 to 60 cycle power supply. The power consumption is 120 watts. An external step-down transformer for 220 volt, 50 cycle operation is available on special order.

Leakage: Negligible.

Size: Overall Dimensions: 11¾ inches high, 19 inches wide, 11 inches deep.

Weight: Approximately 40 pounds.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION

Laboratory Standards

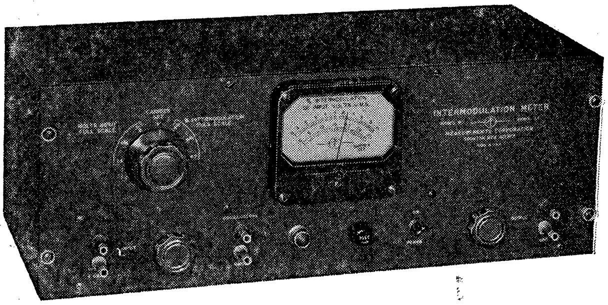
INTERMODULATION METER - Model 31

FEATURES:

- Compact, completely self-contained unit with—
  Test Signal Generator, Analyzer, Voltmeter, Power Supply
- Direct-reading meter indicates percentage of intermodulation.
- Accurate metering of input voltage to analyzer.
- Easy to operate.
- Quick, accurate measurements.
- May be mounted in standard 19" relay rack. (7" relay rack panel space.)
- Connection for oscilloscope.

APPLICATIONS:

- Insuring peak performance from all audio systems.
- Correct adjustment and maintenance of AM and FM receivers and transmitters.
- Checking linearity of film and disc recordings and reproductions.
- Checking phonograph pick-ups and recording styli.
- Checking record matrices.
- Adjusting bias in tape recordings.
- For quality control of all audio components and equipment.



SPECIFICATIONS:

Generator:

LOW FREQUENCY: 60 cycles.

HIGH FREQUENCY: 3000 cycles.

LF/HF VOLTAGE RATIO: Fixed 4/1.

OUTPUT VOLTAGE: 10 v. max. into high impedance or +5 DBM matched to 600 ohms.

OUTPUT IMPEDANCE: 2000 ohms.

RESIDUAL INTERMODULATION: 0.2%.

Analyzer:

INPUT VOLTAGE: Full scale ranges of 3, 10 and 30 volts RMS. Less than one volt of mixed signal is sufficient for operation.

INPUT IMPEDANCE: Greater than 400 K ohms.

INTERMODULATION: Full scale ranges of 3, 10 and 30%.

ACCURACY: ±10% of full scale.

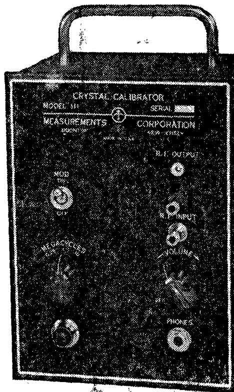
GENERAL: Power Supply 117 volts, 50/60 cycles. 30 watts. Dimensions: 8" high x 19" wide x 9" deep. Weight 16 lbs. Tubes: 1-12AX7, 1-12AT7, 1-6J5GT, 1-5Y3GT.

CRYSTAL CALIBRATORS - Models 111 and 111-B

Designed for the Calibration and Frequency Checking of —

- Signal Generators • Transmitters • Receivers • Grid-Dip Meters

And other equipment where a high degree of frequency accuracy is required.



FREQUENCY RANGES -	Model 111	Model 111-B
	.25 to 1000 Mc.	.1 to 1000 Mc.

These instruments have been designed as dual-purpose calibrators. They not only provide a test signal of crystal-controlled frequency, but also have a self-contained receiver of 2 microwatts sensitivity. A new circuit arrangement utilizes the cross-modulation products of three separate oscillators. The fundamental frequencies of Model 111 are .25, 1.0 and 10 megacycles, while those of the Model 111-B are .1, 1 and 10 megacycles.

FREQUENCY ACCURACY: 0.001%

POWER SUPPLY: 117 volts, 50/60 cycles; 18 watts

DIMENSIONS: 6" wide, 8" high, 5" deep.

WEIGHT: 4 lbs.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION

Laboratory Standards

U. H. F. RADIO NOISE and FIELD STRENGTH METER

MODEL 58

U.H.F. RADIO NOISE AND FIELD STRENGTH METER
MODEL 58
MEASUREMENTS
BOONTON NEW JERSEY
MICROVOLTS
DEPRESS FOR CALIBRATION ONLY

This versatile, portable instrument is useful in measuring signal-to-noise ratios, noise levels and for field strength surveys on TV, FM and AM transmitters.

FREQUENCY RANGE: 15 to 150 megacycles in five bands —dial directly calibrated in megacycles.

SENSITIVITY RANGE: 1 to 100,000 microvolts induced in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

GAIN STANDARDIZATION: Internal "shot noise" diode provides calibration standard. Special dial eliminates need for charts.

CIRCUIT: Superheterodyne circuit with tuned RF amplifier eliminates image response.

BAND WIDTH: 150 kilocycles @ 2X down.

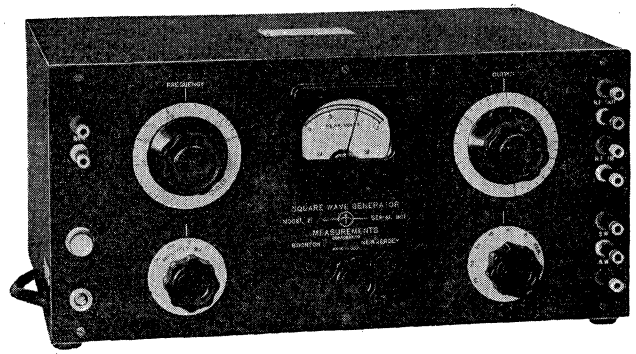
POWER SUPPLY: Built-in regulated dual power supply for operation from either 117 volts AC or 6 volts DC. 70 watts (on AC).

STANDARD EQUIPMENT: Power cables, 15 foot antenna cable, 9 inch loop antenna, carrying strap, and complete instruction book.

DIMENSIONS: 16" wide x 9" high x 11" deep, overall.

WEIGHT: 35 pounds.

SQUARE WAVE GENERATOR - Model 71



Recommended for television testing and many different applications in developing AM, FM and TV equipment where square-wave analysis is of great importance.

FREQUENCY RANGE: 6 to 100,000 cycles.

WAVE SHAPE: Rise time less than 0.2 microseconds with negligible overshoot at 75 peak volts output. At 5 volts or less rise time is less than 0.1 microsecond.

OUTPUT VOLTAGE: Step attenuator giving 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

SYNCHRONIZING OUTPUT: 25 volts peak.

R. F. MODULATOR: 5 volts maximum carrier input. Translation gain is approximately unity—Output impedance is 600 ohms.

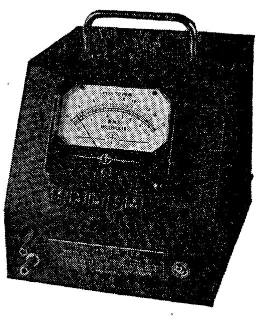
POWER SUPPLY: 117 volts, 50-60 cycles. 100 watts.

DIMENSIONS: 7" high x 15" wide x 7½" deep, overall.

WEIGHT: Approximately 20 pounds.

PEAK-TO-PEAK VOLTMETER - Model 67

Designed for audio and video level measurements and the measurement of audio electrical interference. The Model 67 is ideally suited for uses where the indication of true peak values is required.



VOLTAGE RANGE: 5 ranges; .0005 to 300 volts peak-to-peak. (Approximately .0002 to 100 r.m.s. volts.)

SEMI-LOGARITHMIC SCALES: Hand calibrated; 0 to 30 peak-to-peak and 0 to 10 r.m.s. equivalent.

FREQUENCY RANGE: 5 to 100,000 sine-wave cycles per second.

INPUT IMPEDANCE: 1 megohm shunted by 30 mmfd.

STABILITY: Less than 2% error with line variations from 110 volts to 120 volts.

RECORDER TERMINALS: For external one milliampere graphic recorder or milliammeter.

POWER SUPPLY: 117 volts; 50-60 cycles, 35 watts.

DIMENSIONS: 7½" high x 7" wide x 8½" deep.

WEIGHT: 10 lbs.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

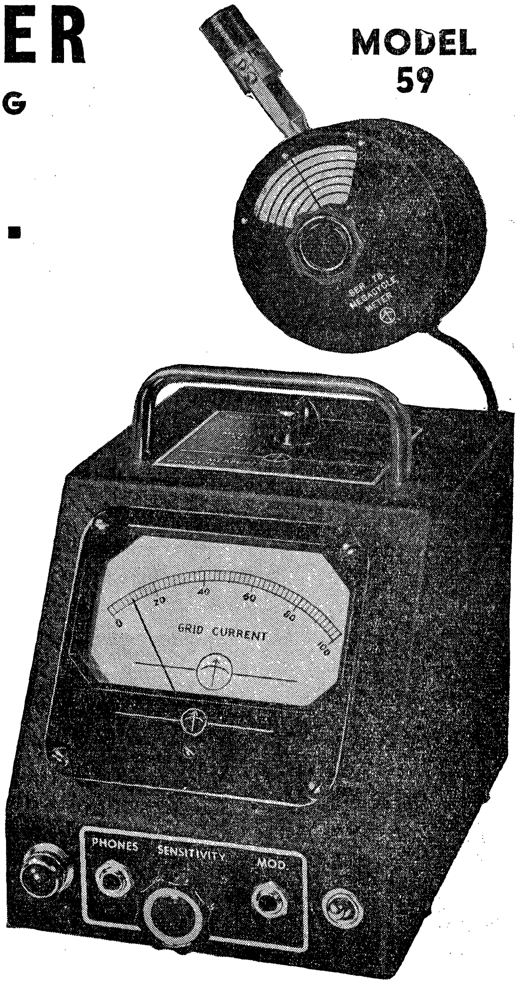
MEASUREMENTS CORPORATION
Laboratory Standards

MEGACYCLE METER

THE ONLY GRID-DIP METER COVERING THE WIDE FREQUENCY RANGE OF

2.2 Mc. to 400 Mc.

MODEL
59



- **For determining the resonant frequency of tuned circuits, antennas, transmission lines, by-pass condensers, chokes or any resonant circuit.**
- **For measuring capacitance, inductance, Q, mutual inductance.**
- **For preliminary tracking and alignment of receivers.**
- **As an auxiliary signal generator; modulated or unmodulated.**
- **For antenna tuning and transmitter neutralizing, power off.**
- **For locating parasitic circuits and spurious resonances.**
- **As a low sensitivity receiver for signal tracing.**
- **As a beat-frequency oscillator in conjunction with a fixed frequency oscillator for measuring video or wide-band amplifier bandwidths.**
- **As an oscillating or absorption marker for use with a sweep-frequency oscillator.**
- **For transmitter or oscillator frequency checking by beat note method and absorption wave meter method.**

And Many Other Applications.

TELEVISION

The Model 59 is most useful in the construction and servicing of television receivers. It can be used for aligning video amplifiers, for peaking coils, sound traps, filters, stagger-tuned i.f.s, stagger-tuned amplifiers, sound i.f.s, local oscillators, carrier circuits, grid mixing circuits, etc. It is very effective for locating interference and for making traps and filters.

FREQUENCY RANGE: 2.2 megacycles to 400 megacycles with seven plug-in coils.

FREQUENCY ACCURACY: Individually calibrated dial, direct reading to an accuracy of ± 2%.

OUTPUT: CW or MCW. Modulation fixed at approximately 30%, 120 cycles.

TUBES: 1—Type 955
1—Type OD3/VR150
1—Type 5Y3GT

DIMENSIONS: Power unit: 5⅛" wide, 6⅛" high, 7½" deep.
Weight: approximately 6½ lbs.
Oscillator unit: 3¾" diameter, 2" deep.
Weight: approximately 1 lb.

POWER SUPPLY: 117 volts, 50-60 cycles, 20 watts.
Step-down transformer available for 220 volts, 50 cycle operation.

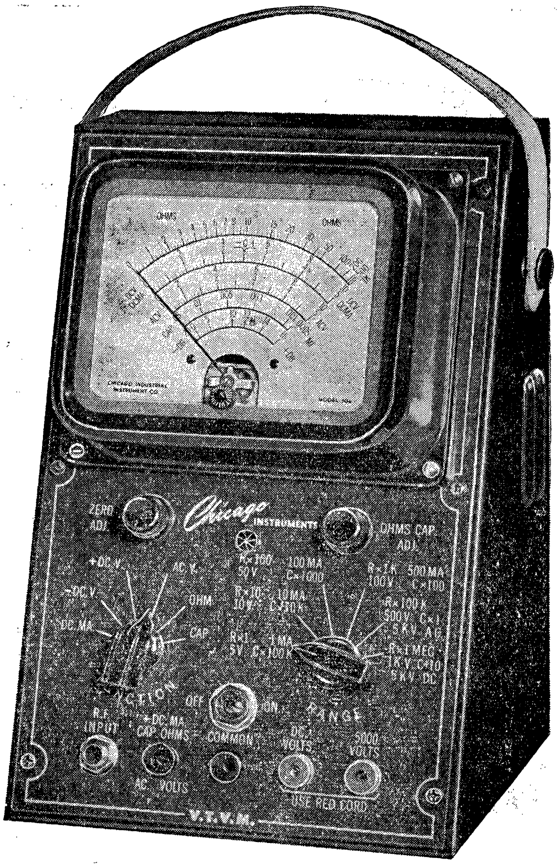
MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

Chicago INSTRUMENTS

ADVANCED DESIGN
DECIDEDLY DIFFERENT
CHICAGO V T V M MULTITESTER

THE GREATEST VACUUM TUBE VOLTMETER VALUE ON THE MARKET!

- Capacitance and Milliampere ranges—found only on finest electronic multitesters.
- One zero adjustment holds for all ohm ranges.
- DC Probe furnished has ten megohm isolating resistor incorporated.
- Zero Center for TV and FM discriminator alignment.
- Additional jack provided for 5000 volt range.
- 30 complete ranges for maximum versatility.
- Line voltage changes have little effect on the stable, double triode, bridge-type circuit.
- Extremely high DC input resistance for making measurements without loading circuit under test.
- Audio frequency response virtually flat to 25 kc on 0 to 100 volt ranges.
- Slanted to give advantage of overhead lighting. Dual position, brown hammerloid aluminum panel shipped in 67½° angle position for ease of reading and convenient portability. May be readily changed to a 22½° angle for counter use by rotating in the rich brown steel case.
- Genuine leather snap-on, flexible carrying strap; may be removed when used in a permanent counter set-up.
- Unique, front of the panel type, big 5½" rectangular meter with three color scale; finest mechanical and electrical arrangement for an electronic device. Protected against possible burnouts in the circuit.
- Newly designed, original cylinder style battery holder houses two standard flash light cells. Contacts are made by designed torque spring pressure (no soldering).
- Precision calibrated 1% multipliers in all voltage and milliampere circuits.



MODEL 504 VTVM
ELECTRONIC MULTITESTER

COMPARE IT WITH THE BEST—BUY IT FOR LESS!! NET $42.00

Overall Dimensions: 10"x 7"x 6"
Shipping Weight: 10 lbs.

Furnished complete with DC Probe and test leads.

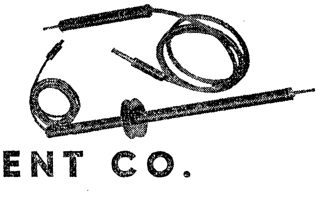
RANGES

DC VOLTS: (7 ranges) 0-5/10/50/100/500/1000/5000
AC VOLTS: (7 ranges) 0-5/10/50/100/500/1000/5000
DECIBELS: — 20 to + 16
OHMS: (6 ranges) 0-1000/10K/100K/1 Meg/100 Meg/1000 Meg
OHMS readings at center scale 10/100/1000/10K/1 Meg/10 Meg
CAPACITANCE: (6 ranges)
50 mmf to 5000 mmf
.0005 mf to .05 mf
.05 mf to 5 mf
.5 mf to 50 mf
5 mf to 500 mf
50 mf to 5000 mf
DC MILLIAMPERES: (4 ranges)
0-1/10/100/500

VTVM OUTSTANDING ELECTRICAL FEATURES

Input Impedance: 20 Megohms including 10 megohms isolating resistor in the DC Probe on the 5 to 1000 VDC positions.
10 Megohms on the 5 to 1000 VAC positions.
100 Megohms on both 5000 VCD and 5000 VAC positions.
DC Milliampere Ranges: (Not electronic) 50 Millivolt drop—will not change the characteristics of the circuit to be measured.
Capacitance Ranges: Use of low voltage power source enables testing of electrolytic condensers without voltage error.
Function Switch selects between plus or minus DC voltages.
Unit operates on 105 to 125 VAC, 50-60 cycles.

ACCESSORIES



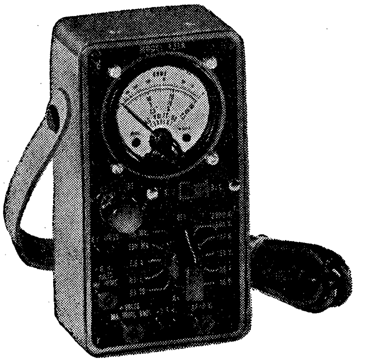
Model P505 R.F. Probe: Extends AC range to 100 megacycles. Not to be used over 50 volts. NET $6.50

Model P506 High Voltage Probe: Extends the range of the Model 504 VTVM to 30,000 VDC. Not to be used over 30,000 VDC. NET $9.00

CHICAGO INDUSTRIAL INSTRUMENT CO.

Chicago INSTRUMENTS

DEPENDABLE . . . ACCURATE PORTABLE and MINIATURE VOLT-OHM MILLIAMETERS



PORTAPLEX MODEL 431A . . . . Net $19.50

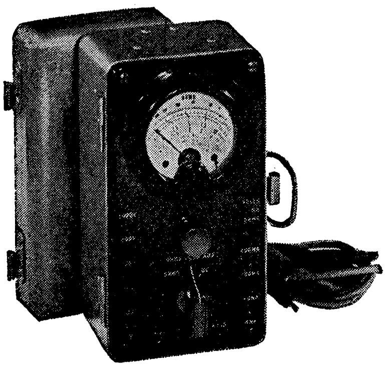
AC-DC VOLTS OHMS—MILS—AMPERES

This small, convenient test unit offers all the important ranges with high accuracy and rugged dependability. Multipliers and shunts are bridge selected and guaranteed accurate within 1%. 860 Microampere meter. Aluminum case. Leather carrying strap included. 1000 Ohms per volt.

RANGES

AC-DC Volts:
0-15/30/150/300/1500/3000
DC Amperes: 0-7.5
DC Milliamperes: 0-1.5/150

Ohms Full Scale:
0-10,000/100,000/1 meg.
Ohms Center Scale: 60/600/6000
Size: 6⅛"x3¼"x2¾"



CHICAGO MODEL 421D . . . . Net $24.50

Closed Case AC-DC VOLT OHM MILLIAMMETER

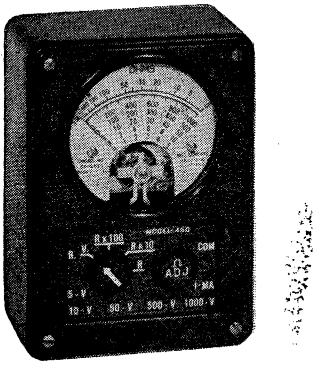
High Sensitivity (5000 Ohms per volt)

Designed for the hard usage of outside service work, the Model 421D has a slip-hinge cover to protect its sensitive 150 mocroampere meter. Bridge selected multipliers and shunts accurate within 1%. Handsome military type aluminum case with grey Hammerloid finish.

RANGES

AC-DC Volts:
0-4/10/40/100/400/1000
(5000 Ohms per Volt)
DC Milliamperes: 0-4/40/100/400

Ohms Full Scale:
0-10,000/100,000/1 meg.
Ohms Center Scale: 60/600/6000
Size: 6⅛"x3¼"x3¼"



FEATHERWEIGHT MINIATURES

Palm Size Volt-Ohm-Milliammeters **Size:** 3-15/16"x2⅞"x2"

Accurate little Featherweights have been extremely popular with service men for many years. They slip into a jacket pocket with hardly a bulge. The same painstaking care with which multipliers and shunts are selected for higher priced instruments is used in the manufacture of Featherweight models. They are completely dependable and accurate. 1000 Ohms per volt. Molded Bakelite case.

RANGES

FEATHERWEIGHT MODEL 450
Price $14.00 net
DC Volts: 0-5/10/50/500/1000
Milliamperes: 0-1
Ohms Full Scale:
5000/50,000/500,000
Ohms Center Scale: 30/300/3000

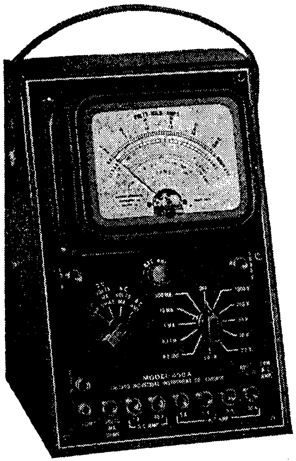
FEATHERWEIGHT MODEL 453
Price $19.50 net
AC-DC Volts:
0-15/30/150/300/1500/3000
DC Milliamperes: 0-150
Ohms Full Scale: 5000/50,000/500,000

CHICAGO INDUSTRIAL INSTRUMENT CO.

CHICAGO 10, ILLINOIS

Chicago INSTRUMENTS

Since 1933 we have been manufacturing a quality line of test equipment. For high accuracy and rugged dependability, Chicago Instruments are without compare in the service field. They represent the greatest test equipment values on the market!



MODEL 458A

PORTABLE BENCH TYPE VOLT-OHM-MILLIAMMETERS

Multiplex Model 458A. Volt-Ohm-Mils-Ammeter. Net $29.50

More useful ranges and more exclusive features have been built into the new Multiplex than any instrument near its price. The slant-front panel, the big easy-to-read meter and convenient range selectors are all designed to make testing a simple, accurate operation.

In addition to broad coverage volt-ohm-milliammeter ranges, the Model 458A also has A.C. and D.C. ampere scales which are highly useful in checking various appliances, auto radios, portables, etc.

All multipliers and shunts are bridge selected, stable and guaranteed accurate within 1%. Attractive brown Hammerloid case. Genuine leather carrying strap and polarized test leads included. 1000 Ohms per volt sensitivity.

Volts AC-DC: 0-2.5/10/50/250/1000/5000
Milliamperes AC-DC: 0-1/10/100
Amperes: AC: 0-0.5/1/5/10
Amperes: DC: 0-1/10

Ohms Full Scale: 1000/200,000/2,000,000
Ohms Center Scale: 50/2250/22,500
Output: — 5 to + 55 Decibels
Size Overall: 10" x 7" x 6"

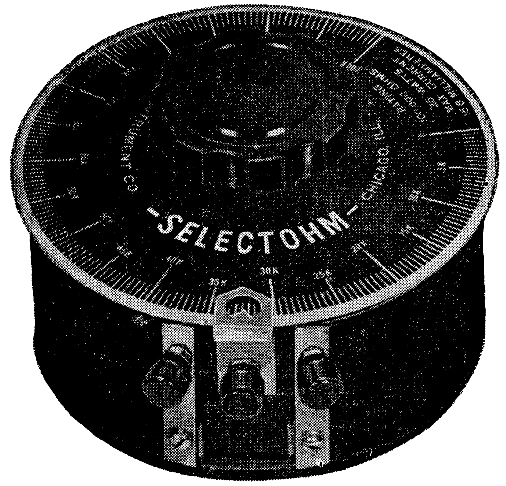
SELECTOHM

100,000 OHMS • 25 WATTS

Used for Resistance Substitute In Radio • Television • Electronic • Laboratory • Industrial Applications

Replaces Decade Box Precision Rheostat Precision Potentiometer
Precision Shunt Precision Multiplier

The Selectohm is a most useful, precision instrument for laboratory and service. It is directly calibrated to ohms from 0 to 100,000 and will hold its accuracy under powers up to 25 watts. The Selectohm is a real time saver in circuit design and for determining the value of blackened, burned out resistors when substituted in a circuit. The price represents a considerable value — approximately half the cost of comparable instruments.



MODEL 501—$9.00

DRY BATTERY TESTER

A counter type merchandising tester that indicates the condition of dry cells at a glance. The customer can see for himself. Boosts battery sales.

Model 471. Dry Battery Tester. Complete with Test Leads. Net $17.50.

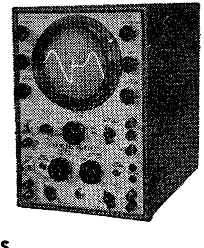
Tests 1½ Volt-10 Volt and 10 Volt to 150 Volt batteries under specified load. Big easy-to-read 5½" rectangular meter.

CHICAGO INDUSTRIAL INSTRUMENT CO.

CHICAGO 10, ILLINOIS

PRECISION

For Laboratory—Industrial—

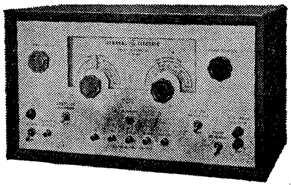


G-E OSCILLOSCOPE TYPE ST-2B

● Better high frequency response than any other scope in its field! Permits a choice of short, medium or long persistence CR tubes. Incorporates identical direct coupled vertical and horizontal amplifiers.

SPECIFICATIONS

Freq. Response—DC to 400 kc at 2db—Identical amplifiers
Sensitivity—AC 10 mv/in. rms—DC 28mv DC/in.
Low Capacity probe—freq. resp. 2 cycles to 400 kc at 2db
Sweep—Triggered or recurrent 2 cycles to 30 kc
Built-in Calibrator—0.1 to 300 volts peak to peak

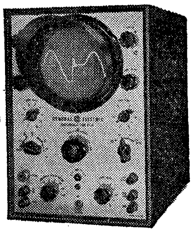


G-E SWEEP GENERATOR TYPE ST-4A

● This Variable Permeability Sweep is completely electronic, has no moving parts. Ideal for TV receiver maintenance, TV production and development laboratories, wide band amplifier study, transmission line impedance measurements.

SPECIFICATIONS

Freq. Range—Continuously variable, 4 to 110 mc; 170 to 220 mc
Sweep Width—Linear from 500 kc to greater than 15 mc
Output Voltage—Greater than 0.1 volts from 4 to 110 mc
Greater than 0.5 volts from 170 to 220 mc
Attenuation—Continuously variable down to 20 microvolts
Leakage—Stray field—less than 10 microvolts induced in 2 in. loop 6 inches from case in any direction
Phase Range Control—Greater than 360 degrees

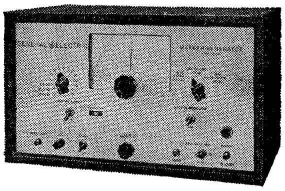


G-E OSCILLOSCOPE TYPE ST-2A

● Excellent for head-end position work. Unsurpassed for stability and fine trace. Delivers maximum sensitivity without sacrifice of frequency response. Use it to check hum, noise, distortion, modulation. Fits many applications where waveform study is essential.

SPECIFICATIONS

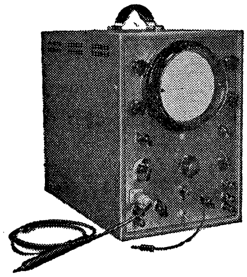
Vertical Frequency Response—20 cycles to 500 kc at 2db
Horizontal Frequency Response—10 cycles to 100 kc
Sensitivity—AC 15 mv/in. rms—DC 2 volts DC/in.
Low Capacity probe available—200mv/in. rms
Sweep—Hard tube sweep 10 cycles to 100 kc
Built-in Calibrator—0.3 to 300 volts peak to peak



G-E MARKER GENERATOR TYPE ST-5A

● Functions as a crystal referenced calibrator from 10 mc. to 300 mc. When used with the General Electric sweep generator, it provides a multiple of crystal controlled markers spaced 1.5 or 4.5 mc. apart . . . and can be used to supply a marker or markers at any frequency from 10 mc. to 900 mc.

TV APPLICATION—12 crystal controlled channel frequency picture markers plus an accurate hand calibrated VFO covering the range of 20 to 50 mc. makes this unit directly applicable to TV alignment problems.

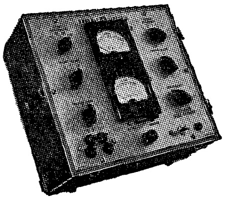


G-E OSCILLOSCOPE TYPE ST-2C

● A 5" scope for general purpose work. Particularly useful for maintenance of microwave installations and television stations. Wide frequency response without recourse to peaked amplifier coupling circuits, resulting in excellent transient response.

SPECIFICATIONS

Vertical Frequency Response—20 cycles to 3 mc
Horizontal Frequency Response—10 cycles to 100 kc
Sensitivity—75 mv/in. rms
Low Capacity probe available—Sens. 1 volt/in. rms
Sweep—Recurrent hard tube sweep 10 cycles to 100 kc
Built-in Calibrator—0.3 to 300 volts peak to peak



G-E GERMANIUM DIODE CHECKER TYPE ST-12A

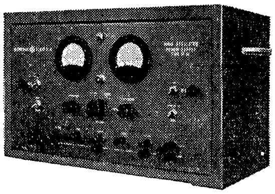
● For use in laboratories, quality control groups, service shops. Measures the static characteristics of diodes.

SPECIFICATIONS

Forward Ranges—Current—0.3, 1.2, 6 and 12 milliamperes full scale. Voltage—.3 and 1.2 volts full scale
Inverse Ranges—Current—60, 120, 300 and 1200 microamperes full scale. Voltage—3, 12 and 120 volts full scale.
Power requirements—105-125 volts, 50/60 cycle, approximately 10 watts

EQUIPMENT

TV Receiver and Broadcast Station Testing

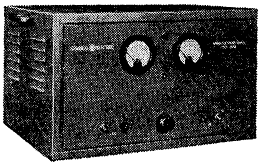


G-E DUAL REGULATED POWER SUPPLY TYPE ST-9A

● Has twin outputs and features electronic overload protection. Instruments cannot be harmed by short circuits on the regulated outputs. Built-in modulator permits observation of hum and noise tolerances by duplicating them on the equipment.

SPECIFICATIONS

#1 Regulated—Continuously variable, 0-500 volts, maximum current 100 ma. **#2 Regulated**—Same as #1
Parallel #1 and #2—Continuously variable, 0-500 volts, maximum current 150 ma
Unregulated—Approx. 650 volts no load, max. current 200 ma
—75 Volts—VR tube regulation, 0-2 ma
—150 Volts—VR tube regulation, 0-4 ma
Filament Supply—6.3 volts a-c at 10 amps
Regulation—Better than ½% +½ volt
Ripple and Noise—Less than 10 mv p to p on all regulated outputs

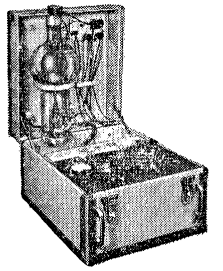


G-E POWER SUPPLY TYPE YPD-2

● A high-quality, electronically regulated unit designed for use in laboratories, broadcast stations, and wherever a closely regulated variable DC voltage source at medium current consumption is required. DC output 250 to 450 volts (positive or negative may be grounded to the chassis), current output 0 to 300 milliamperes max.

SPECIFICATIONS

DC Voltage Output—250-450 volts, (positive or negative may be grounded to chassis)
DC Current Output—0-300 milliamperes
AC Output—6.3 volts 10 amperes unregulated
Regulation—Less than 1% from minimum to maximum current
Ripple—Less than 5 mv peak to peak
Output Impedance—Approximately 2 ohms at 30 cycles, decreases with increasing frequency

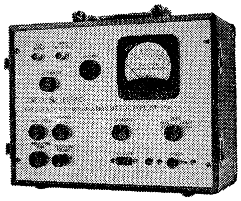


G-E INDUSTRIAL TUBE ANALYZER TYPE YTW-3

● This portable equipment is designed so that non-technical personnel can quickly and efficiently determine the performance of mercury vapor and gas rectifier tubes by measuring the arc drop voltage under load.

SPECIFICATIONS

Peak Current Range—1 amp.—100 amp.
Filament Voltage Range—High Range (4-7V). Low Range (2-3.5V).
Arc Drop Measurement Accuracy—±2%.
Operating Temperature Reading Accuracy—±5% at 38°C.
Tube Complement—2 Type 502A, 1 Type VR-105, 1 Type 5Y3GT, and 1 NE-17.
Ambient Temperature—0°—35° Centigrade. (Tubes would not reach operating temperature in ambient temperature below 15° without heat retaining cover.)



G-E FREQUENCY & MODULATION METER TYPE ST-13A

● Quality FM Communications meter. Gives hairline accuracy plus provision with oven accessories for future split-channel adjustments. Measures both carrier frequency displacement and modulation. Accessories include an External antenna mount and cable.

SPECIFICATIONS

Frequency Ranges—One or two specified frequencies in the following ranges: 25 mc to 50 mc, 72 mc to 76 mc, 148 mc to 174 mc
Reference Oscillator Accuracy—.001% from 32°F to 122°F. External connection, internal wiring and a socket are provided for 6 V oven operation where wider temperature range with greater accuracy is required.
Inputs—Eighteen-inch collapsible whip antenna and fifty-ohm BNC connector.
Outputs—Low and high RF outputs for receiver alignment.
Power—Internal batteries

G-E RADIATION MONITOR TYPE ST-4SN11A3

● Compact, easy to use. Infinite shelf life, no tubes, no batteries to wear out. Self-charging, high sensitivity 0 to 20 mr. Accuracy 10% of radium calibration. Essentially independent of radiation energy over a wide range.

WRITE FOR *FREE* CATALOG!

Your copy will be sent on request. Section 393, General Electric Company, Electronics Park, Syracuse, N.Y.

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MEASURING
EQUIPMENT
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Radio TRIPLETT Testers

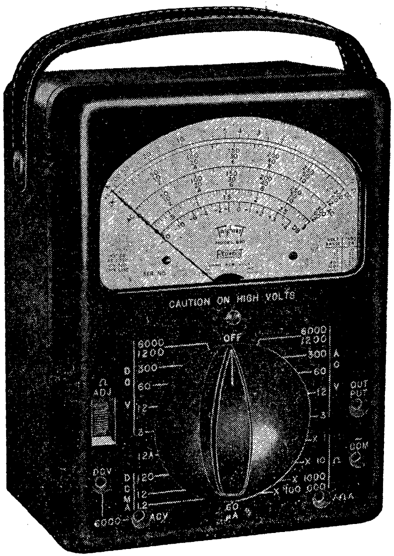
MODEL 630 VOLT-OHM-MIL-AMMETER

RANGES

D. C. VOLTS: 0-3-12-60-300-1200-6000, at 20,000 Ohms/Volt
(For greater accuracy on TV and other High Resistance Circuits.)
A. C. VOLTS: 0-3-12-60-300-1200-6000, at 5,000 Ohms/Volt
(For greater accuracy in Audio and other High Impedance AC Circuits.)
DB.: —30, +4, +16, +30, +44, +56, +70
(For Direct Reading of Output Levels.)
D. C. MICROAMPERES: 0-60, at 250 M. V.
D. C. MILLIAMPERES: 0-1.2-12-120, at 250 M. V.
D. C. AMPERES: 0-12, at 250 M. V.
*OHMS: 0-1000-10,000 (4.4-44 at center scale)
*MEGOHMS: 0-1-100 (4400-440,000 Ohms center scale)
OUTPUT: Condenser in series with AC Volt ranges.

*Resistance ranges are compensated for greatest accuracy over wide battery voltage variations. Series Ohmmeter circuits for all ranges to eliminate possibility of battery drain when leaving switch in OHMS position.

Streamlined Tester with large 5½″ meter, flush with the panel. Unit construction—Resistors, shunts, rectifier, batteries—all housed in a molded base integral with the switch. Provides direct connections without cabling. Simple to operate—only one switch, flush with panel surface, selects both circuit and range. Special 1% resistors are sealed in molded compartment. Batteries easily replaced—Balanced double-spring tension grip makes this operation simple. Assures permanent contact. Precalibrated rectifier for easy replacement.



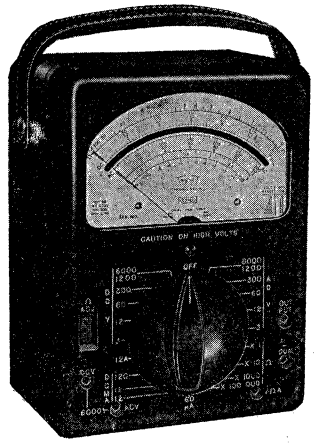
Model 630

Enclosed selector switch of molded construction keeps dirt out. Retains contact alignment permanently. A Triplett design representing the culmination of a quarter-century of switch making experience.

This Volt-Ohm-Mil-Ammeter incorporating a 5½″ instrument with 4⅜″ scale, has RED ● DOT Lifetime Guarantee. Dial has black markings on white except AC and OHM are red. A completely insulated, molded, black case, 3$\frac{7}{32}$″ x 5½″ x 7½″, and panel with engraved white markings. Leather strap handle.

Weight: 4 lbs.

MODEL 630. U.S.A. DEALER NET $39.50



Model 630-A

MODEL 630-A WITH MIRROR SCALE

A laboratory-type Volt-Ohm-Mil-Ammeter with mirrored scales and greater accuracy made possible through the use of special ½% resistors. The long scales are mirror-scaled for greater accuracy.

Model 630-A has the same ranges and other advanced design features as Model 630 described above.

Weight: 4 lbs.

MODEL 630-A. U.S.A. DEALER NET $49.50

CARRYING CASES For Models 630 and 630-A

CARRYING CASE MODEL 639-P, black leather, has adequate space for Model 630 or 630-A, instructions and accessories. Padded lining of ⅜″ sponge rubber. Strong leather strap handle.

MODEL 639-P. U.S.A. DEALER NET $13.50

CARRYING CASE MODEL 639, black leather, strap handle. Adequate space for Model 630 or 630-A, instructions and accessories.

MODEL 639. U.S.A. DEALER NET $8.50

MIRROR SCALE VOLT-OHM-MIL-AMMETER

Widest range tester of its type with additional brand new features: Long 5″ mirror scale for better reading accuracy; Resistance ranges to 40 Megohm; Low Ohm Range 0-2000 (12 ohms center scale); D. C. Volt ranges with dual sensitivity (10,000/20,000 Ohm/Volt) provide double the number of full scale readings of average testers. A. C. Volt ranges at 10,000 Ohm/Volt permit checking many audio and high impedance A. C. circuits where a vacuum tube voltmeter usually is required. Low voltage ranges permit direct measurement of many bias and output voltages. Special film type resistors provide greater stability on all ranges.

6″ RED ● DOT Lifetime guaranteed meter. Long mirror scale guarantees greater reading accuracy. Insulated, black molded case with removable strap handle, 2½″×5½″×6″. Molded black panel with white markings. Leads and instructions furnished.

Weight: Approx. 3 lbs.

39 RANGES

D. C. VOLTS: 0-1.25-5-25-125-500-2500, 20,000 Ohm/Volt
0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt
A. C. VOLTS: 0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt
D. C. MICROAMPS: 0-50, at 250 Millivolts
D. C. MILLIAMPS: 0-1-10-100-1000, at 250 Millivolts
D. C. AMPERES: 0-10, at 250 Millivolts
OHMS: 0-2,000-200,000 (12-1200 center scale)
MEGOHMS: 0-40 (240,000 ohms center scale)
DECIBELS: —30, +3, +15, +29, +43, +55, +69.
(Reference level "0" DB at 1.73 V. on 500 Ohm line.)
OUTPUT: Condenser in series with A. C. Volt ranges

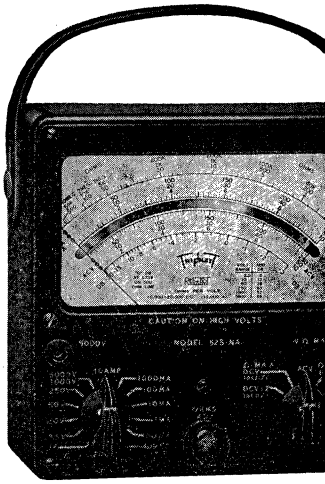
Accessories available to special order for extending ranges: External pin jack shunts for D.C. Current ranges, resistors for A.C.-D.C. volt ranges.

MODEL 625-NA. U.S.A. DEALER NET $49.50

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place.

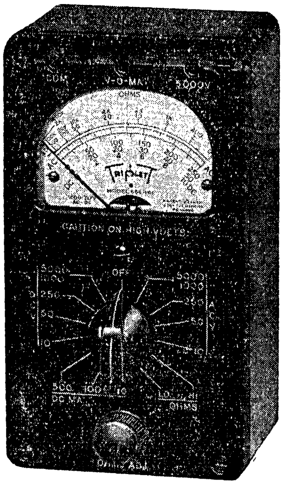
MODEL 629 CASE. U.S.A. DEALER NET $6.50



Model 625-NA

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers



Model 666-HH

POCKET-SIZE VOLT-OHM-MILLIAMMETER

A precision-manufactured marvel of compactness that provides a complete miniature laboratory for D. C. and A. C. voltage, Direct Current and Resistance analyses. Its many ranges, attractive appearance and other unique features provide an answer to the Volt-Ohm-Milliammeter requirements of radio service-men and amateurs, industrial engineers, laboratory technicians, etc. Refinements in design feature:

Greater scale readability on the 3″ RED • DOT Lifetime guaranteed instrument with black and red scale markings.

Simplified switching provides greater ease in changing ranges.

Lower jack contact resistance and trouble-free plug-in connections by use of banana-type jacks. Banana jacks at top of panel reduce possibility of connecting leads over panel controls or meter scales.

Greater stability on voltage ranges by use of special resistors throughout and on current ranges by use of 250 M. V. instrument.

RANGES

D. C VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt

A. C. VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt

D. C. MA: 0-10-100-500, at 250 Millivolts

OHMS: 0-2000-400,000 (12-2400 center scale)

Attractive new streamlined black molded case, completely insulated, 3$\frac{1}{16}$″×5⅞″×2$\frac{9}{16}$″. Black molded panel with white markings. Battery self-contained, plug-in type, 1.5 V. Eveready No. 935 or equivalent. 50″ test leads with clips and plugs furnished.

Weight: 1½ lbs.

Accessories available to special order for extending ranges: External pin jack shunts for Direct Current ranges, resistors for A.C.-D.C. volt ranges, battery and resistors for Ohms ranges.

MODEL 666-HH. U.S.A. DEALER NET $24.50

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place.

MODEL 669 CASE. U.S.A. DEALER NET $5.50

POCKET-SIZE VOLT-OHM-MIL-AMMETER

RANGES

D.C. VOLTS: 0-10-50-250-1000-5000, at 1000 Ohms per volt

A.C. VOLTS: 0-10-50-250-1000-5000, at 1000 Ohms per volt

D.C. M.A.: 0-10-100, at 250 M.V.

D.C. AMP.: 0-1, at 250 M.V.

OHMS: 0-3000-300,000 (20-2000 center scale)

MEGOHM: 0-3 (20,000 Ohm center scale) (Compensated Ohmmeter circuit.)

A New Pocket-Size Volt-Ohm-Mil-Ammeter with these latest specialized features meet your needs for A.C. and D.C. Voltage, Direct Current and Resistance analyses.

Enclosed selector switch of molded construction keeps dirt out. Retains contact alignment permanently. A Triplett design representing the culmination of a quarter-century of switch making experience. UNIT CONSTRUCTION—All resistors, shunts, rectifier and batteries housed in a molded base integral with the switch. Eliminates chance for shorts. Direct connections. No Cabling. All precision film or wire-wound resistors are mounted in their own compartment—assures greater accuracy.

3″ 0-200 Microammeter, 250 M.V., RED • DOT Lifetime guaranteed against defects in materials or workmanship. Red and black markings on a white background. Easy-to-read scale.

Precalibrated rectifier unit and batteries easily replaced. One 1.5 Volt Eveready #935 and two 1.5 Volt Eveready #915, or equivalent, self-contained.

Handy and pocket-size, black molded case is completely insulated. Size: 3$\frac{1}{16}$″x5⅞″x2$\frac{9}{16}$″. Leather strap handle. Black molded panel with engraved white markings.

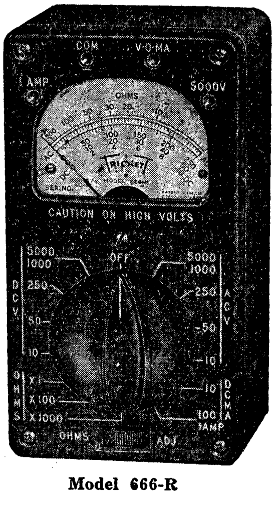
Furnished complete with batteries, 50″ test leads and instruction book at an amazingly low price.

Weight: 1½ lbs.

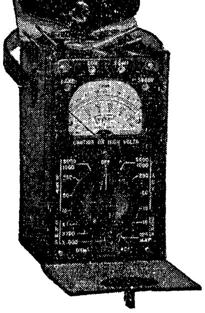
MODEL 666-R . U.S.A. DEALER NET $26.50

CARRYING CASE

MODEL 669, black leather strap handle, snap cover. . . . U.S.A. DEALER NET . . . $5.50



Model 666-R



Model 666-RL

PORTABLE VOLT-OHM-MIL-AMMETER

This is the popular Model 666-R in camera-type black leather case, particularly designed for anyone who wants a completely portable instrument readily accessible for instant use. Among those who like this style are maintenance and repairmen whose work requires equipment with an accent on portability. With the tester hung up by the leather strap handle, the operator is permitted the use of both hands in his work and the tester is kept within easy reach.

When the case is opened, the lower front flap drops down and the top folds back, exposing the entire tester panel and meter dial so that readings can be taken easily from clear, legible black and red markings on the meter dial. Only one switch adjustment is needed to select the range for any A.C. or D.C. Voltage up to 5000, at 1000 Ohms per volt; Direct Current from 0 to 100 Ma. and 1 Amp. The completely enclosed selector switch of molded construction keeps dirt out and retains alignment permanently. Unit construction whereby all resistors, shunts, rectifier and batteries are housed in a molded base provides direct connections, eliminating chances for shorts.

All precision film or wire-wound resistors are mounted in their own compartment assuring greater accuracy.

RANGES AND OTHER TECHNICAL DATA ARE THE SAME AS FOR MODEL 666-R LISTED ABOVE.

MODEL 666-RL. U.S.A. DEALER NET $32.50

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Radio TRIPLETT Testers

TUBE TESTER

A Triplett Tube Tester with new improved testing flexibility permitting checking any type radio receiving tube, miniature hearing aid tubes, pilot lamps, flashlight bulbs and TV picture tubes. The tester gives both "short" and "open" circuit check of each element of every tube — an accurate analysis of the condition of all tube elements, connections, taps, etc. TV picture tubes are checked without removing them from the receiver, by use of an adapter that may be purchased separately. "Continuity" test is provided for checking electrical appliances, motors, etc.

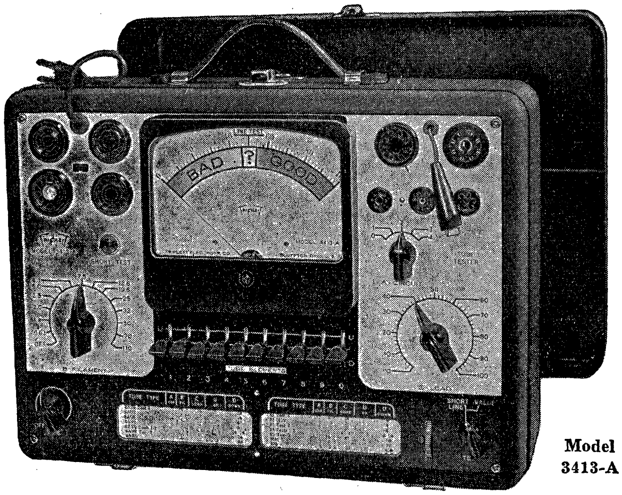
Model 3413-A has flexible 3-position lever switches for complete coverage of present and future tube connections. RMA pin numbering of tube element levers makes for quick reference of tube base connections. Illuminated, easy-to-read roll type tube chart is built into the tester. Simplified test procedure makes it possible for user to add new tube data to chart when desired.

Line Voltage indication on center of meter dial permits observation and adjustment for line fluctuations. Filament voltage: 0.63 volts to 110 volts in 14 steps.

Large 6″ meter, RED ● DOT Lifetime guaranteed, has 3-color easy-to-read GOOD—?—BAD scale.

Portable metal case, 15 11/32″ x 11 1/32″ x 6⅛″, black satin wrinkle finish, with removable, hinged cover and leather handle. Panel attractively etched in black, silver and red. Complete instructions supplied. Power: 115 V., 50-60 cycle A.C. Wt. 20 lbs.

MODEL 3413-A . . U.S.A. DEALER NET . . $79.50



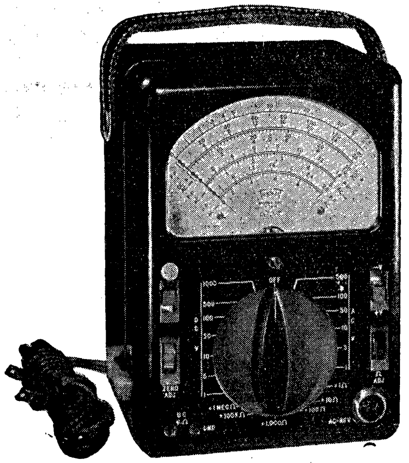
Model 3413-A

PICTURE TUBE ADAPTER

BV Adapter T2247-BV for 3413-A permits testing picture tube right in the receiver or in a shipping carton . . . Dealer Net $7.90

ENGINEERED FOR RADIO, TV, INDUSTRIAL, ELECTRONIC LABS & MAINTENANCE

READS PEAK TO PEAK VOLTAGE DIRECTLY FROM 15 CPS TO 110 MC.



32 RANGES

D.C. VOLTS: 0-1-5-10-50-100-500-1000

A.C.-R.F. VOLTS: 0-1-5-10-50-100-500

PEAK to PEAK VOLTS: 0-2.8-14-28-140-280.

OHMS: 0-1000-10,000-100,000

MEGOHMS: 0-1-100-1000

ACCURACY: D.C. Volts=3%, A.C.-R.F. Volts=5%, ohms=3% of linear scale.

DECIBELS: Tabled in instruction book for different impedances.

Galvanometer Center mark "—0+" for discriminator alignment on all DCV ranges —.5 to +.5 volts on 0-1 DCV range.

MODEL 650 OUTSTANDING FEATURES

1—Peak to Peak ACV and RF measurements made with one probe eliminates troublesome change of probe when changing from ACV to RF measurement. 3—ONE selector switch for all ranges. 4—One volt full scale reading on both AC and DC. 5—Especially designed and insulated, but still shielded RF probe with short leads for high frequency measurements. 6—Zero center mark for FM discriminator alignment plus other Galvanometer measurements. 7—High input impedance 11 Megohms on DC for accurate measurements. 8—Special means for making adjustment for ACV zero shift with line voltage variation. 9—High precision resistors throughout. 10—Special circuit arranged so that OFF position shorts meter for greater damping and meter safety during transportation. 11—RED ● DOT Lifetime Guaranteed meter, 2-color scale 4⅜″ long.

Insulated molded case and panel, dimensions, 3¾″x5½″7½″. Removable black leather strap handle. Wt. 5 lbs. (complete with battery and accessories).

Accessories supplied with 650: 1 each AC Power Cord, DC Volt-Ohm lead (Shielded); AC-RF Volt shielded tube probe; 2 alligator clips for probe tips.

MODEL 650 USA DEALER NET $69.50

ACCESSORIES AVAILABLE: DC High Voltage Probe: 50 KV-500 DC Volt range, 10 KV-100 DC Volt range, 5 KV-50 DC Volt range, $14.50; Stand for holding tester at about a 45° angle, $.50 net.

CARRYING CASE MODEL 659, black leather strap handle.

USA DEALER NET $9.50

CARRYING CASE MODEL 659-P, black leather, lined with ⅜″ sponge rubber. Strap handle. USA DEALER NET $14.50

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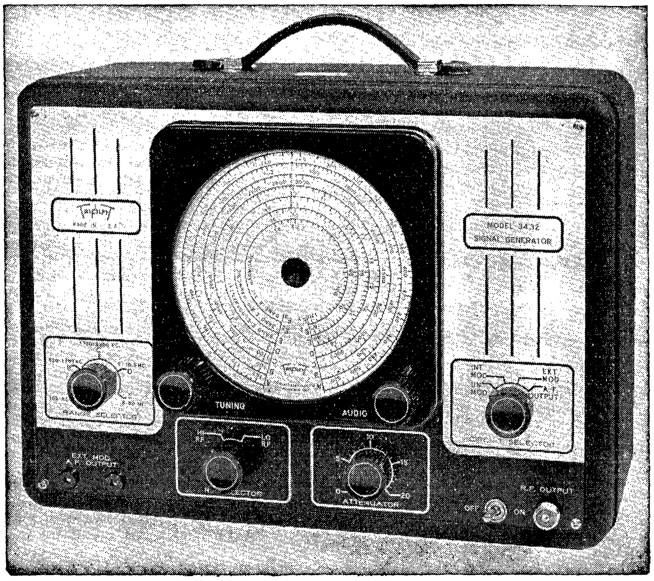
Radio TRIPLETT Testers



Model 3432

RANGES

A—165-525 KC
B—500-1750 KC
C—1700-6200 KC
D—6-18.5 MC

E—18-40 MC
Harmonics to 120 MC
E2—36-80 MC
E3—54-120 MC

TEST OSCILLATOR

A wide-range oscillator with uniformly illuminated dial. Seven long scales with widely separated divisions easily read, have five fundamental ranges—165 KC to 40 MC, and two harmonic ranges directly calibrated 36 to 120 MC.

Unique new feature is the brightly illuminated dial providing distinct illumination of scale markings without the least possibility of glare. Lighting also provides an "ON-OFF" indicator.

The dial is big (330°) with seven scales quickly readable at a glance. It has 10 to 1 ratio vernier tuning for ease of adjustment.

RANGE SELECTOR — 5 position follow-up coil switching with complete shielding.

R. F. SELECTOR — Provides High and Low R. F. Output.

OUTPUT ATTENUATOR — Provides fine control of R. F. Output to Coaxial output cable connector.

CIRCUIT SELECTOR — Provides for internally modulated signal (Variable 0 to 100% at 400 cycles). Variable amplitude of external modulation 40 to 15,000 cycles, unmodulated signal or variable audio 0-10 Volts at 400 cycle.

DOUBLE SHIELDING—All R. F. and audio circuits are double shielded with copper plated steel shields.

Metal case, 15$\frac{11}{32}$″×11$\frac{1}{32}$″×6¼″, with black enamel finish. Has leather strap handle for ease in carrying. Power: 115 volt, 50-60 cycle A. C. (electrostatic shielded transformer).

Weight: 14½ lbs.

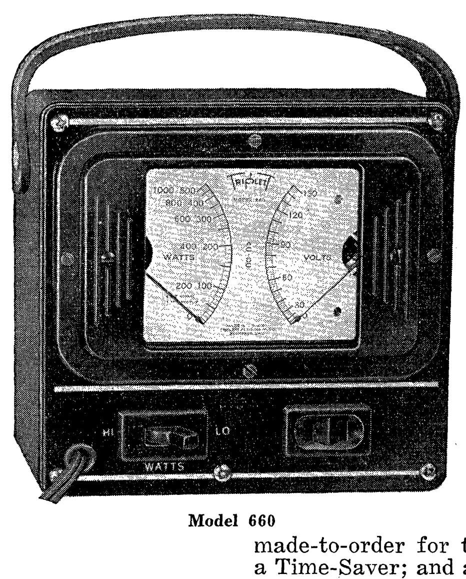
MODEL 3432 . . . U.S.A. DEALER NET . . . $79.50

RADIO & TV SERVICING WITH LOAD-CHEK

RANGES

WATTS—AC or DC:
0-500 (50 division scale)
0-1000 (50 division scale)
VOLTS—AC or DC:
0-150 (65 division scale)

The LOAD-CHEK for the first time makes it possible for every technician to utilize what is perhaps the simplest and quickest of all service methods—servicing by Power Consumption Measurements, long proven by auto-radio servicemen as a rapid method of localizing troubles in auto radios. Triplett Model 660 is the first Wattmeter to be produced at moderate cost, and with the proper ranges, to bring this short-cut method within the reach of every radio and TV serviceman.



Model 660

Following are only two of many time-saving uses of this new instrument:

Locating A Short—The chassis tag may show a normal consumption of 225 Watts. Simply plug the power cord of the chassis into LOAD-CHEK (no loose ends to connect or be in the way). Note the reading—which should be possibly 350 Watts. By removing the rectifier tube you can determine at once which side of the tube the short is on. With a soldering iron and long-nosed pliers you can check through the chassis, locate and correct the trouble without having to lay down tools or to check with lead wires!

Replacing Burned-Out Resistors—With the chassis to be repaired plugged into a LOAD-CHEK MODEL 660, note the wattage reading with the burned out resistor circuit open. Now replace the resistor. Should the increase in watts be greater than the resistor rating, it indicates an extra load has caused the trouble which has not been cleared. LOAD-CHEK is made-to-order for the busy serviceman because it's a Time-Saver; and at its moderate cost can be standard equipment on every service bench.

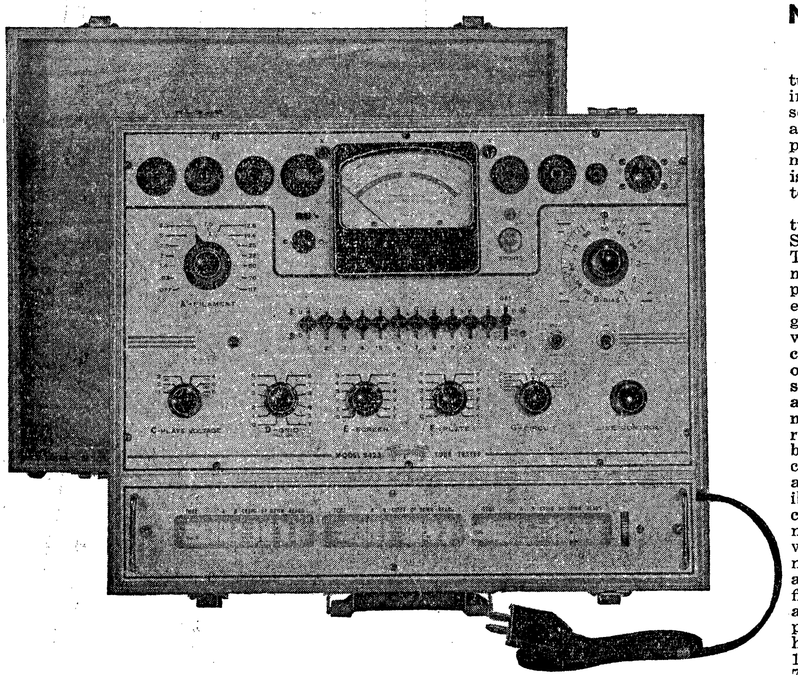
Red • Dot Lifetime Guaranteed Meter.

Black, molded, insulated case, 2½″ x 5½″ x 6″, with removable black leather strap handle. Black molded panel with white markings. Wt. — 2 lbs.

MODEL 660 . . U.S.A. DEALER NET . . $29.50
Model 629 Leather Carrying Case
U.S.A. DEALER NET $ 6.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers



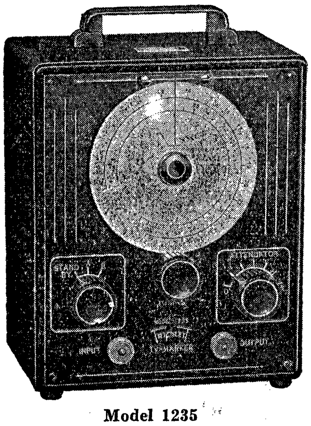
Model 3423

NEW MUTUAL CONDUCTANCE TUBE TESTER

Here is Proportional Mutual Conductance tube testing by a new patented circuit—offering advantages hitherto unavailable to the service trade. The right Tube Tester for TV and Radio Tubes. The circuit provides the true proportional relationship to the Gm curve for measuring in Micromhos the tube characteristics. Diodes and low power thyratrons are tested on the GOOD-?-BAD scale.

This new tester handles the most perplexing tube testing problems in many fields—Radio Servicing, Industrial Production, Laboratory Testing, Theatre and P.A. Equipment, Communications, etc. Patented circuit for Proportional Mutual Conductance tube testing employs actual signal oscillator (4KC) for grid signal. Thus, hum and ripple, and tubes with open grids present no problem, and cannot give false readings. Signal component of output is picked off and measured by the specially designed instrument circuit. Tests all types of receiving tubes, low power transmitting tubes, rectifiers, thyratrons, voltage regulator tubes, eye tubes, subminiature, acorn, ballast tubes and pilot lamps. Continuity test circuit also may be used to check electrical appliances for shorts or open circuits. Flexible three-position lever switches for complete coverage of both present and future tube connections. Only three positions mean no guess work on settings. Speed and ease of operation marks use of the tester. 0-10 ACV (variable) available for testing low voltage tubes. Also five other voltages available. (10, 30, 70, 100 and 250). Full range filament voltage settings provides complete and accurate filament or heater voltage at tube base connections: .63, 1.4, 2.0, 2.5, 5, 6.3, 7.5, 12.6, 19.6, 25, 32, 50, 70, and 117 volts. Instrument is Model 420, 4" long scale, knife edge pointer for easy readability; adjusted to 100 microamperes at 250 millivolts for good temperature compensation. Sockets: 4 prong, 5 prong, 6 prong, 7 prong large and small with combination for pilot lights and flashlight bulbs, 8 prong octal, 8 prong loctal, 7 prong miniature, 7 pin subminiature (for hearing aid tubes), 8 pin subminiature (round), 8 pin acorn, 9 pin subminiature. Wt. 21 lbs.

MODEL 3423 . . . . U.S.A. DEALER NET . . . $199.50



Model 1235

ABSORPTION TV-IF MARKER

Frequency Coverage:
9.5 to 50 MC in two bands.

Triplett first to provide:
Control over amplitude of Marker dip.

Standby feature. Removed from circuit by merely turning switch.

Other special features:
May be used with any type Sweep Generator.

Two tuning ranges providing complete coverage of all present TV-IF frequencies and ample provision for the future.

Designed as companion unit for 3435 Sweep Generator.

Although designed as a companion unit for Triplett Model 3435 Sweep Signal Generator, it can be used with any Sweep Generator as an external Marker. There are no complications in use, for connection is made quickly and easily through a panel connector. A standby switch is provided for temporary silencing of Generator during other work on equipment under test. Attenuation—continuously variable from 0 to maximum of Marker dip.

Copper plated steel construction throughout. Large 4" dial has two easy-to-read scales etched on the dial.

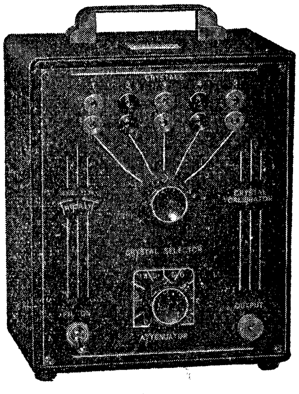
Metal case, with black suede enamel finish, 7⅞" x 6⅝" x 4½". Metal handle. Copper plated feet for improved grounding when working over metal work bench top. Panel is black and red etched on aluminum.

Accessories—Co-Axial cable for low-loss connection to Sweep Generator. Coaxial cable for connection to test setup.

Power: None required. Weight: 4 lbs.

MODEL 1235 . . . . U.S.A. DEALER NET . . . $29.50

NEW CRYSTAL MARKER



Model 1236

Frequency Coverage:
Up through 19 MC on crystal (fundamentals)
Up through 216 MC on crystal (harmonics)
(Crystals not included.)

Model 1236 provides Marker frequencies of crystal controlled accuracy for TV, IF or RF requirements. By purchasing ONLY those crystals needed for a particular TV service area and the most-used IF frequencies, this new unit provides utmost Marker accuracy and offers a speedy selection of the desired crystal-controlled signal.

This Marker saves plenty of time in checking band-pass characteristics of curves — simply throw the switch to the desired crystal — eliminating delays resulting from constant tuning and retuning required in the use of variable markers. Signals for the most accurate and fastest means of aligning local oscillators in TV receivers and many other applications. When using a 1 MC crystal, Model 1236 becomes a standard for checking other signal generators or receivers.

Designed as a companion unit to Triplett 3435, it receives its power by plugging into a panel jack in the Sweep Generator.

Attenuation—Low impedance single control T-pad attenuator, continuously variable. Shielding—Copper plated steel construction throughout. Stability—Increased by use of latest high-frequency techniques.

Metal case, black suede enamel finish, 7⅞" x 6⅝" x 4½". Metal handle. Copper plated feet. Silver, black, and red etched aluminum panel.

Accessories — Coaxial cable for low-loss connection to Sweep Generator.

WEIGHT: 3¾ lbs.

MODEL 1236 . . . . U.S.A. DEALER NET . . . $24.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

TV-FM SWEEP SIGNAL GENERATOR WITH BUILT-IN MARKERS

HARMONICS SUFFICIENT FOR SERVICING UHF RECEIVERS

FREQUENCY COVERAGE

Sweep Center Frequency: Range 1- 0- 60 MC
Range 2- 60-120 MC
Range 3-120-240 MC

Sweep Width: .1-12 MC (Continuously Variable)

Marker Frequency:
3.5- 4.9 MC (Fundamental)
19.5-29.3 MC (Fundamental)
29 -48.6 MC (Fundamental)
48.6 MC to 241 MC on Harmonics

Crystal Frequency: To 20 MC (Fundamental) Can be used to produce Harmonics up to 216 MC. (Plug-in Crystals not included.)

Modulation: 600 Cycle on Both Crystal and Marker frequencies.

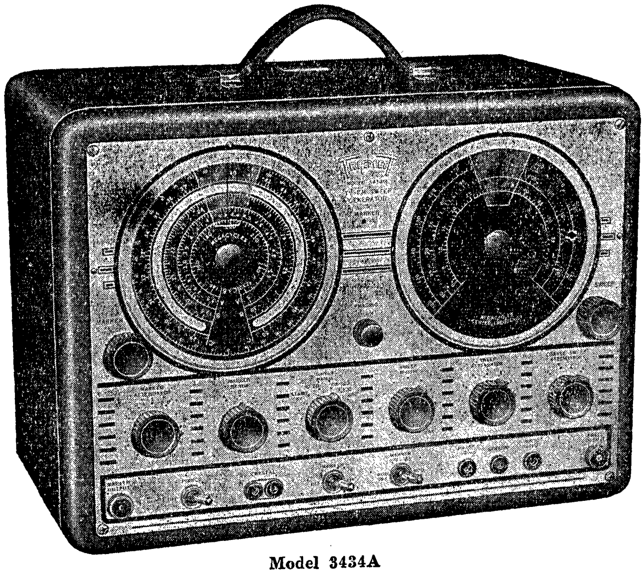
Audio: 600 Cycles.

Model 3434-A provides a complete service laboratory for TV-FM servicing and other electronic requirements. No gaps in frequency. Continuous tuning over all TV-FM bands. Provisions for simultaneous presentation of two Markers. Audio output for quick check on video and sound amplifiers. Ladder type attenuator for coarse and fine output adjustment. Provision for simultaneous presentation of Crystal and Variable Markers. Illuminated, mirror-scaled Marker dials for precise adjustment. Smooth action dial drive with vernier scale. Balanced network for balanced input receivers. Sweep standby switch for temporary silencing of Generator during other work on equipment under test. Line filter. Regulated power supply. Completely shielded. Copper plated steel construction throughout.

Attractive steel case, black enamel finish, 15$\frac{11}{32}$" x 11$\frac{1}{32}$" x 8¼". Copper plated feet for improved grounding. Leather handle. Black, white and red etched markings on aluminum panel. Accessories — Two Co-Axial cables; heavy braid grounding strap; Polystyrene covered, shielded leads for audio, Phase 60 cycle output and additional ground.

Power: 105-115 volt, 50-60 cycle, 55 Watts.

MODEL 3434-A—U.S.A. DEALER NET . . . Wt. 23 lbs. $199.50



Model 3434A

A FEW REASONS YOU'LL WANT MODEL 3434-A

★ Output 1. to 1.5 Volts.
★ Continuously variable sweep width from 100 KC to 12 MC.
★ Illuminated Frequency dial marked with channels and frequencies.
★ Variable Marker provides continuous tuning over all present TV Video and Sound IFs. Illuminated Mirrored dial.
★ Designed to provide HIGH OUTPUT for stage-by-stage alignment.
★ Self-contained Horizontal Bar Generator covers all channels on Marker Harmonics.

MODEL 3441 TV-FM OSCILLOSCOPE

Push-Pull vertical and horizontal output amplifiers.

VERTICAL AMPLIFIER—Response usable beyond 4.0 MC. Shows a 300 KC square wave with no distortion. Two frequency response ranges with four-range compensated attenuator.

SENSITIVITY: .01 RMS Volts/Inch with switch in 2 MC position.
.02 RMS Volts/Inch with switch in 4 MC position.

HORIZONTAL AMPLIFIER—Frequency Range
Flat within ±20% from 20 Cycle to 150 KC. Deflection Sensitivity—.15 RMS Volts/Inch.

INPUT IMPEDANCE—Vertical Amplifier
2 Megohms in parallel with 20 MMF. with low capacity probe.
2 Megohms in parallel with 45 MMF. at input terminals.

CALIBRATING METER (ILLUMINATED)—Reads peak to peak voltages from 0 to 1000 Volts in 8 ranges, the low range being 0-0.3 volt peak to peak. Reading peak to peak voltages with Triplett Model 3441 makes it possible to view the percentage of positive and negative; plus reading peak to peak voltage direct. Where reading peak to peak voltage on a VTVM only peak to peak voltage is known.

PHONE JACK is on front panel connected to the output of the vertical amplifier so you can hear as you see. This makes a convenient way to familiarize the visual pattern with the familiar audio sounds. Having a high gain amplifier system available also is ideal for tracing audio circuits and checking for noisy components.

LINEAR TIME BASE—10 CPS to 60 KC/Second linear, available at panel.

TUBE COMPLEMENT—5UP1, 2-7A5, 5Y3, VR150, 6AC7, 12AT7, 3-6SN7, 2X2. Total 11. Wide frequency range provide for Television servicing requirements.

Phased 60 CPS horizontal sweep and return trace eliminator for use with Sweep Generators.

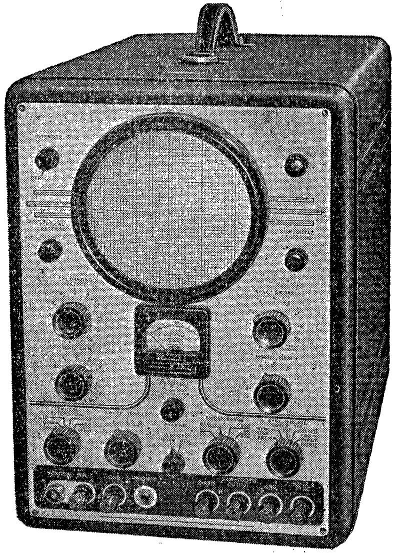
Synchronizing and horizontal Sweep Selector combined in same control for simplicity in operation.

CASE—Metal, with black suede enamel finish, 15$\frac{11}{32}$" x 11$\frac{1}{32}$" x 16". Leather handle. Metal feet for improved grounding.

PANEL—Black, red and white characters etched on aluminum.

ACCESSORIES—Two Co-Axial leads for Vertical Input. Rubber covered leads to plug into Binding Post. Low capacity probe.

POWER—105-115 Volts, 50-60 Cycles, 80 Watts. Wt.: 38 lbs.



Model 3441

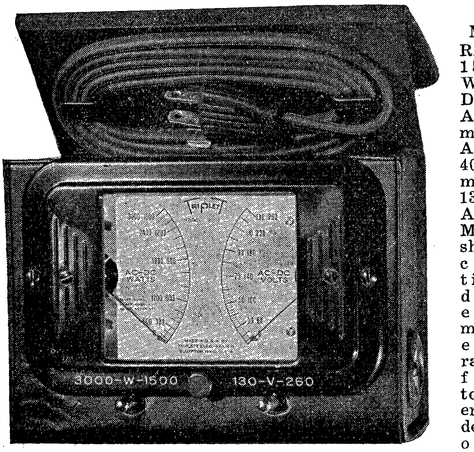
MODEL 3441 U.S.A. DEALER NET $199.50

No. 9989 CRYSTAL (Demodulating or Signal Tracing PROBE, for use with MODELS 3441 or 3440. U.S.A. DEALER NET $9.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers

APPLIANCE TESTERS



Model 2002

Model 2002
RANGES: 0-1500-3000 Watts AC-DC at 10 Amp. normal, 20 Amp. Max., 40 Amp. momentary; 0-130-260 Volts AC-DC.

Model 2002 shows power consumption of industrial equipment, radios, electric ranges, refrigerators, washers, etc., under actual operating conditions, on either DC or AC between 25 and 133 cycles. Wattmeter on the left and Voltmeter on the right permit Watts and Volts to be read simultaneously or independently. Shows if voltage remains within limits under operating loads. Shows faulty power lines. Heavy inner construction. Heavy leather case, with snap cover and leather handle, 6½" x 4½" x 3¼". Storage space for cord and plug furnished. Weight 2 lbs.

MODEL 2002 . . . . U.S.A. DEALER NET $39.50

MODEL 2006

RANGES 0-25 AC-DC Amperes: 0-130-260 AC-DC Volts.

Model 2206 is designed for those who prefer the Voltmeter-Ammeter method of testing electric ranges, refrigerators, washers and other household appliances, plus many industrial uses. Simultaneous readings of line voltage and current drain. Compact, portable, heavy leather case, with strap handle, 6½" x 4½" x 3¼". Adequate storage space for cord and plug furnished. Weight 2 lbs.

MODEL 2006 . . . . U.S.A. DEALER NET $34.50

VU METER DB METER

Volume Unit and Decibel Meters are used to measure sound or noise levels in amplifiers for Public Address, Theatres, Broadcasting Studios, Broadcasting Static Equipment, etc.

VU Meters are used for volume level measurements—including broadcast monitoring. Ballistic characteristics comply with standardization recommendations of NBC and CBS and Bell Telephone Laboratories. Internal impedance 3900 Ohms. Steady state reference 1 Milliwatt. For 600 Ohm line. Dynamic characteristics provide for 99% full scale deflection in .3 seconds. Specify scale type when ordering:

Type "A": 0-100 (black) -20 to +3 VU on top arc (red).
Type "B": 0-100 (black) -20 to +3 VU on bottom arc (red).

	Net Price
Model 420 VU	$16.50
Model 420 VU (Illuminated)	18.00
Model 426 VU	16.50
Model 426 VU (Illuminated)	18.00
Model 327-T VU	15.50
Model 327-T VU (Illuminated)	17.00

DB Meters permit the operator of public address systems, etc., to make instant adjustments to prevent sound blasting or distortion. General purpose type reads up 6 and down 10 decibels. Zero decibel = 1.73 Volts. Calibrated for use on a 500 Ohm line. Reference level 6 Milliwatts. Resistance: 5000 Ohms. They consist of a sensitive D.C. instrument coupled to a copper-oxide rectifier. Standard damping is provided unless highly damped instruments are specified. Quotation on request.

	Net Price
Models 321-T or 327-T	$12.40
Models 321-T or 327-T (Illuminated)	14.00
Models 420 or 426	13.40
Models 420 or 426 (Illuminated)	15.00

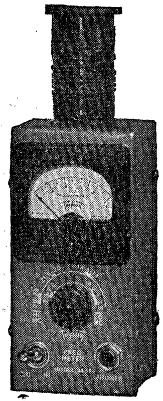
High Range D.C. Voltmeters for Amateurs

Designed particularly for radio amateurs. High range 3" D.C. Voltmeters—1000 ohms per volt. Provided with special external metalized multipliers mounted on bakelite strip. Specify this type when ordering, or standard voltmeters will be furnished. Available 3" case, Models 321-T, 327-T:

Range	Price	Range	Price
0-1000	$13.10	0-4000	$13.10
0-2000	13.10	0-5000	13.10
0-3000	13.10		

RADIO AMATEUR EQUIPMENT

FREQUENCY METER



A new band-switching, tuned Absorption type Frequency Meter covering five amateur bands. Incorporates the new germanium crystal and a D.C. Milliammeter indicator for greater sensitivity. Direct calibration on panel—no coils to change; switching permits instantaneous band change. Audio jack is provided for monitoring of phone signals —another new feature. Fully shielded. Calibration is in megacycles in the following bands: 3.5-4 MC; 7-7.3 MC; 14-14.4 MC; 20-21.5 MC; 28-30 MC. Coil is removable and other coils may be substituted for special bands, if desired.

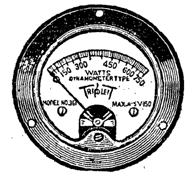
USEFUL FOR CHECKING: (1) Fundamental frequency of oscillating circuits. (2) Presence, order and amplitude of harmonics. (3) For parasitic oscillations. (4) Neutralization of R. F. amplifiers. (5) Standing wave ratio on transmission lines. (6) Presence of undesirable or small quantities of R. F. (7) Monitoring of phone signals.

Red • Dot Lifetime Guaranteed Meter.

A fully shielded unit of compact pocket size. Overall height, including coil, 7½"; width 2½"; depth 2¼". Attractive gray "hammered" enamel finish with black trim.

MODEL 3256 . . . . U.S.A. DEALER NET $17.50

WATTMETERS — ELECTRODYNAMOMETER



These instruments can be used on single phase A.C. or D.C. as Wattmeters. On special order they can be made up as voltmeters or ammeters. Instruments are self-contained to 300 Volts—10 Amperes. Over that external connection can be made. For use on frequencies up to 133 cycles per second. Available in three-inch model 361. Case dimensions same as 321-T, except for depth, 2" back of the flange ($2\frac{15}{16}$" over studs). Wattmeters can be combined in the Triplett Twin case with a voltmeter or Ammeter. Accuracy within ±2%. Standard ranges as follows:

MODEL 361 — SINGLE PHASE

Range Watts	Normal Voltage	Normal Amps.	Sc. Div.	Net Price
0-75	150	½	75	$19.50
0-150	150	1	75	19.50
0-300	150	2	60	19.50
0-750	150	5	75	19.50
0-1500	150	10	75	19.50
0-150	300	½	75	21.50
0-300	300	1	60	21.50
0-600	300	2	60	21.50
0-1500	300	5	75	21.50
0-3000	300	10	60	21.50

DOUBLE RANGE WATTMETERS (Double Voltage Limits Only)

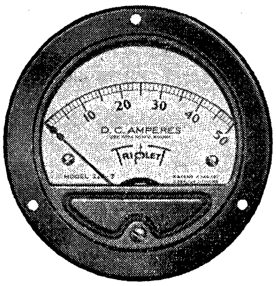
0-75-150	150-300	½	75	26.00
0-150-300	150-300	1	75	26.00
0-300-600	150-300	2	60	26.00
0-750-1500	150-300	5	75	26.00
0-1500-3000	150-300	10	75	28.50

SENSITIVE RELAYS

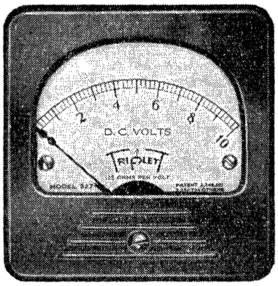
Highly sensitive Triplett relays of the D'Arsonval moving coil type, are carefully designed to give dependable, satisfactory performance. Since relays cover such a wide field and most of them are made to special order, no standard models are listed. Contacts are normally rated at 25 Milliamperes, 25 Volts; higher ratings if required. Instrument relays are provided in 2", 3" or Twin cases. Years of instrument experience are available to every relay user through Triplett's extensive service. Send us your applications with information specifying maximum and minimum currents and voltages which will pass through relay coil and contact points, etc.

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

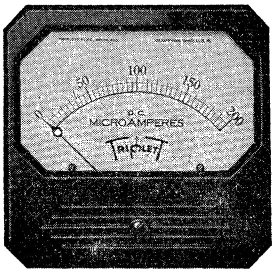
Indicating TRIPLETT Instruments



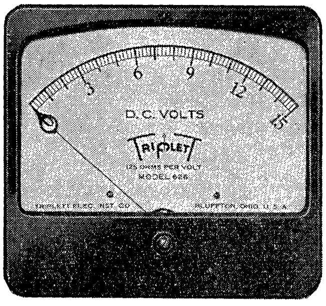
Models 221-T, 231-S, 241-T; 222-T, 232-S, 242-T; 321-T, 331-S, 341-T; 322, 332, 342



Models 227-T, 237-S, 247-T; 327-T, 337-S, 347-T



Models 426, 436, 446



Models 626, 636, 646; 726, 736, 746

Models		Scale Lengths		Flange	Body Dia.	Body Depth		Case Material
D. C.	A. C.	D. C.	A. C.			D. C.	A. C.	
221-T	231-S	1.76″	1.58″	2$\frac{11}{16}$″ Dia.	2$\frac{7}{32}$″	$\frac{15}{16}$″	1$\frac{5}{16}$″	Molded
222-T	232-S	1.76″	1.58″	2$\frac{9}{16}$″ Dia.	2$\frac{1}{16}$″	1$\frac{1}{16}$″	1$\frac{7}{16}$″	Metal*
223-T	233-S	1.76″	1.58″	2$\frac{5}{16}$″ Dia.	2$\frac{1}{16}$″	1$\frac{1}{16}$″	1$\frac{7}{16}$″	Metal*
227-T	237-S	1.76″	1.58″	2$\frac{3}{8}$″ Sq.	2$\frac{5}{32}$″	1″	1$\frac{3}{8}$″	Molded
321-T	331-S	2.49″	2.22″	3$\frac{1}{2}$″ Dia.	2$\frac{3}{4}$″	$\frac{15}{16}$″	1$\frac{5}{8}$″	Molded
322	332	2.49″	2.22″	3$\frac{1}{4}$″ Dia.	2$\frac{9}{16}$″	1$\frac{13}{32}$″	1$\frac{13}{32}$″	Metal*
324	334	2.49″	2.22″	3$\frac{1}{16}$″ Dia.	2$\frac{3}{4}$″	1$\frac{17}{32}$″	1$\frac{17}{32}$″	Molded°
327-T	337-S	2.49″	2.22″	3″ Sq.	2$\frac{3}{4}$″	1″	1$\frac{3}{8}$″	Molded
421	431	3.11″	2.78″	4$\frac{1}{4}$″ x 3$\frac{15}{16}$″	2$\frac{3}{4}$″	$\frac{15}{16}$″	$\frac{15}{16}$″	Molded
421-A	431-A	3.11″	2.78″	3$\frac{1}{2}$″ x 3$\frac{3}{16}$″	2$\frac{3}{4}$″	$\frac{15}{16}$″	$\frac{15}{16}$″	Molded
422	432	3.11″	2.78″	4$\frac{3}{8}$″ Dia.	3$\frac{9}{16}$″	1$\frac{11}{32}$″	1$\frac{11}{32}$″	Molded
426	436	3.11″	2.78″	4$\frac{1}{4}$″ x 4″	3$\frac{1}{8}$″	$\frac{15}{16}$″	$\frac{15}{16}$″	Molded
420	430	4.06″	3.6″	4$\frac{5}{8}$″ x 4$\frac{3}{16}$″	2$\frac{3}{4}$″	$\frac{27}{32}$″	$\frac{27}{32}$″	Molded
521	531	3.11″	2.78″	5$\frac{1}{4}$″ Dia.	4$\frac{3}{8}$″	1$\frac{9}{16}$″	1$\frac{9}{16}$″	Molded
524	534	3.11″	2.78″	4$\frac{3}{4}$″ Dia.	4$\frac{3}{8}$″	1$\frac{5}{8}$″	1$\frac{5}{8}$″	Molded
626	636	5.6″	5.3″	6″ x 5$\frac{3}{8}$″	3$\frac{1}{8}$″	1$\frac{1}{32}$″	1$\frac{1}{32}$″	Molded
726	736	6″	5.75″	7$\frac{17}{32}$″ x 6$\frac{23}{32}$″	3$\frac{1}{2}$″	$\frac{15}{16}$″	$\frac{15}{16}$″	Molded

*Molded base.
°Metal on special order.

D.C. VOLTMETERS — 125 Ohms per Volt

Range	Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 420, 421, 421-A, 422, 426	Models 521, 524	Model 626	Model 726
0-5	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-150	7.50	8.50	9.50	11.00	11.50	14.50
0-300	9.30	10.30	11.30	12.80	13.30	16.30

D.C. VOLTMETERS — 1000 Ohms per Volt

Range	Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 420, 421, 421-A, 422, 426	Models 521, 524	Model 626	Model 726
0-10	$ 9.90	$10.90	$11.90	$13.40	$13.90	$16.90
0-150	10.30	11.30	12.30	13.80	14.30	17.30
0-300	12.60	13.60	14.60	16.10	16.60	19.60
0-500	14.10†	15.10	16.10	17.60	18.10	21.10
0-1000	28.40*	29.40*	30.40*	31.90*	32.40*	35.40*

125 Ohms/Volt sensitivity supplied unless otherwise specified on order. † Instruments supplied with External wire-wound series resistors at prices shown. * Supplied with external resistor boxes at prices shown above. All other instruments are self-contained.

D.C. MICROAMMETERS

Range	Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 420, 421, 421-A, 422, 426	Models 521, 524	Model 626	Model 726
0-20	$13.50	$14.50	$15.50			
0-50	10.50	11.50	12.50	$14.00	$14.50*	$17.50*
0-100	10.00	11.00	12.00	13.50	14.00*	17.00*
0-200	8.50	9.50	10.50	12.00	12.50	15.50
0-500	8.00	9.00	10.00	11.50	12.00	15.00

* Supplied with knife-edge pointer.

D.C. MILLIAMMETERS

Range	Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 420, 421, 421-A, 422, 426	Models 521, 524	Model 626	Model 726
0-1	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-15	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-150	7.50	8.50	9.50	11.00	11.50	14.50
0-200	7.50	8.50	9.50	11.00	11.50	14.50
0-250	7.50	8.50	9.50	11.00	11.50	14.50
0-300	7.50	8.50	9.50	11.00	11.50	14.50
0-500	7.50	8.50	9.50	11.00	11.50	14.50

D.C. AMMETERS

Range	Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 420, 421, 421-A, 422, 426	Models 521, 524	Model 626	Model 726
0-1	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50

A.C. VOLTMETERS

Range	231-S, 232-S, 233-S, 237-S	331-S, 332-S, 334, 337-S	430, 431, 431-A, 432, 436	531, 534	636	736
0-5	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-150	8.50	9.50	10.50	12.00	12.50	15.50
0-300	10.30	11.30	12.30	13.80	14.30	17.30

A.C. AMMETERS

Range	231-S, 232-S, 233-S, 237-S	331-S, 332-S, 334, 337-S	430, 431, 431-A, 432, 436	531, 534	636	736
0-3	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-5	7.50	8.50	9.50	11.00	11.50	14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50

A.C. MILLIAMMETERS

Range	231-S, 232-S, 233-S, 237-S	331-S, 332-S, 334, 337-S	430, 431, 431-A, 432, 436	531, 534	636	736
0-10	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-15	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-200	7.50	8.50	9.50	11.00	11.50	14.50
0-500	7.50	8.50	9.50	11.00	11.50	14.50

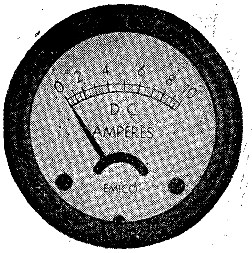
R.F. AMMETERS (with internal couples)

Range	231-S, 232-S, 233-S, 237-S	331-S, 332-S, 334, 337-S	430, 431, 431-A, 432, 436	531, 534	636	736
0-.5	$ 8.50	$ 9.50	$10.50	$12.00	$12.50	$15.50
0-1	8.50	9.50	10.50	12.00	12.50	15.50
0-1.5	8.50	9.50	10.50	12.00	12.50	15.50
0-2.5	8.50	9.50	10.50	12.00	12.50	15.50
0-5	8.50	9.50	10.50	12.00	12.50	15.50
0-10	8.50	9.50	10.50	12.00	12.50	15.50

Also available with external couples; prices on request. Models 241-T, etc. correspond to D.C. Models 221-T, 341-T to 321-T, etc.

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION — OTHER RANGES AVAILABLE

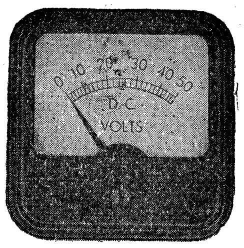
Net



TYPE NF-2C

EMICO PRECISION INSTRUMENTS
FOR
PANELS AND TEST SETS

Electro Mechanical Instrument Co.
813 Chestnut Street, Perkasie, Pa.



TYPE RF-2C

EMICO panel and test meters are rugged and reliable instruments. Cases are of steel and finished in durable black. DC meters have the new HI-TORK magnetic movements and are accurate to well within 5%. AC meters are of the moving iron type and are also accurate to within 5%.

MOUNTING—All model NF-2C and RF-2C meters will fit into a 2 1⁄16″ diameter hole and are mounted by means of a U clamp.

DESIGN—EMICO meters are designed to give satisfactory service under the most severe conditions. They are styled to add to the prestige and appearance of electrical equipment.

CALIBRATION—Since the instruments are calibrated in steel cases, their accuracy is not affected by panels made of magnetic materials of nominal thickness.

GUARANTEED—All EMICO instruments are guaranteed against defective material and workmanship for a period of one year after date of purchase, and will be repaired or replaced if sent to the factory postpaid with a 50c handling charge.

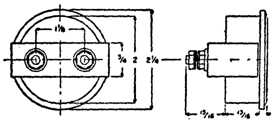
EMICO instruments are available in quantities to jobbers or manufacturers in the following sizes: NF-2″, RF-2″, RF-2½″, and RF-4½″ at 3% accuracy. We invite your inquiries on instruments for special application.

PRICES—Prices listed are net and include all hardware and individual boxing. Resistance approximate. If important request factory engineering confirmation.

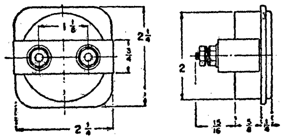
DEALERS' PRICE LIST

DC AMMETERS

		MODEL NF-2C		MODEL RF-2C	
Range	Approximate Resist. Ohms	Catalog Number	Dealers' Net Price	Catalog Number	Dealers' Net Price
0-1	.15	2101	$1.40	2201	$1.50
0-5	.016	2102	1.40	2202	1.50
0-10	.00115	2103	1.40	2203	1.50
0-15	.00115	2103-A	1.40	2203-A	1.50
0-20	.00115	2104	1.40	2204	1.50
0-30	.00115	2105	1.40	2205	1.50
1-0-1	.08	2109	1.40	2209	1.50
3-0-3	.00115	2110	1.40	2210	1.50
6-0-6	.00115	2111	1.40	2211	1.50
10-0-10	.00115	2112	1.40	2212	1.50
15-0-15	.00115	2113	1.40	2213	1.50
20-0-20	.00115	2114	1.40	2214	1.50
30-0-30	.00115	2115	1.40	2215	1.50
		DC MILLIAMMETERS			
0-1	1000	2120	$3.20	2220	$3.22
0-3	500	2121	2.00	2221	2.10
0-5	1250	2125	1.95	2225	2.05
0-10	430	2126	1.85	2226	1.95
0-20	70	2127	1.40	2227	1.50
0-30	60	2128	1.40	2228	1.50
0-50	15	2129	1.40	2229	1.50
0-100	8	2130	1.40	2230	1.50
0-150	2.75	2130-A	1.40	2230-A	1.50
0-200	2.75	2130-B	1.40	2230-B	1.50
0-300	.50	2131	1.40	2231	1.50
0-500	.35	2132	1.40	2232	1.50
		DC VOLTMETERS (LOW RESISTANCE)			
0-1	33	2134	$1.40	2234	$1.50
0-3	100	2135	1.40	2235	1.50
3-0-3	30	2136	1.40	2236	1.50
0-5	140	2136-A	1.40	2236-A	1.50
0-8	225	2136-B	1.40	2236-B	1.50
0-10	280	2137	1.40	2237	1.50
0-15	450	2137-A	1.40	2237-A	1.50
0-50	1400	2138	1.40	2238	1.50
		DC VOLTMETERS (HIGH RESISTANCE) (100 ohms/volt except 150 and 300 volt ranges are 200 ohms per volt)			
0-10	1050	2140	$2.10	2240	$2.20
0-30	2800	2141	2.35	2241	2.45
0-50	4000	2142	2.70	2242	2.80
0-150	28000	2143	2.80	2243	2.90
0-300	55000	2144	2.80	2244	2.90
		AC AMMETERS			
0-1	.365	6101	$2.40	6201	$2.55
0-3	.078	6102	2.40	6202	2.55
0-5	.023	6103	2.40	6203	2.55
0-10	.013	6104	2.40	6204	2.55
0-25	.007	6105	2.70	6205	2.80
		AC MILLIAMMETERS			
0-25	750	6125	$2.40	6225	$2.45
0-50	175	6126	2.40	6226	2.45
0-100	58	6127	2.40	6227	2.45
0-250	12	6128	2.40	6228	2.45
0-500	1.75	6129	2.40	6229	2.45
		AC VOLTMETERS			
0-5	50	6135	$2.40	6235	$2.55
0-10	175	6136	2.40	6236	2.55
0-15	300	6137	2.40	6237	2.55
0-25	920	6137-A	2.40	6237-A	2.55
0-50	1800	6138	2.40	6238	2.55
0-150	9530	6139	3.50	6239	3.60
0-300	32000	6140	4.10	6240	4.15



TYPE NF-2C



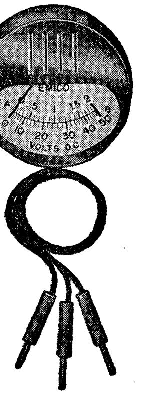
TYPE RF-2C

EMICO HEARING AID BATTERY TESTER

MODEL 103A

Note These Features:

- Unbreakable Metal Case
- Beautifully Finished Case
- Powerful Mechanism
- Color-Fast Metal Dial
- Easily Read Dial
- Reliably Accurate
- Will Not Drain Batteries



Designed to Test
All Types of
2 Volt "A" Batteries
and 22½, 30 and 45 Volt "B" Batteries

Available also in
0-9 and 0-90 Volt Range —
Specify Model 103B

Write to Factory for Prices

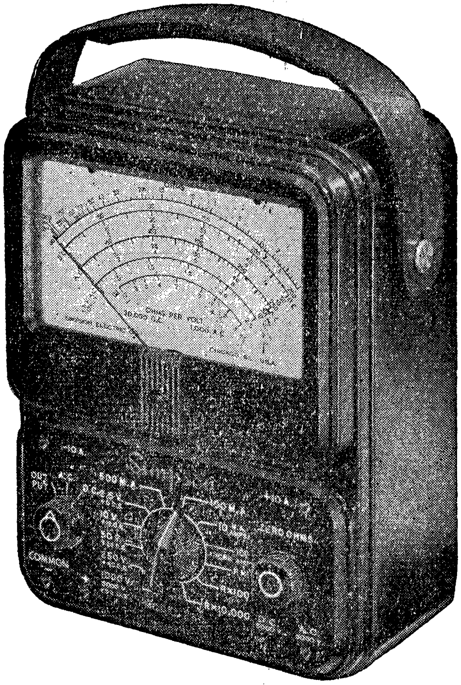
* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 260

Set Tester

World's Most Popular High Sensitivity Set Tester For RADIO and TELEVISION



There are more Simpson 260 high sensitivity volt-ohm-milliammeters in use today than all others combined. No other instrument of its kind has approached the world-wide popularity of the Simpson 260. In no other tester of its kind will you find the combination of useful ranges, accuracy, ruggedness, beauty and sensitivity developed to such a high degree of perfection.

Removal of the Model 260 from its heavy, handsome case of molded bakelite, will disclose how it differs from most set testers. You will see a sub-panel with a score of small recesses each holding a separate resistor or other component. You will notice complete absence of cable wiring. All connections are short and direct, thus offering a strength and firmness of assembly and the finest of insulation to reduce chances of shorts. All components are readily accessible. The front panel is a thing of beauty and long life. Pin jacks are recessed so no metal parts are exposed. All figures and symbols are molded into a heavy Bakelite panel and filled with durable white for long wear and legibility.

At 20,000 ohms per volt the 260 is highly dependable, rugged and accurate. Its practically negligible current consumption assures remarkably accurate voltage readings. It provides DC current readings as low as 2 microamperes and up to 10 amperes. Dependable resistance readings can be made up to 20 megohms and as low as 1/5 ohm. With the 260 you can measure automatic frequency control, diode balancing circuits, grid currents of oscillator tubes and power tubes, bias of power detectors, automatic volume control diode currents, high-mu triode plate voltage, as well as a wide range of other measurements which cannot be checked with ordinary servicing instruments.

RANGES

Model 260 Volt-Ohm-Milliammeter
20,000 Ohms per Volt DC, 1,000 Ohms per Volt AC
Volts, AC and DC: 2.5, 10, 50, 250, 1000, 5000
Output: 2.5, 10, 50, 250, 1000
Milliamperes, DC: 10, 100, 500
Microamperes, DC: 100
Amperes, DC: 10
Decibels (5 ranges): —12 to +55 DB.
Ohms: 0-2000 (12 ohms center), 0-200,000 (1200 ohms center), 0-20 megohms (120,000 ohms center).

25,000 VOLT DC PROBE FOR TELEVISION TESTING

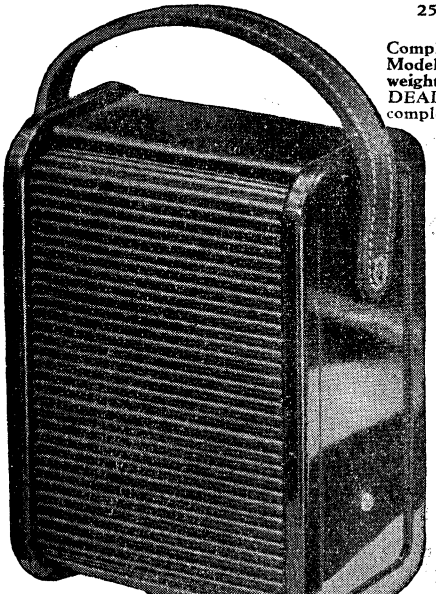
Complete, nothing to add, for use with Model 260. Weight: 6 oz. Shipping weight: 8 oz.

DEALER'S NET PRICE complete with Instructions $9.95

DEALER'S NET PRICES

Model 260, complete with test leads and Operator's Manual (Size: 5¼"x7"x3⅛". Weight: 3½ lbs. Shipping Wt.: 5 lbs.)	$38.95
Leather Carrying Case	6.75
Eveready Neolite Carrying Case	8.75
Model 260RT in Roll Top Safety Case, complete with test leads and Operator's Manual (Size: 6⅜"x9"x4¾". Weight: 6½ lbs. Shipping Wt.: 9 lbs.)	46.90

Model 260 available in standard all black or two tone tan and brown, at above prices. Specify color desired.



MODEL 260RT SET TESTER IN ROLL TOP SAFETY CASE

The Model 260, when placed inside our patented housing of heavy molded bakelite and permanently fastened in position, offers the highest degree of efficient, economical instrument protection. Now you can buy the famous 260 complete in this roll top safety carrying case with its built-in lead compartment at less than the price of a 260 and an Eveready leather carrying case. A flick of the finger rolls the top up and the instrument is ready to use. A downward flick rolls the top down and your instrument is fully protected.

★ Simpson

INSTRUMENTS THAT STAY ACCURATE

THE NEW MODEL 269

THE WORLD'S FIRST COMMERCIALLY AVAILABLE 100,000 OHMS PER VOLT VOLT-OHM MICROAMMETER

BIG 7 INCH DIAL . . . COMPACT 7 INCH CASE

The Simpson Model 269 AC-DC ultra sensitive volt-ohm MICROammeter is ideal for voltage measurements in high resistance circuits . . . TV receivers — laboratory research work — other electronic equipment!

Use it in place of VTVM's for many voltage and resistance measurements in TV and other service work.

Eliminates line cord . . . drift . . . tube replacement.

The new Simpson Model 269 Volt-Ohm-MICROammeter is the most compact ultra high sensitivity instrument you can buy.

Every one of its 33 ranges has been customized to meet the needs of the electronic and electrical industries.

Only two controls are necessary — saves time and assures accuracy.

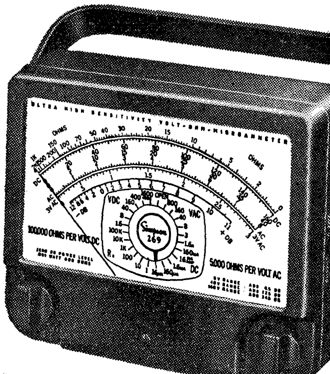
Big seven-inch dial features an extra long scale for reading ease.

Rugged construction is designed for actual service use.

Measurement accuracy is 3% DC and 5% AC of full scale deflection.

Simpson Adjust-A-View handle may be used to instantly support the instrument at a convenient viewing angle on a bench top.

The 269 offers dependable accuracy in a lightweight completely portable and compact case.



RANGES

DC Voltage
0-1.6, 0-8, 0-40, 0-160, 0-400, 0-1600, 0-4000 volts . . . 100,000 ohms per volt sensitivity.

AC Voltage
0-3, 0-8, 0-40, 0-160, 0-800 volts . . . 5,000 ohms per volt sensitivity.

AF Output Voltage
0-3, 0-8, 0-40, 0-160 volts . . . 0.1 microfarad internal series capacitor.

Volume Level in Decibels
−12 to +11 decibels
−3.5 to +19.5 decibels
+10.5 to +33.5 decibels
+22.5 to +45.5 decibels
Zero DB Power Level .001 watt in 600 ohms

DC Resistance
0-2,000 ohms (18 ohms center)
0-20,000 ohms (180 ohms center)
0-200,000 ohms (1800 ohms center)
0-2 megohms (18,000 ohms center)
0-20 megohms (180,000 ohms center)
0-200 megohms (1.8 megohms center)

DC Current
0-16 microamperes, 0-160 microamperes, 0-1.6 milliamperes, 0-16 milliamperes, 0-160 milliamperes . . . 267 millivolts maximum drop.
0-1.6 amperes, 0-16 amperes . . . 267 millivolts maximum drop.

DEALER'S NET PRICE

Complete with test leads . . . removable alligator clips, 4000 volt DC multiplier, operator's manual. Size: 7-15/16" x 6" x 2-15/16". Weight 4 lbs. Shipping weight 6 lbs. **PRICE . . . $88.00**

3/4 *Actual Size*

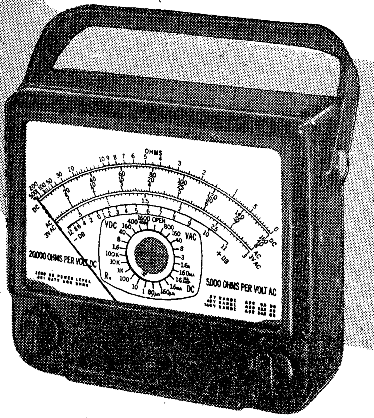
BOTH MODELS 262 and 269 FEATURE BIG 7 INCH DIALS AND COMPACT 7 INCH CASES

MODEL 262

VOLT-OHM-MILLIAMMETER 20,000 OHMS PER VOLT SENSITIVITY

33 RANGES . . . BIG 7 INCH DIAL . . . COMPACT 7 INCH CASE . . .

The Simpson Model 262 Volt-Ohm-Milliammeter has a sensitivity of 20,000 ohms per volt DC and 5,000 ohms per volt AC . . . all in a 7 inch case!



Every one of its 33 ranges has been customized to meet the needs of the electronic and electrical industries.

Only two controls are necessary — saves time and assures accuracy.

Big seven-inch dial features an extra long scale for reading ease.

Rugged construction is designed for actual service use.

Measurement accuracy is 3% DC and 5% AC of full scale deflection.

Simpson Adjust-A-View handle may be used to instantly support the instrument at a convenient viewing angle on a bench top.

The 262 offers dependable accuracy in a lightweight completely portable and compact case.

DEALER'S NET PRICE

Complete with test leads . . . removable alligator clips, 4000 volt DC multiplier, operator's manual. Size: 7-15/16" x 6" x 2-15/16". Weight 4 lbs. Shipping weight 6 lbs. **PRICE . . . $68.00**

RANGES

DC Voltage
0-1.6, 0-8, 0-40, 0-160, 0-400, 0-1600, 0-4000 volts . . . 20,000 ohms per volt sensitivity.

AC Voltage
0-3, 0-8, 0-40, 0-160, 0-800 volts . . . 5,000 ohms per volt sensitivity.

AF Output Voltage
0-3, 0-8, 0-40, 0-160 volts . . . 0.1 microfarad internal series capacitor.

Volume Level in Decibels
−12 to +11 decibels
−3.5 to +19.5 decibels
+10.5 to +33.5 decibels
+22.5 to +45.5 decibels
Zero DB Power Level .001 watt in 600 ohms

DC Resistance
0-500 ohms (4.5 ohms center)
0-5000 ohms (45 ohms center)
0-50,000 ohms (450 ohms center)
0-500,000 ohms (4,500 ohms center)
0-5 megohms (45,000 ohms center)
0-50 megohms (450,000 megohms center)

DC Current
0-80 microamperes, 0-160 microamperes, 0-1.6 milliamperes, 16 milliamperes, 0-160 milliamperes . . . 267 millivolts maximum drop.
0-1.6 amperes, 0-16 amperes . . . 267 millivolts maximum drop.

5262 Eveready Neolite Carrying Case for Models 262 and 269........................$ 9.95

High Voltage Probe for 262 or 269 (16,000V)........................$11.50

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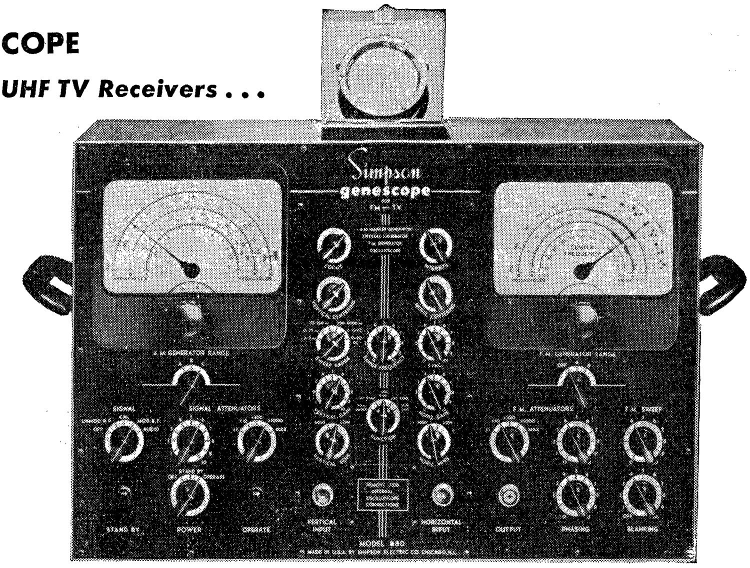
Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 480 FM TV GENESCOPE

Ideal For Servicing Both VHF and UHF TV Receivers . . .



Simpson
genescope
A.M. GENERATOR RANGE
SIGNAL
SIGNAL ATTENUATORS
F.M. GENERATOR RANGE
F.M. ATTENUATORS
F.M. SWEEP
STAND BY
POWER
OPERATE
VERTICAL INPUT
HORIZONTAL INPUT
OUTPUT
PHASING
BLANKING
MODEL 480
MADE IN U.S.A. BY SIMPSON ELECTRIC CO. CHICAGO, ILL.

In addition to providing all the required signal sources for VHF television servicing, the Model 480 Genescope also includes a high sensitivity oscilloscope with unique advanced design in every detail and equipped with a high frequency crystal probe for signal tracing. Harmonics of the FM Generator can be used to observe overall response wave forms in UHF receivers and harmonics of the AM Generator make marking of this wave form possible through most of the band.

The variable oscillator sections are mounted one on each side of the oscilloscope section and are provided with large precision vernier dials having a 20:1 ratio and 1000 division logging scales. They are easy to read and can be quickly set to an exact frequency.

Modern FM and TV development and servicing requires the use of test equipment made to exacting standards. With this in mind we offer you the Genescope with the assurance that everything possible has been done to make it the most accurate, flexible and convenient instrument available.

Multiple shielding, generous bypassing of all power leads entering oscillator enclosures and adequate line input filtering eliminates excessive leakage and oscillator interaction.

Step and continuously variable attenuators on both AM and FM sections provide minutely controlled signal levels from a few microvolts for fringe area peaking operations to a magnitude suitable for single stage alignment.

A self contained impedance matching network is adjustable to any receiver input, balanced or unbalanced, in a matter of seconds. Values available include 300 ohm and 75 ohm termination with or without an intermediate attenuator pad and with or without an isolating condenser, open termination for maximum voltage output with or without isolating condenser and many other useful combinations.

The center section of the Genescope contains the oscilloscope and all associated controls. The cathode ray tube of the oscilloscope is mounted vertically in the case in order to conserve bench space. The pattern on the tube is brought into view by use of a highly polished adjustable mirror at the top of the cabinet. The mirror may be quickly adjusted for any position of the operator. The tube face is placed well below the top surface of the caibnet in order to shield it from incident light thus producing a clear, sharp image unhampered by narrow angle light shields. The mirror when closed provides adequate protection for the cathode ray tube when not in use.

Direct connection to vertical and horizontal deflection plates and other internal functions are available through removable cover on the front panel.

RANGES

AMPLITUDE MODULATED OSCILLATOR

Band A—3.2-15.6 megacycles
Band B—15-76 megacycles
Band C—75-250 megacycles
30% modulation at 400 cycles or unmodulated
Continuously variable and step attenuators
Visual method of beat frequency indication

FREQUENCY MODULATED OSCILLATOR

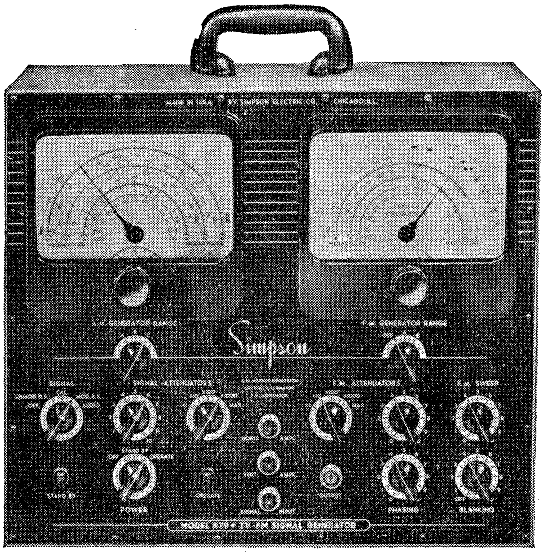
Band A—2-120 megacycles
Band B—140-260 megacycles
Sweep width variable from zero to 15 megacycles
Sweep rate 60 cycles per second
Specially designed frequency sweep motor
Continuously variable and step attenuators

Crystal calibrator—5 megacycles plus or minus .05%
Audio Oscillator 400 cycles
AM and FM oscillator sections provided with large, easy to read dials with 20-1 vernier control and 1000 division logging scale.
Impedance matching RF output cable

OSCILLOSCOPE

Vertical sensitivity—35 mv per inch
Horizontal sensitivity—70 mv per inch
Linear sweep frequency—3 cycles to 60 kilocycles
60 cycle sine sweep
Frequency essentially flat to 300 KC
Size: 22"x14"x7½". Weight 39 lbs. Shipping Weight 48 lbs.
LINE VOLTAGE: 105-125 volts, 60 cycles, 90 watts

DEALER'S NET PRICE complete with Test Leads and Operator's Manual $475.00



MADE IN U.S.A. BY SIMPSON ELECTRIC CO. CHICAGO, ILL.
A.M. GENERATOR RANGE
F.M. GENERATOR RANGE
Simpson
SIGNAL
SIGNAL ATTENUATORS
F.M. ATTENUATORS
F.M. SWEEP
STAND BY
POWER
OPERATE
OUTPUT
PHASING
BLANKING
MODEL 479 TV-FM SIGNAL GENERATOR

MODEL 479

TV-FM SIGNAL GENERATOR

A modern instrument for today's TV-FM problems. Exactly the same circuits, ranges and functions as the Model 480, described above, with the exception of the oscilloscope.

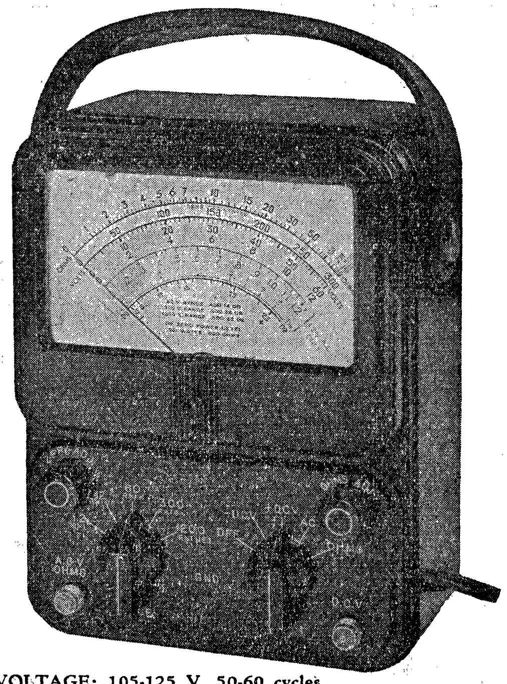
Size 17" x 14" x 7½". Weight 29 lbs. Shipping Weight 35 lbs.
Line Voltage: 105-125 volts, 60 cycles, 50 watts

DEALER'S NET PRICE with Test Leads and Operator's Manual $325.00

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 303 VACUUM TUBE VOLT-OHMMETER



The Simpson 303 really is a versatile instrument. It can be used as an electronic DC voltmeter, an ohmmeter, an AC voltmeter, an AF voltmeter, an RF voltmeter (with accessory probe), an output-meter, and an FM indicator.

The 303 truly is a worthy companion of the world famous Simpson Model 260 Volt-Ohm-Milliammeter. Simpson engineers spent months of painstaking research in the laboratory, working in close co-operation with TV set manufacturers to produce the 303. This ruggedly built instrument has a dimension of only 120 cubic inches, and is 60 to 70% more compact than any similar instrument. In achieving this compactness for greater portability Simpson did not sacrifice accuracy or functional value. Its large 4½-inch meter is easy to read.

Features such as low current consumption and wide voltage and resistance ranges make the 303 an extremely versatile instrument.

Like all other instruments bearing the Simpson name, the 303 is of the highest quality construction throughout, but sells at an amazingly low price.

SPECIFICATIONS

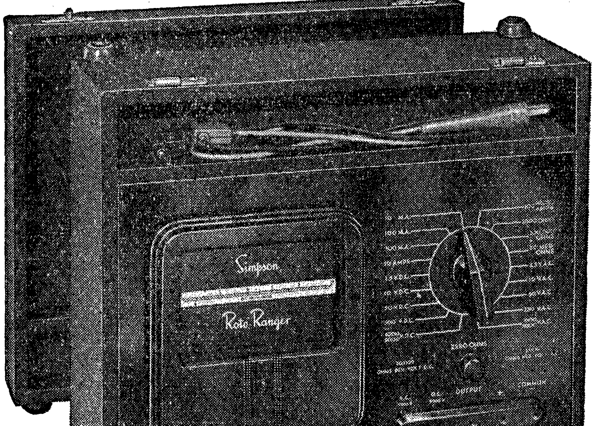
DC VOLTAGE: Ranges—1.2, 12, 60, 300, 1200 (30,000 with Accessory High Voltage Probe)
Input Resistance—10 megohms for all ranges
DC Probe—with one megohm isolating resistor
Polarity reversing switch
OHMS: Ranges—1000 (10 ohm center)
100,000 (1000 ohms center)
1 megohm (10,000 ohms center)
10 megohms (100,000 ohms center)
1000 megohms (10 megohms center)
AC VOLTAGE: Ranges—1.2, 12, 60, 300, 1200
Impedance (with cable) approx. 200 mmf shunted by 275,000 ohms
AF VOLTAGE: Ranges—1.2, 12, 60
Frequency Response—Flat 25 to 100,000 cycles
DECIBELS: Ranges— −20 to +3, −10 to +23, +4 to +37, +18 to +51, +30 to +63
Zero Power Level—1 M. W., 600 ohms
GALVANOMETER: Zero center for FM discriminator alignment and other galvanometer applications
R. F. VOTAGE: (Signal tracing with Accessory High Frequency Crystal Probe)
Range—20 volts maximum
Frequency—Flat 20 KC to 100 M.C.

LINE VOLTAGE: 105-125 V. 50-60 cycles
SIZE: 5¼"x7"x3⅜" (bakelite case). Weight: 4 lbs. Shipping Wt.: 6½ lbs.
DEALER'S NET PRICE: Model 303, including DCV Probe, ACV—Ohms probe and Ground Lead with Operator's Manual—$68.00
Accessory High Frequency Probe, $7.50
Accessory High Voltage Probe, $9.95
Also available with roll top case, Model 303RT—$76.00

MODEL 221

ROTO RANGER

(High Sensitivity AC-DC Volt-Ohm-Milliammeter)



Twenty-five separate meters at the turn of a switch. That is what you get in the Simpson Model 221 Roto Ranger. The necessity of reading numerous scales, so common in ordinary volt-ohm-milliammeters, is forever eliminated when you own a Roto Ranger. The chances for errors in making readings are reduced to a minimum. The Model 221 provides a separate direct reading scale for each range and does it automatically. Calibrations are not cramped. Each scale is full size, the same as it would be for a separate instrument. As the selector switch on the panel is moved to the range desired, an ingenious mechanism rotates the proper range into position behind the meter window.

RANGES

20,000 ohms per volt DC, 1000 ohms per volt AC.
Volts, AC: 2.5, 10, 50, 250, 1000, 5000.
Volts, DC: 2.5, 10, 50, 300, 1000, 5000.
Milliamperes, DC: 10, 100, 500.
Microamperes, DC: 100.
Amperes, DC: 10.
Output: 2.5, 10, 50, 250, 1000.
Ohms: 0-2000 (12 ohms center), 0-200,000 (1200 ohms center), 0-20 megohms (120,000 ohms center).
Size: 12¾"x10⅛"x5⅜".
Weight: 9 lbs. Shipping Weight: 13 lbs.
DEALER'S NET PRICE, complete with Test Leads and Operator's Manual........$75.00

HIGH VOLTAGE PROBE AVAILABLE FOR TELEVISION SERVICING

30,000 V. DC — 20,000 ohms per volt.
Weight: 6 oz. Shipping Weight: 8 oz.
DEALER'S NET PRICE, complete with Instructions ....$ 9.95

★ Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 476 MIRROSCOPE

Simpson takes pleasure in presenting the revolutionary Model 476 Mirroscope.

The objectives behind the design of the Model 476 were to eliminate certain inherent disadvantages found in the conventional type of oscilloscope.

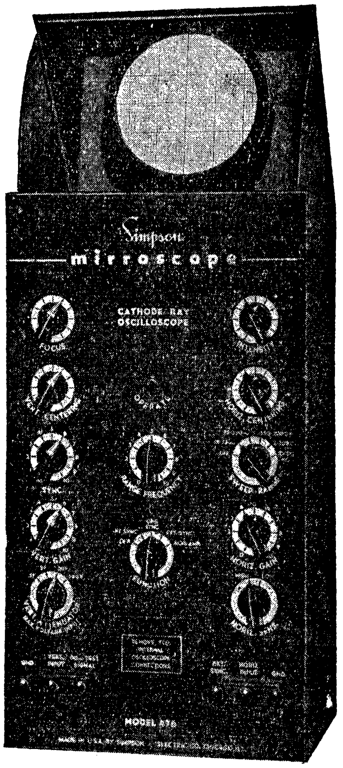
By use of the Mirroscope principle the 5″ cathode ray tube is mounted in a vertical position. This construction reduces bench space requirement to an area of only 9″ x 8″ thereby permitting better concentration of associated equipment for any type of test procedure.

The cathode ray image is reflected from a high grade mirror mounted in the adjustable cover at the top of the cabinet, thus the viewing surface is brought near eye level when the instrument is used on benches of normal height. The mirror angle is quickly and easily adjusted to any position of the operator.

The cover with integral side wings forms an effective shield against external light sources or may be closed down for protection of the tube and mirror when the instrument is not in use.

The upright construction permits location of controls and connections for maximum convenience and allows for internal cathode ray tube connections at the front of the panel instead of the rear.

These and many other advantages will be disclosed when the construction and specifications of the Model 476 Mirroscope are considered fully.



SENSITIVITY:

Vertical direct	— 12 volts rms per inch.
Vertical amplifier	— 20 millivolts rms per inch.
Horizontal direct	— 14 volts rms per inch.
Horizontal amplifier	— 38 millivolts rms per inch.

Horizontal trace expansion is over 4 times tube diameter. This makes it possible to examine minute portions of a response pattern for finer detail.

Linear Sweep frequency is continuously adjustable in five overlapping ranges from 15 cycles to 60,000 cycles. Internal, external or line frequency synchronization with variable amplitude is available.

Means for intensity or "Z axis" modulation is provided. Approximately 14 volts peak will blank a trace of normal intensity.

The vertical amplifier frequency response is within 3DB from 20 cycles to over 300,000 cycles and is usable to well over four megacycles. Square wave slant and overshoot is held to less than 5 per cent of amplitude. This response will be found adequate for all phases of television receiver service including observation and diagnosis of Sync. signals.

INPUT IMPEDANCE:

Vertical direct	- 10 megohms, 15 mmf.
Horizontal direct	- 10 megohms, 15 mmf.
Vertical amplifier	- 300,000 ohms, 30 mmf.
Horizontal amplifier	- 500,000 ohms, 15 mmf.

TUBE COMPLEMENT:

5UP4	Cathode Ray Tube.
4—6J6	Horizontal and Vertical Amplifiers.
1—12AU7	Vertical pre-amplifier.
1—6J6	Linear Sweep oscillator and Sync. injector.
2—6X4	High voltage rectifiers.

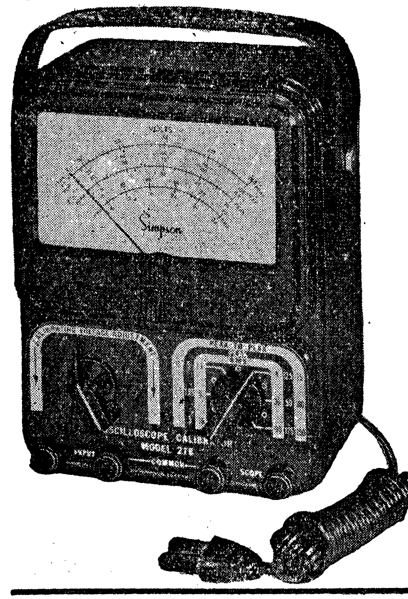
LINE VOLTAGE: 105-125 volts, 50-60 cycles. 40 watts

SIZE: Height 16¼″ Width 9⅛″ Depth 8″ over all

WEIGHT: 24 lbs.; Shipping weight 30 lbs.

High Frequency Crystal Probe........$7.50

DEALER'S NET PRICE including operator's manual $197.00



MODEL 276 OSCILLOSCOPE CALIBRATOR

The Simpson Model 276 Oscilloscope Calibrator adapts your oscilloscope for quick and accurate voltage measurements by comparative methods.

A twelve position switch provides six ranges each of RMS, Peak and Peak to Peak voltage with six alternate neutral positions for viewing the signal under observation.

Continuously variable calibrating voltage of power line frequency is supplied by the Model 276 and is indicated on a large 4½ inch meter which indicates RMS values from 0.06 volt to 90 volts, peak values from 0.1 volt to 125 volts and peak to peak values from 0.2 volt to 250 volts.

When the Model 276 Oscilloscope Calibrator is connected in series between a signal source and the Oscilloscope input, a convenient switching arrangement makes it possible to make quick comparative checks between the relative amplitude of the signal and of the measured voltage source. This system is most convenient because leads do not have to be shifted around in order to calibrate the signal on the oscilloscope.

Housed in a rich black molded bakelite case identical to Models 260 and 303, this instrument will prove a worthy addition to the service dealer's equipment.

RANGES

RMS:
.36 - .9 - 3.6 - 9 - 36 - 90

PEAK:
.50 - 1.25 = 5 - 12.5 - 50 - 125

PEAK to PEAK:
1.0 - 2.50 - 10 - 25 - 100 - 250

LINE VOLTAGE:
105-125 V. 50-60 cycles

SIZE:
5¼″x7″x3⅛″

WEIGHT: 2½ lbs.

SHIPPING WEIGHT: 5 lbs.

DEALER'S NET PRICE........$29.50

★ Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 488 FIELD STRENGTH METER . . .

Essential For Both VHF and UHF TV Receiver Installations

The Simpson Model 488 Television Field Strength Meter provides means for the measurement of Television signals in any locality. IT WILL WORK EQUALLY WELL FOR VHF AND UHF!

Although special consideration was given to fringe area applications in the design of this instrument it will be found of extreme value in all types of installations.

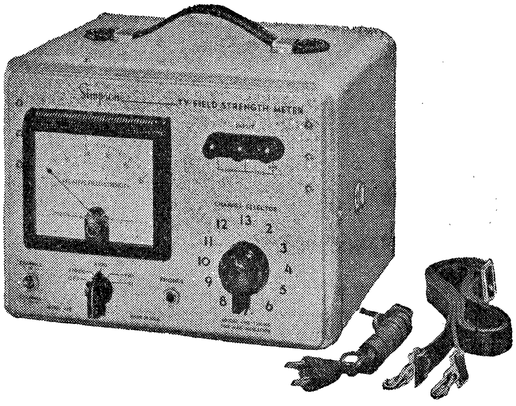
Location of maximum signal areas, antenna orientation and location, comparison of antenna systems, adjustment of boosters and checking antenna and lead-in installations are only a few of the many functions available.

Full scale sensitivity of the lowest range is approximately 50 microvolts and is an outstanding feature for those concerned with fringe area installations where maximum efficiency must be attained. Three additional ranges of approximately 500, 5000 and 50000 microvolts extends the usefulness of the Model 488 into areas of higher signal strength. Antenna installation for UHF reception requires exacting positioning and orientation and this requirement is completely satisfied with the Simpson 488.

The large 4½ inch modernistic meter is easily read from a considerable distance and all controls and connections arranged for greatest accessibility.

Model 488 is housed in a beautiful gray hammerloid finished case with sturdy leather handle for complete portability and ease of use.

Equipped for reception on all 12 VHF channels.



SIZE: 8″ x 11″ x 8½″.

WEIGHT: 11½ lbs. Shipping wt. 15 lbs.

LINE VOLTAGE: 105-125 volts, 50-60 cycles, 45 watts.

DEALER'S NET PRICE, including operating instructions and shoulder strap..........$115.00

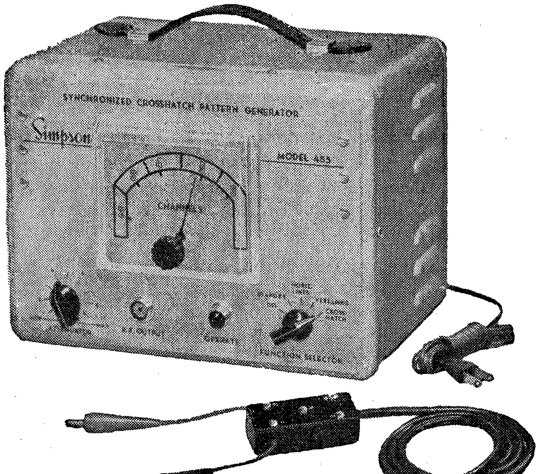
MODEL 485 SYNCHRONIZED CROSSHATCH PATTERN GENERATOR

A Modern Instrument For Today's Linearity Adjustment Problems in TV Receivers

With the increasing number of programs being televised, less and less time is available for broadcasting of test patterns. The Simpson Model 485 Crosshatch Generator furnishes the answer to this problem by providing a synchronized signal, modulated on the carrier frequencies of channels 2 through 6, which can be tuned and sent through the receiver under test. When the receiver has been properly adjusted, the signal will show equally spaced lines in vertical, horizontal, or crosshatch patterns on the picture tube. All patterns are locked in place with synchronizing pulses exactly the same as the sync pulses in transmitted wave-forms.

With the Model 485 Crosshatch Pattern Generator horizontal and vertical linearity, hold, height, width and drive adjustments may be made easily and quickly when transmitter test patterns are not available.

Model 485 is housed in a beautiful gray hammerloid finished case with heavy leather handle for greater portability.



LINE VOLTAGE: 105-125 volts AC, 60 cycles; 45 watts.

SIZE: 11⅜″ x 8⅜″ x 9¼″.

WEIGHT: 11½ lbs. Shipping weight 15 lbs.

DEALER'S NET PRICE, including special output cable for 75 and 300 ohm terminations and operating instructions $147.50

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 1000

For Fast Testing in Convenient Ohms Readings for Leakage and Shorts

The new Simpson Model 1000 will test *any* receiving tube including 9 pin miniatures and subminiatures with base arrangements in a line or circle. The Model 1000 tests an extremely important factor in the tube which is plate conductance. The dial indicates percentage of rated plate conductance which is closely related to mutual conductance since amplification factor remains constant throughout the life of the tube. Testing by the Simpson plate conductance method makes testing methods simpler . . . more positive . . . more accurate. These tests are made under conditions simulating actual use in radio, television, hearing aids and other electronic circuits.

Now, you can have reliable short tests because the Simpson 1000 quickly and conveniently shows you exact ohms values for interelement leakage and tube shorts.

Handy multi-position toggle switches help you make quick adjustments to proper voltages for bias, screen and plate supply. Each tube element is individually connected to the proper potential . . . insures against tube damage during testing.

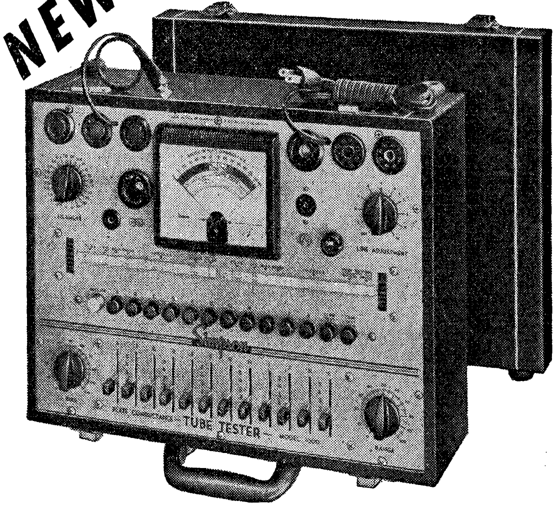
Practical Simpson Snap-Out-Snap-In transparent plastic windows are provided over the fast action roll chart. They're instantly removed. You may add information on new tubes at any time. You'll like the easy-to-read type on the roll chart . . . eliminates squinting.

Simpson's roll chart service makes a new roll chart available each year and complimentary roll chart supplements are provided at regular intervals.

Every detail—no matter how small—has been engineered to meet your satisfaction. The fuse socket is on the front panel . . . dial cover is one piece unbreakable clear plastic.

The panel of the Model 1000 is finished in non-glare grey hammerloid and you'll like the rich burgundy carrying case, too. It looks like luggage. This is the tube tester you will be proud to own. See it at your parts jobber today.

NEW!



For 105-125 volts, 50-60 cycle
SIZE: 15¾" x 11¾" x 6"
WEIGHT: 15 lbs.
SHIPPING WEIGHT: 23½ lbs.
DEALER'S NET PRICE, complete with Operator's Manual $135.00

MODEL 381

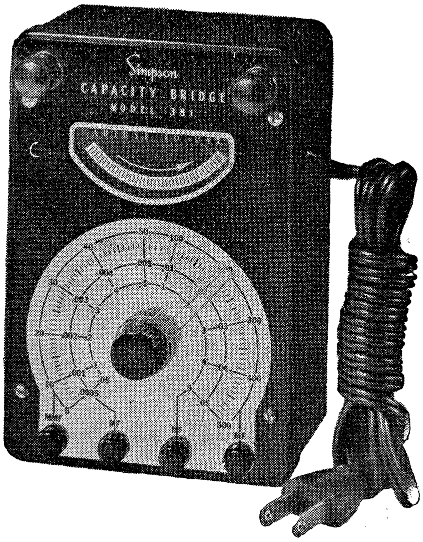
CAPACITY BRIDGE

The Model 381 embodies a new and revolutionary circuit which enables even the inexperienced to make capacity measurement with ease and assurance.

Simplicity and ease of operation are features of this instrument. You merely press a button for the desired range, adjust the bridge arm for maximum meter deflection and read the capacity on the scale.

The small size of this tester, together with its wide range of capacity measurement and low price makes the Model 381 the ideal instrument for Radio and Television service dealers, broadcast engineers, electric repair shops, X-ray servicing, industrial maintenance departments or any other service where condensers are tested.

Housed in a beautiful bakelite case with a durable etched aluminum panel and many specially designed parts, the Model 381 Capacity Bridge exemplifies the high quality construction found in all Simpson instruments.



RANGES

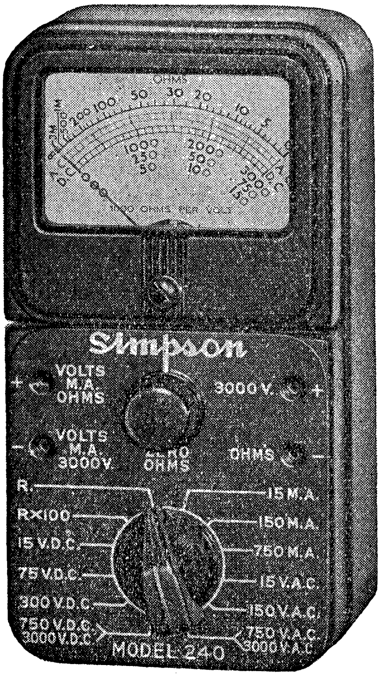
Range 1	20 mmfd. to 500 mmfd.
Range 2	.0005 mfd. to .05 mfd.
Range 3	.05 mfd. to 5 mfd.
Range 4	5 mfd. to 500 mfd.

SIZE: 3⅝" x 5½" x 2⅜".
WEIGHT: 1¾ lbs. Shipping weight: 3 lbs.
LINE VOLTAGE: 105-125 volts, 50-60 cycle.
DEALER'S NET PRICE $28.50

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODELS 240 and 230 VOLT-OHM-MILLIAMETERS



These two "Micro-Tester" portables are famous throughout the world for their ruggedness and built-in accuracy. They exemplify the construction features and utility that distinguish the entire Simpson line shown in this section.

Both are shock-proof and incorporate the special D'Arsonoval Simpson movement which is known for its extreme accuracy. Resistors are in matched pairs to provide the greatest possible accuracy for all ranges.

Model 240 — the "Hammeter" — was designed for the additional voltage and sensitivity demanded in radio testing. With its maximum voltage range of 3000 AC or DC, it was the first self-contained pocket portable instrument built expressly to check high voltage and all the component parts of transmitters and receivers.

Model 230, with a maximum voltage of 1000 volts AC or DC, is ideal for most industrial testing. Its ranges are adequate for most line voltages, for telephone, teletype, and general purpose testing.

Both models are housed in heavily molded bakelite cases, with all numbers and symbols recessed in the panel and filled with white enamel for greatest legibility and ease of reading. Both have full size 3″ meters.

RANGES

MODEL 240

AC Volts: 0-15, 150, 750, 3000 (1000 ohms per volt)

DC Volts: 0-15, 75, 300, 750, 3000 (1000 ohms per volt)

DC Milliamperes: 0-15, 150, 750

Ohms: 0-3000 (center scale 30)
0-300,000 (center scale 3000)

Accuracy: DC 3% — AC 5%

Size: 3″x5⅞″x2½″. Weight: 1¼ lbs.
Shipping Weight: 3 lbs.

DEALER'S NET PRICE, complete with Leads and Printed Instructions.....$26.35

IIIIIIIIII

MODEL 230

(Same physical appearance as Model 240 pictured at left)

AC Volts: 0-10, 250, 1000 (400 ohms per volt)

DC Volts: 0-10, 50, 250, 1000 (1000 ohms per volt)

DC Milliamperes: 0-10, 50, 250

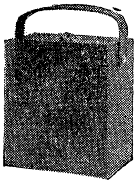
Ohms: 0-1000, 0-100,000

Accuracy: DC 3% — AC 5%

Size: 3″x5⅞″x2½″. Weight: 1¼ lbs.
Shipping Weight: 3 lbs.

DEALER'S NET PRICE, complete with Leads and Printed Instructions.....$24.95

LEATHER AND LEATHERETTE CARRYING CASES — TEST LEADS



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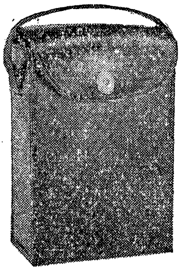

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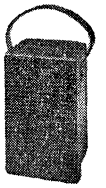
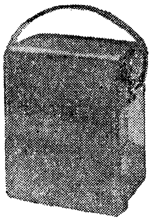
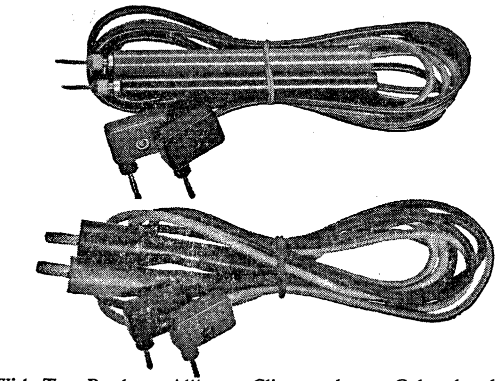


1-114299



1-114236

		Dealer's Net
1-111818	Leather Carrying Case for Model 260	$6.75
1-114236	Eveready Neolite Carrying Case for Models 260-303-276	8.75
1-115262	Eveready Neolite Carrying Case for Model 262-269	9.95
1-114299	Eveready Leather Carrying Case for Microtester	5.50
1-113011	Leatherette Covered Carrying Case for Microtester	5.50
1-113413	Leatherette Covered Carrying Case for 391-392	5.50



With Test Prods or Alligator Clips as shown. Colored red and black for easy identification. Length 48″. Rubber insulated. Dealer's net prices.

0-008463	Removable Alligator Clips for use as Test Prods - and Elbow Terminals	$1.85
0-008380	Test Prods and Elbow Terminals	1.25
0-008379	Test Prods and Spade Terminals	1.25
0-008377	Alligator Clips and Elbow Terminals	1.25
0-008376	Alligator Clips and Spade Terminals	1.25

HIGH VOLTAGE TV PROBE

Here are Simpson's three High Voltage Test Probes for Television servicing, each designed for use with the models listed here. They are molded of high temperature polystyrene to provide high dielectric strength and maximum insulation. Their small diameter permits reaching in small spaces and narrow openings.

Size diameter 9/16″, Length 11½″, Weight 6 oz. Shipping Weight 2 lbs.

DEALER'S NET PRICES

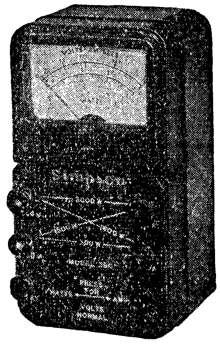
High Voltage Probe for 260 (25000 V) Complete, nothing to add	$ 9.95
High Voltage Probe for 221 (30000 V) Complete, nothing to add	9.95
High Voltage Probe for 303 (30000 V) Complete, nothing to add	9.95
High Voltage Probe for 262 (16000 V)	11.50
High Voltage Probe for 269 (16000 V)	11.50

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 390 VOLT-AMP-WATTMETER

Ruggedly constructed for full load, continuous operation, the Simpson Model 390 is the first tester of its size ever made to give you volt, ampere and wattage readings in one compact instrument. It embraces two ranges each of voltage and current, providing four wattage ranges which cover practically all types and makes of appliances. The panel has volt-ampere combinations clearly indexed to the proper wattage range on the scale, which makes the instrument easy to use. All readings are shown on one meter. In normal position, the meter indicates volts. Ampere and watt readings are obtained by depressing button on the panel. The widely separated binding posts make it possible for the Model 390 to be used as an individual voltmeter or as an ammeter. The Model 390 has a molded bakelite case with all figures recessed in the panel, which are filled with white enamel for better legibility.



RANGES

AC Current, 60 cycles
Volts: 0-150, 0-300
Amperes: 0-3, 0-15
Watts: 0-300, 0-600, 0-1500, 0-3000

Size: 3"x5⅞"x2½". Weight 1½ lbs. Shipping Weight: 4 lbs.

DEALER'S NET PRICE, complete with Break-in plug, leads and Operator's Manual.................. $39.50

Leatherette Covered Carrying Case, with compartment for Break-in plug and leads.................. 5.50

MODELS 391 and 392 AC-DC VOLT-WATTMETERS

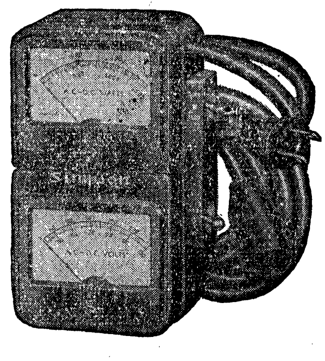
Designed for simultaneous reading of volts and watts, each of these handy little testers has two separate 3" square meters, one for volts and one for watts. Each has a built-in cord and plug for connection to the line outlet, and a receptacle for connecting the appliance under test. The ranges for each meter are selected by separate toggle switches recessed in the molded bakelite case. The low power consumption combined with the high efficiency of these instruments results in negligible loss and error in reading.

Model 391 (3000 watts max.)

Ranges: AC or DC
Volts: 0-130, 0-260
Watts: 0-1500, 0-3000
Size: 3"x5⅞"x2½". Weight: 1½ lbs.
Shipping Weight: 4 lbs.
DEALER'S NET PRICE, with Operating Instructions $30.00
Leatherette carrying case...... 5.50

Model 392 (5000 watts max.)

Ranges: AC or DC
Volts: 0-130, 0-260
Watts: 0-1000, 0-5000
Size: 3"x5⅞"x2½". Weight: 1½ lbs.
Shipping Weight: 4 lbs.
DEALER'S NET PRICE, with Operating instructions $35.00
Leatherette carrying case...... 5.50



MODEL 385 TEMPERATURE INDICATOR

This is the newest addition to the Simpson Appliance Tester line. You will find this a compact instrument which is ideal for measuring temperatures from +70° F to as low as —50° F, where fast accurate temperature readings are important. The scale is designed so that the center portion is expanded, making the most widely used temperatures easy to read. The Model 385 is ideal for use in the refrigeration service field and wherever temperature readings are important, such as deep freeze units, home refrigerators, walk-in coolers and air conditioning units. The temperature readings can be taken at the end of the 15′ lead which is supplied with the unit. The lead cord is small in diameter, making it possible to close the door of the equipment, thus obtaining temperature indications under actual conditions.

The probe can also be immersed in liquids where critical temperatures must be maintained.

Range: −5° to +70° F.
Battery, self-contained
Size: 3"x5⅞"x2½".
Weight: 1½ lbs.
Shipping Weight: 4 lbs.
DEALER'S NET PRICE, complete with Test Lead and Operating Instructions $30.00
Leatherette Carrying Case 5.50

Simpson
ADJUST
OFF
READ
MODEL 385

***Simpson**

INSTRUMENTS THAT STAY ACCURATE

MODEL 370 AC AMMETER

With self-contained current transformer
For use on 60 cycles

RANGES

0-1, 0-2.5, 0-5, 0-10, 0-25
Amperes

In the Model 370, a current transformer and indicating instrument have been combined in one small case to meet the consistent demand for a small multiple range AC ammeter, at a price that you can afford. Its many uses include the measurement of current drawn by all types of electric appliances and motors, heating elements, lamps, radio sets, etc.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

MODEL 371 AC VOLTMETER

RANGES

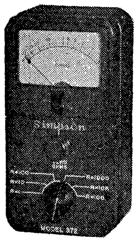
0-150, 0-300, 0-600
Volts

This instrument is a "must" for the industrial service kit or the lineman. Designed primarily for testing line voltages applied to motors, heating equipment or other industrial installations, the ranges are such that many additional applications will suggest themselves.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$18.40
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

MODEL 372 OHMMETER



RANGES

- 0-500 ohms (5 ohms center)
- 0-5000 ohms (50 ohms center)
- 0-50,000 (500 ohms center)
- 0-500,000 (5000 ohms center)
- 0-5 Meg. (50,000 ohms center)
- 0-50 Meg. (500,000 ohms center)

A complete instrument with self-contained batteries. Has a wide range from .2 ohms to 50 megohms. "Ohms" adjuster compensates for variations in battery voltages. Wire wound and matched metallized resistors are used throughout. The basic movement has a sensitivity of 85 microamperes.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE, complete with Test Leads	$25.50

MODEL 373 DC MILLIAMMETER

RANGES

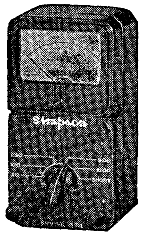
0-1, 5, 10, 25, 50, 100, 250
0-1000 MA.

The Model 373 provides for DC current measurements from .02 to 1000 MA. This tester is ideal for radio servicing and experimental work; checking burglar alarm circuits, railroad signal systems, telephone work, etc.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

MODEL 374 DC MICROAMMETER



RANGES

0-50, 100, 250, 500, 1000
Microamperes

Incorporates a basic movement of 50 microamperes sensitivity with self-contained shunts for all other ranges. This tester can be used with external resistors or multipliers as a high sensitivity voltmeter at 20,000 ohms per volt. It is of particular value in photoelectric cell and other experimental work. The meter may be shorted out of the circuit by setting the selector knob to "short" position.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$23.00
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 375 DC AMMETER

Self-Contained

A new multi-range instrument which is extremely useful in testing the current in DC circuits. Provides a complete range from a fraction of an ampere to 25 amperes without the necessity of using auxiliary external shunts. Excellent for checking auto radios and experimental work in DC circuits.

Size: 3″x5⅞″x2½″. Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 2-5, 5, 10, 25
Amperes

MODEL 376 DC VOLTMETER

Rectifier Type 1000 ohms per volt

An AC Voltmeter, especially useful in circuits where a limited amount of current is present. Makes an excellent output meter when used with proper condenser. The wide variety of ranges covers both primary and secondary voltage ranges of transformers used in radio sets, toys and appliances.

Size: 3″x5⅞″x2½″. Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-5, 10, 25, 50, 100, 250,
500, 1000 AC volts

MODEL 377 DC VOLTMETER

Resistance 1000 ohms per volt

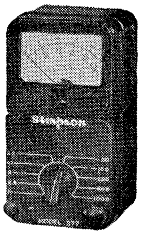
Measures all dry battery voltage, both A and B, for radio sets, also grid and plate voltage and filament voltage in battery-operated sets. High ranges may be used for checking DC line voltage.

Size: 3″x5⅞″x2½″. Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 2.5, 5, 10, 25, 50,
100, 250, 500, 1000
DC Volts



MODEL 378 AC MILLIAMMETER

With self-contained current transformer

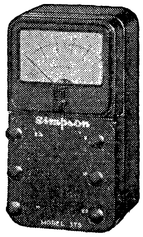
Here is the instrument that answers your need for a low cost, handy size milliammeter that combines a current transformer and an indicating instrument in one case. It offers five separate ranges, making it suitable for a wide variety of testing jobs.

Size: 3″x5⅞″x2½″. Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$22.60
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-5, 25, 100, 250,
1000 MA.



MODEL 379 BATTERY TESTER

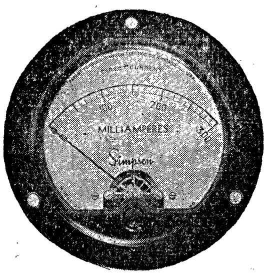
Designed in accordance with the engineering specifications of leading battery manufacturers, this compact instrument is so ruggedly built that it will stand a lifetime of hard usage. The loading resistors have an accuracy of 1% and properly load all radio and hearing aid A and B batteries.

A single rotary switch selects the voltage of the battery under test and brings into line the correct loading resistor. The full 3″ dial has three separate arcs, one for all radio A batteries, one for hearing aid A batteries, and one for all B batteries.

A percentage scale shows the exact condition of the battery in percentage of full voltage. The voltage reading can be quickly obtained by multiplying the percentage reading by the selector-switch voltage setting.

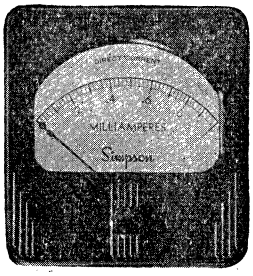
Size: 3″x5⅞″x2½″. Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE, including Test Leads and Operator's Manual	$23.70
Leatherette covered Carrying Case, with compartment for leads	5.50



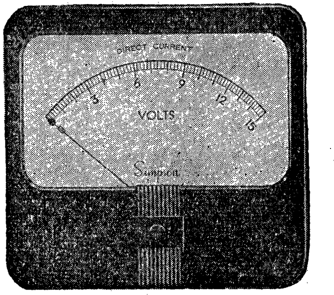
MODELS 25, 35, 45, 55

3½" ROUND CASE — OPEN FACE STYLE. Flange diameter, 3½"; depth overall, 2¼"; body diameter, 2¾"; scale length, 2 9/16". Bakelite case.



MODELS 27, 37, 47, 57

3½" RECTANGULAR CASE. Width, 3"; height, 3⅛". Mounts in round hole. Body diameter, 2¾". Scale length 2 9/16". Bakelite case.



MODELS 29, 39, 49, 59

4½" RECTANGULAR CASE. Width 4 21/32", height, 4 13/64". Mounts in round hole. Body diameter 2¾". Scale length 3 29/32". Bakelite case.

AMMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE	D. C.			A. C.		
0-1	$7.65	$8.70	$9.75	$7.50	$8.10	$ 9.90
0-1.5	7.65	8.70	9.75	7.50	8.10	9.90
0-2	7.65	8.70	9.75	7.50	8.10	9.90
0-3	7.65	8.70	9.75	7.50	8.10	9.90
0-5	7.65	8.70	9.75	7.50	8.10	9.90
0-10	7.65	8.70	9.75	7.50	8.10	9.90
0-15	7.65	8.70	9.75	7.50	8.10	9.90
0-25	7.65	8.70	9.75	7.80	8.40	10.50
0-30	7.65	8.70	....	....	....	.....
0-50	7.65	8.70	9.75	....	9.30	12.60
15-0-15	7.65	8.70	9.75	....	....	.....
30-0-30	7.65	8.70	9.75	....	....	.....
50-0-50	7.65	8.70	9.75	....	....	.....

AC-DC ammeters are self-contained for ranges up to and including 50 amperes. Higher range DC ammeters can be supplied with external shunts and include 6 foot leads. Higher range AC ammeters can be supplied with external current transformers and include 2 foot leads.

WATTMETERS—DYNAMOMETER TYPE

RANGE WATTS	MAX. VOLTS	MAX. AMPS.	MODEL 175-177	MODEL 75-77	MODEL 79	RANGE WATTS	MAX. VOLTS	MAX. AMPS.	MODEL 175-177	MODEL 75-77	MODEL 79
0-75	150	.75	$18.60	$19.80	$25.80	0-600	300	3.0	$20.70	$21.75	$27.75
0-150	150	1.5	18.60	19.80	25.80	0-1500	300	7.5	20.70	21.75	27.75
0-300	150	3.0	18.60	19.80	25.80	0-3000	300	15.0	20.70	21.75	27.75
0-750	150	7.5	18.60	19.80	25.80						

A. C. VOLTMETERS—RECTIFIER TYPE

RANGE	MODEL→ APPROX. RESISTANCE	45-47	49
0-1	1000 ohms per volt	$12.75	$13.65
0-3		12.75	13.65
0-5		12.75	13.65
0-10		12.75	13.65
0-15		12.75	13.65
0-50		12.75	13.65
0-100		12.75	13.65
0-150		12.75	13.65
0-300		12.75	13.65
0-1	2000 ohms per volt	13.05	14.25
0-3		13.05	14.25
0-5		13.05	14.25
0-10		13.05	14.25
0-15		13.05	14.25
0-50		13.05	14.25
0-100		13.05	14.25
0-150		13.05	14.25
0-300		13.05	14.25

MILLIAMMETERS

0-1	600 ohms	$12.60	$13.65
0-2	400	12.60	13.65
0-5	200	12.60	13.65

MICROAMMETERS

0-100	3400 ohms	$15.15	$16.50
0-200	2400	13.50	14.85
0-300	1800	13.35	14.55
0-500	1200	13.05	14.25

D. C. GALVANOMETERS

SCALE	SENSITIVITY MICRO-AMPERES	MODEL→ RESIST.	125-127	25-27
50-0-50	500-0-500	46 ohms	$7.65	$ 8.70
50-0-50	75-0-75	2000	9.45	10.50

R. F. AMMETERS INTERNAL THERMOCOUPLE TYPE

MODEL→ RANGE	135-137	35-37	39
0-1	$9.30*	$10.50*	$12.75
0-1.5	9.30	10.50	12.75
0-2	9.30*	10.50*	12.75
0-2.5	9.30	10.50	12.75
0-3	9.30*	10.50*	12.75
0-5	9.30*	10.50*	12.75
0-8	9.30	10.50	12.75
0-10	9.30	10.50	12.75

*See note at top of next page.

RF MILLIAMMETERS

†0-115	....	$21.45	.....
0-150	....	12.60	$14.55
0-250	....	12.60	14.55
0-500	....	12.60	14.55

†0-100 linear scale—50 divisions.

VOLUME LEVEL INDICATORS—DECIBEL METERS

ZERO POWER LEVEL—6 MW. 500 OHM LINE

MODEL→ RANGE	145-147	45-47	49
GENERAL PURPOSE TYPE —10 to +6 db 5000 ohms	$11.25	$12.30	$13.95
HIGH SPEED TYPE —10 to +6 db 5000 ohms	.....	13.20	14.85
LOW SPEED TYPE —10 to +6 db 5000 ohms	.....	13.20	14.85

VOLUME LEVEL INDICATORS—VU METERS

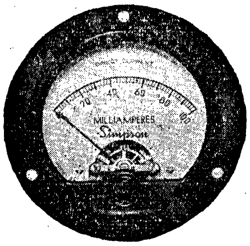
REFERENCE LEVEL—1 MW. 600 OHM LINE

Not illuminated A or B Scale—3900 ohms	.....	$15.90	$16.80
Illuminated A or B Scale— 3900 ohms	.....	.....	19.50

Model 142—4 Rectangular ↑

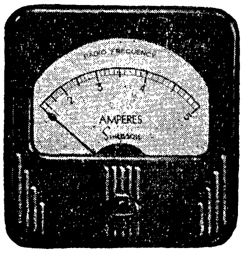
Net

Simpson PANEL INSTRUMENTS



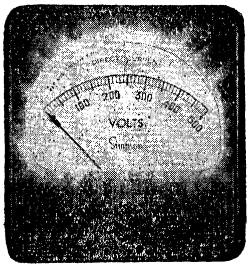
MODELS
125, 135, 145, 155

2½" ROUND CASE — OPEN FACE STYLE. Flange diameter, 2¾"; depth over-all, 2 5/16"; body diameter, 2 11/64"; scale length, 1⅞". Bakelite case.



MODELS
127, 137, 147, 157

2½" RECTANGULAR CASE. Width 2⅜"; height, 2⅜". Mounts in round hole. Body diameter, 2 3/16". Scale length 1⅞". Bakelite case.



MODEL 27-37-57
ILLUMINATED

3½" RECTANGULAR CASE. Width 3"; height 3⅛". Mounts in round hole. Body diameter 2¾". Scale length 1 5/16". Bakelite case.

***NOTE: The 2½" and 3½" rectangular instruments indicated (*) are also carried in stock with lucite illuminated dials. Supplied complete with socket and 6 volt bulb for an additional cost of $1.50 dealer's net. R.F. ammeters lucite illuminated must be supplied with external thermocouple. Add $4.95 for couple. All instruments are calibrated for use on non-magnetic panels.**

VOLTMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE		D. C.			A. C.	
0-1.5	....	....	....	$ 7.50	$ 8.10	$ 9.75
0-3	$ 7.65	$ 8.85	$ 9.75	7.50	8.10	9.75
0-5	7.65	8.85	9.75	7.50	8.10	9.75
0-8	7.65	8.85	9.75	....	....	....
0-10	7.65*	8.85*	9.75	7.50*	8.10*	9.75
0-15	7.65	8.85	9.75	7.50*	8.10*	9.75
0-25	7.65	8.85	9.75	7.50	8.10	9.75
0-30	7.95	8.85	....	....	....	....
0-50	7.95*	8.85*	9.75	7.50	8.10	9.75
0-100	7.95	8.85	9.75	7.50	8.10	9.75
0-150	7.95*	8.85*	9.75	8.85*	9.60*	10.50
0-200	7.95	8.85	9.75	....	....	....
0-250	7.95	8.85	9.75	8.85	9.60	10.50
0-300	7.95*	8.85*	9.75	8.85*	9.60*	10.50
0-500	7.95	8.85*	9.75	12.75	13.50	14.40
0-750	7.95	8.85	9.75	12.75	13.50	14.40
0-1000	11.85	12.75*	13.65	12.75	13.50	14.40
0-1500	11.85	12.75	13.65	....	....	....
0-2000	11.85	12.75*	13.65	....	....	....
0-2500	11.85	12.75	13.65	....	....	....
0-3000	11.85	12.75*	13.65	....	....	....
0-4000	11.85	12.75*	13.65	....	....	....
0-5000	11.85	12.75*	13.65	....	....	....

External resistors are furnished on A.C. meters having a range of 500 volts or higher. D.C. 1000 volts or higher.

MILLIAMMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE		D. C.			A. C.	
0-1	$7.65*	$8.70*	$9.75	....	....	....
0-1.5	7.65	8.70	9.75	....	....	....
0-3	7.65	8.70	9.75	....	....	....
0-5	7.65	8.70	9.75	....	....	....
0-10	7.65*	8.70*	9.75	$7.50	$8.10	$9.90
0-15	7.65*	8.70*	9.75	7.50	8.10	9.90
0-20	7.65	8.70	9.75	....	....	....
0-25	7.65*	8.70*	9.75	7.50	8.10	9.90
0-50	7.65*	8.70*	9.75	7.50	8.10	9.90
0-75	7.65	8.70	9.75	....	....	....
0-100	7.65*	8.70*	9.75	7.50	8.10	9.90
0-150	7.65	8.70*	9.75	....	....	....
0-200	7.65*	8.70*	9.75	....	....	....
0-250	7.65	8.70	9.75	7.50	8.10	9.90
0-300	7.65*	8.70*	9.75	....	....	....
0-500	7.65*	8.70*	9.75	7.50	8.10	9.90
0-750	7.65	8.70	9.75	....	....	....
0-1000	7.65	8.70	9.75	....	....	....

MICROAMMETERS

MODEL→	125-127	25-27	59
RANGE		D. C.	
0-25	$13.65	$14.85	$17.10
0-50	10.80	11.85	13.05
0-100	10.20	11.25	12.60
0-200	8.55	9.60	10.95
0-500	7.95	9.15	10.35

MILLIVOLTMETERS

MODEL→	125-127	25-27	29
RANGE		D. C.	
0-50	$7.65	$8.70	$9.75
0-100	7.65	8.70	9.75

Net

MARION ELECTRICAL INSTRUMENT CO., 401 CANAL ST., MANCHESTER, N. H.

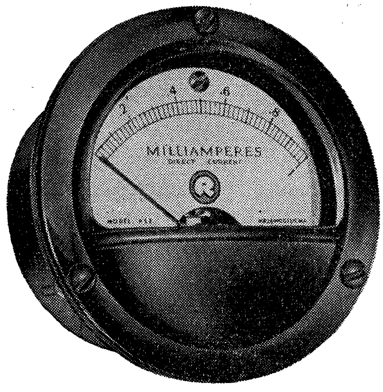
marion meters

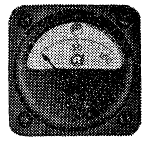
MANUFACTURERS OF MARION Ruggedized PANEL METERS

In Canada: H. Roy Gray, 44 Danforth Road, Toronto, Ontario
Export Division: 13 East 40th Street, New York 16, N. Y. Cable Address ARLAB

MARION RUGGEDIZED METERS

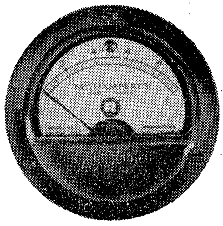
HERMETICALLY SEALED





HS1 - 1½"

New Marion ruggedized meters are an especially accurate and sensitive means for electrical measurement, even under extreme conditions of shock, vibration, mechanical stress and strain, weather conditions, and climate.

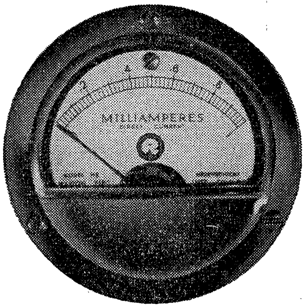


HS2 - 2½"

Ruggedized meters offer new freedom of application. They give faster response time, more sustained accuracy, lower bearing friction and longer life.

Ruggedized instruments meet the dimensional requirements of JAN I-6 and are completely interchangeable with existing 2½" and 3½" types. They are manufactured in standard 1½", 2½", and 3½" sizes.

When you want the finest in electrical instruments you can depend upon these new Marion ruggedized meters.



HS3 - 3½"

RANGES

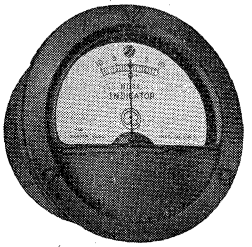
DC INSTRUMENTS

DC MICROAMPERES	DC MILLIAMPERES	
0-30	0-1	0-50
0-50	0-1.5	0-100
0-100	0-3	0-200
0-200	0-5	0-250
0-500	0-10	0-500
0-800	0-15	0-800
	0-25	

DC MILLIVOLTS	DC VOLTS	
0-15	0-1.5	0-25
0-25	0-3	0-50
0-50	0-5	0-150
0-100	0-10	0-250
	0-15	0-500

AC INSTRUMENTS

0-5 Volts AC	0-150 Volts AC
0-15 Volts AC	0-250 Volts AC
0-50 Volts AC	0-500 Volts AC



NULL INDICATORS

Marion Ruggedized Hermetically Sealed Null Indicators are now available in models HS2 and HS3. They are used primarily as bridge and potentiometer balance indicators and in any application where an instrument with very high sensitivity about the zero or balance point is desired. The sensitivity at this point is 1 microampere per mm. or higher; the meter's shaded pole face and shielded core construction gives sharply logarithmic attenuation as it departs from null point, and provides ample overload protection. This Ruggedized meter opens up new applications for Null Indicators, for it permits use of the null system for precise measurement under field conditions that have been prohibitively severe up to now.

marion meters

MANUFACTURERS OF MARION Ruggedized PANEL METERS

MARION ELECTRICAL INSTRUMENT CO., 401 CANAL ST., MANCHESTER, N. H.

marion meters

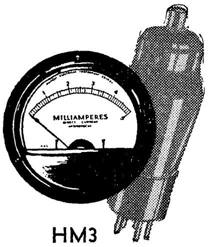
MANUFACTURERS OF MARION Ruggedized PANEL METERS

In Canada: H. Roy Gray, 44 Danforth Road, Toronto, Ontario
Export Division: 13 East 40th Street, New York 16, N. Y. Cable Address ARLAB

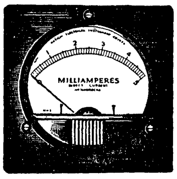
MARION HERMETICALLY SEALED METERS

SEALED LIKE A VACUUM TUBE FOR GUARANTEED PERFORMANCE

Magnetically shielded. 2½" x 3½". Dustproof and moistureproof. Unaffected by heat, cold, humidity. Made to JAN specifications, giving peak performance with critical accuracy. Interchangeable round and square colored flanges for different panel needs.



HM3



HM2

RANGES

DC INSTRUMENTS

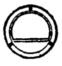
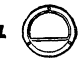
DC MICROAMPERES	DC MILLIAMPERES		DC MILLIVOLTS	DC VOLTS	
0-30	0-1	0-50	0-15	0-1.5	0-25
0-50	0-1.5	0-100	0-25	0-3	0-50
0-100	0-3	0-200	0-50	0-5	0-150
0-200	0-5	0-250	0-100	0-10	0-250
0-500	0-10	0-500		0-15	0-500
0-800	0-15	0-800			
	0-25				

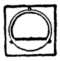
AC INSTRUMENTS

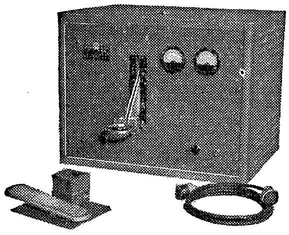
0-5 Volts AC	0-150 Volts AC
0-15 Volts AC	0-250 Volts AC
0-50 Volts AC	0-500 Volts AC

MARION "4 FOR 1" FEATURE

Interchangeable Round and Square Colored Flanges . . . one instrument can thus fill four different needs:

1. ***ROUND***

2. ***ROUND FOR STEEL PANEL***

3. ***RECTANGULAR***

4. ***RECTANGULAR FOR STEEL PANEL***




MODEL PM-1

MARION PORTABLE BENCH TYPE INDUCTION SOLDERING UNIT

COMPACT . . . ADAPTABLE . . . EFFICIENT
ECONOMICAL . . . SAFE . . . EASY TO USE

ADVANTAGES

- **Speeds soldering operations by generating heat within the work in localized area.**
- **Improves quality by producing cleaner work. Avoids oxidation and scaling.**
- **Prevents damage to surface finish. This is important in glass-to-metal applications.**
- **Permits soldering of an entire seam or several jig-located parts at one time.**
- **Provides complete control, timing or duplication of soldering processes.**
- **Prevents mistakes and reduces rejects.**
- **Provides local heat for otherwise inaccessible parts.**
- **Gives expert results with inexperienced operators.**
- **Saves time, money, effort. Draws only 775 watts and then only at full load. Only 100 watts are used on standby.**
- **Practically free from maintenance. No moving parts to wear out. Uses only low-priced, easily replaceable tubes. Has high safety factor.**
- **Offers less hazard but does a neater, cleaner, faster job. No danger of sparking or RF burns from output terminal or work coils.**

FOR QUANTITY PRODUCTION

Use this low-cost, low-powered portable Marion Induction Heating Unit wherever production soldering of small metal parts and assemblies is required. It cuts costs by minimizing time, reducing labor, improving quality and eliminating the need for a high degree of skill. The unit has made a place for itself in the field of Radio, Electronics, Jewelry, Watches, Electrical Fixture Components, Toys, Automotive Parts, Household Fixtures and other fabrication applications requiring Small Part Assemblies.

FOR GLASS-TO-METAL SOLDERING

With the Marion Portable Bench-Type Induction Unit you can do glass-to-metal soldering on Resistors, Relays, Photo Cells, Meters, Capacitors, etc. It makes true hermetic sealing possible right in your own plant. Also, it is ideal for terminal, magnet and bearing assembly. It gives machinelike uniformity to a normally inexact operation.

SPECIFICATIONS

Power Supply: 115 volts, 60 cycle.
Size: 15¾" x 21½" x 15".
Mounting: Standard relay rack cabinet.
Weight: 150 pounds.
Power: 775 watts at full power output, 100 watts standby.
The entire unit is rigidly assembled and mounted to prevent arc-over and failure of components.

marion meters

MANUFACTURERS OF MARION Ruggedized PANEL METERS

MARION ELECTRICAL INSTRUMENT CO., 401 CANAL ST., MANCHESTER, N. H.

marion meters

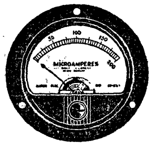
MANUFACTURERS OF MARION Ruggedized PANEL METERS

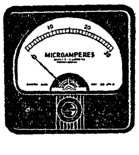
In Canada: H. Roy Gray, 44 Danforth Road, Toronto, Ontario
Export Division: 13 East 40th Street, New York 16, N. Y. Cable Address ARLAB

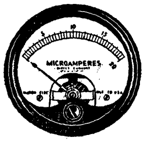
MARION STANDARD INSTRUMENTS

SERIES 52

Space saver, yet has superior damping characteristics. 2½" JAN Spec. round case (52N). Also available in standard 2½" square (Model 52S) or with narrow flange brass case for R.F. Shielding (Model 52RM). Dependable, extra strong — has well-aged Alnico magnet and heavy flanged construction. Popular for pocket test, portable radio, medical equipment and general electrical service where size and dependability count.

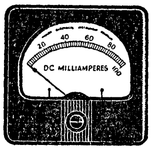

52N

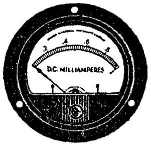

52S


52RM

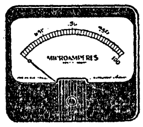
SERIES 53

Standard commercial 3½" rectangular type (53SN). Also available in 3½" JAN Spec., round case (53RN). All Alnico construction. Excellent scale distribution characteristics. Ideal for portable test equipment and general electronic equipment application.


53SN

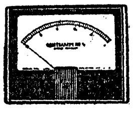

53RN

SERIES 55



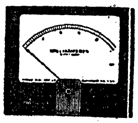
Large, 4⅝" x 4⅛". Gives real microamp readability on 100° scale. Alnico V magnets for sensitive range; heavy Alnico for standard ranges. Extreme accuracy assured. Designed for permanent and portable test equipment.

SERIES 56

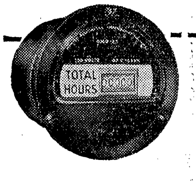


New 6½" x 5¼" bakelite cased meter. Easy reading at a distance. Large open face has 100° scale in 5½" arc. Room for multirange scale if needed. Milliamp ranges are Alnico II constructed, Alnico V for microamps. Strong, accurate, efficient, dependable.

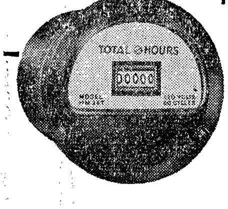
SERIES 57S



Superb milliameter — more than a mere overgrown 3 incher. 8½" x 7", open face, extra long scale. Enlarged pole shoes — higher torque movement — higher damping factor. Accurate within 1%. Used in large vacuum tube voltmeters, multitesters and production testing.



HM2ET 2½″



HM3ET 3½″

ELAPSED TIME INDICATORS

Two sizes, 2½″ and 3½″, standard JAN dimensions for panel mounting. Low temperature (—55°C) starting. Operating range —55°C to +85°C. True glass-to-metal hermetic seal. Drawn steel case provides magnetic shielding. Registers in 1/10 hour steps to 9999.9 or hour steps to 99999. Powered by a durable, self-starting synchronous motor. Available for 110-125, 220-250 volts, 50 or 60 cycle A.C.

RANGES—For The Models Illustrated

DC MICROAMPERES	DC MILLIAMPERES		DC AMPERES	DC MILLIVOLTS	DC VOLTS	AC VOLTS
0-20	0-1	0-250	0-1	0-15	0-1.5	0-5
0-30	0-1.5	0-500	0-1.5	0-25	0-3	0-15
0-50	0-3	0-800	0-3	0-50	0-5	0-50
0-100	0-5		0-5	0-100	0-10	0-150
0-200	0-10		0-10		0-15	0-250
0-500	0-15		0-15		0-25	0-500
0-800	0-25		0-25		0-50	
	0-50		Self-contained Shunts		0-150	
	0-100				0-250	
	0-200				0-500	

AVAILABLE IN ZERO CENTER AND OTHER RANGES ON SPECIAL ORDER

marion meters

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marion meters

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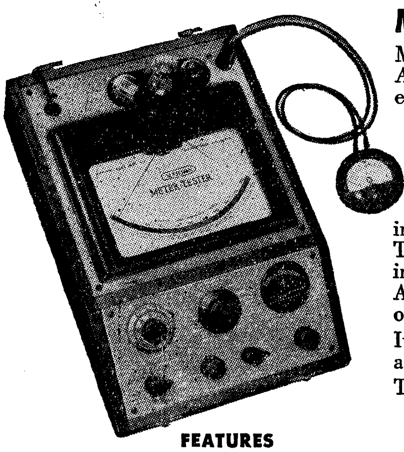
MARION MULTI-RANGE METER TESTER M-2



Marion Meter Tester (Model M-2) is the only instrument of its type available today. A laboratory and production tool for the measurement of the performance of DC electrical indicating instruments, it combines in one portable package an electronically regulated self-contained power supply, stepless vacuum tube voltage control, large 8½" mirror-scale individually hand-calibrated illuminated standard instrument, a decade of .1% accurate manganin wire wound resistors, a resistance bridge, null indicator and associated switches.

The Marion Meter Tester measures current sensitivity of electrical indicating instruments in 10 steps from 25 ua full scale to 10MA full scale and from 0-100v. The resistance measurement portion of the meter tester permits measuring of the internal resistance of the meter under test without exceeding its full scale rating. Accurate measurement of the internal resistance of sensitive microammeters and other instrument types is possible over the range of 0-5000 ohms.

It may also be used as a precise production limit-bridge in the same resistance range and will permit acceptance tolerances to be set for any value from ±½ of 1% to ±20%.

The Marion Meter Tester is a means of high speed production inspection and calibration of electrical indicating instruments as well as a versatile laboratory instrument to assist in the maintenance of high measuring standards.

The M-2 Model can also be used for additional purposes, such as a precise source of DC current and voltage and as a precision Wheatstone bridge in the 0-5000 ohm range.

FEATURES

- Regulated Power Supply
- Stepless Vacuum Tube Voltage Control
- Illuminated 8½" Mirror-Scale Standard Instrument, Hand Calibrated
- Marion Ruggedized Null Indicator movement for bridge balance indication
- Decade of .1% accurate Manganin Wire Wound Resistors
- Direct Reading Bridge Circuit using Helipot
- Complete. No accessories required

SPECIFICATIONS

ACCURACY: For current measurements
Overall better than ¼ of 1%.
For resistance measurements ±½ ohm or ±½% whichever is greater.
RESISTANCE RANGE: 0-5000 ohms
POWER SOURCE: 115V AC 60 cycles
CASE SIZE: 15⅛"x10⅛"x5⅜"
WEIGHT: 15 lbs.

Sensitivity Ranges

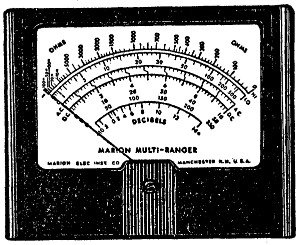
0-25UA
0-50UA
0-100UA
0-200UA
0-400UA
0-500UA
0-800UA
0-1MA
0-5MA
0-10MA
0-100 Volts

BUILD YOUR OWN TEST EQUIPMENT

with the MARION MULTI-RANGER METER

ACCURATE DURABLE DEPENDABLE

A GREAT VARIETY OF SIZES



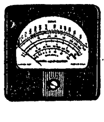
Model 56
List $19.25

Model 57S
List $22.00

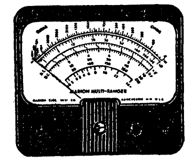
When it comes to TEST EQUIPMENT build your own with Marion Multi-Ranger Meters. They will solve your problem of finding reasonably priced instruments with the critical accuracy you demand for test equipment or other auxiliary equipment with multiple functions.

These Multi-Ranger Meters permit you to assemble a highly accurate instrument for use as a voltmeter, milliammeter, high and low resistance ohmmeter, AC voltmeter and decibel meter. — Build As Many Ranges As You Desire.

All instruments use Alnico Magnets, have full 100° three-color scales, feature the new, tough Marion "Bulldozer" moving system that insures long life under severe operating conditions plus the highest degree of accuracy.



Model 53SN
List $13.20



Model 55
List $16.50

MARION RESISTOR KIT LOW-PRICED! VERSATILE!

Contains: 18 Resistors Ranging from .4 Ohms to 750,000 Ohms. A Schematic Diagram for Constructing Your Own Test Equipment. It's easy to construct accurate, useful, versatile test equipment with the Marion Resistor Kit, used in conjunction with Marion Multi-Ranger Instruments.
List $13.75

SCALE RANGES POSSIBLE WITH STANDARD RESISTOR KIT

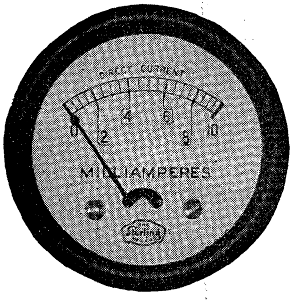
VOLTS AC-DC
0-10 Volts 0-50 Volts 0-250 Volts 0-1000 Volts
MILLIAMPERES
0-1 MA 0-10 MA 0-50 MA 0-500 MA
OHMS
0-500 Ohms 0-100 M 0-10 MEG 0-1 MEG
DECIBELS
−10 — +14 decibels +18 — +42 decibels
+ 4 — +28 decibels +30 — +54 decibels

ALSO AVAILABLE WITH VTVM SCALES

marion meters

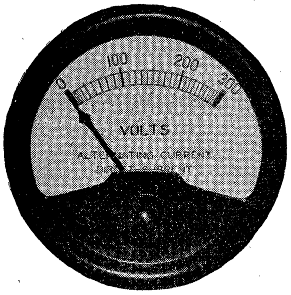
MANUFACTURERS OF MARION Ruggedized PANEL METERS

STERLING PANEL METERS


DIRECT CURRENT
0
2
4
6
8
10
MILLIAMPERES
Sterling

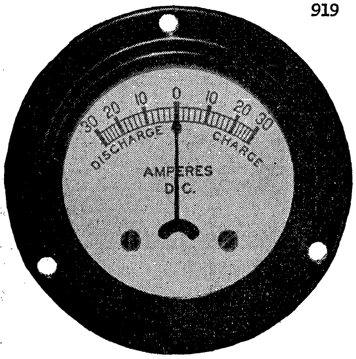
TYPE 80

Flush case, narrow flange, standard finish black enamel. Speed Nut Mounting. Diam. flange $2\frac{5}{32}''$. Speed Diam. case 2". Depth case $\frac{31}{32}''$ Requires hole $2\frac{1}{32}''$ in diam. Length terminals $\frac{7}{16}''$.


0
100
200
300
VOLTS
ALTERNATING CURRENT
DIRECT CURRENT

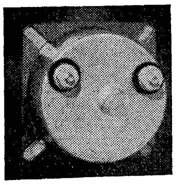
TYPE 88

Flush case, narrow apron flange. Standard finish black enamel. Same dimensions as Type 80. Speed Nut Mounting.

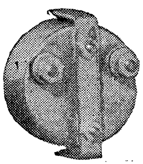

30
20
10
0
10
20
30
DISCHARGE
CHARGE
AMPERES
D.C.

TYPE 70

Flush case, wide flange, standard finish black enamel. Screw holes in flange for mounting. Diam. flange 2⅝". Diam. case 2". Depth case ⅞". Requires hole $2\frac{1}{32}''$ in diam.



STERLING'S NEW SPEED NUT CLAMP



REGULAR BACK CLAMP

ALTERNATING CURRENT METERS

A.C. VOLTMETERS

Number	Range	List Price
870	0-4 Volts	$3.50
871	0-6 Volts	3.50
872	0-10 Volts	3.50
873	0-15 Volts	3.50
910	0-30 Volts	3.50
879	0-50 Volts	4.00
911	0-75 Volts	4.00
874	0-150 VHR†	5.25
912	0-250 Volts	5.75
875	0-300 Volts	6.00
913	0-500 Volts	7.00
876	0-600 Volts	7.00
877	0-750 Volts	8.50
878	0-10-140 Volts	5.25

†VHR—Volts High Resistance

A.C. MILLIAMMETERS

Number	Range	List Price
880	0-25 Milliamperes	$3.50
881	0-50 Milliamperes	3.50
882	0-100 Milliamperes	3.50
883	0-250 Milliamperes	3.50
914	0-300 Milliamperes	3.50
884	0-500 Milliamperes	3.50

A.C. AMMETERS

Number	Range	List Price
886	0-1 Amperes	$3.50
915	0-2 Amperes	3.50
887	0-3 Amperes	3.50
888	0-5 Amperes	3.50
916	0-7½ Amperes	3.50
889	0-10 Amperes	3.50
917	0-15 Amperes	3.50
890	0-20 Amperes	3.75
918	0-25 Amperes	3.75
892	0-30 Amperes	3.75
891	0-60 Amperes	4.00
893	0-60 Amperes	4.25
894	0-75 Amperes	4.25
895	0-100 Amperes	4.25
919	0-125 Amperes	*

*Special Price on application.

DIRECT CURRENT METERS

D.C. VOLTMETERS

Number	Range	List Price
801	0-1 Volts	$2 00
802	0-3 Volts	2.00
803	3-0-3 Volts	2.00
804	0-5 Volts	2.00
805	0-6 Volts	2.00
806	0-8 Volts	2.00
807	0-10 Volts	2.00
808	0-15 Volts	2.00
809	0-25 Volts	2.00
810	0-25 Volts High Res.	3.50
811	0-50 Volts	2.00
812	0-50 Volts High Res.	4.00
823	0-75 Volts	2.25
813	0-100 Volts	2.25
814	0-100 Volts High Res.	4.00
815	0-150 Volts	2.50
816	0-150 Volts High Res.	4.00
817	0-300 Volts	4.00
818	0-500 Volts	5.50
819	0-750 Volts	6.50
820	0-8-160 Volts	3.50

RESISTANCE METERS

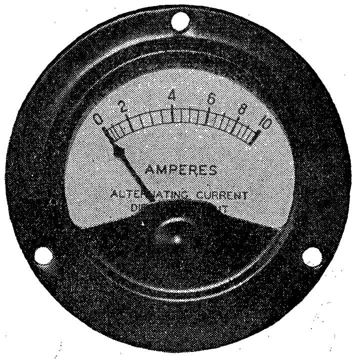
Direct Reading

901......4.5 Volts, 10,000 Ohms
3 Flashlight cells required
List Price $3.50

902....2 M.A., 9 Volts, 100,000 Ohms, 6 Flashlight cells required **List Price $5.00**

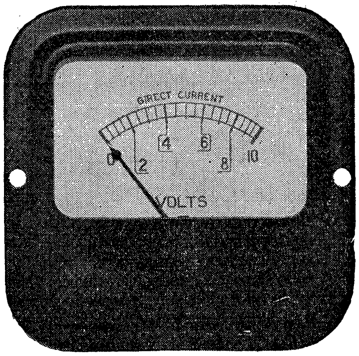
D.C. MILLIAMMETERS

Number	Range	List Price
835	0-2 Milliamps.	$4.50
836	0-5 Milliamps.	3.00
837	0-10 Milliamps.	2.50
838	0-15 Milliamps.	2.00
839	0-25 Milliamps.	2.00
840	0-50 Milliamps.	2.00
841	0-100 Milliamps.	2.00
842	0-150 Milliamps.	2.00
843	0-200 Milliamps.	2.00
844	0-300 Milliamps.	2.00
845	0-400 Milliamps.	2.00
846	0-20-100 Milliamps.	2.75
847	0-15-150 Milliamps.	2.75
848	0-500 Milliamps.	2.00


0
2
4
6
8
10
AMPERES
ALTERNATING CURRENT
DIRECT CURRENT

TYPE 78

Flush case, wide flange with apron. Standard finish black, screw holes in flange for mounting. Same dimensions as Type 70.

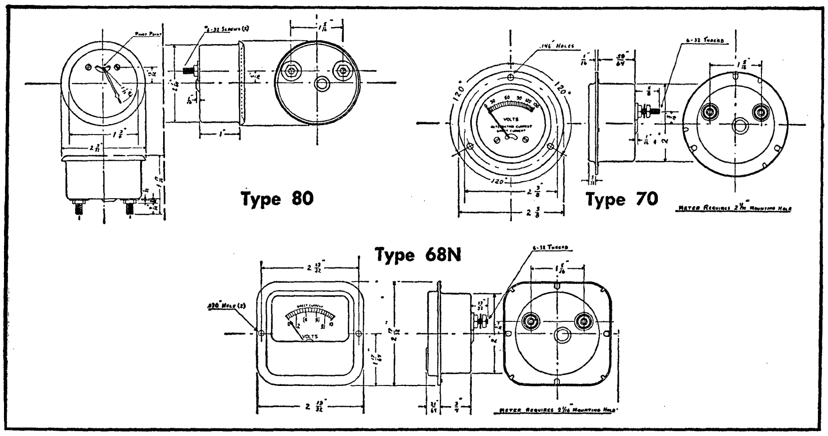

DIRECT CURRENT
0
2
4
6
8
10
VOLTS

TYPE 68N

Flush case, square flange, standard finish black enamel. Screw holes in flange for mounting. Width flange 2⅝". Diam. case $2\frac{1}{32}''$. Depth case ¾".

D.C. AMMETERS

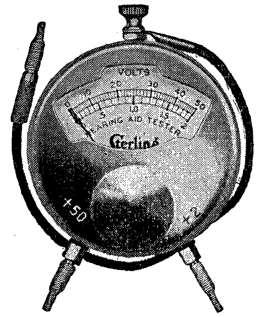
Number	Range	List Price	Number	Range	List Price
855	0-1 Amperes	$2.00	868	0-20 Amperes	$2.25
859	1-0-1 Amperes	2.00	863	20-0-20 Amperes	2.00
856	0-3 Amperes	2.00	865	0-30 Amperes	2.50
860	3-0-3 Amperes	2.00	867	30-0-30 Amperes	2.50
857	0-5 Amperes	2.00	869	0-40 Amperes	3.25
861	6-0-6 Amperes	2.00	866	0-50 Amperes	3.25
858	0-10 Amperes	2.00	925	50-0-50 Amperes	3.50
862	10-0-10 Amperes	2.00	926	60-0-60 Amperes	3.50
864	0-15 Amperes	2.00	927	75-0-75 Amperes	3.75

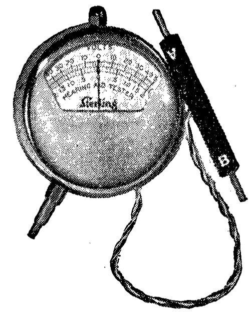

Pivot Point
6-32 Screws (2)
Type 80
.146" Holes
6-32 Thread
Type 70
Meter Requires 2 1/16" Mounting Hole
Type 68N
6-32 Thread
Meter Requires 2 1/16" Mounting Hole

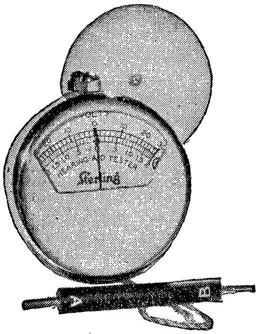
TYPE 70 PRICES LISTED

Note: Specify if for magnetic steel panel mounting.

Type 80, 88, 78, and 68N square flange case furnished for any range of meter at an additional list price of 25c each.


No. 31A


No. 10


No. 12

Sterling Hearing Aid Battery Testers

NO. 31A DOUBLE VOLTMETER—for special 30 or 45 v. "B" batteries and 1½ v. "A" batteries, scale 0-50 v. 1 v. div., scale 0-2 v., 1/10 v. divisions. Carefully engineered to impose the correct loads on the small delicate batteries used to operate vacuum tube hearing aids. Equipped with new STERLING flexible plugs................**Price $4.00**

NO. 32A DOUBLE VOLTMETER—for special 30 v. "B" batteries and 1½ v. "A" batteries, scale 0-35 v. 1 v. div. scale 0-2 v. 1/10 v. divisions. Equipped with new STERLING flexible plugs..........**Price $4.00**

NO. 10 DUAL CONTACT PROD METER in pocket or desk model. Marked "A" at one contact and "B" at the other, the prod is simply inserted into the corresponding battery for quick and easy reading. No. 10 is for earlier type hearing aid batteries. Scale 50-0-50 v., 2 v. div. and 2-0-2 v., 1/10 v. div. No. 10 has one cord and one plug. **Price $4.75**

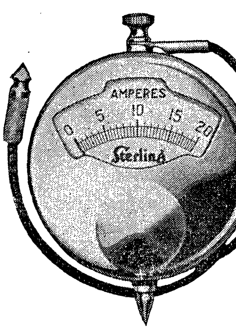
NO. 11 Formerly called the 10S this tester is used on 22½ v. and 30 v. "B" batteries. The load requirement is proportionately less than 1 mil. No. 11 has one cord and one plug..........**Price $7.50**

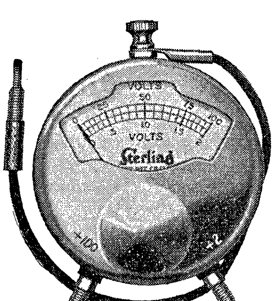
NO. 12 This new meter has no spur and a new voltage scale 30-0-30 v., 1 v. div. and 2-0-2 v., 1/10 v. div. Made extra sensitive for the latest type miniature batteries. Load: on 22½ v. batteries approx. 565 micro-amperes, on 15 v. batteries approx. 375 micro-amperes, on 1½ v. batteries approx. 40 mils..........**Price $7.50**

Sterling Pocket Meters

Standard Line Direct Current Pocket Ammeters, Voltmeters and Voltammeters.

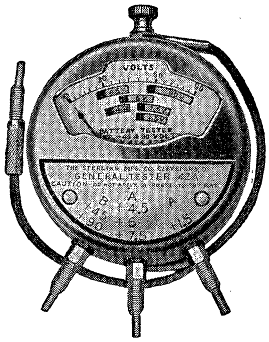
	Ammeters	LIST PRICE
No. 23	for photo-flash dry batteries. 0-20 amp. scale, ½ amp. div.	$2.50
No. 24	for testing No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions	$2.25
No. 24A	for testing dry cells including the heavy-duty Ignition type of cell. 0-50 ampere scale, 1 ampere divisions	$2.30
	Voltmeters	
No. 33	for ordinary single cells and Flashlight" cells, 0-3 v. scale 1/10 v. div.	$2.30
No. 34	for "Hot Shot" and Radio batteries. 0-10 volt scale, 1/5 volt. div.	$2.30
No. 34A	for 12 volt batteries. 0-16 volt scale, ½ volt divisions	$2.50
No. 34B	for ordinary 22½ v. radio "B" batteries. 0-30 v. scale, 1 v. divisions	$2.50
No. 34C	for testing ordinary 45 v. radio "B" batteries. 0-50 v. scale, 1 v. div.	$3.00
	Voltammeters	
No. 44	for "Hot Shot" and Radio batteries and No. 6 dry cells, 0-35 ampere scale, 1 ampere divisions; 0-10 volt scale, 1/5 volt divisions	$2.75
No. 44A	for 12 volt batteries and No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions; 0-16 volt scale, ½ volt divisions	$3.00
No. 45	for testing No. 6 dry cells and ordinary 45 volt radio "B" batteries. 0-35 ampere scale, 1 ampere divisions; 0-50 volt scale; 1 volt divisions	$4.00
No. 45A	for testing dry cells including the heavy-duty Ignition type and ordinary 45 v. radio "B" batteries. 0-50 amp. scale, 1 amp. div.; 0-50 v. scale, 1 v. div.	$4.25

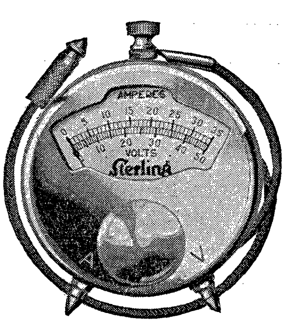

No. 23 AMMETER


No. 38A VOLTMETER

SPECIAL PURPOSE POCKET METERS

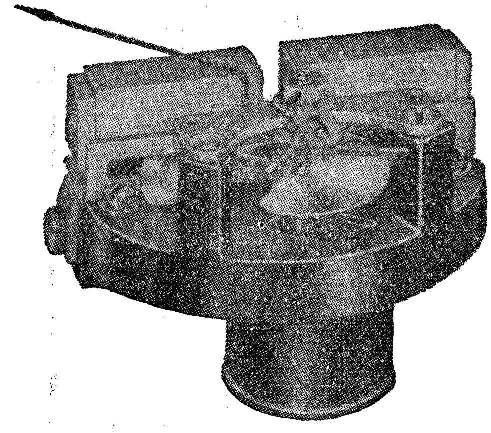
	Voltmeters	
No. 37A	for 45 v. "B" batteries and 1.5 "A" batteries. Scale 0-50 v., 1 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. "B" and 1½ v. "A" batteries	$3.50
No. 38A	for 90 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-100 v., 5 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. and 90 v. "B" batteries and 1½ v. "A" batteries	$3.75
No. 39A	for 90 v. and 135 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-150 v., 5-v. div. Scale 0-2 v., 1/10 v. div. Tests 90 v. and 135 v. "B" batteries and 1½ v. "A" batteries	$3.75
No. 40A	for 90 v. and 135 v. "B" batteries and 4.5 v., 6 v. and 7.5 v. "A" batteries. Scale 0-150 v., 5 v. div. Scale 0-10 v., 1/5 v. div. Tests 90 v. and 135 v. "B" batteries and 4½ v., 6 v. and 7½ v. "A" batteries	$4.00
No. 42A	Graphic General Tester. Red and Green color chart for all standard batteries including 45 v. and 90 v. "B" batteries and 1.5 v., 4.5 v., 6 v., and 7.5 v. "A" batteries. 0-100 v. scale for special sizes of "B" batteries, 5 v. div. Tests all Portable Radio batteries	$6.00


No. 42A GENERAL TESTER

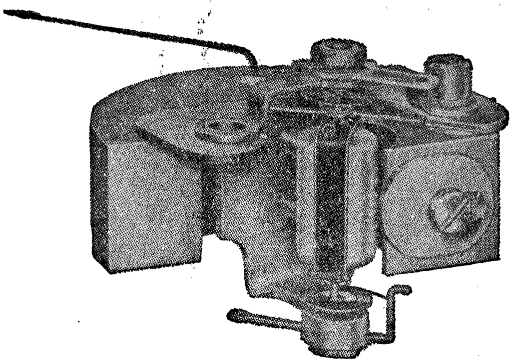

No. 45 VOLTAMMETER

STANDARD LINE—Sterling's direct current pocket ammeters, voltmeters and voltammeters may be used in all kinds of battery testing, in railroad signal work, for photo flash purposes and in telephone and low-voltage electrical work generally. **They are polarity indicators.** Meters 2½" in diameter and ⅝" thick. Nickel finish. Standard package, ten instruments. Shipping Weight 4 lbs.

Burlington Improved PANEL INSTRUMENTS



Alternating Current



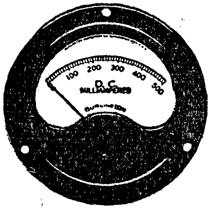
Direct Current

AC and DC types are accurate to within 2% of full scale value at any point on the scale.

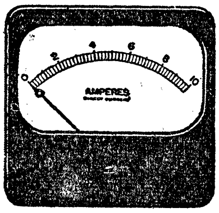
DC instruments combine extremely light weight moving elements and powerful alnico magnets to produce a torque to weight ratio which reduces frictional error to a minimum. This high torque to weight ratio permits use of pivots with ample pivot bearing surface to overcome effects of rough handling, shock, and vibration.

AC instruments are accurate over entire range of commercial power frequencies (25 to 125 cycles). These instruments are of repulsion vane type using carefully aged and impregnated field coils and multipliers which are wound with conductors of ample size so that temperature rise of the windings may be maintained at a minimum, even though instrument is subjected to continuous use in the circuit.

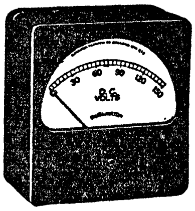
Alnico magnets are used to obtain perfected damping characteristics found in no other AC instrument.



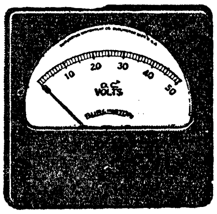
MODELS
Direct Current
221, 421, 431, 441
Alternating Current
222, 422, 432.



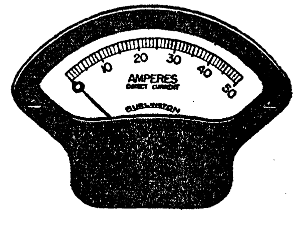
MODELS
Direct Current
731, 741
Alternating Current
732, 742



MODELS
Direct Current
141
Alternating Current
142



MODELS
Direct Current
521, 531
Alternating Current
522, 532



MODELS
Direct Current
841

***Request Catalog #47 for information on Hermetically Sealed Instruments in 1½", 2½", and 3½" types**

CASE DIMENSIONS

Model No.					Stud Length		
DC	AC	Body	Flange	Body Depth	AC	DC	Case
141	142		4" x 4¼"	2"	¾"	1"	Rectangular, front-of-board Bakelite
*311		1.500" Diam.	1.750" x 1.750"	1"	Solder type		Square, flush, Hermetically Sealed
221	222	2.062" Diam.	2.740" Diam.	1 29/64"	⅝"	25/32"	Round, flush, Metal
*321	322	2.068" Diam.	2.695" Diam.	1 1/16"	Solder type		Round, flush, Hermetically Sealed
421	422	2.156" Diam.	2.690" Diam.	1.4062"	⅝"	25/32"	Round, flush, Bakelite
*331	332	2.670" Diam.	3½" Diam.	1 9/64"	Solder type		Round, flush, Hermetically Sealed
431	432	2.796" Diam.	3½" Diam.	1½"	¾"	¾"	Round, flush, Bakelite
441		3.5625" Diam.	4⅜" Diam.	1.4531"	¾"		Round, flush, Bakelite
521	522	2.156" Diam.	2⅜" x 2⅜"	1⅜"	⅝"	25/32"	Square, flush, Bakelite
531	532	2.796" Diam.	3" x 3"	1½"	¾"	¾"	Square, flush, Bakelite
731	732	2¼" Diam.	3 11/16" x 3 5/16"	1.0156"	¾"	⅝"	Rectangular, semi-flush, Bakelite
741	742	2¾" Diam.	4" x 4¼"	1"	¾"	¾"	Rectangular, semi-flush, Bakelite
841		2¾" Diam.		1.2187"	¾"		Fan-shaped, semi-flush, Bakelite

Prices and Specifications shown are subject to change without notice.

Burlington *Improved*

DIRECT

D. C. MILLIAMMETERS

Range	Scale Div	Approx. Res.	MODEL 221		MODEL 421		MODEL 521		MODEL 531	
			Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
0-1	50	47 ohms	A82 x 5	$7.50	A72 x 11	$7.50	A73 x 11	$7.50	A75 x 11	$8.10
0-5	50	10 ohms	A82 x 6	7.50	A72 x 14	7.50	A73 x 14	7.50	A75 x 14	8.10
0-10	50	5 ohms	A82 x 7	7.50	A72 x 15	7.50	A73 x 15	7.50	A75 x 15	8.10
0-15	30	9.34 ohms	A82 x 8	7.50	A72 x 16	7.50	A73 x 16	7.50	A75 x 16	8.10
0-25	50	5.6 ohms	A82 x 9	7.50	A72 x 17	7.50	A73 x 17	7.50	A75 x 17	8.10
0-50	50	2.8 ohms	A82 x 10	7.50	A72 x 19	7.50	A73 x 19	7.50	A75 x 19	8.10
0-100	50	1.4 ohms	A82 x 11	7.50	A72 x 20	7.50	A73 x 20	7.50	A75 x 20	8.10
0-150	30	.94 ohms	A82 x 12	7.50	A72 x 21	7.50	A73 x 21	7.50	A75 x 21	8.10
0-200	40	.7 ohms	A82 x 13	7.50	A72 x 22	7.50	A73 x 22	7.50	A75 x 22	8.10
0-250	50	.56 ohms	A82 x 14	7.50	A72 x 23	7.50	A73 x 23	7.50	A75 x 23	8.10
0-300	30	.466 ohms	A82 x 15	7.50	A72 x 24	7.50	A73 x 24	7.50	A75 x 24	8.10
0-500	50	.28 ohms	A82 x 16	7.50	A72 x 25	7.50	A73 x 25	7.50	A75 x 25	8.10
0-750	75	.186 ohms	A82 x 17	7.50	A72 x 26	7.50	A73 x 26	7.50	A75 x 26	8.10
0-1000	50	.140 ohms	A82 x 18	7.50	A72 x 28	7.50	A73 x 28	7.50	A75 x 28	8.10

D. C. AMMETERS

0-1	50	50MV	A82 x 19	$7.50	A72X29	$7.50	A73X29	$7.50	A75 x 29	$8.10
0-3	30	50MV	A82 x 20	7.50	A72X77	7.50	A73X77	7.50	A75 x 84	8.10
0-5	50	50MV	A82 x 21	7.50	A72X30	7.50	A73X30	7.50	A75 x 30	8.10
0-10	50	50MV	A82 x 22	7.50	A72X32	7.50	A73X32	7.50	A75 x 33	8.10
0-15	30	50MV	A82 x 48	7.50	A72X33	7.50	A73X33	7.50	A75 x 34	8.10
0-25	50	50MV	A82 x 23	7.50	A72X35	7.50	A73X35	7.50	A75 x 36	8.10
0-30	30	50MV	A82 x 24	7.50	A72X36	7.50	A73X36	7.50	A75 x 37	8.10
0-50	50	50MV	A82 x 25	7.50	A72X38	7.50	A73X38	7.50	A75 x 40	8.10
0-60	30	50MV	A82 x 26	7.50	A72X39	7.50	A73X39	7.50	A75 x 41	8.10
0-75	75	50MV	A82 x 27	7.50	A72X42	7.50	A73X42	7.50	A75 x 44	8.10

Ranges above 60 amp. are supplied as 50MV movements for use with 50MV external shunts.

D. C. MICROAMMETERS

0-50	50	1150 ohms	A82 x 1	$11.85	A72 x 1	$11.85	A73 x 1	$11.85	A75 x 1	$12.45
0-100	50	1150 ohms	A82 x 2	10.50	A72 x 2	10.50	A73 x 2	10.50	A75 x 2	11.25
0-200	40	330 ohms	A82 x 3	8.55	A72 x 4	8.55	A73 x 4	8.55	A75 x 4	9.30
0-500	50	225 ohms	A82 x 4	7.95	A72 x 9	7.95	A73 x 9	7.95	A75 x 9	8.70

D. C. VOLTMETERS—200 Ohms Per Volt

0-3	30	—	A82 x 36	$7.50	A72X57	$7.50	A73X57	$7.50	A75 x 59	$8.10
0-5	50	—	A82 x 37	7.50	A72X58	7.50	A73X58	7.50	A75 x 60	8.10
0-10	50	—	A82 x 38	7.50	A72X59	7.50	A73X59	7.50	A75 x 61	8.10
0-15	30	—	A82 x 39	7.50	A72X60	7.50	A73X60	7.50	A75 x 62	8.10
0-25	50	—	A82 x 40	7.50	A72X62	7.50	A73X62	7.50	A75 x 64	8.10
0-50	50	—	A82 x 41	7.50	A72X65	7.50	A73X65	7.50	A75 x 67	8.10
0-100	50	—	A82 x 42	7.50	A72X68	7.50	A73X68	7.50	A75 x 70	8.10
0-150	30	—	A82 x 43	7.50	A72X69	7.50	A73X69	7.50	A75 x 71	8.10
0-300	30	—	—	—	—	—	—	—	A75 x 74	9.15

D. C. VOLTMETERS—1000 Ohms Per Volt

0-50	50	—	A82 x 44	$8.55	A72 x 70	$8.55	A73 x 70	$8.55	A75 x 75	$9.30
0-100	50	—	A82 x 45	8.85	A72 x 72	8.85	A73 x 72	8.85	A75 x 77	9.75
0-150	30	—	A82 x 46	9.30	A72 x 73	9.30	A73 x 73	9.30	A75 x 78	10.05
0-300	30	—	A82 x 47	9.60	A72 x 76	9.60	A73 x 76	9.60	A75 x 81	10.35
0-500	50	—	—	—	A72 x 78	9.90	A73 x 78	9.90	A75 x 82	10.65
0-1000	50	—	—	—	—	—	—	—	A75 x 83	10.95

Ranges above those listed are supplied for use with external resistors.

ALTERNATING

A. C. MILLIAMMETERS

			MODEL 222		MODEL 422		MODEL 522		MODEL 532	
0-10	50	2020 ohms	A100 x 2	$7.50	A90 x 1	$7.50	A91 x 1	$7.50	A93 x 1	$8.10
0-15	30	1120 ohms	A100 x 3	7.50	A90 x 33	7.50	A91 x 33	7.50	A93 x 25	8.10
0-25	50	370 ohms	A100 x 4	7.50	A90 x 2	7.50	A91 x 2	7.50	A93 x 2	8.10
0-50	50	83 ohms	A100 x 5	7.50	A90 x 3	7.50	A91 x 3	7.50	A93 x 3	8.10
0-100	50	20 ohms	A100 x 6	7.50	A90 x 4	7.50	A91 x 4	7.50	A93 x 4	8.10
0-250	50	4 ohms	A100 x 7	7.50	A90 x 34	7.50	A91 x 34	7.50	A93 x 26	8.10
0-500	50	.8 ohms	A100 x 8	7.50	A90 x 5	7.50	A91 x 5	7.50	A93 x 5	8.10

A. C. AMMETERS

0-1.5	30	072 ohms	A100 x 9	$7.50	A90 x 27	$7.50	A91 x 27	$7.50	A93 x 27	$8.10
0-5	50	.0108 ohms	A100 x 10	7.50	A90 x 7	7.50	A91 x 7	7.50	A93 x 7	8.10
0-10	50	.0038 ohms	A100 x 11	7.50	A90 x 8	7.50	A91 x 8	7.50	A93 x 8	8.10
0-15	30	.0018 ohms	A100 x 12	7.50	A90 x 28	7.50	A91 x 28	7.50	A93 x 28	8.10
0-25	50	.0008 ohms	A100 x 13	7.50	A90 x 29	7.50	A91 x 29	7.50	A93 x 29	8.10
0-30	30	.00079 ohms	A100 x 14	7.50	A90 x 9	7.50	A91 x 9	7.50	A93 x 9	8.10
0-50	50	.00048 ohms	A100 x 15	7.50	A90 x 10	7.50	A91 x 10	7.50	A93 x 10	8.10
0-75	75	.00035 ohms	A100 x 16	*7.50	A90 x 11	*7.50	A91 x 11	7.50	A93 x 11	9.30

*** These and higher ranges are supplied as 5 amp. movement for use with current transformers.**

A. C. VOLTMETERS

0-1.5	30	3.3	A100 x 23	$7.50	A90 x 24	$7.50	A91 x 24	$7.50	A93 x 33	$8.10
0-3	30	10	A100 x 24	7.50	A90 x 25	7.50	A91 x 25	7.50	A93 x 34	8.10
0-5	50	10	A100 x 25	7.50	A90 x 16	7.50	A91 x 16	7.50	A93 x 16	8.10
0-10	50	13	A100 x 26	7.50	A90 x 17	7.50	A91 x 17	7.50	A93 x 17	8.10
0-15	30	13	A100 x 27	7.50	A90 x 18	7.50	A91 x 18	7.50	A93 x 18	8.10
0-25	50	26	A100 x 28	7.50	A90 x 26	7.50	A91 x 26	7.50	A93 x 35	8.10
0-50	50	50	A100 x 29	7.50	A90 x 20	7.50	A91 x 20	7.50	A93 x 20	8.10
0-100	50	110	A100 x 30	7.50	A90 x 21	7.50	A91 x 21	7.50	A93 x 21	8.10
0-150	30	110	A100 x 1	8.25	A90 x 22	8.25	A91 x 22	8.25	A93 x 22	8.85
0-300	30	165	A100 x 31	10.05	A90 x 23	10.05	A91 x 23	10.05	A93 x 23	10.65
0-500	50	165	—	—	—	—	—	—	A93 x 24	13.05
0-600	30	165	—	—	—	—	—	—	A93 x 36	15.60

Ranges above those shown require external resistors.

PANEL INSTRUMENTS

CURRENT

D. C. MILLIAMMETERS

MODEL 731		MODEL 431		MODEL 741		MODEL 141		• • MODEL 441		MODEL 841	
Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A76 x 11	$8.40	A74 x 11	$8.10	A79 x 11	$9.15	A78 x 11	$9.15	A77 x 11	$8.70	A80 x 11	$8.70
A76 x 14	8.40	A74 x 14	8.10	A79 x 14	9.15	A78 x 14	9.15	A77 x 14	8.70	A80 x 14	8.70
A76 x 15	8.40	A74 x 15	8.10	A79 x 15	9.15	A78 x 15	9.15	A77 x 15	8.70	A80 x 15	8.70
A76 x 16	8.40	A74 x 16	8.10	A79 x 16	9.15	A78 x 16	9.15	A77 x 16	8.70	A80 x 16	8.70
A76 x 17	8.40	A74 x 17	8.10	A79 x 17	9.15	A78 x 17	9.15	A77 x 17	8.70	A80 x 17	8.70
A76 x 19	8.40	A74 x 19	8.10	A79 x 19	9.15	A78 x 19	9.15	A77 x 19	8.70	A80 x 19	8.70
A76 x 20	8.40	A74 x 20	8.10	A79 x 20	9.15	A78 x 20	9.15	A77 x 20	8.70	A80 x 20	8.70
A76 x 21	8.40	A74 x 21	8.10	A79 x 21	9.15	A78 x 21	9.15	A77 x 21	8.70	A80 x 21	8.70
A76 x 22	8.40	A74 x 22	8.10	A79 x 22	9.15	A78 x 22	9.15	A77 x 22	8.70	A80 x 22	8.70
A76 x 23	8.40	A74 x 23	8.10	A79 x 23	9.15	A78 x 23	9.15	A77 x 23	8.70	A80 x 23	8.70
A76 x 24	8.40	A74 x 24	8.10	A79 x 24	9.15	A78 x 24	9.15	A77 x 24	8.70	A80 x 24	8.70
A76 x 25	8.40	A74 x 25	8.10	A79 x 25	9.15	A78 x 25	9.15	A77 x 25	8.70	A80 x 25	8.70
A76 x 26	8.40	A74 x 26	8.10	A79 x 26	9.15	A78 x 26	9.15	A77 x 26	8.70	A80 x 26	8.70
A76 x 28	8.40	A74 x 28	8.10	A79 x 28	9.15	A78 x 28	9.15	A77 x 28	8.70	A80 x 28	8.70

D. C. AMMETERS

A76 x 29	$8.40	A74 x 29	$8.10	A79 x 29	$9.15	A78 x 29	$9.15	A77 x 29	$8.70	A80 x 29	$8.70
A76 x 84	8.40	A74 x 84	8.10	A79 x 84	9.15	A78 x 84	9.15	A77 x 84	8.70	A80 x 84	8.70
A76 x 30	8.40	A74 x 30	8.10	A79 x 30	9.15	A78 x 30	9.15	A77 x 30	8.70	A80 x 30	8.70
A76 x 33	8.40	A74 x 33	8.10	A79 x 33	9.15	A78 x 33	9.15	A77 x 33	8.70	A80 x 33	8.70
A76 x 34	8.40	A74 x 34	8.10	A79 x 34	9.15	A78 x 34	9.15	A77 x 34	8.70	A80 x 34	8.70
A76 x 36	8.40	A74 x 36	8.10	A79 x 36	9.15	A78 x 36	9.15	A77 x 36	8.70	A80 x 36	8.70
A76 x 37	8.40	A74 x 37	8.10	A79 x 37	9.15	A78 x 37	9.15	A77 x 37	8.70	A80 x 37	8.70
A76 x 40	8.40	A74 x 40	8.10	A79 x 40	9.15	A78 x 40	9.15	A77 x 40	8.70	A80 x 40	8.70
A76 x 41	8.40	A74 x 41	8.10	A79 x 41	9.15	A78 x 41	9.15	A77 x 41	8.70	A80 x 41	8.70
A76 x 44	8.40	A74 x 44	8.10	A79 x 44	9.15	A78 x 44	9.15	A77 x 44	8.70	A80 x 44	8.70

D. C. MICROAMMETERS

A76 x 1	$12.75	A74 x 1	$12.45	A79 x 1	$13.95	A78 x 1	$13.95	A77 x 1	$13.50	A80 x 1	$13.50
A76 x 2	11.55	A74 x 2	11.25	A79 x 2	12.60	A78 x 2	12.60	A77 x 2	12.30	A80 x 2	12.30
A76 x 4	9.75	A74 x 4	9.30	A79 x 4	10.80	A78 x 4	10.80	A77 x 4	10.35	A80 x 4	10.35
A76 x 9	9.00	A74 x 9	8.70	A79 x 9	10.20	A78 x 9	10.20	A77 x 9	9.75	A80 x 9	9.75

D. C. VOLTMETERS 200 Ohms Per Volt

A76 x 59	$8.40	A74 x 59	$8.10	A79 x 59	$9.15	A78 x 59	$9.15	A77 x 59	$8.70	A80 x 59	$8.70
A76 x 60	8.40	A74 x 60	8.10	A79 x 60	9.15	A78 x 60	9.15	A77 x 60	8.70	A80 x 60	8.70
A76 x 61	8.40	A74 x 61	8.10	A79 x 61	9.15	A78 x 61	9.15	A77 x 61	8.70	A80 x 61	8.70
A76 x 62	8.40	A74 x 62	8.10	A79 x 62	9.15	A78 x 62	9.15	A77 x 62	8.70	A80 x 62	8.70
A76 x 64	8.40	A74 x 64	8.10	A79 x 64	9.15	A78 x 64	9.15	A77 x 64	8.70	A80 x 64	8.70
A76 x 67	8.40	A74 x 67	8.10	A79 x 67	9.15	A78 x 67	9.15	A77 x 67	8.70	A80 x 67	8.70
A76 x 70	8.40	A74 x 70	8.10	A79 x 70	9.15	A78 x 70	9.15	A77 x 70	8.70	A80 x 70	8.70
A76 x 71	8.40	A74 x 71	8.10	A79 x 71	9.15	A78 x 71	9.15	A77 x 71	8.70	A80 x 71	8.70
		A74 x 74	9.15	A79 x 74	10.20	A78 x 74	10.20	A77 x 74	9.75	A80 x 74	9.75

D. C. VOLTMETERS 1000 Ohms Per Volt

A76 x 75	$9.75	A74 x 75	$9.30	A79 x 75	$10.50	A78 x 75	$10.50	A77 x 75	$10.05	A80 x 75	$10.05
A76 x 77	10.05	A74 x 77	9.75	A79 x 77	10.80	A78 x 77	10.80	A77 x 77	10.35	A80 x 77	10.35
A76 x 78	10.35	A74 x 78	10.05	A79 x 78	11.10	A78 x 78	11.10	A77 x 78	10.65	A80 x 78	10.65
A76 x 81	10.65	A74 x 81	10.35	A79 x 81	11.40	A78 x 81	11.40	A77 x 81	10.95	A80 x 81	10.95
A76 x 82	10.95	A74 x 82	10.65	A79 x 82	11.70	A78 x 82	11.70	A77 x 82	11.25	A80 x 82	11.25
		A74 x 83	10.95	A79 x 83	12.00	A78 x 83	12.00	A77 x 83	11.55	A80 x 83	11.55

CURRENT

A. C. MILLIAMMETERS

MODEL 732		MODEL 432		MODEL 742		MODEL 142	
A94 x 1	$8.40	A92 x 1	$8.10	A97 x 1	$9.15	A96 x 1	$9.15
A94 x 25	8.40	A92 x 25	8.10	A97 x 25	9.15	A96 x 25	9.15
A94 x 2	8.40	A92 x 2	8.10	A97 x 2	9.15	A96 x 2	9.15
A94 x 3	8.40	A92 x 3	8.10	A97 x 3	9.15	A96 x 3	9.15
A94 x 4	8.40	A92 x 4	8.10	A97 x 4	9.15	A96 x 4	9.15
A94 x 26	8.40	A92 x 26	8.10	A97 x 26	9.15	A96 x 26	9.15
A94 x 5	8.40	A92 x 5	8.10	A97 x 5	9.15	A96 x 5	9.15

A. C. AMMETERS

A94 x 27	$8.40	A92 x 27	$8.10	A97 x 27	$9.15	A96 x 27	$9.15
A94 x 7	8.40	A92 x 7	8.10	A97 x 7	9.15	A96 x 7	9.15
A94 x 8	8.40	A92 x 8	8.10	A97 x 8	9.15	A96 x 8	9.15
A94 x 28	8.40	A92 x 28	8.10	A97 x 28	9.15	A96 x 28	9.15
A94 x 29	8.40	A92 x 29	8.10	A97 x 29	9.15	A96 x 29	9.15
A94 x 9	8.40	A92 x 9	8.10	A97 x 9	9.15	A96 x 9	9.15
A94 x 10	8.40	A92 x 10	8.10	A97 x 10	9.15	A96 x 10	9.15
A94 x 11	8.40	A92 x 11	9.30	A97 x 11	10.50	A96 x 11	10.50

A. C. VOLTMETERS

A94 x 33	$8.40	A92 x 33	$8.10	A97 x 33	$9.15	A96 x 33	$9.15
A94 x 34	8.40	A92 x 34	8.10	A97 x 34	9.15	A96 x 34	9.15
A94 x 16	8.40	A92 x 16	8.10	A97 x 16	9.15	A96 x 16	9.15
A94 x 17	8.40	A92 x 17	8.10	A97 x 17	9.15	A96 x 17	9.15
A94 x 18	8.40	A92 x 18	8.10	A97 x 18	9.15	A96 x 18	9.15
A94 x 35	8.40	A92 x 35	8.10	A97 x 35	9.15	A96 x 35	9.15
A94 x 20	8.40	A92 x 20	8.10	A97 x 20	9.15	A96 x 20	9.15
A94 x 21	8.40	A92 x 21	8.10	A97 x 21	9.15	A96 x 21	9.15
A94 x 22	9.15	A92 x 22	8.85	A97 x 22	9.90	A96 x 22	9.90
A94 x 23	10.95	A92 x 23	10.65	A97 x 23	11.55	A96 x 23	11.55
—	—	A92 x 24	13.05	A97 x 24	14.10	A96 x 24	14.10
—	—	A92 x 45	15.60	A97 x 38	16.50	A96 x 36	16.50

Net

Burlington *Improved*
PANEL INSTRUMENTS

RUNNING TIME METERS

Model 538 3" Square Flush 0-9999.9 Hours	**$16.50**
Model 438 3½" Round Flush 0-9999.9 Hours	**16.50**

120 or 240 volt (specify when ordering)

POWER LEVEL INDICATORS
VU METERS

Model 745 4¼" Rectangular Semi-flush	**$19.50**
Model 535 3" Square Flush	**18.00**
Model 435 3½" Round Flush	**18.00**

Supplied with "A" or "B" Scale (specify)
Illumination for Model 745 add **$3.00** extra. Complete with bulbs.

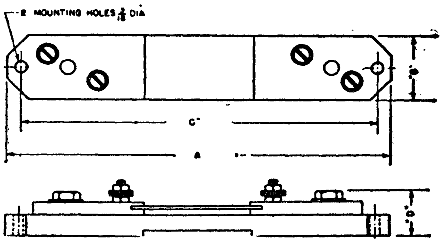
DB METERS

Model 425 2½" Round Flush	**$14.40**
Model 525 2½" Square Flush	**14.40**
Model 435 3½" Round Flush	**15.00**
Model 535 3" Square Flush	**15.00**
Model 735 3½" Rectangular Semi-flush	**15.15**
Model 745 4¼" Rectangular Semi-flush	**16.50**

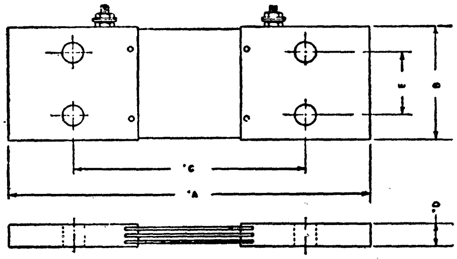
Illumination for Models 735-745 Add **$3.00** extra.
All other Models Add **$1.50** extra. Complete with bulbs.

EXTERNAL SHUNTS

Range	**Part No.**	"A"	"B"	"C"	"D"	**Price**
25 amp.	**A31 x 152**	7½"	1¼"	7"	61/64"	**$6.60**
30 amp.	**A31 x 153**	7½"	1¼"	7"	61/64"	**6.60**
50 amp.	**A31 x 156**	7½"	1¼"	7"	61/64"	**6.60**
60 amp.	**A31 x 157**	7½"	1¼"	7"	61/64"	**6.60**
75 amp.	**A31 x 158**	7½"	1¼"	7"	61/64"	**6.60**
100 amp.	**A31 x 160**	7½"	1¼"	7"	61/64"	**6.60**



25 to 100 Amp. Inclusive



Range	**Part No.**	"A"	"B"	"C"	"D"	"E"	Mounting	**Price**
150 amp.	**A31 x 163**	5½"	1½"	4¼"	¼"	On CL	1-Hole Each End ⅜" Dia.	**$7.65**
200 amp.	**A31 x 164**	5½"	2"	4¼"	¼"	On CL		**7.65**
300 amp.	**A31 x 167**	5½"	1½"	4¼"	⅜"	On CL		**7.65**
400 amp.	**A31 x 169**	7"	2¼"	4½"	⅜"	1¼"	2-Holes Each End ⅜" Dia.	**9.60**
500 amp.	**A31 x 170**	7"	2¼"	4½"	⅜"	1¼"		**11.55**
600 amp.	**A31 x 171**	8"	3"	5"	½"	2"		**13.80**
1000 amp.	**A31 x 174**	8¼"	3"	6¾"	1½"	1½"		**22.50**
1200 amp.	**A31 x 175**	8¼"	3"	6¾"	1½"	1½"		**27.30**
1500 amp.	**A31 x 176**	8¼"	3"	6¾"	1½"	1½"		**33.60**

150 to 1500 Amp. Inclusive

Shunts or other than 50MV drop or ranges not listed quoted on request. 4 foot leads are supplied.

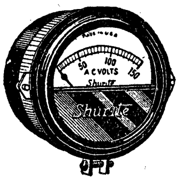
CURRENT TRANSFORMERS DONUT TYPE

RATIO	**PART No.**	**PRIMARY TURNS**	**PRICE**
50/5	**A70 x 7**	1	**$10.50**
100/5	**A70 x 21**	1	**7.80**
150/5	**A70 x 25**	1	**7.80**
200/5	**A70 x 27**	1	**7.80**
250/5	**A70 x 28**	1	**7.80**
300/5	**A70 x 31**	1	**9.50**
400/5	**A70 x 33**	1	**9.50**
500/5	**A70 x 36**	1	**10.50**
600/5	**A70 x 37**	1	**11.50**
750/5	**A70 x 38**	1	**13.75**
1000/5	**A70 x 40**	1	**14.50**

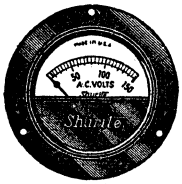
If ranges or ratios other than those listed above are required, give full details as to range or ratio, length of leads, size etc., when ordering. 2 foot leads are standard.

Net

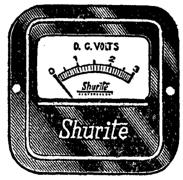
Shurite PANEL METERS



Model 550-AC



Model 650-AC



Model 950-DC (or AC)

Model 550-DC
with Zero Adjuster

Shurite panel meters are attractive, rugged, dependable instruments with accuracy well within 5%. All models have metal cases, telephone-black front; all require $2\frac{5}{32}''$ hole. DC meters are polarized-vane solenoid type, AC meters are double vane repulsion type with jeweled bearing. All are guaranteed.

- **Guarantee:** All Shurite meters are guaranteed to users against defective workmanship and material, and will be repaired or replaced if sent to the factory postpaid with 40c handling charge within one year after date of purchase.
- **All-metal Dials**—age and moisture resistant, lithographed in black on white for high visibility.
- **Sturdy Design**—with new coil frames for greater rigidity, yet interchangeable in other respects with similar type of instrument formerly available.
- **Modern appearance**—with concealed coils, full view scales, and attractive styling and finish.

TYPICAL USES: Shurite products, with their rugged design, and ability to duplicate readings, enjoy wide acceptance in the electronic and electrical fields. Applications include transmitters, receivers, TV antenna rotator controls, battery indicators, appliances, power sources, battery eliminators, electric fence controllers, and the very popular basic meters in radio test kits.

Shurite products are also specified for battery voltage indicators on emergency lighting, burglar and fire alarm systems, output meters on rectifiers (copper oxide, tungar or selenium types), rate-of-charge indicators, testers for hearing aid batteries and their chargers, ammeters for plating sets, and polarity indicators for metals analysis.

Other uses range from automotive test equipment to pin-ball circuit testers, and well depth indicators. Shurite has long been the favorite brand for those who take their hobbies and experiments seriously.

DC MILLIAMMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Amps.	Approx. Ohms#	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1**	1000	5300Z	$3.10	6300Z	$3.20	9300Z	$3.25
0-3L**	500	5332Z	2.80	6332Z	2.90	9332Z	2.95
0-3	5000	5301	2.15	6301	2.25	9301	2.30
0-5	2470	5302	1.95	6302	2.05	9302	2.10
0-10	557	5303	1.85	6303	1.95	9303	2.00
0-15	296	5304	1.50	6304	1.60	9304	1.65
0-25	87	5305	1.45	6305	1.55	9305	1.60
0-50	24	5306	1.45	6306	1.55	9306	1.60
0-100	6.2	5307	1.45	6307	1.55	9307	1.60
0-150	2.0	5308	1.45	6308	1.55	9308	1.60
0-200	1.5	5309	1.45	6309	1.55	9309	1.60
0-300	.90	5310	1.45	6310	1.55	9310	1.60
0-400	.46	5311	1.40	6311	1.50	9311	1.55
0-500	.25	5312	1.40	6312	1.50	9312	1.55

** Moving Magnet Construction, provides the approximate internal resistance shown. Price includes zero adjuster.
* For zero adjusters add 35c to price and Z to stock number. No zero adjuster on Model 950 stock models; except 9300Z and 9332Z.

AC MILLIAMMETERS

RANGE Ma.	RESIST. Ohms	MODEL 550 No.	Each	MODEL 650 No.	Each	MODEL 950 No.	Each
	Approx.	Stock	Net	Stock	Net	Stock	Net
0-10	4800	5607	$2.85	6607	$2.95	9607	$3.00
0-25	750	5601	2.55	6601	2.65	9601	2.70
0-50	150	5602	2.55	6602	2.65	9602	2.70
0-100	37	5603	2.55	6603	2.65	9603	2.70
0-250	5.4	5604	2.55	6604	2.65	9604	2.70
0-500	1.34	5605	2.55	6605	2.65	9605	2.70

DC AMMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Amps.	Approx. Ohms#	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	.105	5201	$1.45	6201	$1.55	9201	$1.60
0-3	.02 Max	5202	1.45	6202	1.55	9202	1.60
0-5	.02 Max	5203	1.45	6203	1.55	9203	1.60
0-8	.02 Max	5204	1.45	6204	1.55	9204	1.60
0-10	.02 Max	5205	1.45	6205	1.55	9205	1.60
0-15	.02 Max	5206	1.55	6206	1.65	9206	1.70
0-25	.02 Max	5207	1.85	6207	1.95	9207	2.00
0-50	.02 Max	5208	2.15	6208	2.25	9208	2.30
1-0-1	.13	5209	1.55	6209	1.65	9209	1.70
3-0-3	.02 Max	5210	1.55	6210	1.65	9210	1.70
5-0-5	.022	5211	1.55	6211	1.65	9211	1.70
6-0-6	.02 Max	5212	1.55	6212	1.65	9212	1.70
10-0-10	.02 Max	5213	1.70	6213	1.80	9213	1.85
20-0-20	.02 Max	5214	1.75	6214	1.85	9214	1.90
30-0-30	.02 Max	5215	1.85	6215	1.95	9215	2.00
50-0-50	.02 Max	5216	2.00	6216	2.10	9216	2.15

* For zero adjuster, add 35c to price and Z to stock number. No zero adjuster on Model 950 stock models.

AC AMMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Ma.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	.42 Max	5501	$2.55	6501	$2.65	9501	$2.70
0-3	.072 Max	5502	2.55	6502	2.65	9502	2.70
0-5	.041 Max	5503	2.55	6503	2.65	9503	2.70
0-10	.02 Max	5504	2.55	6504	2.65	9504	2.70
0-30	.02 Max	5505	2.85	6505	2.95	9505	3.00
0-50	.02 Max	5506	3.05	6506	3.15	9506	3.20

#Resistances are being changed in some models. If this factor is important in your circuit, factory engineering data will be supplied on request. Please state whether case is magnetic or nonmagnetic.

Prices NET, F.O.B. New Haven, Conn., domestic packing, effective April 1, 1953. Subject to change without notice. Printed in U. S. A.

DC VOLTMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Volts	Approx. Ohms#	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	22	5101	$1.40	6101	$1.50	9101	$1.55
0-3	205	5102	1.45	6102	1.55	9102	1.60
3-0-3	265	5103	1.45	6103	1.55	9103	1.60
0-5	525	5104	1.45	6104	1.55	9104	1.60
0-6	570	5105	1.45	6105	1.55	9105	1.60
0-8	970	5106	1.45	6106	1.55	9106	1.60
0-10	1920	5107	1.50	6107	1.60	9107	1.65
0-15	4200	5108	1.60	6108	1.70	9108	1.75
0-20	1115	5121	1.65	6121	1.75	9121	1.80
0-25	1360	5109	1.60	6109	1.70	9109	1.75
0-25H**	6000	5110	2.30	6110	2.40	9110	2.45
0-50	2630	5122	1.75	6122	1.85	9122	1.90
0-50H**	12500	5111	2.45	6111	2.55	9111	2.60
0-75	4000	5112	1.80	6112	1.90	9112	1.95
0-100	5300	5113	1.90	6113	2.00	9113	2.05
0-100H**	25600	5114	2.60	6114	2.70	9114	2.75
0-150	8000	5115	2.00	6115	2.10	9115	2.15
0-150H**	37200	5116	2.70	6116	2.80	9116	2.85
0-300H**†	74200	5117	2.95	6117	3.05	9117	3.10
0-500H**†	124200	5118	3.90	6118	4.00	9118	4.05
0-750H**†	184200	5119	4.65	6119	4.75	9119	4.80
0-8-160	††	5120	2.40	6120	2.50	9120	2.55

*For zero adjuster, add 35c to price and Z to stock number. No zero adjuster on No. 950 stock models.

**H denotes high resistance.

†Supplied with external resistors.

††Approx. resistance 840 ohms at 8 volts. 17,340 ohms at 160 volts.

AC VOLTMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Volts	Approx. Ohms/Volts	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-4	11	5401	$2.55	6401	$2.65	9401	$2.70
0-6	15.8	5402	2.55	6402	2.65	9402	2.70
0-10	27	5403	2.55	6403	2.65	9403	2.70
0-15	32.3	5404	2.55	6404	2.65	9404	2.70
0-50	96	5405	3.05	6405	3.15	9405	3.20
0-150	135	5406	3.30	6406	3.40	9406	3.45
0-300*	100	5407	3.70	6407	3.80	9407	3.85
0-600*	100	5408	4.70	6408	4.80	9408	4.85
0-750*	100	5409	5.30	6409	5.40	9409	5.40

*Supplied with external resistors.

RESISTANCE METERS

RANGE		MODEL 550*		MODEL 650*		MODEL 950	
Ohms	Volts	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
10,000	4.5**	5701	$2.00	6701	$2.10	9701	$2.15

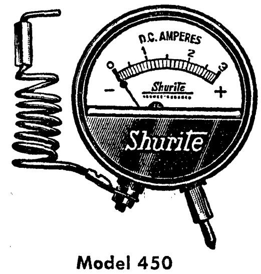
* For zero adjuster add 35c to price and Z to stock number. No zero adjuster on No. 950 stock models.

** Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.

#Resistances are being changed in some models. If this factor is important in your circuit, factory engineering data will be supplied on request. Please state whether case is magnetic or nonmagnetic.

POCKET TYPE METERS

Various Shurite pocket meters using the Model 450 case are in production. Model 450 has bright plated case, with two or three terminals, depending on ranges. Ranges suitable for pre-war and post-war batteries, portable radio batteries and many other electrical applications, including polarity indication types have been made, although they are not regularly stocked.



Model 450

Stock numbers begin with 4 as the first digit. For example, the 0-3 DC Ammeter, as illustrated, is Stock No. 4202.

The bulletin, "Shurite Pocket Types", available on request, is periodically revised to indicate pocket meters which are authorized for production. Dealer net price is obtained by adding $0.40 to the price of 550 Model meters as shown in this catalog at $1.70 or less, or by adding $0.30 for meters at $1.75 or above.

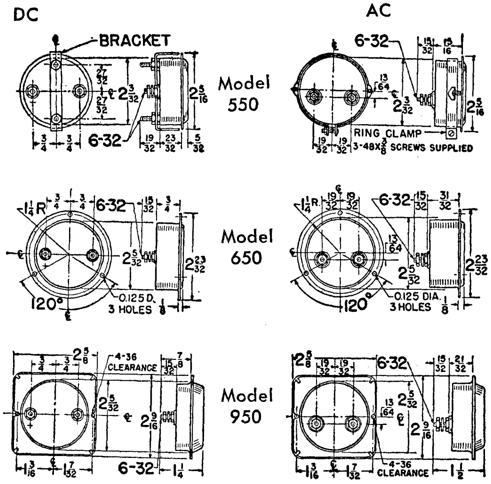
FLANGE ADAPTER RING

A sturdy flange ring to be placed over any Model 550 (round) Shurite meter where a flange mount is preferred. Makes appearance similar to Model 650. Wide flange, 2¾" dia. Telephone black finish. Screws, lockwashers and nuts included.

Model 5-A, Net **$0.18**

MOUNTING DETAILS

All Shurite Panel Meters have flush cases and require $2\frac{5}{32}''$ hole. Most standard ranges have 6-32 studs, and are mounted as follows:



IMPORTANT—HOW TO ORDER:

For all standard models, give: (1) Model Number, (2) Range, (3) Stock Number. If Model number and stock number are not stated, Model 550 will be supplied.

ZERO ADJUSTERS (Z)

Zero Adjusters are available only on Models 550-DC and 650-DC. No zero adjuster on models using 950 case, except 9332-Z. When ordering, add Z to stock number. Example: Stock number for Model 550-DC voltmeter, 0-1 volt range—without zero adjuster is 5101. With zero adjuster, it is 5101-Z.

PANEL CALIBRATION (S)

Meters are calibrated for non-magnetic panels. If for magnetic (steel) panel mounting, specify thickness and overall size of panel, and add -S to stock number when ordering, as 5101-S. If thickness of steel panel is not specified, meter will be supplied for .040 panel.

VISCOSITY DAMPING (V)

Careful application of new silicone compound on bearing surfaces damps pointer overtravel. Add -V to stock number, as 5406-V, and 5 cents to price. Not regularly stocked; available only on quantity orders.

SEE YOUR DISTRIBUTOR

Besides carrying most types, and being able to obtain your other needs on reasonable notice, your authorized Shurite distributor of electronic parts is qualified to suggest the right meter for your need.

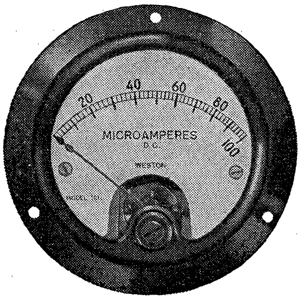
(PRICES SHOWN ARE U.S.A. DEALER NET FOR INDIVIDUALLY BOXED METERS)

SHURITE METERS NEW HAVEN 8, CONNECTICUT

Prices NET, F.O.B. New Haven, Conn., domestic packing, effective April 1, 1953. Subject to change without notice. Printed in U. S. A.

Weston RADIO INSTRUMENTS

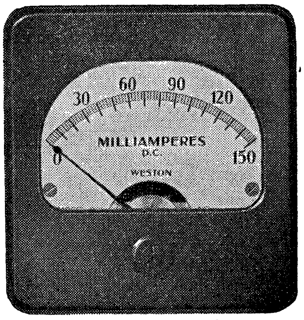
PANEL INSTRUMENTS



Round Style

These panel instruments reflect half a century of instrument skill, and the Weston tradition of building instruments to the highest standards of dependability and service.

Models 301, 425 and 476 are available in round flush bakelite cases 3½" or 3⅜", and 3¼" metal cases with black finish; also in round surface metal and rectangular flush bakelite cases. Models 301 and 425 supplied in round surface bakelite cases. Models 506, 507, 517 regularly supplied in round flush 2½" bakelite and black finished metal cases; flush narrow flange metal and rectangular flush bakelite cases with a clamp for panel mounting. Model 506 available in surface metal case. All are calibrated normally for use on non-magnetic panels. For magnetic panel use, instruments will be adjusted for steel panel thickness of .09". Order instruments in bakelite cases for use on circuits above 300 volts when it is not possible to connect in grounded side of line. For other instrument prices, write to Weston Electrical Instrument Corporation, Newark 5, New Jersey.



Rectangular Style

3½" PANEL INSTRUMENTS

MODEL 301 — D-C VOLTMETERS

Approximate resistance of Model 301 in ohms per volt — 1 to 40 volts, 62; 50 to 150 volts, 200; 200 volts, 250.

Range	Price	Range	Price	Range	Price
3	$14.25	15	$14.25	150	$15.75
5	14.25	30	14.25	200	16.50
8	14.25	50	14.25		
10	14.25	100	15.00		

With Resistance of 1,000 ohms per volt

Range	Price	Range	Price	Range	Price
50	$15.00	300	$18.75	1.5KV	$41.75*
100	15.75	500	23.25	2 KV	46.75*
200	17.25	1KV	30.75	3 KV	56.75*

* Supplied with external resistor.

MODEL 301 — D-C MILLIAMMETERS *

Range	Approx. Res. Ohms	Price	Range	Approx. Res. Ohms	Price
1	105	$14.25	30	1.2	$14.25
1.5	27	14.25	50	2.0	14.25
2	27	14.25	100	1.0	14.25
5	5.7	14.25	150	0.66	14.25
10	2.0	14.25	200	0.5	14.25
15	2.0	14.25	300	0.33	14.25
20	2.0	14.25	500	0.2	14.25

* Milliammeters with ranges above 40 MA. are shunted, and have a drop of approximately 100 MV.

MODEL 301 — D-C AMMETERS *

Single Ranges: 1/1.5/2/3/5/10/15/30/50 at $14.25

* Ammeters are supplied in self-contained ranges up to 50 amperes inclusive, and have a drop of 50 MV ±5%. Ranges above 50 amperes require external shunts.

MODEL 301 — D-C MICROAMMETERS

Range	Price	Range	Price
20	$30.00	100	$27.00
30	30.00	200	18.00
50	28.25	500	18.00

MODEL 301 — RECTIFIER TYPE A-C VOLTMETERS

Range	1000 ohms per volt	2000 ohms per volt	Range	1000 ohms per volt	2000 ohms per volt
1	....	$25.50	50	$22.50	$25.50
1.5	....	25.50	100	23.25	26.25
3	$22.50	25.50	150	24.00	27.00
5	22.50	25.50	300	26.25	....
15	22.50	25.50			

MODEL 301 — RECTIFIER TYPE A-C MILLIAMMETERS

Range	Price	Range	Price
0.5	$25.50	2	$21.75
1	21.75	5	21.75

MODEL 301 — RECTIFIER TYPE A-C MICROAMMETERS

Range	Price	Range	Price
100	$34.50	250	$25.50
200	25.50	500	25.50

MODEL 301 VU METER

A OR B SCALE..Price $35.00

MODEL 476 — A-C AMMETERS

Single Ranges: 1/1.5/2/3/5/10/15/30/50 at $14.25

MODEL 476 — A-C VOLTMETERS

Single Ranges: 1.5/3/5/8/10/15/30/50 at $14.25

Range	Price	Range	Price
100	$15.00	250	$17.25
130	15.75	300	18.00
150	15.75	500	21.00

MODEL 425 — THERMOCOUPLE TYPE AMMETERS

Single Ranges: 1/1.5/2/3/5/8/10/15/20 at $21.00

MODEL 425 — THERMO MILLIAMMETERS

Ranges: 10/20/50 ....$52.50
100/115/120/150/200/300/500 ....$24.00

2½" PANEL INSTRUMENTS

MODEL 506 — D-C VOLTMETERS

Approximate resistance of Model 506 in ohms per volt: 3 to 150 volts, 125; 300 volts, 1000.

Range	Price	Range	Price	Range	Price
3	$11.25	10	$11.25	100	$12.00
5	11.25	15	11.25	150	12.75
8	11.25	50	11.25	300	15.75

MODEL 506 — D-C AMMETERS

Single Ranges: 1/1.5/3/5/10/15/30/50 at $11.25

Ammeters, self-contained up to 5) amps., inclusive—drop 50 MV±5%

MODEL 506 — D-C MILLIAMMETERS

Range	Approx. Resis.	Price	Range	Approx. Resis.	Price
1	105	$11.25	30	1.2	$11.25
1.5	18	11.25	50	1	11.25
2	18	11.25	100	.5	11.25
3	18	11.25	150	.33	11.25
5	9.5	11.25	200	.25	11.25
10	3.2	11.25	300	.16	11.25
15	1.5	11.25	500	.1	11.25

Milliammeters above 40 MA are shunted — drop approximately 50 MV.

MODEL 507 — THERMO AMMETERS

For use on any frequency including radio frequency.
Single Ranges: 1/1.5/2/5/8/15/20 at $18.00

MODEL 517 — A-C AMMETERS

Range	Approx. Resis. in ohms	Price	Range	Approx. Resis. in ohms	Price
1	.22	$13.50	20	.0012	$13.50
3	.024	13.50	30	.00085	13.50
5	.01	13.50	50	.00072	13.50
10	.0037	13.50			

MODEL 517 — A-C VOLTMETERS

Range	Approx. Ohms per volt	Price	Range	Approx. Ohms per volt	Price
5	10	$13.50	50	52	$13.50
10	14	13.50	130	110	15.00
15	14	13.50	150	110	15.00
25	26	13.50	250	167	16.50
			300	167	17.25

SUBJECT TO PRICE CHANGE OR WITHDRAWAL WITHOUT NOTICE

WESTON INSTRUMENTS

4¼" PANEL INSTRUMENTS

MODEL 961—D-C INSTRUMENTS

Rated accuracy 2% of full scale—Scale 3.17" (80.3 mm)—Permanent Magnet Moving Coil Type.

D-C VOLTMETERS

Range	Scale Div.	List Price
1	50	$21.75
2	40	21.75
3	60	21.75
5	50	21.75
7.5	75	21.75
10	50	21.75
15	75	21.75
25	50	21.75
50	50	21.75
80	40	21.75
100	50	22.50
130	65	23.25
150	75	23.25
200	40	24.00
250	50	25.50
300	60	26.25
500	50	29.25

Self-contained ranges listed have sensitivity of approximately 200 ohms per volt up to and including 200 volts; higher ranges are 1000 ohms per volt.

D-C MILLIAMMETERS

Range	Scale Div	Approx. Res.	List Price
1	50	80	$21.75
3	60	7.3	21.75
5	50	2.8	21.75
10	50	1.25	21.75
25	50	1.0	21.75
50	50	2	21.75
100	50	1	21.75
200	40	0.5	21.75
300	60	0.33	21.75
500	50	0.2	21.75

Ranges above 25 milliamperes are shunted and have a drop of approximately 100 millivolts.

D-C AMMETERS

Range	Scale Div.	List Price	Range	Scale Div.	List Price
1	50	$21.75	5	50	$21.75
1.5	75	21.75	10	50	21.75
2	40	21.75	25	50	21.75
3	60	21.75	50	50	21.75

Regularly supplied with self-contained shunts up to and including 50 amperes, but can be supplied with external 50 mv shunts and 5 foot (0.065 ohm) leads.

Range	Scale Div.	Approx. Res. Ohms	List Price
30	60	1950	$37.50
50	50	900	35.75
75	75	450	35.75
100	50	1110	34.50
200	40	400	25.50
300	60	175	25.50
500	50	80	25.50

MODEL 963—THERMO AMMETERS

Rated accuracy 2% of full scale . . . Scale 3.17" . . . Thermocouple type.

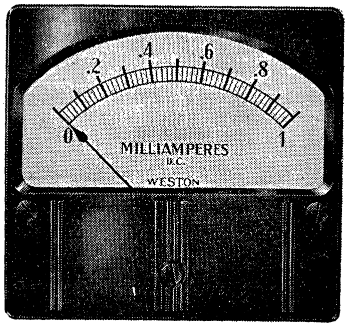
POWER CONSUMPTION: 1 to 4 amperes incl. varies from 0.2 to 0.4 watt per ampere. Approx. 5 amperes and above—0.2 watt per ampere.

Frequency errors less than 2% up to 65 megacycles.

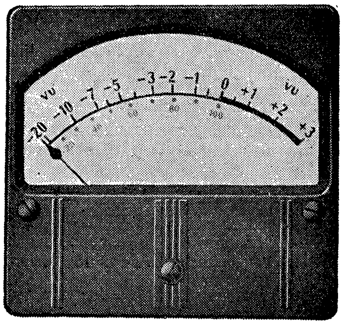
Amps.	Scale Div.	List Price	Amps.	Scale Div.	List Price
1	50	$28.50	5	50	$28.50
1.5	75	28.50	6	60	28.50
2	40	28.50	8	40	28.50
2.5	50	28.50	10	50	28.50
3	60	28.50	15	75	28.50
4	40	28.50	20	40	28.50

The ranges are all self-contained.

Through the use of specially controlled characteristics, thermo ammeters can be supplied to meet the special requirements of the FCC for antenna ammeters.



MODEL 961



MODEL 962—TYPE 30 VU METERS

Model 962 VU Meters are available with a choice of two scales. Type A stresses the level in VU and is used largely in monitoring wire lines. Type B emphasizes per cent use of transmitter output and is the standard for broadcast service. Scale backgrounds are buff colored.

Scale A or B..............................Model 962—**$42.50**

MATCHED A-C AND D-C PORTABLE INSTRUMENTS

MODEL 433—A-C INSTRUMENTS

Scale Length 4.04"—Accuracy within ¾ of 1% — Movable Iron Type — Shielded Case Size 5-1/16" x 5¼" x 3¼"—Weight 2½ lbs.—Hand Calibrated Mirror Scales Bakelite Case with Carrying Strap.

Note: These instruments are calibrated for use in a horizontal position.

A-C VOLTMETERS

Made with single, double and triple ranges. For use on frequencies from 25 to 125 cycles.

Range	List Price
10, 30, 50, 75	$54.00
10/5, 20/10, 30/15	61.50
450/300/150	83.25
600/300/150	85.50
750/300/150	87.75

A-C MILLIAMMETERS

Made in single and double ranges only, for use on frequencies from 25 to 500 cycles.

Range	List Price
15, 30, 75, 500	$52.50
300/150	67.50

A-C AMMETERS

Made in single, double and triple ranges for use on frequencies from 25 to 500 cycles. All instruments have two binding posts; double and triple range instruments are provided with a range selector switch.

Range	List Price
1, 1.5, 2, 3	$ 52.50
15, 25, 30	58.50
2/1, 5/2.5, 10/5	67.50
3/1.5/0.75, 5/2.5/1, 10/5/1	112.50
20/5/2, 30/7.5/3, 50/20/5	118.50

MODEL 931—D-C INSTRUMENTS

Scale Length 4.04"—Accuracy within ½ of 1% Core Magnet Moving Coil Type. Case Size 5-1/16" x 5¼" x 3¼"—Weight 2 lbs. — Hand Calibrated Mirror Scales — Bakelite Case with Carrying Strap.

Note: These instruments are calibrated for use in a horizontal position.

D-C VOLTMETERS

Range	List Price 1,000 Ohms Per Volt	List Price 5,000 Ohms Per Volt
3, 15, 50	$60.00	$75.00
300/150/3	78.00	93.00
750/300/150	84.75	99.75

D-C AMMETERS

Range	List Price
1, 1.5, 3, 5	$63.00
30/15/3	78.00
50/20/5	78.00

Self-contained up to 50 amperes inclusive, but can be supplied with external 50 mv shunts and 5 ft. leads.

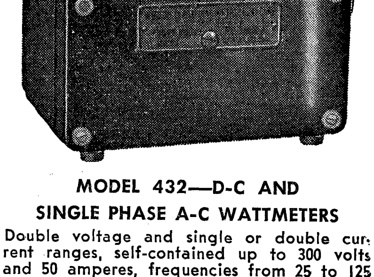
D-C MILLIAMMETERS

Range	List Price
15, 150	$58.50
1500/150/15	82.50
15/1.5/.15	78.00

Single range Milliammeters with ranges above 30 ma are shunted and have a drop of 50 mv ±5%.

D-C MICROAMMETERS

Range	High Resistance		Low Resistance	
	Approx. Res. Ohms	List Price	Approx. Res. Ohms	List Price
30	2400	$82.50	150	$90.00
100	1650	75.00	45	82.50
200	560	67.50	10	75.00



MODEL 432—D-C AND SINGLE PHASE A-C WATTMETERS

Double voltage and single or double current ranges, self-contained up to 300 volts and 50 amperes, frequencies from 25 to 125 cycles.

Electrodynamometer Type

Accuracy ½ of 1% ....Scale Length 4.04"

Case Size $5\frac{1}{16}$" x 5¼" x 3¼"............Wt. 3¼ lbs.

Normal Volts	Normal Amps	List Price
75/150	1	$101.25
Double Current Ranges		
300/150	5/2.5	122.25

WESTON INSTRUMENTS

MODEL 769 HIGH FREQUENCY ELECTRONIC ANALYZER

A versatile three-in-one instrument built to Weston standards of quality. Provides a conventional Volt-Ohm-Milliammeter, a high impedance Electronic Volt-Ohmmeter, and a stable, probe type Vacuum Tube Voltmeter for use to 300 megacycles. RF and special D-C probe supplied.
Complete stability is attained on all ranges from 3 to 1200 Volts and 200 Ohms to 2000 Megohms full scale.

RANGES

VOLT-OHM-MILLIAMMETER

D-C VOLTS (at 10,000 ohms per volt):† 3/12/30/120/300/1200.

A-C VOLTS (at 1,000 ohms per volt): 3/12/30/120/300/1200.

DECIBELS: −6 to +62 in six ranges: 1 milliwatt, 0 level, 600 ohm line.

D-C CURRENT: 300 microamperes 1/1.2/6/30/120/600 ma.

RESISTANCE: 2,000 / 20,000 / 200,000 ohms full scale.* 20/200/2,000 ohms center scale.

ACCURACY: D-C ±3% A-C ±5%

† For higher ranges to 6000 volts d-c order Model 766 Type 4 Televerter at $21.00 list.

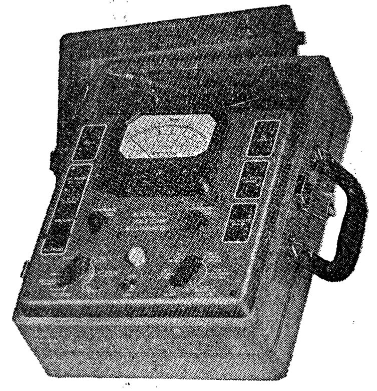
* Ranges from 2 to 2000 megohms operate electronically.

PROBE TYPE VACUUM TUBE VOLT METER

A-C VOLTS: 3/12/30/120.
DECIBELS: −6 to +42 in four ranges. 1 milliwatt, 0 level, 600 ohm line.
ACCURACY: ±5% (direct reading) at 50 cycles to 150 megacycles.
±12% (direct reading) at 150 to 300 megacycles.
±8% (with correction curve) at 150 to 300 megecycles.

ELECTRONIC VOLT-OHMMETER

D-C VOLTS: ±3/12/30/120/300/1200.
RESISTANCE: 2,000 / 20,000 / 200,000 ohms full scale. 2/20/2,000 megohms full scale.
20/200/2,000/20,000/200,000 ohms center scale, 20 megohms center scale.
VOLTMETER RESISTANCE: 15 megohms on all ranges.
ACCURACY: ±4% of full scale on all ranges.



MODEL 769

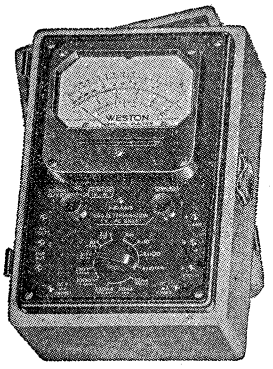
RF PROBE

FREQUENCY RANGE: 50 cycles to 300 megacycles.
INPUT RESISTANCE: 5 megohms.
INPUT CAPACITY: Approximately 5 micro-microfarads.
DIMENSIONS: 3½" x ¾".

Size: 10" x 13" x 6⅛".
App. Wgt. 13½ lbs.

PRICE..**$247.50 List**

MODEL 779 SUPER-SENSITIVE ANALYZER



MODEL 779

A compact 26 range ultra-sensitive analyzer with five d-c voltage ranges of a sensitivity of either 1,000 or 20,000 ohms per volt. A-C temperature compensated; precision resistors throughout. Supplied in a rugged solid oak case with a removable cover and convenient carrying handle.

Used for . . . measurement of tube circuits, as in electronic receivers, transmitters and electronic control equipment . . . television and wire communication systems . . . power level in decibels in audio equipment, P.A., telephone or speech lines . . . maintenance of electronic control and alarm systems . . . leakage of condensers . . . resistance of all types of circuits.

For application requiring higher d-c voltage measurements use Model 766 Televerters as listed on next page.

RANGES

Volts D-C	Volts A-C	Current D-C Only	Decibels	Ohms
2.5	2.5	.1 Ma	− 14 to + 2*	0-3000
10	10	1 Ma	− 2 to + 14*	0-30,000
50	50	10 Ma	+ 12 to + 28*	0-300,000
250	250	50 Ma	+ 26 to + 42†	0-30 Meg
1000	1000	250 Ma	+ 38 to + 54††	
		1 Amp	(6 milliwatts,	
		10 Amp	500 ohms, zero level)	

* Substantially flat to 10,000 cycles.
† Substantially flat to 3,000 cycles.
†† Substantially flat to 1,000 cycles.

Accuracy: A-C within 3%; D-C within 2% to 250 volts; 3% on 1,000 volt range.

Size: 6⅜" x 9⅛" x 4⅞"
Approx. Weight: 6 lbs.

Model 779 Type 1 (Incl. Test Leads)..**$127.50 List**

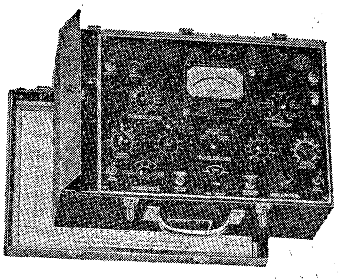
MODEL 981 TYPE 1 TUBE CHECKER

The Model 981 Tube Checker uses a new method of proportional mutual conductance testing . . . the differential frequency system which provides readings similar to actual operating conditions. This tube checker supplies mutual conductance and "Good-Bad" readings on all receiving tube types . . . tests all Voltage Regulator and low power type Thyratron tubes . . . has adjustable plate, screen, signal and grid bias voltages. Only six settings required for most tubes . . . switching flexibility provides for testing future tubes as they are announced.

SPECIFICATIONS

Tube Checker ranges: 3000/6000/12000 micromhos.
Tube sockets: 4, 5, 6, and 7 prong, octal, loctal, miniature, acorn and 9 pin types. (Spare miniature socket provided.)

Power Requirements: 105/125 Volts, 50/60 Cycles A-C.
Size: 17¾" x 11⅜" x 6⅛" — **Weight:** 23 Lbs.
Price..$291.50 List



MODEL 981 TYPE 1

SUBJECT TO PRICE CHANGE OR WITHDRAWAL WITHOUT NOTICE

WESTON INSTRUMENTS

MODEL 785 INDUSTRIAL CIRCUIT TESTER

Established in industry as the most complete single unit for general maintenance and ultra-sensitive test purposes, particularly on electronic equipment. Provides 28 ranges for measuring D-C voltage and current; A-C voltage and current; and resistance. Current and voltage ranges can be extended for insulation testing. Provisions for instantaneous current and voltage readings.

RANGES

D-C Volts: (Full scale) 1/10/50/200/500/1000 Volts (20,000 Ohms per volt), 100 Millivolts direct or with external shunt. Accurate within 2% to 500 V.; 3% at 1000 V.

A-C Volts: (Full scale) 5/15/30/150/300/750 Volts (1000 Ohms per volt). Accurate within 3%.

D-C Current: (Full scale) 50 Microamps; 1/10/100 Milliamps; 1/10 Amps. Accurate within 2%. Higher ranges with 100 mv. shunts.

A-C Current: (Full scale) .5/1/5/10 Amperes. Accurate within 3% on 60 cycles. Higher ranges with external current transformers.

Resistance: (Full scale) 3,000/30,000/300,000 Ohms; 3/30 Megohms. (Center scale) 25/250/2,500/25,000/250,000 Ohms. Accurate within 2% of linear arc length on any ohmmeter range.

Sizes: 13" x 12½" x 5½".
Weight (complete) 13½ Lbs.

Model 785 (Oak carrying case)....$157.50 List
Model 785 (Steel case) .... 127.50 List

MODEL 785 ACCESSORIES

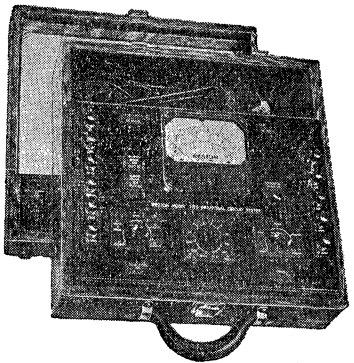
Model 766 Televerter — used with any 50 microampere D-C instrument or 20,000 ohm per volt analyzer to extend range to 5,000 or 10,000 volts.

Type 1 (5,000 volts)....................$18.00 List
Type 2 (10,000 volts).................... 24.00 List

Model 792 Insulation Tester — for insulation and cable resistance measurements to 900 megohms at a test potential of 500 volts. Operates from any 100-130 volt, 50 to 60 cycle line. $37.50 List

Model 604 Current Transformer — inserted primary type used to increase A-C current. Type 1, accurate within 1% on frequencies from 25 to 125 cycles, capacity 2 volt-amperes. Type 2, accurate within 1% on frequencies from 50-125 cycles, capacity 5 volt-amperes. Ratios include 200:5, 300:5, 400:5, 500:5.

Type 1 ....(200:5, 300:5) $18.00 List;
(400:5, 500:5) $16.50 List
Type 2 ....(200:5) $30.00 List;
(400:5, 500:5) $28.50 List



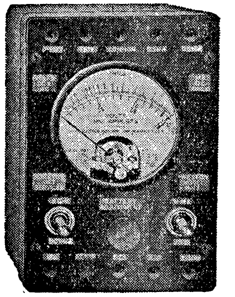
MODEL 785

100 MV External Shunt — used for extending D-C current ranges of Model 785 beyond 10 amperes.

Price .... 50 amp., $12.75;
100 amp., $12.75;
250 amp., $14.00;
500 amp., $24.00 List

WESTON POCKET-SIZE TESTERS

Model 697 Volt-Ohm-Milliammeter



MODEL 697

SPECIFICATIONS —

Accurate within 2% D-C
5% A-C
Scale: 2.36"
Ranges: 0-7.5/15/150/750 a-c and d-c (1000 ohms per volt)
Current: 0-7.5/75 milliamperes d-c
Resistance: Full scale 5,000/500,000 ohms. Center scale 35/3500 ohms
Size: 5-9/16" x 3¾" x 3-9/16"
Approx. Wt.: 1¾ lbs.

Model 697 (Incl. Test Leads) $49.50 List

Model 564 Volt-Ohmmeter

SPECIFICATIONS — Accurate within 2%
Scale: 2.36"
Ranges: 3/30/300/600 volts d-c (1000 ohms per volt)
Resistance: Full scale — 1,000/10,000/100,000/1,000,000 ohms
Size: 5-33/64" x 3-45/64" x 2-9/16"
Approx. Wt.: 1¾ lbs.

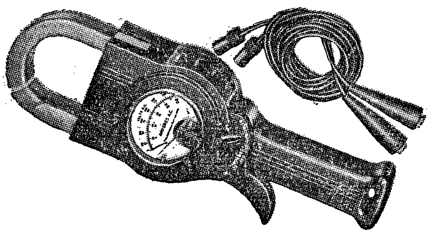
Model 564, Type 3-C (Incl. Test Leads)....................................$54.00 List

Model 689 Ohmmeters

SPECIFICATIONS — Accurate within 2%
Scale: 2.36"
Ranges: Type 1-E — double range 0-5,000 and 50,000 ohms-full scale.
Type 1-F — double range 0-10 and 0-1,000 ohms-full scale.
5" x 2⅞" x 1⅞"
Approx. Wt.: 1 lb.

Model 689, Type 1-E (Incl. Test Leads).................................$27.00 List
Model 689, Type 1-F (Incl. Test Leads).................................$25.50 List

Model 633 Clamp Volt-Ammeter and Clamp-Ammeter



MODEL 633 Type VA-1

Model 633 Type VA-1 (Incl. Potential Leads) — 1000/250/100/25/10 amperes a-c 700/350/175 volts a-c	$ 95.00
Model 633 Type A-1 — 500/250/100/50/25/10 amperes a-c	$ 87.00
Model 633 Type A-2 — 1000/500/250/100/25/10 amperes a-c	$ 87.00
Model 633 Type A-3 — 2000/1000/500/250/100/50 amperes a-c	$ 95.00
Model 9958, 50 Foot Extension Cable, Plug & Receptacle for Model 633 Types A-1, A-2, A-3	$ 72.00
Leather Carrying Case (Model 633 Types VA-1, A-1, A-2, A-3)	$ 13.50
Leather Carrying Case (Model 9958 — Cable, Plug and Receptacle)	$ 22.50

— NOTE —

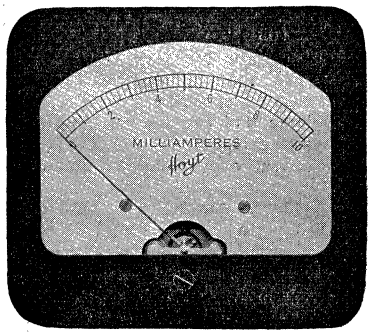
Model 633 instruments may be used for continuous duty up to 500 amperes.

Approximate Dimensions and Weights

Model 633 Types VA-1, A-1, A-2, A-3	13⅝"x4⅜"x2½"	3¼ lbs.
Leather Carrying Case (Types VA-1, A-1, A-2, A-3)	14½"x5½"x3⅝"	2¼ lbs.
Model 9958, 50 Foot Extension Cable, Plug & Receptacle		4¼ lbs.
Leather Carrying Case (Model 9958—Cable, Plug & Receptacle)	14"x8½"x3¾"	4¼ lbs.

Prices Subject To Change Without Notice.

Hoyt PANEL AND PORTABLE INSTRUMENTS



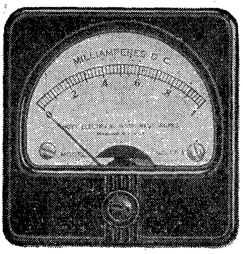
MODEL Nos. 600 and 607

HOYT moving-coil Meters, both panel-mounting and portable, are built on the D'Arsonval principle. All with carefully selected jewel bearings and insulated zero adjustors. Accurate to 2% of full scale.

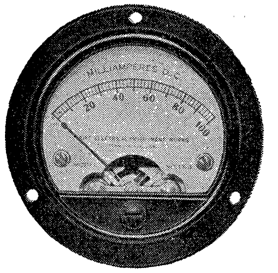
Alnico Magnets with soft-iron or sintered pole-pieces of uniform flux density used in all movements. Permanently correct balance assured by HOYT designed "cross arm" spiral wire balance in two planes. High torque to weight ratio. Quick response and good damping under all conditions. Either "knife-edge" or "lance" type pointers available on most models.

Small Meters (2½″ to 4½″) have external pivot construction — best for sensitive movements in small instruments. Larger Meters have internal pivots. A wide range of sizes in round and square cases.

MODEL DC	MODEL AC	CASE TYPE PANEL MTG.	SCALE LENGTH AC - DC	FLANGE	BODY DIA. AC - DC	BODY DEPTH AC - DC
17/3	552	Bakelite Rd.	1⅞″	2.690″	2.200″	1⅜″
17/3	552	Metal Rd.	1⅞″	2 35/64″	2 1/16″	1 19/64″
635	636	Bakelite Sq.	1⅞″	2⅜″ x 2⅜″	2.200″	1.400″
17/L	560	Metal Rd.	2¼″	3 7/32″	2½″	1½″
17/L	560	Metal Surface	2¼″	3 1/16″	2½″	—
582	584	Bakelite Rd.	2½″	3½″	2¾″	1⅜″
597	598	Bakelite Sq.	2½″	3″ x 3″	2¾″	1½″
570	580	Metal Rd.	2⅝″	3¾″	3″	1 11/16″
570	580	Metal Surface	2⅝″	3⅝″	3″	—
607	610	Bakelite Sq.	2¾″	3⅝″ x 3 5/16″	2¼″	1 1/16″
574	617	Metal Rd.	3¾″	4½″	3¾″	1 19/32″
574	617	Metal Surface	3¾″	4½″	3¾″	—
600	601	Bakelite Sq.	3¾″	4½″ x 4″	2¾″	1 1/16″
602	—	Metal Rd.	5″	6 11/16″	3″	1¼″
583	—	Metal Rd.	6¼″	8⅜″	3″	1 17/32″



MODEL No. 635



MODEL Nos. 582 and 17/3

STANDARD SWITCHBOARD SHUNTS

For price of high current Ammeters, add price of 50 millivoltmeter to price of external shunt, shown below.

0/100..	$6.50	0/300..	$7.50
0/150..	7.00	0/600..	13.00
0/200..	7.00	0/1000.	22.00

PRICES:

Range	PANEL MOUNTING #17/3 #635	#17/L	#582 #597	#570 #607	#574 #600	#583	#602	PORTABLE #578	#515
D.C. MILLIAMMETERS									
0/1	$7.40	$7.80	$8.35	$8.85	$9.50	$16.50	$12.50	$9.85	$11.50
0/10	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/30	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/50	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/100	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/150	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/200	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/300	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/500	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
D.C. MICROAMMETERS									
0/50	10.40	10.80	11.35	11.85	12.50	....	....	12.85	14.50
0/100	9.90	10.30	10.85	11.35	12.00	19.00	15.00	12.35	14.00
0/200	8.40	8.80	9.35	9.85	10.50	17.50	13.50	10.85	12.50
0/500	7.85	8.30	8.85	9.35	10.00	17.00	13.00	10.35	12.00
D.C. MILLIVOLTMETERS									
0/50	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
D.C. AMMETERS									
0/1	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/5	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/10	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/15	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/30	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/50	7.40	7.80	8.35s	8.85	9.50	16.50	12.50	9.85	11.50
D.C. VOLTMETERS									
0/3	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/5	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/10	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/15	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/30	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/50	7.40	7.80	8.35s	8.85	9.50	16.50	12.50	9.85	11.50
0/100	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/150	7.40	7.80	8.35s	8.85	9.50	16.50	12.50	9.85	11.50
0/300	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50
0/600	7.40	7.80	8.35	8.85	9.50	16.50	12.50	9.85	11.50

NOTE: Meters listed above are standard in Flush cases. Surface cases can be supplied in No. 17/L, No. 570, No. 574, if desired—specify case on order. If "in-between" ranges are required—add 50c to price of next higher range listed. If "zero-center" ranges are required—add 50c to price of that range. For in-between ranges on moving-coil type voltmeters 300 volts and up, add $2.00 to prices above.

NOTE: "S" marked prices under type No. 582 are ranges normally carried in stock. These are NOT calibrated for steel panel.

NOTE: Unless otherwise specified, all meters are calibrated on non-magnetic panels. If steel panels are used, kindly so state giving thickness of steel and size of panel hole, and meters will be calibrated for steel panels at no extra charge. All prices are net—subject to change or withdrawal without notice.

Hoyt PANEL AND PORTABLE INSTRUMENTS

PRICES: A.C. MILLIAMMETERS REPULSION MOVEMENTS

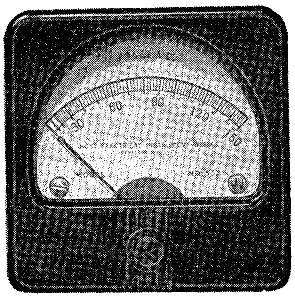
	PANEL MOUNTING					PORTABLE	
Range	#552 #636	#560	#584 #598	#580 #610	#617 #601	#562	#517
0/10	$7.40	$7.80	$8.10	$8.40	$9.15	$9.85	$11.50
0/30	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/50	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/100	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/150	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/200	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/300	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/500	7.40	7.80	8.10	8.40	9.15	9.85	11.50

A.C. AMMETERS

Range	#552 #636	#560	#584 #598	#580 #610	#617 #601	#562	#517
0/1	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/3	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/5	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/10	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/15	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/30	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/50	7.40	7.80	8.10s	8.40	9.15	9.85	11.50

A.C. VOLTMETERS

Range	#552 #636	#560	#584 #598	#580 #610	#617 #601	#562	#517
0/5	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/10	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/15	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/30	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/50	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/100	7.40	7.80	8.10	8.40	9.15	9.85	11.50
0/150	7.90	8.30	8.85s	9.15	9.90	10.60	12.25
0/300	8.75	9.15	9.60s	9.95	10.50	11.40	13.05
0/600	....	....	13.50	13.80	14.40	15.30	16.95



MODEL No. 636

HOYT A.C. Meters for indicating 60 cycle Voltage and Current are of the repulsion type with pneumatic damping. Furnished in the same case styles and sizes as HOYT D.C. Meters, they match the D.C. meter where both types are used on the same panel.

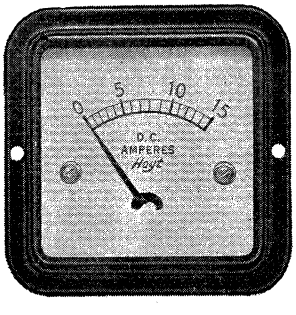
Accuracy is 2%. A choice of pointers is available, and special shields can be supplied if needed.

NOTE: Meters listed above are standard in Flush cases. Type 560, 580 and 617 can be supplied in surface case, if desired—Specify case on order. If "in-between" ranges are required—add 50c to next higher price as shown above. Standard calibration is for non-magnetic panels. Steel panel calibration at no extra charge if order specifies thickness of steel and size of panel hole. NOTE: "S" marked prices under Type No. 584 are ranges normally carried in stock. These are NOT calibrated for steel panel. All prices are net—subject to change or withdrawal without notice.

Range	#566	#593
D.C. MILLIAM.		
0/10	$1.85	$1.95
0/30	1.40	1.50
0/50	1.40	1.50
0/100	1.40	1.50
0/150	1.40	1.50
0/200	1.40	1.50
0/300	1.40	1.50
0/500	1.40	1.50
D.C. AM.		
0/1	1.40	1.50
0/5	1.40	1.50
0/10	1.40	1.50
0/15	1.40	1.50
0/30	1.40	1.50
0/50	1.95	2.05
0/75	2.40	2.50
0/100	2.80	2.90
D.C. VOLTM.		
0/3	1.40	1.50
0/5	1.40	1.50
0/10	1.40	1.50
0/15	1.40	1.50
0/30	1.40	1.50
0/50	1.40	1.50
0/100	1.90	2.00
0/150	2.20	2.30

NOTE: A.C. Vane Meters are furnished in quantity only. Prices on request.

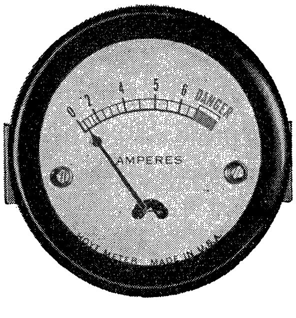
MAGNETIC VANE MOVEMENTS



MODEL No. 593

HOYT magnetic Vane-type Indicators have been used for many years by the leading manufacturers of electrical devices.

Attractive appearance is combined with a sturdy movement. Furnished in round or square cases at low cost. Standard finish on metal cases is black. Chrome Plate is available at slight additional cost.



MODEL No. 566

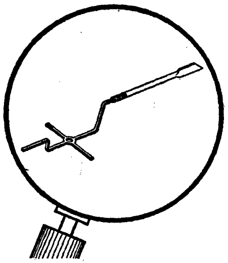
MODEL DC - AC	CASE TYPE PANEL MTG.	SCALE LENGTH AC - DC	FLANGE	BODY DIA. AC - DC	BODY DEPTH AC - DC
566 531AC	Nar. Metal Rd.	1¼″	2⁹⁄₃₂″	2″	1⁵⁄₆₄″
566 531AC	Metal Surface	1¼″	2⅜″	2″	—
593 594	Metal Sq.	1⁵⁄₁₆″	2⅝″ x 2⅝″	2¹⁄₁₆″	⁹⁄₁₆″

phaostron
RUGGEDIZED

panel instruments

RUGGEDIZED and HERMETICALLY SEALED

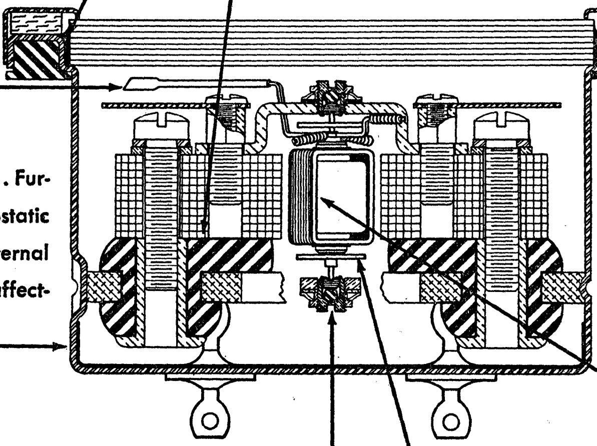
PROVIDE *ENVIRONMENT FREE* OPERATION *anywhere* IN THE WORLD



POINTERS...are formed of 52 SH aluminum alloy tubing locked to the balance cross of the moving coil system. This permits extreme overload, shock and vibration without damage.

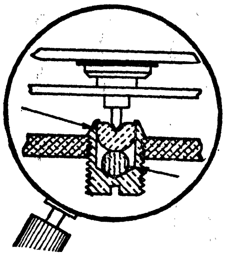
GLASS-TO-METAL HERMETICALLY SEALED...The glass window is metalized, tinned and soldered to the case. The electrical connections are glass sealed terminals.

SELF CONTAINED RUBBER SHOCK MOUNTS...control deflection of the instrument movement under shock. The specially developed rubber has good low temperature characteristics and high dielectric strength. It exhibits no corrosive properties even when exposed to extreme temperatures.



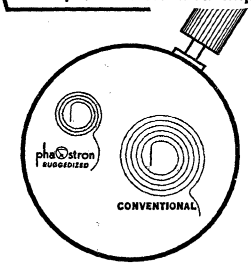
INSTRUMENT HOUSING... Furnishes magnetic and electrostatic shielding which prevents external magnetic conditions from affecting the meter calibration.

***RUGGEDIZED* MOVEMENT**...is a result of a miniaturized moving coil assembly, the mass is reduced to the point that it is not affected by high shock, tumbling or vibration.



HAIRSPRINGS . . . for Phaostron *RUGGEDIZED* meters are formed of silver-coated beryllium copper springs of the shortest length consistent with the torque desired and are unaffected by high shock, vibration and impact.

SHOCK MOUNTED JEWELS AND PIVOTS... Large radius pivots reduce the unit loading and are incorporated with shock mounted jewels, assuring continuous accuracy when exposed to extreme shock and vibrational environment.



ENVIRONMENT FREE ELECTRICAL EQUIPMENT by Phaostron

MANUFACTURED BY PHAOSTRON COMPANY, 151 PASADENA AVE., SOUTH PASADENA, CALIF.

phaostron
RUGGEDIZED

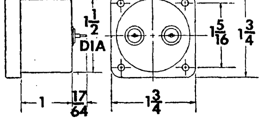
panel instruments

RUGGEDIZED and HERMETICALLY SEALED

PROVIDE *ENVIRONMENT FREE* OPERATION *anywhere* IN THE WORLD

AVAILABLE IN
2½", 3½", and 4½" SIZES
JAN. Spec. Round Case

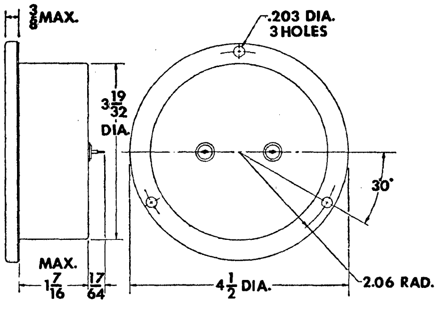
and



1 3/8
1 5/16
.120 DIA. 4 HOLES
1 1/2 DIA
1 5/16
1 3/4
1
17/64
1 3/4

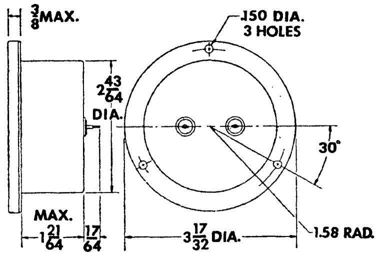
1½" METER

SQUARE FLUSH FRONT ROUND BODY



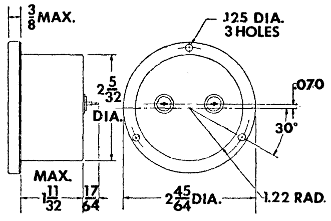
3/8 MAX.
.203 DIA. 3 HOLES
3 19/32 DIA.
30°
MAX.
1 7/16
17/64
4 1/2 DIA.
2.06 RAD.

4½" METER



3/8 MAX.
.150 DIA. 3 HOLES
2 43/64 DIA.
30°
MAX.
1 21/64
17/64
3 17/32 DIA.
1.58 RAD.

3½" METER



3/8 MAX.
.125 DIA. 3 HOLES
2 5/32 DIA.
.070
30°
MAX.
1 11/32
17/64
2 45/64 DIA.
1.22 RAD.

2½" METER

All models feature aged Alnico magnets, R.F. Shielding, shock mounted jewels, a glass-to-metal HERMETIC SEAL and RUGGEDIZED, SHOCK MOUNTED construction. Built to meet JAN 1-6 dimensional specifications and MIL-10304.

MADE IN THE FOLLOWING RANGES

DC INSTRUMENTS

MICROAMMETERS	MILLIAMMETERS	
0 - 100	0 - 1	0 - 100
0 - 250	0 - 10	0 - 250

VOLTMETERS 1000 Ohms Per Volt		VOLTMETERS 20,000 Ohms Per Volt	
0 - 2.5	0 - 150	0 - 2.5	0 - 150
0 - 10	0 - 300	0 - 10	0 - 300
0 - 25	0 - 500	0 - 25	0 - 500
0 - 50		0 - 50	

AC INSTRUMENTS

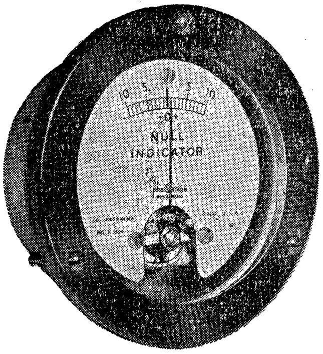
VOLTMETER, RECTIFIER TYPE

1000 Ohms Per Volt

0 - 10	0 - 150
0 - 50	0 - 300

null indicators

RUGGEDIZED and HERMETICALLY SEALED



AVAILABLE
IN
2½", 3½"
and 4½"
SIZES.
JAN. SPEC.
ROUND CASE

ENVIRONMENT FREE
ELECTRICAL EQUIPMENT by Phaostron

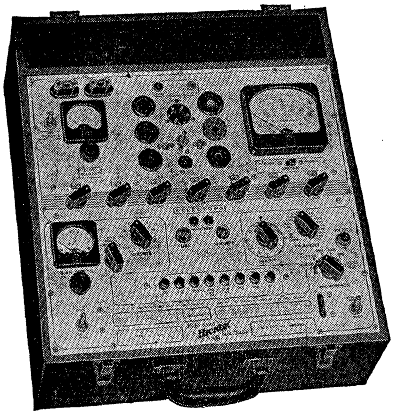
MANUFACTURED BY PHAOSTRON COMPANY, 151 PASADENA AVE., SOUTH PASADENA, CALIF.

HICKOK TEST INSTRUMENTS HICKOK

DYNAMIC MUTUAL CONDUCTANCE *TUBE TESTERS*

Engineers' Laboratory Models

RADIO, TELEVISION, LABORATORY, AVIATION *and* COMMUNICATION ENGINEERS' MODEL



Model 539A

Model 539A, laboratory tube tester of highest accuracy. Dynamic Mutual Conductance with tube readings in micromhos for reliable test of tube gain under simulated operating conditions. Tests all tubes normally encountered in all phases of electronic work — including the ruggedized types used by airlines, hearing aid tubes, and miniature types used in TV receivers. Provides increased accuracy for testing high-gain type tubes.

Designed with professional accuracy for engineers and engineering technicians, in the radio, television, aviation, communication and industrial field.

Model 539-A, illustrated at the left. Strong portable carrying case with detachable cover. Most convenient to provide laboratory accuracy for the field engineer. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 30 lbs. net, 39 lbs. shipping wgt. 110-130 V.A.C. 40 watts. **Price: $287.00**

SPECIFICATIONS:

Permits choice of 3 A.C. signals; 0.25 volts: 0-15,000, 30,000 micromhos. 0.5 volts: 0-6000 micromhos. 2.5 volts: 0-3000, 6000 micromhos.

Vernier adjustment, with sensitive 2-range meter, permits accurate setting of grid voltage.

Provision for insertion of plate milliammeter for measuring plate current.

Built-in, optional self-bias arrangement.

Separate voltmeter measures grid bias.

Separate A.C. meter measures line voltage at all times.

D.C. grid bias and D.C. plate and screen voltages.

Provides the HICKOK Tube Life, Tube Gas and Tube Noise tests.

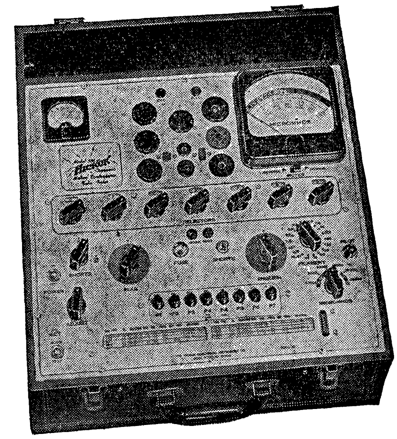
Built with highest accuracy HICKOK meters.

HIGHLY ACCURATE LABORATORY TUBE TESTER *for Radio, Television and Industrial Engineers*

Model 536, professionals' Dynamic Mutual Conductance tube tester. Completely built to the highest quality standards. Provides Dynamic Mutual Conductance circuits for the most accurate tube tests. Contains the latest sockets for testing all tubes normally encountered in all phases of electronic work.

Permits choice of 2 A.C. grid signals in addition to D.C. grid bias and plate voltages. Micromho Ranges: 1 volt; 0-6000, 15,000 micromhos. 5 volt; 0-3000, 6000, 15,000 micromhos.

Provides the HICKOK Tube Life Test, Tube Gas Test and Tube Noise Test.
A.C. meter accurately indicates line voltage at all times.
Has high-low signal to insure highest accuracy.



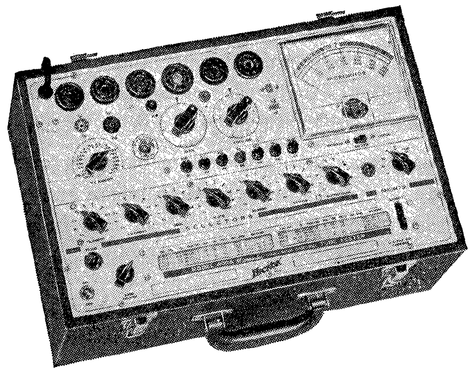
Model 536: $276.00

Model 536, illustrated at the right. Strong portable carrying case with detachable cover. Most convenient to provide laboratory accuracy for the servicing technician in the field. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 26 lbs. net, 35 lbs. shipping weight. 110-130 V.A.C. 40 watts.

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

RADIO *and* TELEVISION TECHNICIANS' SMALL SIZE MODELS



Model 600A **Price: $164.00**

DYNAMIC MUTUAL CONDUCTANCE IN A HANDIER, PORTABLE SIZE

Model 600A, new lighter weight portable. Dynamic Mutual Conductance in a radio and TV technicians' popularly priced model. Smaller, handier, but built to the high HICKOK standard for accuracy and dependability. A very popular model for on-location or shop-bench servicing. The 600A may also be used for lab. and industrial applications.

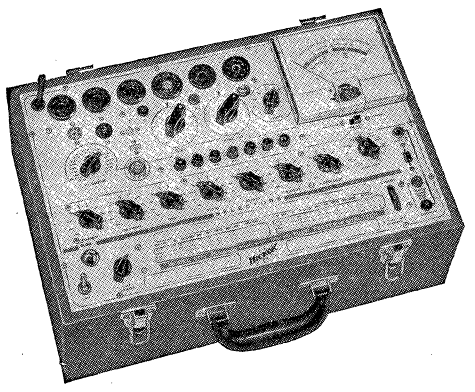
Model 600A, illustrated at the left. Strong portable carrying case with detachable cover. Case is attractively covered in durable, dark red leatherette. 16¾" W., 11¾" L., 7½" D. 15 lbs. net, 25 lbs. shipping weight. 110-130 V.A.C. 40 watts.

HICKOK testers remain up to date. . . . Periodically revised roll-charts, covering new tubes, are available to all registered owners of HICKOK Tube Testers.

SPECIFICATIONS:

Scale readings in micromhos for most accurate tube evaluation. Ranges: 0-3000, 6000, 15,000 micromhos.
Contains the HICKOK Tube Gas Test.
Acclaimed by the experts as a must for accurate television servicing.
New, large 5" meter scale is easier to read more accurately.
Detects more weak tubes with professional accuracy.
Tests tubes under simulated operating conditions.
Tests the latest tubes including miniature and subminiature types.
New bias fuse prevents accidental damage to bias potentiometer.

ALL-PURPOSE TUBE *and* SET TESTER IN A HANDIER, PORTABLE SIZE



Model 605A **Price: $189.50**

Model 605A, new, lighter weight portable. Radio and television technicians' popularly priced, all-purpose tube and set tester with built-in 20,000 ohm per volt D.C. multimeter panel. Designed for speedy, highly accurate radio and TV servicing.

Built to the high HICKOK quality standard throughout. Provides Dynamic Mutual Conductance circuits with tube readings in micromhos. A popular technicians model for on-location servicing. Smaller, lighter, but built entirely with highest quality components for accuracy and dependability.

Excellent for leakage tests of electrolytics, and checks for hum in any stage of receivers. Built with a minimum number of jacks. Ranges are selected with a rotary master switch. Test leads supplied.

Model 605A, illustrated at the left. Same case as Model 600A, above 17 lbs. net, 27 lbs. shipping weight 110-130 V.A.C. 40 watts.

SPECIFICATIONS:

Contains all features of the Model 600A listed above, including the HICKOK standard built-in roll chart with complete tube information.
New, large 5" meter scale is easier to read more accurately. Attractive lucite window has static-proof coating.
Accurate, built-in multimeter panel measures:
Volts: 0-1000 A.C. — D.C. in four ranges each.
Ohms: 20,000 per volt D.C.
1,000 per volt A.C.
Resistance: 0.1 to 100 megohms, in 3 ranges.
Inductance: to 70 henries. (By use of conversion chart furnished).
Capacitance: .0001 to 50 microfarads, in two ranges.
Current: 0-500 MA D.C. in 3 ranges.
Decibels: — 10 to + 50.
New bias fuse prevents accidental damage to bias potentiometer.

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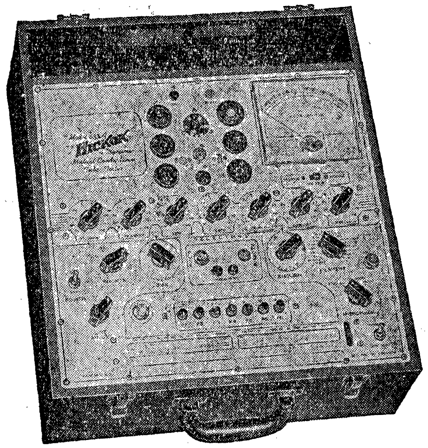
HICKOK TEST INSTRUMENTS HICKOK

RADIO and TELEVISION TECHNICIANS' TUBE TESTER



Portable Model 533AP

Model 533AP, radio, television and communication technicians' portable model with true Dynamic Mutual Conductance circuits pioneered by HICKOK. Acclaimed by the experts as the only true test of a tube.

Model 533AP, illustrated at the left. Strong, portable carrying case with detachable cover. Designed for on-location or shop-bench servicing. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 24 lbs. net, 33 lbs. shipping weight. 110-130 V.A.C. 40 watts.

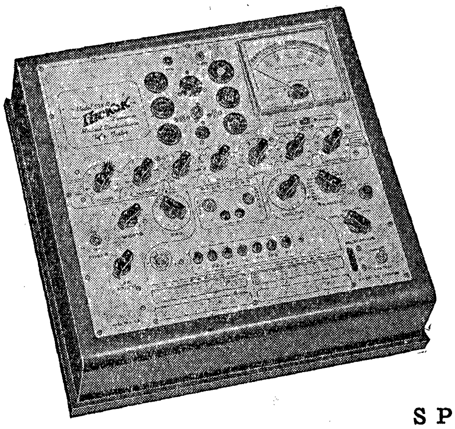
Price: $185.80

Model 533AP

SPECIFICATIONS:

New Bias Fuse prevents accidental damage to bias potentiometer. New lucite meter window has static-free coating.
Tube readings in micromhos — 0-3000, 6000, 15,000.
Tests tubes under simulated operating conditions.
Contains the HICKOK Tube Gas Test and Tube Noise test.
Incorporates the new test feature that forecasts future life of a tube.
Larger, 5" easy-to-read meter scale and calibrated GM circuit provide increased accuracy in testing today's newer tubes.
Tests all the latest tubes including miniature and subminiature types.
Accurately tests and detects more weak, borderline tubes.
Completely built of highest quality components for lasting accuracy and dependability.
Most valuable for accurate matching of tubes in television servicing.

DYNAMIC MUTUAL CONDUCTANCE IN A SMALLER COUNTER MODEL



Model 533AC, a lower cost dealer's counter model. Attractively designed to set on the counter and increase your tube sales. Highly accurate Dynamic Mutual Conductance circuits. Encourages customers to bring their tubes in where they can see the actual test. If customers' tubes check "OK" you have an excellent opportunity to invite him to bring his receiver in for a thorough check of all its circuits. With the 533-AC you will build customer confidence, increase tube sales and promote your complete radio and TV service.

Model 533AC, illustrated at the left. Satin finish aluminum panel. Beautifully styled, blue enameled steel case. 17½" W., 18½" L., 6" H. 24 lbs. net, 32 lbs. shipping weight. 110-130 V.A.C. 40 watts.

Model 533AC **Price: $185.80**

SPECIFICATIONS:

Dual-scale meter provides readings in micromhos for the technician and "Good", "Replace" scale for easy customer interpretation.
Quick, impressive, accurate, and dependable.
Detects more weak, ordinarily passable tubes.
Contains the HICKOK Tube Gas Test, and a circuit for accurate forecast of future tube life.
Simple to operate.
Contains all necessary tube information on a handy built-in roll chart.
Tests tubes under simulated operating conditions.
Tests all the latest tubes including television.
Large 5" easy-to-read meter scale and calibrated GM circuit provide increased accuracy in testing today's newer tubes.

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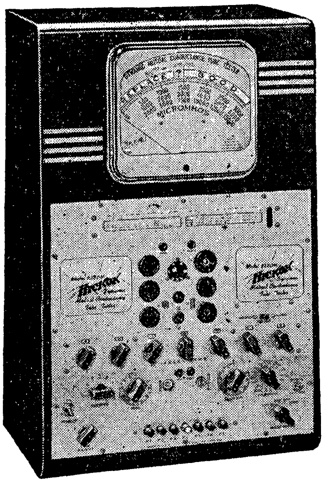
HICKOK TEST INSTRUMENTS HICKOK

ATTRACTIVE DISPLAY MODEL



MOST EFFECTIVE TUBE SALESMAN

Model 533DM. Dealers who use this tube tester enthusiastically report that it is the best salesman they ever used.

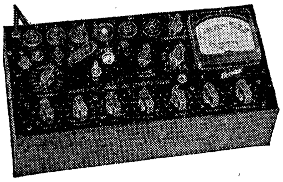
Customer convincing, the 533-DM contains a huge, illuminated nine-inch meter that clearly and accurately shows condition of the tube under test. Dual-scale meter provides micromho readings for the technician, and a multi-color "Good", "Replace", scale for easy customer interpretation across the counter.

- Contains the HICKOK Tube Gas Test, and a circuit for accurate forcast of future tube life.
- Detects more weak tubes.
- Tests all the latest tubes including television.

Model 533DM, illustrated at the left. 9" chrome meter case, satin finish aluminum panel. Strong, attractive, enameled steel case. 26½" H., 17" W., 11" D. 35 lbs. net, 44 lbs. shipping weight. 110-130 V.A.C.

Model 533DM

Price: $199.20

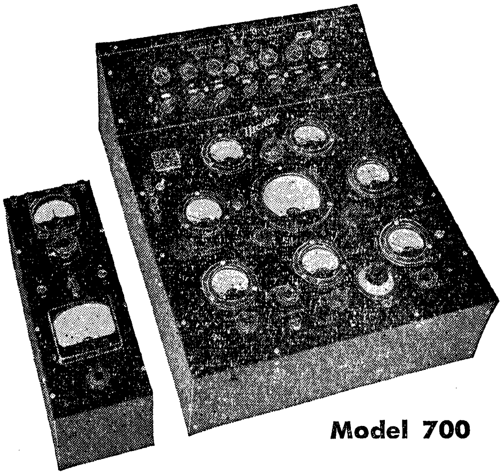


SHORT and LEAKAGE TEST ACCESSORY

For use with the Model 700 to check for shorts between all elements. Provides adjustable voltage between all elements. Matched to the set. 10"D., 20"W., 27"L.

Model 7002 **Price: $145.00**

LABORATORY MODEL



Model 700

Model 7001

Most accurate tube tester available for precise development laboratory measurement of Mutual Conductance. Provides 4 separate signal voltages with micromho ranges from 1500 to 60,000. Duplicates results in tube manuals. Places separate voltage on each element of the tube. Voltages can be varied and measured separately in each circuit. Provides means for complete curve study of any particular tube.

Designed to never become obsolete.

Complete with all leads. 10"D., 20"W., 27"L.

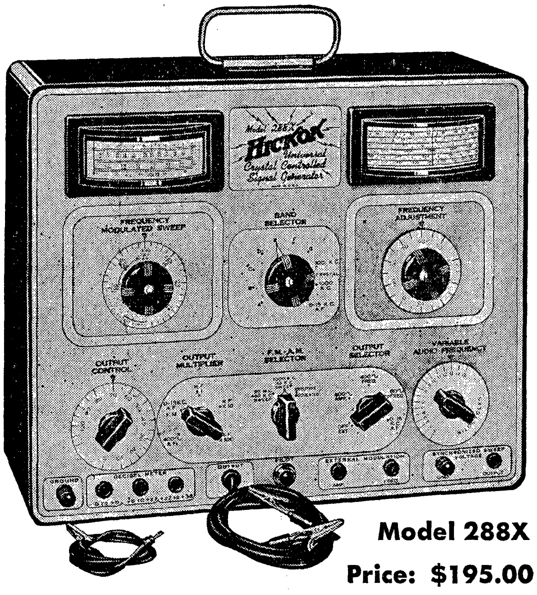
Model 700 Tube Tester Price: $750

Model 7001 Null Reading Device, for use with the Model 700 for obtaining bridge type null readings with accuracy of ½ of 1%.

Case matched to the set. 7½"D., 8"W., 21"L.

Price: $162.30

UNIVERSAL CRYSTAL CONTROLLED SIGNAL GENERATOR



Model 288X

Price: $195.00

MODEL 288X

High Output AM-FM Generator

A variable frequency signal generator, crystal controlled, for accurate AM and FM alignment. Useable in TV alignment as a marker oscillator in connection with television front-end or IF alignment, or the 288X can also be used as an FM generator to align the sound IF amplifier of a TV receiver. RF unmodulated or internally amplitude modulated at 400 cycles, or internally frequency modulated. RF variable from 110 kc. to 110 mc. on AM and 110 kc. to 160 mc. on FM, in 7 bands, all fundamental. Fixed 50-mc. output is internally frequency modulated at 60 cycles or at 400 cycles for FM and television. Fixed, crystal-controlled 100-kc. and 1000-kc. outputs either unmodulated or internally amplitude modulated. Fixed 1000 kc. internally frequency modulated at 60 cycles for visual IF alignment. 50 mc. and 1000 kc. oscillators beat with variable RF oscillator to give variable FM signals. Variable AF output 0-15,000 cycles; fixed AF, 400 cycles. Outputs continuously variable with multiplier and linear controls. Db meter — 10 to plus 38 in 3 ranges. 110-volt 60-cycle operation. Test leads included.

SPECIFICATIONS

Dimensions—13¼" x 16¼" x 7"
Net Weight—25 lbs.—Ship. 36 lbs.
Meter—Model 51X

Scale—over 100"
Satin-aluminum finish panel
Blue baked Hammertex finished steel case

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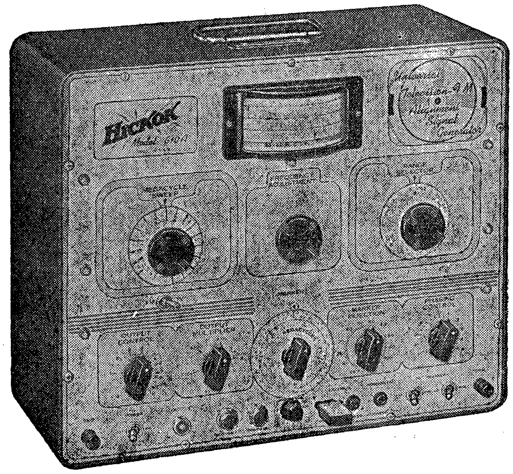
HICKOK TEST INSTRUMENTS HICKOK

THE ACCEPTED TV ALIGNMENT GENERATOR



Model 610A **Price $219.00**

Power Supply: 105-125 V., 50-60 cycles, A.C.
Tube Compliments: 6J6—Variable oscillator; 6J6—Fixed oscillator; 6J6—Mixer; 6SN7—Crystal oscillator & marker oscillator; 6J5—Audio oscillator; 6X5—Rectifier.
Net 24 lbs. Shipping Weight: 31 lbs.
Size: 16¼"x13¼"x7"; Satin aluminum finish panel; Blue Hammertex finished steel portable case.

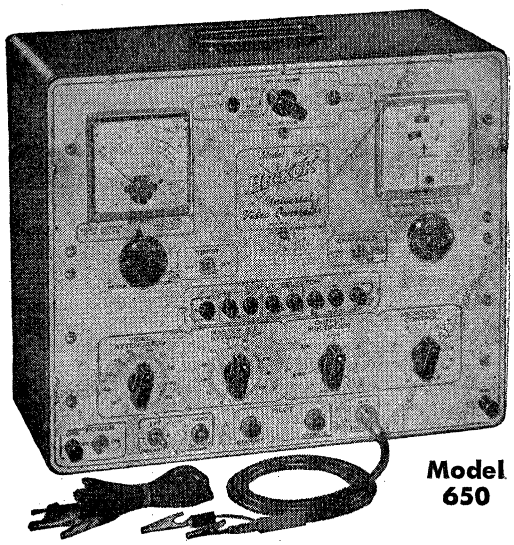
Popularly priced TV sweep generator—Harmonic output useable for UHF. Contains 3 most practical markers including Absorption. Marker Range: 19.5 to 48 m.c.—Covers all I.F. frequencies in TV receivers.

Contains linear sweep with unusual accuracy to 2%. Hickok ferrous modulator furnishes symmetrical pattern response curve for easier and more accurate readings.

THIS 1 INSTRUMENT DOES THIS

1. Provides accurate, complete visual alignment of any TV receiver.
2. Visually align IF stages of any television receiver—including the old and current bands, and new bands. Marker range—19 to 48 mc.
3. Align all traps with a calibrated signal—modulated or unmodulated—19 to 48 mc.
4. Insert a marker—accurate to .05 mc—at any point along the IF response curve. This marker frequency is directly calibrated on a dial 9½ inches long.
5. Align IF or RF Sections by single stage method—with high output.
6. Attenuate the output down to a very low signal in microvolts.
7. Highly stable.
8. Output multiplier control is 5-stage with a vernier control calibrated from 1 to 10.
9. Panel Jack accommodates separate plug-in calibrating crystals for local TV channels, if desired.
10. Makes possible a crystal controlled frequency modulated or unmodulated for any frequency as low as 2 mc to the upper television channel No. 13 at 216 mc.
11. Temperature compensated.
12. Low amplitude modulation.
13. Completely shielded attenuator.
14. Sweep phasing control.
15. TV sweep frequency.
16. FM sweep frequency.

NEW TELEVISION VIDEO GENERATOR



Model 650

Price: $310.90

This fine new instrument is the first of its kind. Now available to rapidly and accurately solve your service problems. Does in minutes many of the TV servicing jobs that would require hours by other methods.

The 650 has a new timer circuit which delivers video pulses of 60 cycles, 900 cycles, 15,750 cycles and 315 kc., singularly or in any combination, both positive and negative output. Pulses are all locked together and crystal controlled for greater accuracy.

Pulses can be used directly, metered in peak-to-peak volts or to modulate the self-contained RF oscillator.

RF oscillator covers all TV channels in two bands (2-6 and 7-13), all on fundamentals. RF output is metered at all times from 1 to 10,000 microvolts with calibrated attenuation and variable percentage modulation. RF can be externally modulated with video frequencies from 5 cycles to 4 MC with variable percentage modulation on all channels.

Self-contained, substitute external video amplifier, 5 cycles to 4 MC with a variable gain from 0 to 10, with high input impedance, low output impedance and metered peak-to-peak voltage output.

Includes horizontal and vertical sawtooth voltages which can be directly substituted for vertical and horizontal oscillator in a TV receiver. Both the vertical and horizontal sawtooth amplitude is sufficient to give full raster deflection and in the case of flyback type high voltage power supplies the horizontal sawtooth can be used to light up the picture tube.

The 650 also contains an AC line voltage scale for instantaneous check on line voltage fluctuation, a common source of TV trouble.

This HICKOK Videometer is truly an all-purpose video generator, and a must for the income-minded, successful and aggressive TV service technician.

Will rebroadcast a TV picture on any channel, to any number of TV receivers.

FEATURES

Quickly localizes and accurately identifies trouble in any section of a TV receiver.
Provides electronically accurate bar or dot pattern on the screen of any TV receiver — independent of station operation.
R.F. output, directly calibrated in microvolts for sensitivity measurements.
Attractive steel portable case. 16¼" x 13¼" x 7". 30 lbs. net; 40 lbs. shipping. Test leads included.
Substitute Video Amplifier with gain of 0 to 10.
Crystal controlled timer for greater accuracy.
Fast, accurate, the ideal instrument for fringe area TV servicing.
Increases TV maintenance profits — allows you to trouble shoot many more installations per day.
Built only by HICKOK. Contains highest quality components throughout for lasting accuracy and dependability.

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HICKOK TEST INSTRUMENTS HICKOK

NEW MICROVOLT SIGNAL GENERATOR for AM, FM, TV and Mobile Bands

Model 292X **Price $296.00**

Output cable, test leads, 1000 kc crystal, and
20 db pad are included.

MODEL 292X
125 KC to 120 MC and 150 MC to 220 MC on fundamentals.

Here's an outstandingly accurate microvolt signal generator that meets the servicing, alignment and calibration needs of such high-frequency users as police, fire departments, railroads, relay press, maritime mobile, etc. Covers from 125 kc to 120 mc, and from 150 mc to 220 mc — all on fundamentals, with an accuracy of 1.0%. Has special provision for an optionally available crystal-controlled oscillator accurate to .005% in 30-50 and 152-162 mc mobile ranges. Has easy-to-read calibrated 8" dial with over 100" of scale. Output voltages: 400 cycles AF, variable 0-2 volts; RF unmodulated or modulated at 400 cycles — directly calibrated 0-100,000 microvolts by means of internal crystal detector for meter. Also has provision for external modulation. Internal 1000 kc crystal-controlled reference oscillator with an accuracy of 0.5%. Has excellent shielding; leakage is less than 0.2 microvolt. All controls are plainly marked. This new HICKOK Model 292X is the only popularly priced Microvolt Generator available that covers both Upper Channel TV and Mobile frequencies — on fundamentals.

FEATURES

- Covers all AM, FM, TV and Mobile Frequencies in 7 ranges. Also ideal for industrial applications.
- Crystal controlled. Temperature compensated.
- Amplitude Modulated and Unmodulated Output from .2 to 100,000 microvolts
- Cast Aluminum Attenuator for Minimum Signal Leakage
- May be externally modulated from 15 to 10,000 cycles per second
- Decibel Meter for faster servicing to indicate reference level
- Self-contained Crystal Oscillator Circuit—Crystals from 1 mc to 20 mc are available.
- Negligible Change in Frequency due to output
- Most accurate Microvolt Generator available for practical radio servicing and communication's manufacturers final inspections

TECHNICAL CHARACTERISTICS

Fundamental Frequency Coverage: Bands A through G — 125 kc to 120 mc; Band H — 150 to 220 mc. **Output Calibrated:** .2 to 100,000 microvolts. **Output Impedance:** X1, X10, and X100 microvolts — 5 ohms; X1K — 30 ohms. X10K — 0 to 100 ohms. **Modulation Fixed:** 400 cycles. **AF Output:** 0-2 volts. The Model 292-X is wired for plug-in type crystals (152-162, 30-50 mc), with accuracy to .005%. Self-Contained crystal oscillator circuit has crystal jack on front panel permitting crystal outputs at any frequency from 1000 kc to 20 mc on fundamentals; and to over 250 mc on harmonics. Type CCO-56 Crystal Oscillator unit available with frequency accuracy to .005% for Mobile Band coverage. **Self-Contained Decibel Meter:** -10 to +38 DB in 3 ranges. **Power Consumption:** 35 watts at 115 volts. **Meter Model:** 50; 105-125 V., 50-70 cycles, A.C. 14"x16½"x8"; 29 lbs. Net; 38# Ship. Satin Aluminum Panel. Blue hammertex steel case. Test leads and 1000 kc crystal included.

AIRLINE MICROVOLT SIGNAL GENERATOR — MODEL 292XAL

Model 292XAL **Price $326.00**

The only Microvolt Generator to provide complete coverage from 125 KC to 165 MC on fundamentals.

Especially built to meet the exacting requirements of aircraft radio technicians. This one instrument provides complete coverage of the aircraft band including all the necessary IF frequencies, and covers all RF frequencies with calibrated output. Can be externally modulated from 15 to 10,000 cycles per second, and measures both input and output of units under test. This fine generator is, beyond a doubt, the best high quality oscillator available today at anywhere near its price range.

TECHNICAL FEATURES: Maintains dependable and accurate frequency calibration, is free of wave distortion, and has no spurious signals in the output system. Temperature compensation, self contained crystal oscillator reference level, and crystal controlled. Cast aluminum attenuator is especially designed to faithfully attenuate without frequency discrimination.

Doubly shielded for absolute minimum signal leakage. Model 292XAL Technical Characteristics are the same as the Model 292X listed above EXCEPTING that the 292XAL has continuous frequency coverage from 125 KC to 165 MC. However, all other features and accessories remain the same for both instruments.

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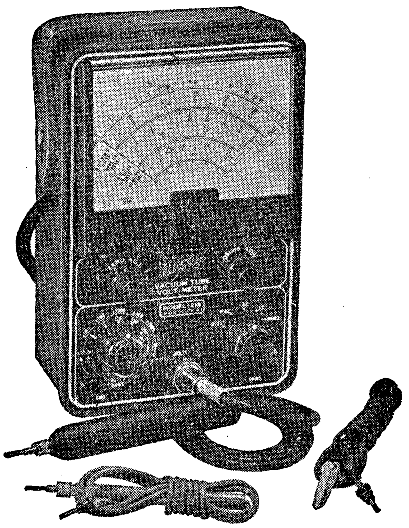
HANDY SIZE ELECTRONIC VOLTMETER

Smaller Size Laboratory Model



Model 215

Price: $67.50

Dual Probe and Test leads included.

INCLUDES: NEW, DUAL-PURPOSE AC-DC PROBE

A single unit with built-in switching arrangement. (Patent applied for)

- ★ Combination RMS or Peak-to-Peak voltage measurements.
- ★ New, guaranteed insulated and shock-resistant case.
- ★ Modern lucite meter case with large 5" easy-to-read scale.
- ★ Handier size for greater portability.
- ★ Zero-Center for faster discriminator alignment and other galvanometer applications.

This new HICKOK Model 215 is truly a laboratory instrument of highest quality, accuracy and dependability. Though ideal for the radio-television manufacturer or service shop, this fine instrument will meet a greater number of applications in the electronic design or industrial laboratory. Exceptionally versatile, the 215 provides the sensitivity and ranges for quick and accurate measurements of sine or complex waves of TV or industrial devices.

RANGES

D. C. VOLTMETER

Volts: 0 to 1.5, 3, 12, 30, 120, 300, 1200.
Input Resistance: 10 megohms with new HICKOK Dual-Probe.
Zero-Center Scale: For discriminator alignment and other galvanometer applications.

OHMMETER

Design Center: 10 ohms.
Ranges: x1 x10, x100, x1,000, x10,000, x100,000, x1 megohm.
Readability: .2 ohms to 1000 megohms.

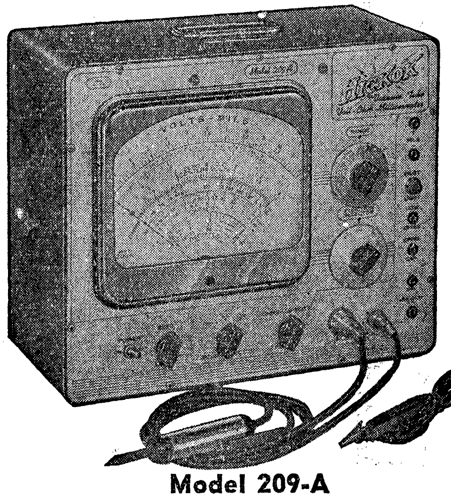
A. C. VOLTMETER

7 Ranges AC, RMS: 0 to 1.5, 3, 12, 30, 120, 300, 1200.
7 Ranges AC, Peak-to-Peak: 0 to 4, 8, 32, 80, 320, 800, 3200.
Frequency Characteristics: Flat from 40 cps. to 3.5 MC. Crystal Probe available to extend frequency range to 250 MC.
Input Impedance: With new HICKOK Dual-Probe, 30 megohms shunted by 150 uuf.

SPECIFICATIONS

105-125 VAC. Insulated, shock-resistant case. 5¾" W., 8⅜" H., 4½" D., 4½ lbs. net weight. 8 lbs. shipping.
Test leads included:
New combination AC-DC HICKOK Dual-Probe, ohms lead and ground lead.

CAPACITANCE TESTER AND VACUUM TUBE VOLT-OHM MILLIAMMETER



Model 209-A

POWER SUPPLY: 105-125 V, 50-70 cycles. Ranges: Volts, A-C and D-C 0-3, 12, 30, 120, 300, 1200. Mils (D-C): 0-3, 12, 30, 120, 300, 1200. Cap.: 0-10,000 mmf in 2 ranges, 0-1000 mf in 5 ranges. Ind.: 50 mh-100 henries. Ohms: 0.1 ohm to 10,000 megohms in 7 ranges. Frequency: A-C up to approximately 200 mc may be measured. Input Impedance: Volts D-C: 15 megohms, Volt A-C: 12 megohms. Tube Complement: 6X5GT A-C rectifiers, 6SJ7 cathode follower, 6SN7GT vacuum tube voltmeter.

LABORATORY SIZE . . . LARGE NINE-INCH METER WITH ZERO CENTER SCALE

A universal test instrument for all radio and electronic service work. Accurately and easily measures wide ranges of inductances, capacitances, resistances, currents and voltages, both A.C. and D.C.

This new giant size instrument matches the size and attractiveness of the Hickok complete line of test equipment. Large 9-inch meter improves ease of operation. Has a 1200 Volt scale, and a new Peak-to-Peak Voltmeter to measure peak to peak or RMS values of A.C.

The new Zero-Center scale on D.C. permits much faster alignment of discriminator and other galvanometer applications.

SPECIFICATIONS:

Dimensions—13¼"x16¼"x7"
Meter—Hickok Model S-22
Weight—19 lbs. Net.—26 lbs. Ship.
Blue baked Hammertex finish

High input impedance prevents loading when making voltage tests. Measurement of inductances are possible with the use of a conversion chart supplied in the instruction book. Possibility of damage due to overload is slight in all except current measurements. Power supply permits normal operation and accuracy with wide line voltage fluctuation.

Price $132.50

Including high frequency probe and all leads.

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

HIGH SENSITIVITY VOLT-OHM-MILLIAMMETER

Compact Portable . . . Shock-Resistant Case

Model 450

Price: $46.50

Test leads included.

RANGES: **LARGE 5" METER**

20,000 ohms per volt DC, 5,000 ohms per volt AC.
Volts AC and DC: 2.5, 10, 50, 250, 1,000, 5,000
Output: 2.5, 10, 50, 250, 1,000
Milliamperes, DC: 2.5, 10, 50, 250, 1,000
Microamperes, DC: 0 to 50
Amperes, DC: 0-10.
Decibels: —30 to + 55, in 5 ranges
Ohms:
0 to 1,000, 5 ohm center scale
0 to 10,000, 50 ohm center scale
0 to 1 meg., 5,000 ohm center scale
0 to 100 meg., 500,000 ohm center scale

This fine, new HICKOK Model 450 is the last word in design for attractive, high sensitivity volt-ohm-milliammeters. It is thin, lightweight and fully portable.

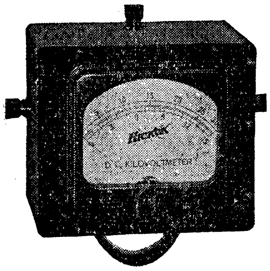
The modern HICKOK lucite meter case provides increased readability. Large 5" meter scale can be read more accurately.

Compact HICKOK design provides the thinnest instrument of its kind. Handier for the Radio-TV or field engineer for on-location servicing. Provides work-bench accuracy for all field jobs. Durable neolite handle provides sturdy stand at just the correct angle for easy bench use.

The new HICKOK insulated and shock-resistant case protects the high sensitivity and accuracy of this fine instrument.

Rugged and dependable, the HICKOK 450 provides for long, hard, day-in, day-out service on the bench or in the field. (Battery operated). 8¼" H., 5½" W., x 2½" D. 2½ lbs. net, 5 lbs. shipping.

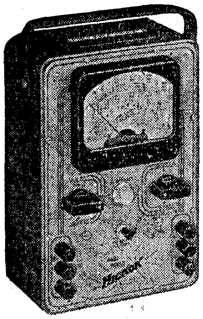
DOUBLE RANGE DC KILOVOLTMETER



Model 465

For measuring DC voltages as high as 30,000 volts. 20,000 ohm per volt sensitivity. Low current drain. Well insulated phenolic case for ample protection against the high voltages being measured. 7" x 6⅛" x $4\frac{5}{16}$". 6 lbs. net; 8½ lbs. shipping. Complete price including leads and carrying case $61.25.

PORTABLE TRUE WATTMETER



Model 900-B

Tests all AC electrical units under actual use conditions. Continuity test for shorts. Accurately tests even smallest units. 3¾" meter shows wattage, amperes and line voltage. Portable case complete with leads, 9⅜" x 6¼" x 3¼". 6 lbs. net; 10 lbs. shipping. $99.00. C-105 external transformer for ranges to 10,000 watts and 130 amp. $17.00. 9A and 9B leads for 220 volts, $18.00. Strong, detachable-cover carrying case. $10.20.

CRYSTALS

.005% accuracy for 292X	$18.80	Specified channels for 610-A	9.29
4.5 MC for 610-A	4.65	Special frequencies for 610-A	14.30

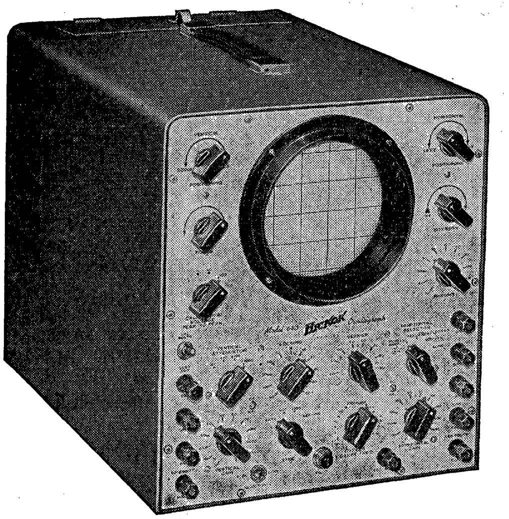
TUBE TESTER ROLL CHARTS

HICKOK periodically issues revised tube reference charts to include the data on all tubes available at time of each printing. Announcement of the availability of each new chart is sent to all registered owners of HICKOK tube testers. This is another HICKOK service designed to help you maintain the speed and accuracy necessary in your profession. $1.00 delivers up-to-date chart to you.

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

PROFESSIONAL MODEL LABORATORY OSCILLOGRAPH



Model 640

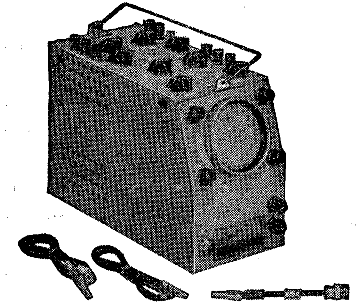
The new Model 640 Oscillograph is an outstanding, versatile instrument designed for General Purpose, Industrial Laboratory and Television applications for observation of transient or regular recurring phenomena.

Designed with outstanding range and sensitivity and completely built to the highest quality standards throughout. Rigidly field-tested and proved in the HICKOK laboratories.

SPECIFICATIONS:

WIDE BAND AMPLIFIER: Frequency response DC, 0 to 4.5 mc, (down 3 db).
VERTICAL DC AND AC AMPLIFIER: 17 M. V. per inch with sensitivity switch in high position. 35 M. V. per inch in low position.
FREQUENCY RESPONSE: 0 to 1,000,000 cycles (3 db point), in high position. 0 to 4,500,000 cycles (3 db point), in low position.
No jitter, even with high gain amplifiers.
Maximum Input Potential: 1000 volts peak.
Input Impedance: 2 megohms, 50 mmf.
Excellent stability and minimum microphonics and drift.
HORIZONTAL AMPLIFIER:
Deflection Factor —
Direct: 13 volts RMS per inch.
Full Gain Setting: 50 millivolts RMS per inch.
Frequency Response: 0 to 200,000 cycles, with 3 DB down at upper limit.
Maximum Input Potential: 1000 volts peak.
Input Impedance: 2 megohms, 50 mmf.
BUILT-IN CALIBRATING VOLTAGES:
Peak-to-Peak—100, 10, 1, .1 volts.
TEST SIGNALS: Line Frequency: 3 volts RMS per inch.
Sawtooth: Available from front panel.
Direct connection to both horizontal and vertical deflection plates.
SHOCK MOUNTED: Provides minimum microphonics due to external mechanical vibrations.
SHIELDED: Mu Metal magnetic shield gives maximum protection to the cathode ray tube against effects of external magnetic fields.
CALIBRATED SCALE: Provided for quantitative measurements and comparisons.
LINEAR TIME BASE: Recurrent and Driven Sweep: 2 cycles to 30,000 cycles.
Provision for external capacities for slower frequency sweeps of 10 seconds and slower.
Sweep Speeds: Faster than 0.75 inch per microsecond.
Television fixed frequencies; 30 and 7,875 for observing blanking and sync waveforms in the horizontal and vertical circuits of TV receivers.
Synchronization at line or 2-times line frequency.
EXPANDABLE SWEEP: 6 times expansion, or equivalent to 30 inches of screen diameter.
LINE FREQUENCY PHASING CONTROL: Zero, plus or minus 90° phase shift.
"Z" AXIS MODULATION: Capacitively coupled to the grid of the cathode ray tube. 15 volts will blank trace fully at normal intensity.
INTENSITY: Standard Model 640 includes 5UP1 cathode ray tube with medium persistence screen. High accelerating potentials give excellent intensity for viewing transient waves and high frequencies.
Some engineers may prefer a 5UP11 tube for short persistence, or a 5UP7 tube for long persistence. Either is available in the Model 640 at slight additional cost.
STABILIZED: Designed so that sweep lengths and synchronizations are maintained as signal level varies.
DIMENSIONS: Portable steel case, 14"x11½"x19", approximately 35 lbs. net; 40 lbs. shipping. Combination light shield and camera base provided.

Price: $355.00



Model 380A Price $225.00

NEW, HANDY SIZE 3" PORTABLE OSCILLOSCOPE

This new, handy size oscilloscope is similar to equipment built for the armed forces and is of the highest quality throughout. It is slightly larger than a normal size telephone and provides a new high in dependable accuracy to both laboratory technicians and field engineers.

Features both vertical and horizontal DC Amplifiers with a sensitivity of better than .075 RMS volts per inch. Frequency coverage to beyond 5 MC.
Fully compensated horizontal and vertical attenuators, retractable light shield, direct connection to CR tube elements, and provision for Z-Axis modulation are other desirable characteristics.

Test leads, (3' coaxial test cable, 6" coaxial test cable, 3' ground lead), are included. Storage compartment for leads is in accessory case.

This fine instrument is also available in a shock mounted, waterproof, moisture proof, strong aluminum case at $247.50.

TECHNICAL CHARACTERISTICS OF MODEL 380A

CATHODE RAY TUBE:
3" Screen, Type 3RP-1
FREQUENCY RANGE:
a) Vertical Amplifiers:
(D.C.) 0 to 2 MC, 3 db down (Full gain setting).
(A.C.) 5 cycles to 2 MC, 3 db down.
b) Horizontal Amplifiers:
(D.C.) 0-500 KC, 3 db down (Full gain setting).
(A.C.) 1 cycle to 500 KC, 3 db down.
c) Sweep Circuit Oscillator:
3 to 50,000 cycles.
INPUT IMPEDANCE:
(a) Vertical Amplifier:
(1) A.C. — 1.5 megohms shunted by 25 mmf capacity.
(2) D.C. — 2 megohms.
b) Horizontal Amplifier:
(1) A.C. — 1.5 megohms shunted by 25 mmf capacity.
(2) D.C. — 2 megohms.
c) Vertical Direct connection:
9 megohms shunted by 11 mmf.
d) Horizontal Direct connection:
9 megohms shunted by 11 mmf.

DEFLECTION SENSITIVITY:
a) Horizontal and Vertical:
.075 RMS volts/inch.
b) Vertical Direct connection:
17 RMS volts/inch.
c) Horizontal Direct connection:
25 RMS volts/inch.

POWER SUPPLY REQUIREMENTS:
a) 105 to 125 volts A.C. at 50 to 1000 cycles.
b) Power consumption 60 watts at 115 volts.
ACCESSORIES INCLUDED:
3 ft. Coaxial Test Cable, 6 inch Coaxial Test Cable, 3 ft. Ground Lead, and Ruled Celluloid Screen. Also available with strong, aluminum waterproof, moisture-proof, shock mounted carrying case.
5½" wide x 8" high x 13¼" deep, less carrying case.
11 lbs. net.
6" wide x 9" high x 13½" deep, including carrying case.
15 lbs. net.

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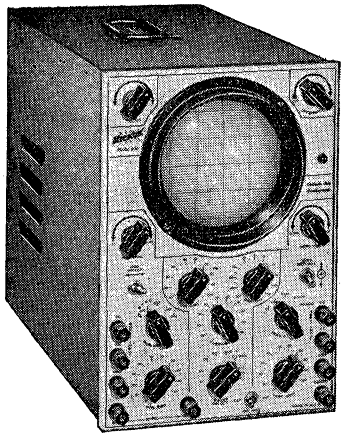
HICKOK TEST INSTRUMENTS HICKOK



Model 670

NEW MODEL 670 OSCILLOGRAPH

Accurate, Stable, High Sensitivity with AC and DC AMPLIFIERS

Model 670: The more exacting requirements of today's television maintenance have made it necessary for the service technician to have a good 'Scope. The HICKOK Model 670 is designed with DC amplifiers to provide excellent square wave response — even down to DC.

Many TV receivers are so far out of alignment that extreme 'Scope sensitivity is necessary to properly show the response curve. The 670 provides this extra sensitivity — to 10 MV per inch.

To properly view all TV frequencies a wide band vertical amplifier is necessary. The 670 provides for this need by having a band width useable to beyond 5 MC. Push-pull amplifiers and polarity reversing switches are also new features you will find most useful in the 670.

TECHNICAL CHARACTERISTICS

Deflection Sensitivity:

a. vertical amplifier	.015 volts (RMS) per inch
b. vertical direct	12 volts (RMS) per inch
c. horizontal amplifier	.07 volts (RMS) per inch
d. horizontal direct	13 volts (RMS) per inch

Input Impedance:

a. vertical amplifier	2.2 megohms—30 mmf
b. vertical direct	3.3 megohms
c. horizontal amplifier	1 megohm—35 mmf
d. horizontal direct	3.3 megohms

Frequency Range:

a. Vertical Amplifier: D.C. to 600 KC, within 3 db. Useful beyond 5 MC; pulse rise time 0.6 microseconds.

b. Horizontal Amplifier: 0 to 250 KC; pulse rise time 1.2 microseconds.

Sweep Oscillator: 3 to 50 KC.

Power Supply: 105-125 **VAC, 50-70 cycles, 65 watts at 115 VAC.**

Size: 9½" W x 12¼" **H x 18" D.** In attractive, steel portable case or matched set "D" case.

Weight: 28 **lbs. net; 35 lbs. ship.**

TECHNICAL FEATURES:

Highest practical sensitivity: 0.01 (10 millivolts) RMS per inch.
Demodulator circuit for viewing modulation on RF signal.
Recurrent linear sweep; 3 cycles to 50,000 cycles.
Reversing switches for both horizontal and vertical deflection.
Fixed sweep frequency for horizontal and vertical wave forms to TV receivers.
Both negative and positive synchronizing.
Line phasing control (approximately 180°).
Wide band vertical amplifier, useful beyond 5 MC.
Direct coupled, balanced (push-pull) amplifiers for both vertical and horizontal deflection.
Provision for Z-axis modulation.
Permits the study and analysis of wave forms, and other electric and magnetic phenomena. Excellent square wave response.
Provides for the visual testing and alignment of amplitude and frequency modulated receivers, as well as television equipment when used with a frequency modulated RF oscillator or sweep generator.

Price: $244.00

Model 680

TELEVISION RF MARKER and Crystal Calibrator

A perfect companion for the HICKOK 610-A TV Alignment Generator to provide the most complete, overall TV alignment including UHF.

The 680 is designed to rapidly solve the growing TV front-end maintenance problems. Thousands of TV front-ends are failing daily due to age. The usual procedure of returning these units to the manufacturer for replacement has become increasingly difficult. Now, with the 680 you can build a big business on repairing TV front-ends yourself — to crystal accuracy. The 680 has directly calibrated channel, sound and picture frequencies accurate to .05%. Covers the ranges of 53-89 MC and 174-217 MC on fundamentals and to 868 MC on harmonics.

The 680 also is a crystal standard with choice of 3 crystals provided by means of a front panel switch. (A 2.5 MC crystal is supplied.) The built-in magic eye provides a visible zero beat indicator; a phone jack is also provided for an audiable indicator.

The 680 can be used as a heterodyne frequency meter for calibrating other generators up to 900 MC.

This fine instrument is the latest HICKOK development and can be used as a crystal standard in the shop, laboratory or factory, to check oscillators, generators and front-end or over all response curve of a TV receiver to an accuracy of .05%.

Price: $129.50

TECHNICAL CHARACTERISTICS

Power supply required: 20 Watts, 105-125V AC 50-70 cycles.

RF Output: 53-89 MC, 174-217 MC.

VHF	106-178 MC	2nd harmonic
UHF	424-712 MC	8th harmonic
	522-651 MC	3rd harmonic
	696-868 MC	4th harmonic

.15V, RMS RF output, 31 crystal check points at 2.5 MC.

Size 11½" **W x 6" H x 9" D, attractive portable steel case.**

Weight: 13¼ **lbs. net; 18 lbs. shipping.**

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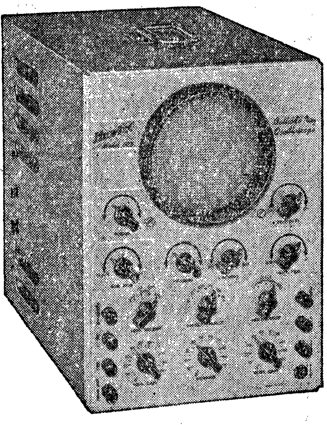
HICKOK TEST INSTRUMENTS HICKOK

EXCEPTIONAL VALUE 5" OSCILLOSCOPE



Model 665

Price: $129.50

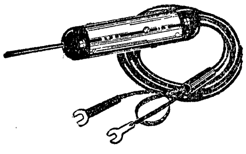
Excellent Characteristics for Radio—TV Receiver Work

Model 665: Here is real value in a HICKOK 5" cathode ray oscilloscope. This new instrument is good quality at a price well within the reach of every radio-TV technician. Thoroughly HICKOK designed with very good square wave characteristics and a frequency range entirely adequate for all TV receiver work. Built to the same attractive — sturdy construction as all other HICKOK equipment and guaranteed to give excellent service within the range of its technical characteristics.

TECHNICAL SPECIFICATIONS

Frequency Range: 0.5 cycles to 700KC, down 3 db.
Accelerating Potential: 1775 Volts (high intensity).
Square Wave Response: Flat at 60 cps. to 100KC, with less than **1%** tilt, less than **2%** overshoot.
Dual Fuse: B+ is fused and the line is fused.
Amplifier: Push — pull, vertical sensitivity .020 MV per inch.
Horizontal, .030 MV per inch.
Vertical Input Impedance: 15 MMF, 2.2 Megohms.
Horizontal Impedance: 52 MMF, 0.1 Megohms.
Excellent locking.
Sweep Oscillator Range: 18 cps. to 50KC.
Provision for direct connection to CRT is provided.
Withstands shock, vibration and humidity. CRT is shock-mounted.
Attractive blue hammertex steel case. 13" H., 17¼" D., 9⅝" W. 23 lbs. net; 30 lbs. shipping. 105 — 125 VAC, 35 watts.

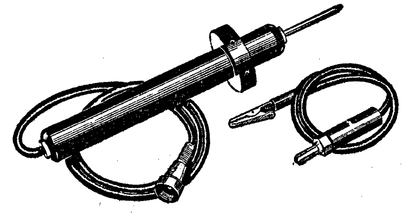
PROBES and ACCESSORIES



TVP-1

TVP-1 Television Probe — Increases 'scope usefulness in servicing TV. Technicians now can accurately duplicate manufacturers pattern. Reduces loading effect. Phenolic, black and chrome probe, 4 ft. heavy-duty cord with spade connectors. 6 oz. net; 2 lbs. shipping. Light and easy to handle. Price:

$12.60



PR 30 KV — High Voltage DC Probe — Extends VTVM range to 30,000 volts DC. Doubles use of any voltmeter. Ideal for use with HICKOK 203 or 209. Heavy duty phenolic, 4 ft. cord and cable type connector. 12 oz. net; 2 lbs. ship. Price:

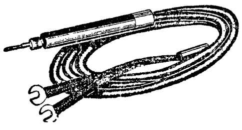
$11.90

PR 30KVA — High Voltage DC Probe — For use with HICKOK Model 209A. 12 oz. net; 2 lbs. ship. Price:

$11.90

PR 25 — Extends range of HICKOK Models 450 or 435-A to 25,000 volts DC. Can be used with any 20,000 ohm-per-volt multimeter with a 250 volt scale. 12 oz. net; 2 lbs. ship. Price:

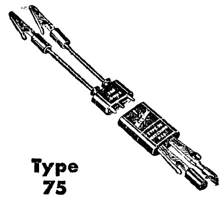
$11.90



TYPE 34

"34" Crystal Demodulator Probe — Use with any 'scope to trace a modulated RF signal, at any frequency, through radio or TV receiver from the antenna post to the detector or discriminator. 4 ft. long. 2 oz. net; 2 lbs. shipping. A quick and accurate aid to trouble-shooting with your 'scope. Price:

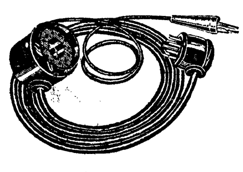
$9.80



Type 75

"75" Termination Pad — This accessory is for use with the HICKOK 610A or any other TV-FM alignment generator. Eliminates most standing waves on the length of output cable to insure accurate impedence match of the generator and TV receiver. Can be used on both 90 and 300 ohm inputs. 6 oz. net; 2 lbs. shipping. Price:

$8.50



MODEL CRT

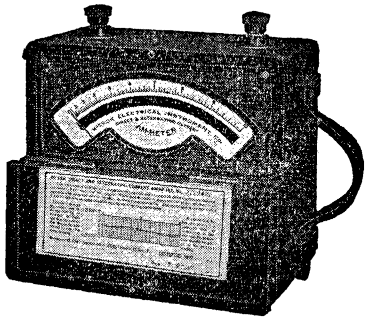
Model CRT — Cathode Ray Tube Tester — Built for use with any HICKOK tube tester. Tests all types TV receiver electromagnetic picture tubes including Philco. Tube gas test, grid control test, short test, cathode emmission test. Also, by increasing filament voltage of CR tube and holding for a few minutes, many tubes can be brought back to full operating brilliance. Price:

$9.90

HICKOK Meters

For Accuracy and Dependability

MODEL 19 AC-DC ASTATIC MILLAMMETERS, AMMETERS, VOLTMETERS, WATTMETERS, WATTLESS COMPONENT INDICATORS

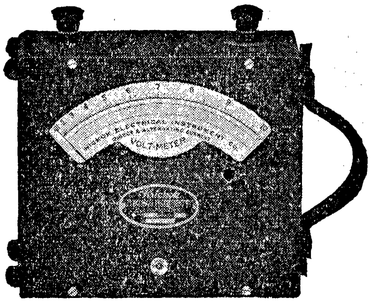


Astatic Electrodynamometer movements. Accuracy within ½ of 1% on AC **or** DC. Not affected by external magnetic fields. **Scale length:** 5½ inches. Wattmeter scales are uniform, others uniformly squared. Mirror scales.

Model 19 portable instruments designed for precision AC and DC measurements. They are of astatic dynamometer type with a greater accuracy than most other portable AC and DC instruments. Owing to the astatic design the indications are the same on either AC or DC.

Dimensions: 4" x 6¼" x 7⅛". **Weight:** 4½ lbs. **Case material:** Molded phenolic.

MODEL 13 AC DYNAMOMETER INSTRUMENT

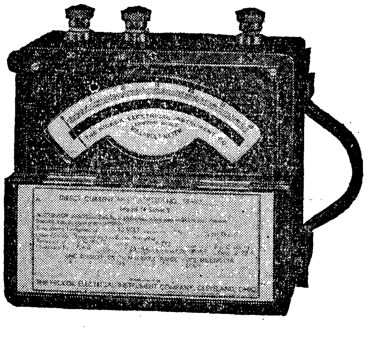


Accuracy ½ of 1%. Shielded from effect of External Magnetic fields. Ammeters, Milliammeters, Voltmeters, Wattmeters — single phase. Mirror scales, Knife Edge Pointers. **Scale length:** 5½ inches.

These instruments are correct on AC of any frequency up to 125 cycles. Built for use on higher frequencies. Deviations from the sinusoidal wave form met in ordinary testing have no noticeable effect on the calibration of these instruments. Voltmeters and wattmeters are self-contained up to 750 volts, designed to perform continuous service.

Dimensions: 3¼" x 6¼" x 7⅛". **Weight:** 3½ lbs. **Case material:** Phenolic.

MODEL 14 DC AMMETERS, MILLIAMMETERS, MICROAMMETERS, VOLTMETERS, MILLIVOLTMETERS, VOLT-AMMETERS, THERMO-COUPLE METERS

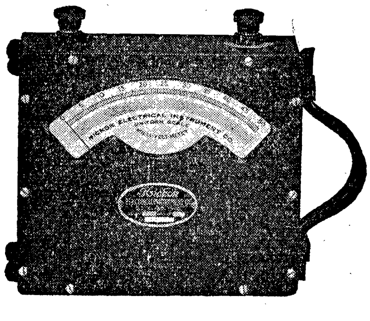


D'Arsonval movements. Accuracy within ½ of 1%. Shielded from effect of external magnetic fields. Uniform scales provided in DC meter with anti-parralax mirrors. **Scale length:** 5½ inches.

Voltmeters in this model have a resistance of approximately 1000 ohms per volt, the exact resistance being marked on data card furnished with the instruments. Model 14 millivoltmeters are supplied with leads for connection to external shunts. Ammeters are self-contained up to 150 amperes, having negligible temperature coefficient built-in shunts. The drop across the ammeters is 50 millivolts. Model 14 microammeters are of the high torque, have excellent damping, and other rugged characteristics not usually found in high sensitivity instruments.

Dimensions: 7⅛" x 6¼" x 4". **Weight:** 6½ lbs. **Case material:** Polished phenolic. Excellent magnetic damping.

MODEL 18 DC INSTRUMENTS FOR ALL CLASSES OF DIRECT CURRENT TESTING



D'Arsonval movements. Accuracy within ½ of 1%. Unshielded from external magnetic fields. Voltmeters, millivoltmeters, ammeters, milliammeters, microammeters, and volt-ammeters. Uniform mirror scales engraved on moisture-proof stock. **Scale Length:** 5½ inches.

Excellent damping characteristics. This model is so designed that there is only a small overswing to the needle which results in quick and accurate readings. Voltmeters have a resistance of 1000 ohms per volt. Voltmeters are self-contained up to 1000 volts and are designed for continuous use at 1000 volts without temperature error. The Volt-ammeters in this model are especially adaptable for making tests where consecutive volt and ampere readings are desired, such as motor test and battery test. Model 18 instruments, except in the higher voltage ranges, will withstand an instantaneous overload of 10 times the full scale value without damage or change in calibration.

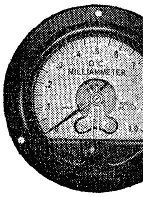
Dimensions: 7⅛" x 6¼" x 2¾". **Weight:** 5¼ lbs. **Case material:** Molded phenolic.

HICKOK Meters

For Accuracy and Dependability

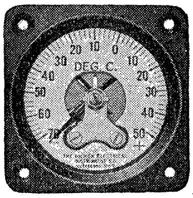
3½" ROUND-250 DEGREE METER

All DC meters can be supplied with accuracy either 1% or 2% of full scale deflection. The AC meters, which use copper-oxide rectifier-type movements, have accuracy within 5% of full scale deflection under all conditions. These instruments are as accurate as panel mounting instruments having equal size and have the advantage of two and one-half times longer scale. They are damped in accordance with American Standards Association Specifications, and their response time is also in accordance with these specifications. Allows readings to be taken quickly and more accurately.



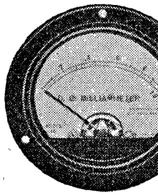
2½" 250 DEGREE AIRCRAFT METER

This instrument is mounted in a regulation aircraft case per Army-Navy specification, including the shielding and dimensional requirements. Has scale approximately 4⅜" long. Quick readability makes them desirable as flight instruments. Aircraft-type dail is available. Mechanism specially designed for aircraft service and will meet vibration-resistant requirements, etc.



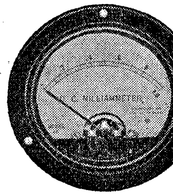
3½" ROUND RUGGEDIZED METER

The high Hickok standard of quality is now available in a ruggedized DC or rectifier type AC meter. This instrument provides the practical answer to requirements for shock proof meters with dependable accuracy. This highly efficient shock mount design permits pointer and scale divisions to be easily read when meter is under vibration. Rear panel is built with new screw-type terminals to eliminate solder connections. Also available in 2½" and 4½"



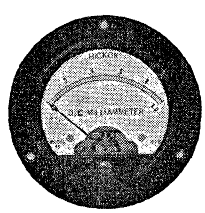
2½" MINIATURE PANEL MOUNTING, SEALED

This instrument answers the need for absolute airtight, panel sized electrical instruments for use in tropicalized military equipment, creameries, ships, outdoor, etc. Terminals are of the special glass soldered-in type using a direct bond of glass to metal. Case is rust proof black enamel. Exceptionally thick flint hard glass withstands pressure and shock tests designated by military specifications. Designed for flush mounting. Luminous dials can be supplied. Zero adjuster is internal. Also available in 3½".

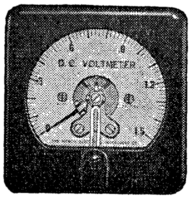


3½" ROUND FLUSH MOUNTINGS

Accurate within 1½%. Large opening symmetrically designed admits a maximum of light to the dial. Thick flange eliminates danger of breakage and improves appearance. Metal dials with white background are supplied in all standard ranges. Special dial designs are supplied on quantity orders, at no extra charge. Include internal illumination.

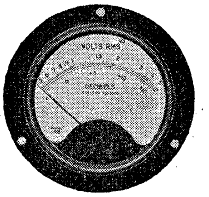


3½" SQUARE 250 DEGREE METER SAME AS THE ROUND 250 DEGREE METER



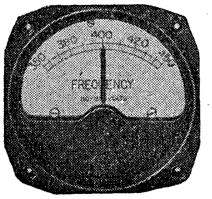
All DC meters can be supplied with accuracy either 1% or 2% of full scale deflection. The AC meters, which use copper-oxide rectifier-type movements, have accuracy within 5% of full scale deflection under all conditions. These instruments are as accurate as panel mounting instruments having equal size and have the advantage of two and one-half times longer scale. They are damped in accordance with American Standards Association Specifications, and their response time is also in accordance with these specifications. Allows readings to be taken quickly and more accurately.

4½" ROUND PANEL METER, SEALED



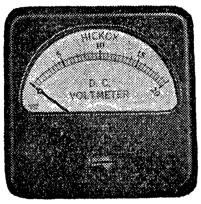
Latest design sealed instrument perfected for use wherever 4½" meters are required. Built around the famous Hickok internal pivot movement to provide lasting and dependable accuracy. Thoroughly engineered case design, features the perfect seal against air, dust, and moisture. Permanently sealed at the factory, however, special gasket construction permits opening and resealing with simple tools.

DIRECT READING FREQUENCY METER, AIRCRAFT TYPE



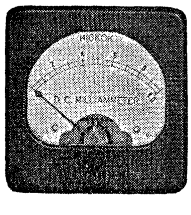
These Hickok improved self-contained frequency meters can be mounted in aircraft type cases of the large AN size. These are the smallest size frequency meters. This type of case is often convenient where space is a limiting factor. Suitable for aircraft use. Movement is shockproof. Case is dust and waterproof in accordance with Army-Navy aircraft instrument specifications. Radium or fluorescent dials and pointers available.

2½" MINIATURE SQUARE PANEL MOUNTING



Flush mounting, phenolic case, wide flange only; and metal cases, wide and narrow flanges. Accurate within 1½%. These miniature panel mounting instruments are of the standardized 2½" size, but have extra long scale lengths by reason of the wide angle of deflection and longer scale radius. Five types of cases are available. Lance type pointers regularly supplied, however, small spade pointers can be furnished.

3½" SQUARE FLUSH MOUNTINGS

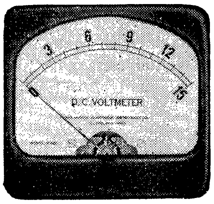


Accurate within 1½%. Large opening, symmetrically designed, admit maximum light to the dial. Thick flange eliminates danger of breakage and improves appearance. Require less panel space than round flush instruments. Metal dials with white background are supplied in all standard ranges. Special dial designs supplied on quantity orders at no extra charge, including internal illumination by means of bulb inserted in a socket through the instrument base.

HICKOK Meters

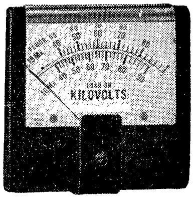
For Accuracy and Dependability

FOUR INCH RECTANGULAR PANEL



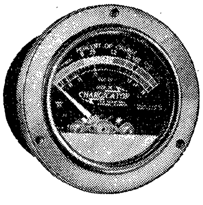
Accuracy within 1½%. Molded phenolic cases — for flush or surface mounting. Dull Black finish standard. Other phenolic colors available. DC Scale length 3¾" — longest which can be attained in an instrument of this size. AC Scale length 3.2", 85 degrees deflection. Can be furnished with or without illuminated dials. Available also in 2½", 3½", and 5".

3½" RECTANGULAR SEMI-FLUSH



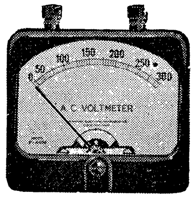
The new lucite-window model with a scale length of 3¼". Designed as attractive, modernistic replacements for conventional 3½" round or square flange instruments, and can be used in any space large enough to accommodate the standard 3½" meter. This instrument is furnished shielded or unshielded and available in most AC and DC ranges. Also available in 5".

CHARGICATOR PANEL MOUNT



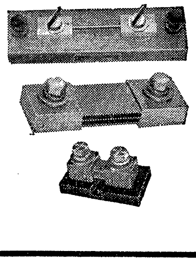
The chargicator is an electrical hydrometer which places no load on the battery and may be left permanently connected. It has advantages over a hydrometer in that the batteries need not be disturbed when the reading is made, and the readings need not be made at the battery. The chargicator gives an accurate and instant measurement of battery conditions on a highly expanded scale, suppressed zero voltmeter.

4" "P" SERIES PORTABLE INSTRUMENTS



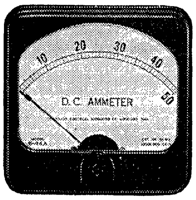
Scale lengths — AC Models P49, P49M — 3.15". DC Model P48 — 3.7". Accurate within 1½%. Dimensions: 4" x 3¾" x 2-3/16". Not shielded. These meters are manufactured in many ranges of voltmeters, millivoltmeters, ammeters, milliammeters, microammeters, volt-ammeters, and wattmeters for use on both alternating and direct currents. A high quality solid leather carrying case can be supplied at no extra charge.

SHUNTS



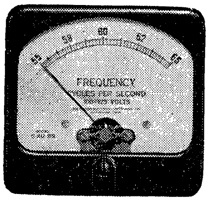
Hickok Portable Precision Shunts are of sufficient size to keep the temperature rise within the limits of N. E. M. A. standards. Shunts are accurately adjusted for 50 millivolt drop at full current value. The shunt resistance material has negligible thermo-electric effect against copper and negligible temperature coefficient within the limits of operation of the shunt. Will operate at rated capacity continuously without impairment of accuracy. Leads supplied with all shunts.

FIVE INCH RECTANGULAR



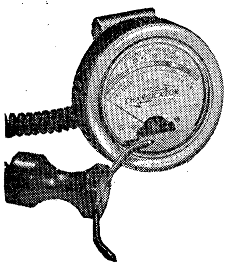
Large dial area. Accurate within 1½%. Molded bakelite cases — furnished shielded or unshielded. Dull black finish standard, other colors available. Flush mounting. DC scale length 5", AC scale length 4.25". Illuminated dials available. This instrument is a companion to other Hickok rectangular models but has proportionately larger dials, and is ideally suitable for use in electronic-testing equipment where multiple scale arcs are needed.

4" RECTANGULAR FREQUENCY METER



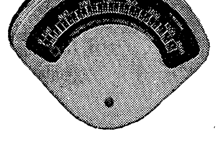
Frequency meters are self-contained with dimensions of 3½" x 4" x 2". No external reactor is used. The instruments can be supplied shielded from the effect of external magnetic fields. Volt-ammeters, volt-milliammeters, etc., having built-in push-button switches available. Push button and switch are located completely within the instrument.

CHARGICATOR



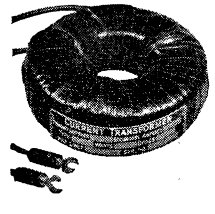
The newest instrument designed to improve battery servicing. This instrument measures the state of charge in a lead-acid storage battery, instantly and accurately. It's handier, cleaner, and quicker than a hydrometer and avoids acid damage to clothing. The chargicator also provides a complete test of all other factors affecting the life or condition of a battery. Available in 2½" and 3½" sizes as well as special designs, and for special purposes.

FAN TYPE METER



D'Arsonval movement. Accuracy 1%. Scale length: 7½ inches. Dimensions: 8-19/32" x 6-11/16" x 2-7/32". This instrument is available in any combination of DC ranges. It has a window in the top of the case so that a light can be mounted above it for external illumination. This window is optional. It can be supplied with mirror scales and knife-edge pointers. The movements are especially designed for use in places where vibrations are encountered.

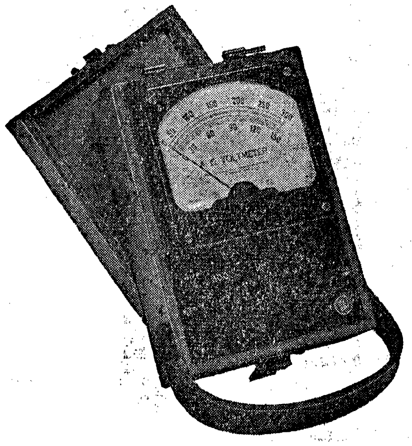
CURRENT TRANSFORMERS



Hickok midget current transformers "Donut" design — for use with inserted primaries. SERIES 1 is primarily intended for use with ammeters, and conforms to N. E. M. A. standards ½X as to ratio only. SERIES 2 conform to N. E. M. A. standards ½X as to ratio and phase angle, and are intended for use with wattmeters, also may be used with both wattmeters and ammeters. Secondary leads are five feet long with soldering lugs made to fit ¼" dia. stud.

HICKOK Meters

For Accuracy and Dependability

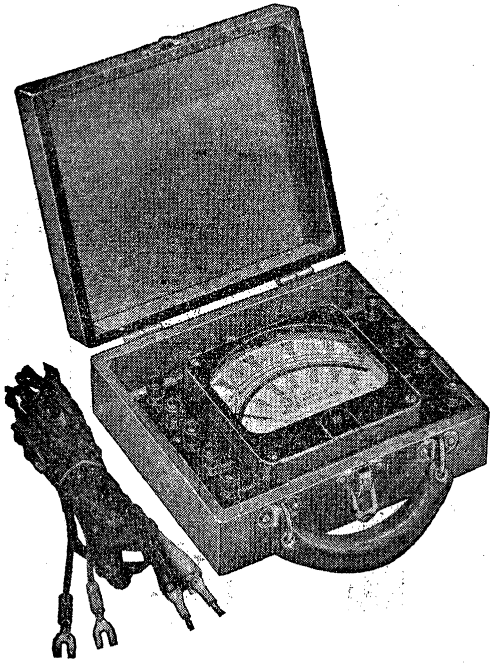


POCKET PORTABLE

MODEL 480 and 481—Accuracy within 1%. Unshielded. DC Model 480: Scale length 3.7". Voltmeters, millivoltmeters, ammeters, milliammeters, microammeters, and volt-ammeters. AC Model 481. Scale length 3.15". Ammeters, milliammeters, voltmeters, wattmeters — single phase. Mirror scales, knife edge pointers.

Oak Case furnished with slip hinges permits the cover to be removed. The resistor compartment is separate from the meter movement and beneath the panel on which the binding posts are mounted. These instruments are specifically designed for smallness and accuracy. They will easily slip into the pocket and their high accuracy enables them to be used in many testing and inspecting applications. Found especially handy for field service work and are extensively used by the U. S. Signal Corps. Built with full open faces, enabling the use of multiple scales, which are easily readable and unusually long. The movements are especially designed for portable use in these models, and are of the very highest quality.

Dimensions: 6¾" x 4¾" x 2¾". **Weight:** 3 lbs.



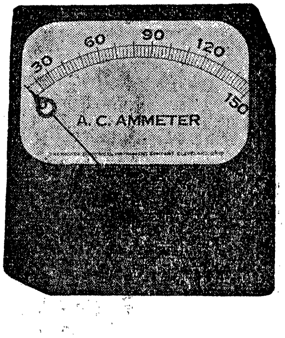
MODEL 440—Accuracy 1½%. Scale length 5". Panel and meter cover are phenolic. Has a built-in lead compartment with leads supplied.

The instrument comes in an oak case with strong, flexible carrying handle. Case is furnished with slip hinge cover, permitting the cover to be removed for easier use. This type of case is especially handy for field service work and is extensively used. All types have mirror scales, knife edge pointers and full open faces. The latter feature enables the use of multiple scales, which are easily readable and unusually long. The movements are especially designed for portable use in these models, and are of the very highest quality. This particular instrument has three DC voltage ranges; 30, 150, and 1500. Two millivolt ranges: 75 and 150. Three milliampere ranges; 30, 60, and 300. These instruments, however, are available in any combination of DC ranges. **Dimensions:** 8½" x 7¼" x 3½". **Weight:** 4 lbs.

SWITCHBOARD TYPE

MODEL S12 DC, D'Arsonval Movements. Model S-11 AC, Electrodynamometers. Model S-11M AC, Magnetic Vane Movements. Scale length of 5⅛". Shielded from External Magnetic Fields. Ideally suited for heavy industrial applications. Movements are of the large switchboard type. The AC Ammeter at left is furnished either self contained or with an external switchboard mounting current transformer. Cases can be supplied impervious to magnetic dust, dirt and moisture found in heavy industries. Can withstand severe vibration, shocks and extreme of temperature though still maintain the guaranteed accuracy of 1%. Available in surface type or flush type cases. Pressed steel cases, black enamel finish.

Dimensions: 5⅜"W., 5⅞"H., 4¼"D. plus 1¼" mounting studs.



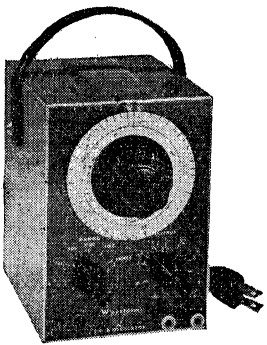
Hickok is one of the foremost pioneers and manufacturers of electrical indicating instruments. Here shown are a few of the more popular types furnished. However, any practical range and type can be supplied. Your inquiry is invited. Kindly list details of your requirements. Prices are available on request.

THE HICKOK ELECTRICAL INSTRUMENT CO.

10514 Dupont Avenue, Cleveland 8, Ohio

Waveforms

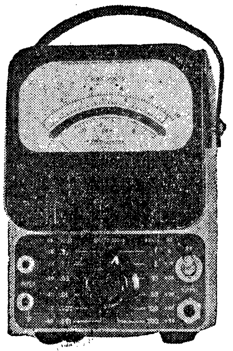
PRECISION IN MINIATURE!


Model 510-B

510-B EXTENDED RANGE AUDIO OSCILLATOR

Frequency range from 18 cycles to 1.1 megacycles, with output constant ±0.5 db, and 2% calibration accuracy (1% on special order). Stability ±0.5% with temperature and line voltage. Distortion less than 0.2% over most of useful range. Maximum output 10 volts or 4 ma (+15 dbm into 2000 ohms). Source impedance 400 ohms. Logarithmic output control calibrated approximately in volts. Panel size 6" x 4¼". Weight less than 6 lbs. 95-130 volts, 50-400 cycles.

T-10 Matching Transformer . . . Attaches securely below 510-B; 150/600 ohms balanced. **Write for additional information.**

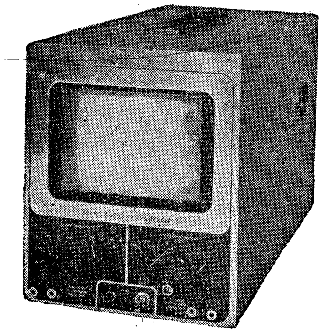

Model 520-A

520-A EXTENDED RANGE VOLTMETER

Frequency range from 10 cycles to 2 megacycles. 1 millivolt full scale sensitivity; 12 ranges up to 300 volts. 4¼" illuminated Weston meter calibrated in volts and dbm. Full wave average rectifier. Input impedance 10 megohms 24 uuf. Meter protected against overload. Amplifier output provided. Miniature size; panel 6" x 4¼". Weight 6 lbs. Buff or mirror scale on special order. 95-130 volts, 50-400 cycles. **Write for additional information.**

540-A HETERODYNE CRYSTAL CALIBRATOR

Crystal controlled output at 100 kc, 1mc, and 10 mc, or from external crystal. Sensitive heterodyne detector provides wideband output; self contained speaker monitors audible beat. Miniature unit 6" x 4¼" x 6". 95-130 volts, 50-400 cycles.

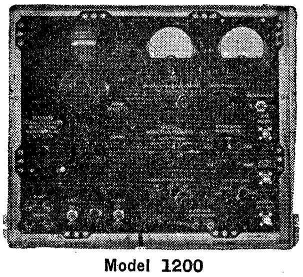

Model 601-A

601-A WAVETRACER — AN AUDIO CURVE TRACER

Instantaneous visual display of frequency response of any audio system. Logarithmic vertical scale; linear in db. Completely self-contained including audio sweep generator, attenuator, mike preamplifier, and logarithmic voltmeter using 7", long-persistence CR tube. **Write for additional information.**

MODEL 1100 AUDIO FREQUENCY GENERATOR

Frequency range from 18 cycles to 500 kc, with output constant ±0.5 db, and calibration accuracy of 1%. Output 150 or 600 ohms balanced +26 dbm max.; unbalanced 50 volts, 1 watt. Distortion less than 0.1% over most of useful range. Output continuously variable from +26 to —70 dbm; 50 volts to 0.1 millivolt. Step attenuator. Output meter calibrated in volts and dbm. Equivalent to SG/83. Miniature size 6" x 9" x 10" deep. **Write for additional information.**


Model 1200

MODEL 1200 AM-FM STANDARD SIGNAL GENERATOR

Frequency range from 100 kc. to 170 mc. AM 0-100%; FM 0-100 kc, metered and continuously variable. Output maximum 1.5 volts; attenuation to 1 microvolt. Six internal modulation frequencies from 100 cycles to 8 kc. Crystal calibrator. Size 13" x 15" x 11" deep. 50 lbs. Equivalent to SG-77/U. 115-230 volts, 50-400 cycles.

Specifications subject to change without notice.

Waveforms, inc.

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Laboratory Precision at Lowest Cost—

INSTRUMENTS and KITS

The Industry's most complete line of MATCHED TEST INSTRUMENTS!

You Build EICO KITS in one evening . . . but they last a lifetime! AND—YOU SAVE 50%!

EICO New 5" Push-Pull Oscilloscope

All-new laboratory-precision scope with all the extra sensitivity and response for precise servicing of TV, FM & AM sets. • Push-pull undistorted vertical and horizontal amplifiers. • Boosted sensitivity, .05 to .1 rms volts/inch. • Useful to 2.5 MC. TV-type multivibrator sweep circuits, 15 cps—75 KC. • Z-axis intensity modulation feature. • Dual positioning controls move trace anywhere on screen. • Complete with 2-6J5, 3-6SN7, 2-5Y3, and 5" C.R. Tube. • 3-color etched rub-proof panel; rugged steel case. 115 v., 60 cycle AC. 8½"x17"x13". Ship. wt. 29 lbs.

Model 425-K, KIT, only.............. **$44.95**
Model 425, factory wired...... **$79.95**

EICO New 7" Push-Pull Oscilloscope

America's greatest scoop in big-scope value—way up in versatility, way down in price. • Boosted vertical sensitivity, 10 mv rms/inch. • Extended flat frequency response, 10 cps to 1 MC (±2 db). • 3-step frequency-compensated attenuator. • Cathode follower input. • Internal voltage calibrator. • Directly calibrated screen. • Extended sweep range, 15 cps to 100 kc. • Internal positive or negative, external and line sync. • On front panel: sawtooth, 60 cps outputs; intensity modulation and external sync inputs. • Variable phasing of internal 60 cps sweep. • Direct connection to CRT plates available. • Size: 10x15x15". Ship wt. 33 lbs.

Model 470-K, KIT, only................ **$79.95**
Model 470, factory wired.... **$129.50**

EICO New Vacuum Tube Voltmeter

Laboratory-precision VTVM for trigger-fast operation and lifetime service. • 15 different ranges. • Large 4½" meter, can't-burn-out circuit. • New zero center for TV & FM discriminator alignment. • Electronic AC & DC ranges: 0-5, 10, 100, 500, 1000 v. (30,000 volts & 200 MC with HVP-1 & P-75 probes). • Ohmmeter ranges, .2 ohms to 1000 megs. • DB scale. • New stable double-triode balanced bridge circuit—extreme accuracy. • 26 megs DC input impedance. • 3-color etched rub-proof panel; rugged steel case. 115 v., 60 cycle AC. 9⁷⁄₁₆"x6"x5". Ship. wt. 10 lbs.

Model 221-K, KIT, only............. **$25.95**
Model 221, factory wired...... **$49.95**

EICO Radio Frequency Probe

Sensitive Germanium crystal probe for signal tracing and measurements to over 200 mc. Extends range of VTVMs and scopes.

P-75K, KIT, for VTVM; P-76K for Scope; ea.................. **$3.75**
P-75 or P-76, factory wired, ea.. **$5.95**

EICO High Voltage Probe

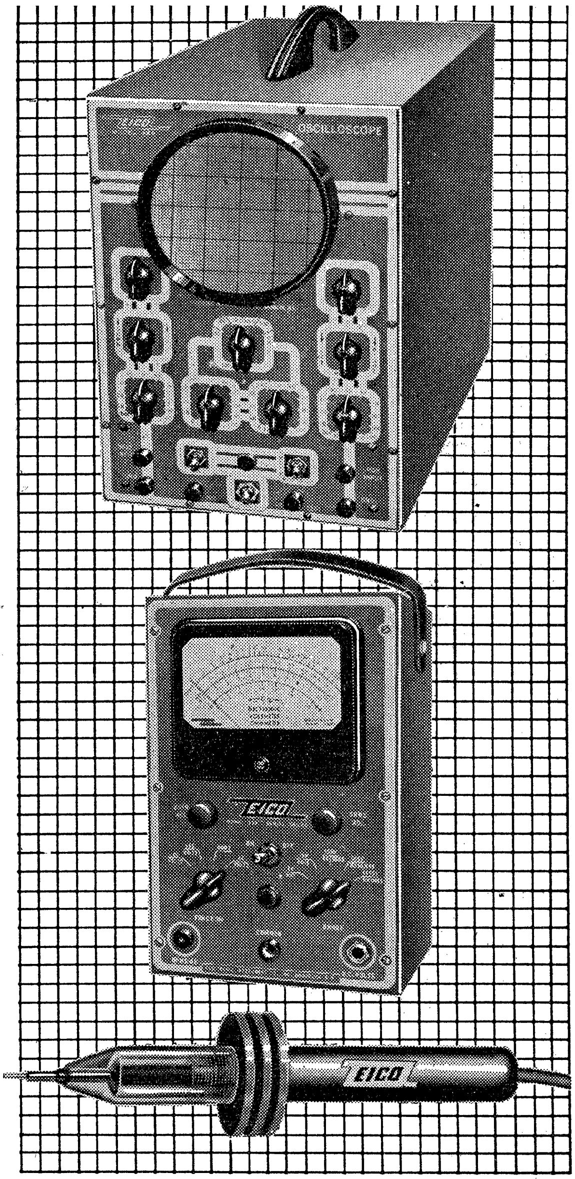
New professional EICO-engineered HV probe carefully designed and insulated for extra safety and versatility. Extends range of VTVMs and voltmeters up to 30,000 v. Lucite head. Large flashguards. Multilayer processed handle. Complete with interchangeable ceramic Multiplier to match your instrument.

Model HVP-1 (wired).. **$6.95**

Prices 5% higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT CO., Inc., Brooklyn 11, N. Y.

23 KITS and 25 WIRED INSTRUMENTS TO CHOOSE FROM!



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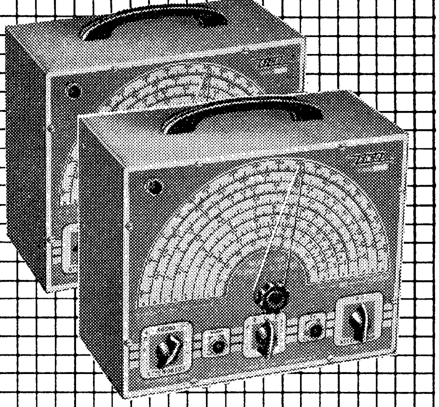
Laboratory Precision at Lowest Cost–

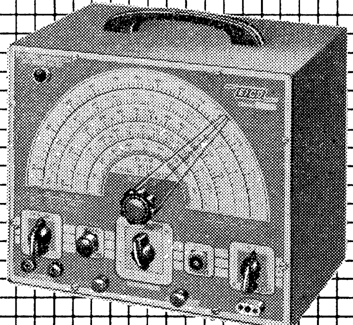
INSTRUMENTS and KITS

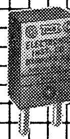
TRIPLE-PROVED FOR AM, FM, TV

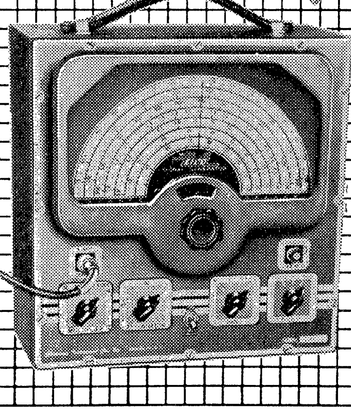
The Industry's most complete line of MATCHED TEST INSTRUMENTS!

You Build *EICO* KITS in one evening... but they last a lifetime! AND YOU SAVE 50%









5 NEW GENERATORS TO CHOOSE FROM!

2 *EICO* New RF-AF Signal Generators

Model 320: For FM-AM precision alignment and TV marker frequencies. Vernier Tuning Condenser. Highly stable RF oscillator, range: 150 KC - 102 MC with fundamentals to 34 MC. Separate audio oscillator supplies 400-cycle pure sine wave voltage. Pure RF, modulated RF or pure AF for external testing. 3-color etched panel; rugged steel case. Ship. wt. 10 lbs.

Model 320-K, KIT, only	**$19.95**	Model 320, factory wired	**$29.95**

Model 322: In addition to all the outstanding laboratory-precision qualities of the famous EICO Model 320, the brand new Model 322 features **the individual calibration of each of its 5 bands.**

Model 322-K, KIT, only	**$23.95**	Model 322, factory wired	**$34.95**

EICO New TV-FM Sweep Generator

Covers all TV-FM alignment frequencies, 500 KC - 228 MC. Vernier-driven dial: center of each of 13 TV channels marked on front panel. Sweepwidth variable 0-30 MC with mechanical inductive sweep — permits gain comparison of adjacent RF TV channels. Crystal marker oscillator, variable amplitude. Provides for injection of external marker. Phasing control. Complete with HF tubes. Less Crystal. 10"x 8"x 6¾". 5 MC Crystal, each. $3.95. Ship. wt. 12 lbs.

Model 360-K, KIT, only	**$34.95**	Model 360, factory wired	**$49.95**

EICO 5 MC and 4.5 MC Crystals

EICO-designed for all generators and oscillators, these highest quality crystals accommodate all standard sockets and circuits. Give excellent performance with EICO Model 360 Sweep Generator.

Model C-5: 5 MC only	**$3.95**	Model C-4.5: 4.5 MC only	**$3.95**

EICO New Deluxe RF-AF Signal Generator

Laboratory-precision generator EICO Service-Engineered with 1% accuracy. Extremely stable, frequency 75 kc - 150 mc in 7 calibrated ranges. Illuminated hairline *vernier tuning*. VR stabilized line supply. 400-cycle pure sine wave with less than 5% distortion. Tube complement: 6X5, 7F7, 6C4, VR-150. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 12"x 13"x 7". Ship. wt. 21 lbs.

Model 315-K, KIT, only	**$39.95**	Model 315, factory wired	**$59.95**

SEE NEXT PAGE for *EICO* New Sine & Square Wave AUDIO GENERATOR

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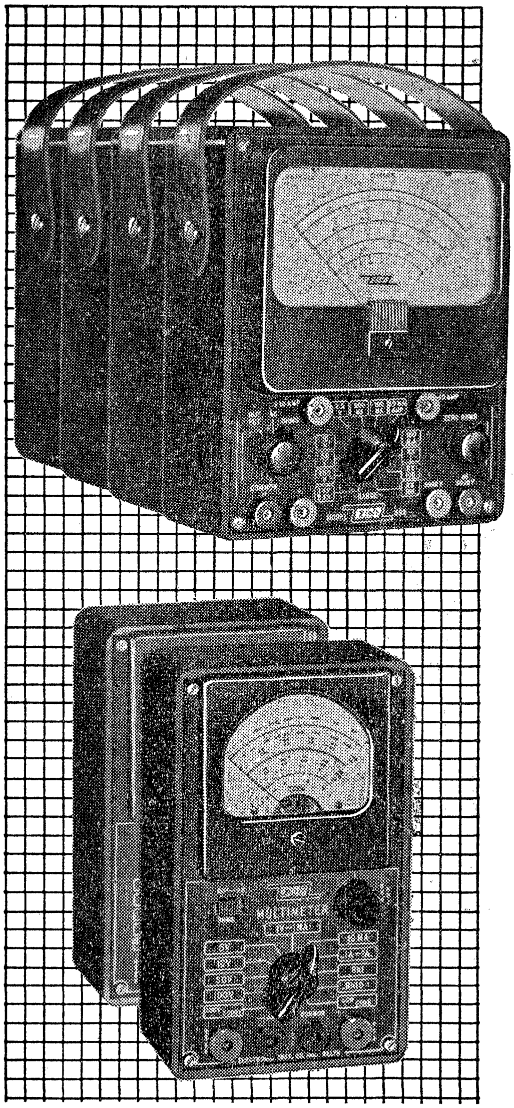
Laboratory Precision at Lowest Cost

TRIPLE-PROVED FOR AM, FM, TV
The Industry's most complete line of
MATCHED TEST INSTRUMENTS!

You Build EICO KITS in one evening... but they last a lifetime! AND YOU SAVE 50%



6 New EICO Volt-Ohm-Milliammeters to choose from — *the Industry's Greatest V-O-M Values!*

EICO New Model 565 20,000 Ohms/Volt Multimeter KIT $24.95. Wired $29.95.

- **31 full scale ranges!**
- **DC/AC/Output Volts:** 0-2.5, 10, 50, 250, 1000, 5000.
- **DC Current:** 0-100 ua; 10, 100, 500 ma; 10 Amp.
- **Ohms:** 0-2000, 200K, 20 meg.
- **5 DB Ranges:** —12 to +55.
- **Large 4½" 50 ua meter movement.**
- **High-impact** Bakelite case. 6¾ x 5¼ x 3".

EICO New Model 555 20,000 Ohms/Volt Multimeter KIT $29.95. Wired $34.95.

As above, with 1% precision resistors.

EICO New Model 566 1000 Ohms/Volt Multimeter KIT $14.90. Wired $18.95.

Ranges: same as Model 536 (see below), plus 7 output voltages. Large 4½" 400 ua meter movement.

EICO New Model 556 1000 Ohms/Volt Multimeter KIT $16.90. Wired $23.50.

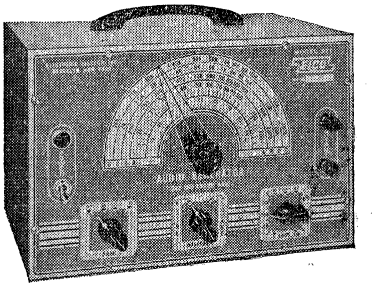
Same as Model 566, with 1% precision resistors.

EICO New Model 536 1000 Ohms/Volt Multimeter KIT $12.90. Wired $14.90.

- **31 1000 ohms/volt full-scale ranges!**
- **DC/AC Volts:** Zero to 1, 5, 10, 50, 100, 500, 5000.
- **DC/AC Current:** 0-1, 10 ma; 0.1, 1 Amp.
- **Ohms:** 0-500, 100K, 1 meg.
- **6 DB Ranges:** —20 to +69.
- **Large 3" 400 ua meter movement.**
- **High-impact** Bakelite case. 6¼ x 3¾ x 2".

EICO New Model 526 1000 Ohms/Volt Multimeter KIT $13.90. Wired $16.90.

As above, with 1% precision resistors.



EICO New Sine & Square Wave Audio Generator

- Complete sine wave coverage: 20-200,000 cps. - Complete square wave coverage: 60-30,000 cps. - 4-gang tuning condenser. - All Frequency Selector resistors have 1% or better accuracy. - Large easy-reading dial calibration; 0-100 linear reference scale. - Response ±1.5 db from 60 cps to 150 kc. - Improved Wien bridge-type oscillator. - Improved cathode follower output circuit. - Output Voltage: 10 v. at 1000 ohms load, 14 v. at 10,000 ohms and higher, 8 v. at 500 ohms on sine wave; square wave output higher. - High power output: 100 mw into rated load. - Rated load impedance: 1000 ohms resistive. - Continuous output attenuation from 0 to 10 v. - Distortion 1% of rated output. - Hum less than 0.4% of rated output. - Tubes: 6X5, 6SJ7, 2-6K6, 6SN7, 6S6 (GE 6-watt lamp). - 3-color etched rubproof panel; rugged steel case. 115 V., 50/60 cycles, 50 W. 11⅛"x7⅛"x7⅝". 14 lbs.

Model 377-K, KIT, only........................ **$31.95**   Model 377, factory-wired.............. **$49.95**

Prices slightly higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT CO., Inc., Brooklyn 11, N. Y.

Dollar for dollar, feature for feature, EICO Instruments and Kits lead the industry!

EICO® INSTRUMENTS and KITS

Laboratory Precision at Lowest Cost—

TRIPLE-PROVED FOR AM, FM, TV

The Industry's most complete line of MATCHED TEST INSTRUMENTS!

You Build *EICO* KITS in one evening... but they last a lifetime! AND YOU SAVE 50%

*EI*CO New Tube Tester

Brand new professional tube tester and merchandiser EICO Service-Engineered for unbeatable value! Large 4½" full-vision meter. Tests *conventional and TV tubes* including 9-pin miniatures. New lever-action switches — tests every tube element: Illuminated "Speed Roll-Chart". 2 grid caps. Short and open-element tests. Spare socket for new tubes. Protective overload bulb. Electronic rectifier. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 12½"x 9½"x 4¼". Ship. wt. 12 lbs.

Model 625-K, KIT, only.......... **$34.95** Model 625, factory wired.......... **$49.95**

*EI*CO New Picture Tube Test Adapter

(for EICO Models 625 & 625-K Tube Testers)

With the new Model CRA and your EICO Tube Tester, you check all sizes TV Picture Tubes as fast and easily as any ordinary tube. Model CRA gives a quantitative measurement of cathode emission, and tests for filament continuity and shorts between elements. Comes complete with standard 12-pin TV tube socket, octal plug-in connector, and extra long 4-foot cable that enables Pix Tube to remain in set *while testing.*

Model CRA, only **$4.50**

*EI*CO New Resistance-Capacitance Bridge & R-C-L Comparator

This brand new professional resistance-capacitance bridge is especially EICO Service-Engineered for extremely wide usefulness. Measures and tests all resistors from 0.5 ohms to 500 megohms. Measures and tests every type condenser, 10 mmfd to 5000 mfd. Special built-in **Precision Comparator Range** gives instant, easy comparison measurement of resistance, capacitance and inductance with a complementary component as a standard: exceptional wide range of 400:1. Built-in continuously variable 0-500 DC voltage source for capacitor leakage testing. Separate leakage tests for paper and mica condensers (large magic eye indicator) and for electrolytic condensers (neon bulb circuit). Allows determination of capacitor power factor by means of calibrated potentiometer and magic eye. Latest bridge-type circuit. 110 v. 60 cycle transformer and rectifier. All ranges calibrated on front panel. 3-color etched rub-proof panel; rugged steel case. 10" x 8" x 4¾".

Model 950-K, KIT, only.......... **$19.95** Model 950, factory wired.......... **$29.95**

*EI*CO New Battery Eliminator, Charger & Booster

For *all* auto radio testing. Latest-type full-wave *Bridge* circuit. 4-stack manganese copper-sulfide rectifiers. Specially designed transformer, continuously variable from 0 to 13 volts. Continuous operation: 5-8 v., 10 amps. Intermittent: 20 amps. 10,000 mfd filter condenser. Meter measures *current and voltage output.* Fused primary and an automatic reset overload device for secondary. Rugged hammertone steel case. 115 v., 60 cycle AC. 10½"x 7¾"x 8¾". Ship. wt. 15 lbs.

Model 1040-K, KIT, only.......... **$25.95** Model 1040, factory wired.......... **$34.95**

*EI*CO Multi-Signal Tracer

Highest gain and flexibility in low-cost field! Audibly traces all IF, RF, Video & Audio from ANT to SPKR or CRT without switching. Response well over 200 mc. Integral test speaker. Provision for visual tracing with VTVM. Complete with 6SJ7, 6K6, 6X5. Germanium crystal diode probe. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 10"x 8"x 4¾". Ship. wt. 9 lbs.

Model 145-K, KIT, only.......... **$19.95** Model 145, factory wired.......... **$28.95**

the exclusive EICO Make-Good GUARANTEE

(included with every *EI*CO product)

Each EICO Kit and Instrument is *doubly guaranteed,* by EICO and your jobber, to contain only selected quality components EICO guarantees to replace any component which might become defective in normal use if returned to the factory transportation charges pre-paid within 90 days of purchase EICO guarantees all Kits assembled according to EICO's simplified instructions will operate as specified therein EICO guarantees service and calibration of every EICO Kit and Instrument at the nominal charge as stated in the instructions

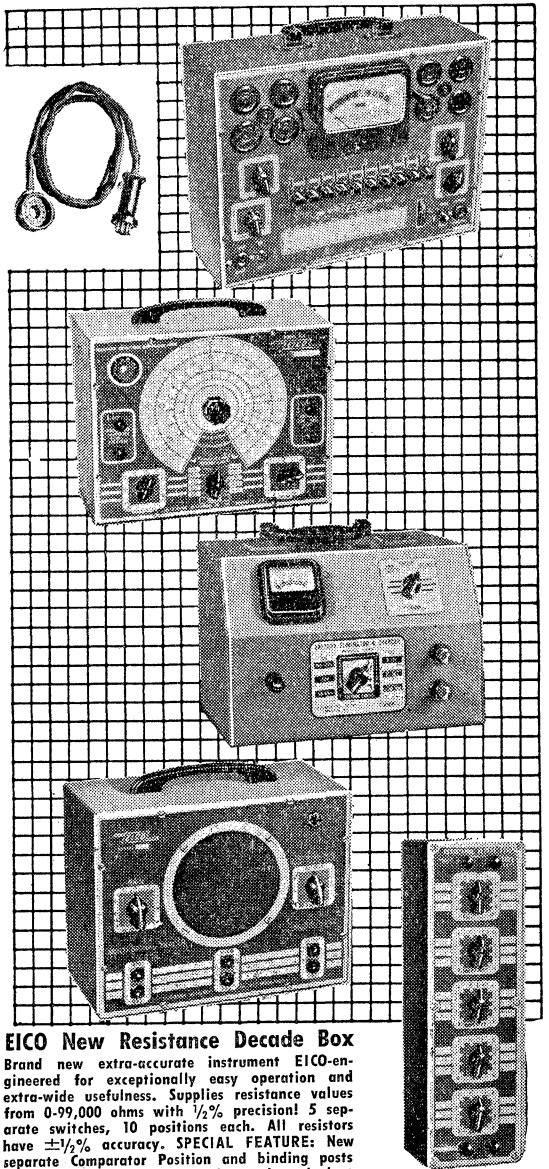
The EICO Guarantee

Only EICO gives you the Make-Good Guarantee — the strongest, most substantial guarantee in the industry! When you buy EICO, you enjoy the greatest protection available for your test equipment investment!

SEE THESE FAMOUS *EI*CO INSTRUMENTS & KITS AT YOUR LOCAL JOBBER TODAY—AND *SAVE!*

Prices 5% higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

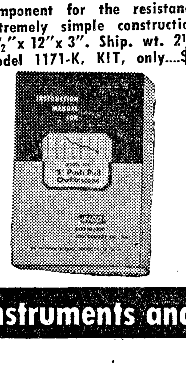
ELECTRONIC INSTRUMENT CO., Inc., Brooklyn 11, N. Y.



EICO New Resistance Decade Box

Brand new extra-accurate instrument EICO-engineered for exceptionally easy operation and extra-wide usefulness. Supplies resistance values from 0-99,000 ohms with ½% precision! 5 separate switches, 10 positions each. All resistors have ±½% accuracy. SPECIAL FEATURE: New separate Comparator Position and binding posts permits instant substitution of actual equivalent component for the resistance value indicated on decade box. Rugged, extremely simple construction. 3-color etched panel; sturdy steel case. 3½"x 12"x 3". Ship. wt. 2½ lbs.

Model 1171-K, KIT, only....$19.95 Model 1171, factory wired $24.95



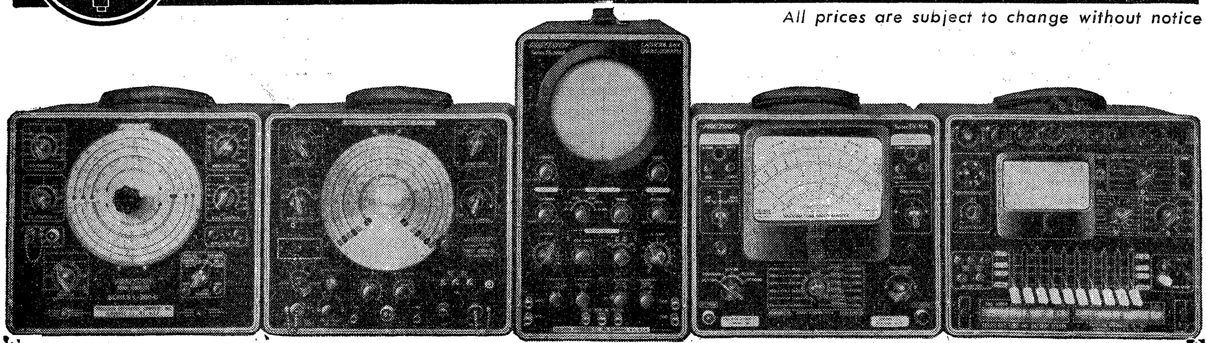
2 Instruction Manuals

Each EICO Kit contains both a Construction Book and an Operating Book . . . step-by-step assembly instructions with easy-to-follow schematic and pictorial diagrams; and easy application data. All small parts are packed in individually marked envelopes clearly identified on the blueprints. *Anyone* can build the EICO Kits!

Dollar for dollar, feature for feature, *EI*CO Instruments and Kits lead the industry!

PRECISION TEST EQUIPMENT Standard of Accuracy
-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

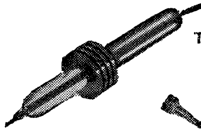


SERIES E-200-C	SERIES E-400	SERIES ES-500A	SERIES EV-10A	SERIES 612
Modern Multi-band **SIGNAL and MARKER GENERATOR** (see page G-88)	Wide Range H.F. **SWEEP SIGNAL GENERATOR** (see page G-87)	5 in. Hi-Sensitivity Wide Range **OSCILLOSCOPE** (see page G-87)	True Zero-Center **VTVM-MEGOHMMETER** with 7 in. Meter (see page G-88)	Modern Free-point **TUBE and BATTERY TESTER** (see page G-92)

THESE FIVE MATCHED "PRECISION" INSTRUMENTS PROVIDE A COMPLETE MODERN BASIC LABORATORY FOR TV-FM-AM AT ONLY MODERATE COST

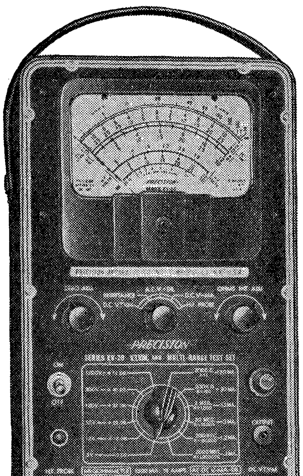
OTHER MATCHED COMBINATIONS

The instruments shown above, and other "Precision" equipments, are available in various enclosure styles...Panel Mounts, Portable, Counter Types, etc. . . . designed to suit individual applications, field or shop. The illustration shows only one of the many possible "matched combinations" of diversified "Precision" Test Equipment. Each combination provides a selected and Basic, modern, efficient Laboratory at moderate cost.



SERIES TV
THE SUPER HIGH VOLTAGE SAFETY TEST PROBE
for High D.C. Potential Measurements up to 60,000 volts
(see page G-91)

SERIES EV-20 VTVM and Multi-Range Test Set
TRUE ZERO — CENTER ON ALL VTVM RANGES
WITH DIRECT PEAK READING HIGH FREQUENCY SCALES
Plus Complete Standard 1000 Ohms/Volt Functions
48 Ranges to 1200 Volts*, 2000 Megohms, 12 Amperes, +63 DB



★ **SERIES EV-20 VTVM and MULTI-RANGE TEST SET**

Complete with coaxial Circuit Isolating Test Probe, Shielded Ohmmeter Test Cable, Standard #227 Super-Flex Test Leads, Ohmmeter battery and full operating instructions.

In modern, black ripple finished cabinet. Size—10½"x6¼"x5".
CODE: Party Net Price — $69.75

Series EV-20 is a compact, high sensitivity, laboratory-type, circuit-testing instrument, incorporating the most modern electrical and physical design. It provides unparalleled performance, accuracy and versatility required for AM-FM-TV and general electronic circuit analysis.

Functionally similar to the deluxe Series EV-10A VTVM, with extra large 7" meter, (described on Page G-88) the Series EV-20 (with 4½-inch meter) affords a highly efficient instrument at moderate cost.

RANGE SPECIFICATIONS

- ★ **SIX ALL-ZERO CENTER VTVM RANGES:** 13⅓ Megs. Constant Input Resistance. ±3, ±12, ±30, ±120, ±300, ±1200 volts. ***Direct Reading to ±60 KV** when used with Series TV-4 High Voltage Test Probe described on page G-91.
- ★ **SIX SELF-CONTAINED RESISTANCE RANGES:** 0-2000 - 200,000 **ohms.** 0-2-20-200-2000 **Megohms.**
- ★ **FOUR DIRECT PEAK READING HIGH FREQ. VTVM RANGES:** 0-3-12-30-120 volts. (Requires RF-10A High Freq. Vacuum Tube Probe, Net Price $14.40. No crystal rectifiers employed.)
- ★ **SIX AC-DC AND OUTPUT VOLTAGE RANGES** at 1000 ohms per volt. 0-3-12-30-120-300-1200 volts.
- ★ **EIGHT D.C. CURRENT RANGES:** 0-300 microamps. 0-1.2-3-12-30-120-1200 MA. 0-12 Amperes.
- ★ **SIX DECIBEL RANGES** from –20 to +63DB. Calibrated for 600 ohm, 1 mw., zero DB.
- ★ **ROTARY RANGE — FUNCTION SELECTORS** eliminate frequent and inefficient shifting of test leads.

IMPORTANT FEATURES

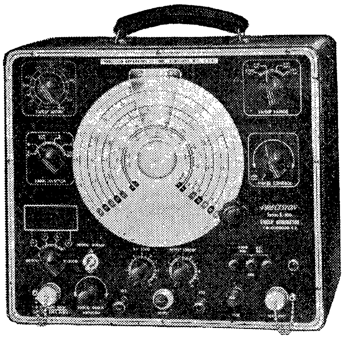
- ★ **VOLTAGE REGULATED — BRIDGE CIRCUIT**
- ★ **DIRECT READING, ALL ZERO-CENTER VTVM** Indicates **both** Polarity and Magnitude without switching or test lead reversal.
- ★ **SHIELDED CONNECTORS** for D.C.—VTVM **and** RF—VTVM. Permits simultaneous and non-interfering connection of both the Circuit Isolating Test Probe and optional H.F. Vacuum Tube Probe Series RF—10A.
- ★ **DUAL - BALANCED ELECTRONIC BRIDGE OHMMETER—MEGOHMMETER** uses two 1.5 volt cells easily replaced at rear of cabinet.
- ★ **ADDITIONAL 1000 OHMS/VOLT FUNCTIONS** permit routine AC-DC voltage, DB and current measurements free of power line.
- ★ **4⅝" RECTANGULAR METER** — 200 microamperes, ±2%. D'Arsonval construction.
- ★ 1% Film type, Metallized and Wire-Wound resistors for all shunts and multipliers.
- ★ Heavy gauge; round-cornered, louvred steel case with plastic handle. Etched, anodized, aluminum panel.

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

PRECISION TEST EQUIPMENT Standard of Accuracy -PRECISION- TEST EQUIPMENT STANDARD OF ACCURACY

All prices are subject to change without notice

Series E-400
Wide Range Sweep Signal Generator
Narrow and Wide Band Sweep
Direct Reading from 2 to 480 Megacycles
DIRECTLY COVERS UHF AND VHF I.F. ALIGNMENT REQUIREMENTS



Incorporating selected and true high frequency components and circuits, Series E-400 has been Application Engineered specifically for modern F.M. and TV oscillographic alignment methods.

Stressing utmost simplicity of operation, flexibility and stability, Series E-400 affords an unparalleled standard of performance and value for the efficient TV-FM Service Lab.

FEATURES

★ **Direct Frequency Reading** — 2 to 480 MC in 7 bands without skip. Harmonically calibrated from 240 to 480 MC. Directly covers frequency requirements for I.F. alignment of both UHF and VHF TV receivers.

★ **6 Position Rotary Band Switch** covers complete spectrum. No coil switching. Multiple oscillator B supply switch assures maximum frequency accuracy and stability.

★ **6½" Etched Aluminum Tuning Dial** — Engine turned finish.

★ **1500 Point Vernier Scale** for close calibration and resetting.

★ **Engraved Transparent Lucite Frequency Indicator** affords readings free from parallax.

★ **Voltage Regulated Oscillators** free of power supply variations.

★ **The Basic Circuit and Tube Complement** — Uses 2 separate 6C4 high frequency beat oscillators plus a 6J6 reactance-modulated high frequency oscillator. This positively minimizes generation of unwanted extraneous signals. Also employs a 6J6 mixer-buffer, a 6C4 multiple crystal oscillator and a 6J6 final marker-mixer amplifier. 6X5 full wave rectifier. VR-105 voltage regulator.

★ **Selected, True High Frequency Circuit Components.** Uses ceramic and air dielectric trimmers, coupling, by-pass and loading capacitors; rugged ceramic suspended, National Straight Line Frequency tuning condenser; modern miniature HF tubes; mica-filled low-loss sockets; shock mounted, compensated reactance modulator; multi-section copper-plate shielding; etc.

★ **Narrow and Wide Band Sweep — 0 to 1 MC and 0 to 15 MC.**

★ **Dual Continuous R.F. Attenuators** triple shielded. Smooth, stepless, effective control from **extra high output for single stage alignment** to minimum levels for multi-stage adjustments.

★ **Wide Range Phasing Control** for Hor. sweep or oscilloscope.

★ **Multiple Crystal Marker-Calibrator** built-in. Accommodates 4 rotary selected crystals. .01% accuracy 4.5 MC and 2 MC crystals **furnished as standard equipment.** Crystal signal separately attenuated for internal or external use.

★ **Crystal Calibrated and Control** — Each instrument calibrated against crystal standards. The 2 MC crystal permits crystal monitoring and calibration of external signal generators.

★ **Terminated RG/U Type Coaxial Output Cable** for efficient signal transmission with minimum standing wave effects.

★ **8 Element Double Section Balanced Line Filter** plus **Thorough Multi-Section Copper Plate Shielding** of instrument assures minimum leakage and radiation.

★ **Simultaneous A.M. and F.M.** test facilities for anti-A.M. check of F.M. second detector circuits. A.M. input jacks also permit use as a modulated H.F. A.M. Generator.

★ **External Deviation** input facility for sweep repetition frequencies other than internal 60 cycle source.

★ **Fuse Protected** at panel extracor fuse post.

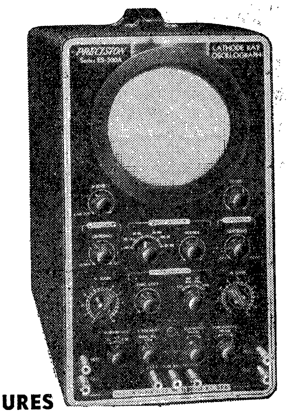
★ **Heavy Gauge, Etched-Anodized Aluminum Panel.**

★ **Fully Licensed** under W. E., A. T. & T. and Pierce patents.

★ **Series E-400** (illustrated)—In louvered portable copper-plated case. Size 10½" x 12" x 6". Complete with test cables, 2 crystals and elaborate Technical Manual.
Code: Nancy. **Net Price — $139.75**

★ **E-400-PM** — Consists of E-400 on 12¼" x 19" steel panel for standard rack mount. Complete as above.
Code: Niece. **Net Price — $145.25**

Series ES-500A
High Sensitivity, Wide Range, 5" Oscilloscope
Push-Pull Vertical and Horizontal Amplifiers
20 MV. per inch "V" Sensitivity
SELF-CONTAINED 1 VOLT PEAK TO PEAK CALIBRATOR



Series ES-500A affords the ultimate in performance, visibility and operational flexibility at moderate cost.

"Precision" engineers have incorporated every necessary feature which they found to be required to meet the needs of the rapidly advancing art of electronics.

Series ES-500A provides an unparalleled combination of high sensitivity, extended frequency range and other essential features specifically desired for experimental and commercial visual circuit analysis.

FEATURES

★ **High Sensitivity, Wide Range, Voltage Regulated, Push-Pull Vertical Amplifier**—.02V. per inch deflection sensitivity. 10 cycles to 1 MC response. 2 megohms input resistance. Approx. 22 mmf. input capacity.

★ **Compensated Vertical Input Step Attenuator**—X1, X10, X100.

★ **Direct Peak to Peak Voltage Checks** thru use of internal, semi-square wave, regulated calibrator.

★ **Vertical Phase-Reversing Switch** permits inversion of all patterns at will. Non-frequency discriminating.

★ **Extended Range, Push-Pull Horizontal Amplifier**—150 MV (.15 V) per inch high deflection sensitivity adequate for most all "H" drive purposes. 10 cycles to 1 MC response at full gain. ½ megohm, approx. 20 mmfd. input.

★ **Linear Multi-Vibrator Sweep Circuit**—
10 cycles to 30 KC plus internal line or external sweep.

★ **Amplitude Controlled, Four Way Synch. Selection**—
Internal Positive, Internal Negative, External and Line.

★ **"Z" Axis Modulation** input facility for blanking, timing, etc.

★ **Internal, Phasable 60 cycle Beam Blanking** for elimination of alignment retrace; clean display of synch. pulses, etc.

★ **Sweep Phasing Control** for sinusoidal line sweep usage. Wide angle bridge circuit.

★ **Direct H and V Deflection Plate Connections** and Audio Monitoring phone jacks at rear. All four plates accessible.

★ **High Intensity CR Patterns** through use of adequate high voltage power supply with separate 2X2 rectifier.

★ **The Circuit and Tube Complement**—6C4 Vertical input cathode follower. 6CB6 first "V" amplifier. 6C4 "V" phase inverter. Push-Pull 6J6's vertical CR driver. 7N7 first "H" amplifier and phase inverter. Push-Pull 6AU6's horizontal CR driver. 7N7 Multi-vibrator internal linear sweep oscillator. 5Y3 low voltage rectifier. 2X2 high potential rectifier. VR-150 voltage regulator. 5CP1/A CR Tube.

★ **7 Four-Way Lab.-Type Input Terminals**—Take banana plugs, phone tips, bare wire or spade lugs.

★ **Light Shield and Mask** removable and rotatable.

★ **Extra Heavy-Duty Construction** and components to assure **"Precision"**-engineered performance.

★ **Fully Licensed** under Western Electric Co. patents.

★ **Series ES-500A**—In louvered, black-ripple, heavy gauge steel case. Size 8¼" x 14½" x 18". Complete with light shield, calibrating mask and comprehensive instruction manual. **Code: Quick. Net Price — $173.70**

Series SP-5 – Oscilloscope Test Probe Set
FOR TV SIGNAL TRACING, ALIGNMENT, TROUBLE SHOOTING AND WAVEFORM ANALYSIS

★ Specifically engineered for use with ***PRECISION*** Cathode Ray Oscillographs, Series ES-500 and ES-500A.

★ Set consists of shielded Master Cable and four different, detachable probe heads in custom-made vinyl carrying case.

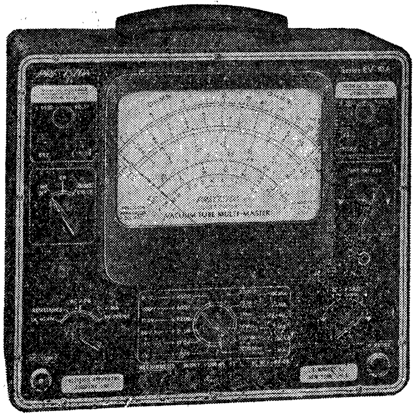
1. **HIGH IMPEDANCE—LOW CAPACITY PROBE**
2. **CRYSTAL—DEMODULATOR PROBE**
3. **RESISTIVE—ISOLATING PROBE**
4. **SHIELDED—DIRECT PROBE** **Net Price — $23.50**

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

PRECISION SERIES EV-10A VTVM—Megohmmeter

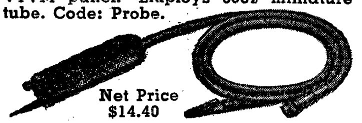
TRUE ZERO-CENTER VTVM WITH 7" FULL-VIEW METER
FOUR DIRECT PEAK READING HIGH FREQUENCY SCALES
Plus standard 1000 Ohms per Volt Functions.
Ranges to 6000 Volts, 2000 Megohms, 12 Amperes, +77 DB.



- **EV-10A (MCP)** (illustrated) In black ripple finished, heavy gauge steel case. Size 10½" x 12" x 6". Complete with tubes, battery, and test probes. **Code: Place. Net Price — $99.75**
- **EV-10A (P)** In hardwood portable case with tool compartment. Size 12" x 13" x 6" **Code: Phone Net Price — $102.50**
- **EV-10A (PM)** Consists of Series EV-10A on steel panel. Size 12¼" x 19", for standard rack mount. **Code: Panel. Net Price — $105.25**

★ SERIES RF-10A VACUUM TUBE R.F. PROBE

Accessory for Series EV-10A & EV-20; affords direct high frequency peak voltage measurements. Connects directly to VTVM panel. Employs 9002 miniature tube. Code: Probe.



Net Price
$14.40

All prices are subject to change without notice

A WIDE-RANGE, TRUE ZERO-CENTER ELECTRONIC INSTRUMENT, stressing the utmost in performance, accuracy, and ease of manipulation. The Series EV-10A permits rapid check of voltage, current, and resistance conditions encountered in modern A.M., F.M., and TV Networks, without materially disturbing the performance of circuits under analysis.

RANGE SPECIFICATIONS

★ **Eight All Zezo-Center VTVM Ranges.** ±3, ±12, ±60, ±120, ±300, ±600, ±1200, ±6000 volts D.C. self-contained.

★ **High Input Resistance —** 13⅓ megs. constant to 600 volts. 26⅔ megohms at 1200 volts. 133⅓ megohms at 6000 volts.

★ **4 Direct Reading High Freq. Ranges:** 0-3-12-60-120 peak volts. (Requires Series RF-10A High Frequency Vacuum Tube Test Probe described and illustrated at left.)

★ **Extra-High Voltage Ranges to ±60 KV.** when employed with Series TV-4 High Voltage Probe described on page G-91.

★ **Six Ohmmeter-Megohmmeter Ranges:** 0-2000-200,000 ohms. 0-2-20-200-2000 megohms.

★ **Eight Extra A.C.-D.C.-Output Voltage ranges** at 1000 ohms per volt. 0-3-12-60-120-300-600-1200-6000 V.

★ **Eight D.C. Current Ranges:** 0-300 microamperes. 0-1.2-6-30-120-600-1200 MA. 0-12 amps.

★ **Eight DB Ranges** from −20 to +77DB Calibrated for 1MW, 600 ohms zero DB

IMPORTANT FEATURES

★ **Voltage Regulated-Bridge Type Circuit:** affords practical freedom from tube and line voltage variations.

★ **True Zero-Center VTVM**—Indicates **both** magnitude and polarity **without** reversal of test prods **on all ranges.**

★ **Rotary Range and Function Selectors** minimize shifting of test leads.

★ **Recessed 6000 volt Safety Jacks.**

★ **Shielded Coax Test-Cable Connectors** permit both D.C. and R.F. probes to be connected simultaneously.

★ **Duo-Balanced Electronic-Bridge Ohmmeter—Megohmmeter.** Uses 2 self-contained, standard 1.5 volt batteries.

★ **Special 1000 Ohms/Volt Functions** permit routine AC-DC circuit tests free or need for power line connection.

★ **Extra-large 7" Rectangular Meter.** 200 microampere, ±2% sensitivity.

★ **Highest Quality Components** employed throughout • 1% wire, film and matched resistors • Silverplated switch contacts • Leakage-resistant, plastic insulated hook-up wire • Etched-anodized aluminum panel • Heavy duty line cord.

Precision Series E-200-C Signal Generator

A Modern Multi-Band Signal and Marker Generator for A.M., F.M., and Television Alignment.

Featuring "Servicing by Signal Substitution." The Dynamic Speed Approach to Receiver Alignment and Adjustment Problems.

SPECIFICATIONS

★ FREQUENCY COVERAGE: 88 KC. to 120 MC., 30 MC. on fundamental. 6½" Dial direct reading in 8 bands to 120 MC. No charts required.

★ ACCURACY—CONSTANCY OF CALIBRATION: 1% accuracy on all bands. Uses "PRECISION" developed "UNIT-OSCILLATOR" turret construction.

★ 0-1000 POINT VERNIER SCALE, direct reading to one part in 1000.

★ THE CIRCUIT—single-ended 6S17 in stable E.C.O. circuit—modulated by a 6C5 sine-wave audio oscillator. 5Y3 Full wave rectifier.

★ 400 CYCLE SINE-WAVE AUDIO OSCILLATOR —o ver 50 volts output.

★ DUAL R.F. ATTENUATORS — smooth stepless control of R.F. signal.

★ SHIELDING — Compartment shielding of vital components — Power transformer electrostatically shielded—A.C. line is R.F. filtered.

★ SHIELDED COAXIAL OUTPUT CABLE and (LO-HI) cable connectors.

★ FOUR TYPES OF SIGNALS — "Unmod. R.F.", "400 cycle Mod. R.F.", "EXTERNALLY Mod. R.F.", "400 cycle Audio Output."

★ DIRECT READING VARIABLE MODULATION—0-100%—triples signal utility as against obsolete fixed or stepped modulation of only 30 or 40%.

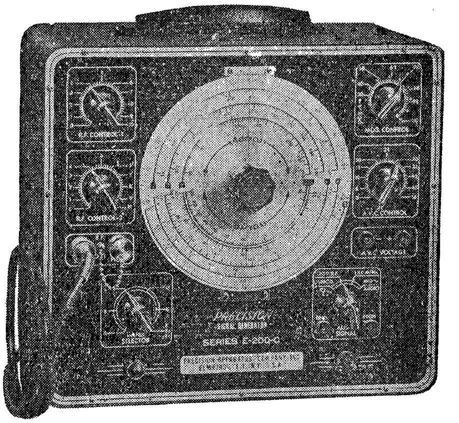
★ BUILT-IN A.V.C.-A.G.C. SUBSTITUTION — Overcomes alignment troubles arising from varying receiver A.V.C. and A.G.C. voltage.

★ HAND CALIBRATED — Each instrument is INDIVIDUALLY calibrated.

★ FULLY LICENSED under patents of A. T. & T. and W. E. Co's.

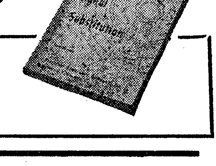
★ Not only an efficient Signal Generator for purposes of alignment but also specifically designed for "Servicing by Signal Substitution."

★ IDEAL MARKING GENERATOR — Exceptional stability and high accuracy renders Series E-200-C an excellent variable frequency Marker Generator for use with the Series E-400 or similar high quality Sweep Signal Generator.



★ **Series E-200-C** — (illustrated) In black ripple finished, portable steel case. Size 10½"x12"x6". Complete with tubes, output cable and FREE copy of "Servicing by Signal Substitution."
Code: Trade. Net Price — $78.50

★ **Series E-200-C-PM**—Consists of E-200-C on steel panel size 12¼"x19", for standard rack mount.
Code: Trace. Net Price $84.00



"SERVICING BY SIGNAL SUBSTITUTION" . . . . The modern ECONOMICAL solution to your **daily service problems . . . Nothing complex to learn, no extraneous equipment to purchase . . . A systematic method of DYNAMIC SIGNAL ANALYSIS based entirely on fundamentals . . . Fully described in a bound illustrated text "Servicing by Signal Substitution." This highly valuable book is supplied with Series E-200-C at no charge. Additional copies available at your Precision distributor or directly from factory at 40c per copy.**

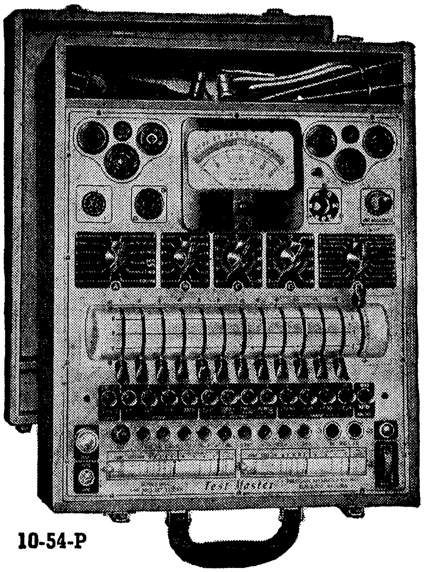
-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

ELECTRONAMIC (Reg. U. S. Patent Office)

Series 10-54 *Electronamic Test Master*

Combination Tube Performance Tester, Battery Tester, and
35 Range, Push-Button Operated, Supersensitive, A.C.-D.C. Set Tester.
Ranges to 6000 Volts, 60 Microamps, 12 amps, +70 DB, 60 Meg.
20,000 Ohms per Volt D.C.—1000 Ohms per Volt A.C.



10-54-P

CIRCUIT TESTING FEATURES

A complete, wide-range, high speed, push-button operated, super-sensitive test set

Completely Self-contained

- ★ **Six D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **Six A.C. Voltage Ranges:** 1000 ohms per volt.
- ★ **Six Output Ranges** at 1000 ohms per volt. 0-6-12-60-300-1200-6000 volts.
- ★ **Ranges to 30,000 Volts D.C.** when used with Series TV-2 super high voltage test probe. Not included with 10-54. See page G-91.
- ★ **Seven D.C. Current Ranges:** 0-60-120 microamperes. 0-1.2-12-120-1200 MA. and 0-12 amperes.
- ★ **Four Self-Contained Resistance Ranges:** 0-6000-600,000 ohms; 0-6-60 megohms.
- ★ **Six Decibel Ranges** from −20 to +70 DB.
- ★ **Automatic Push-Button** range selection.
- ★ 1% Wire, **Film and Metallized Resistors.**

The All-Inclusive, Positive Vacuum Tube Performance Test that is not limited to Mutual Conductance Alone.
(See technical details in main catalog)

Series 10-54 affords to the discriminating instrument purchaser, THE COMPLETE PORTABLE SERVICE LABORATORY; engineered to meet the expanding needs of modern radio electronics. Provides every necessary facility for high speed, reliable tube and circuit testing associated with Industrial Electronics, Communications, Radio (A.M.-F.M.), Television, Laboratory, etc. . . .

TUBE AND BATTERY TESTING FEATURES

- ★ A TUBE "PERFORMANCE" TESTER: "Precision" ELECTRONAMIC circuit, effectively tests all tubes over a complete "Path of Operation" not just at one arbitrary operating point or for just one inconclusive characteristic.
- ★ TESTS ALL MODERN TUBE TYPES: Noval 9 pin, 7 pin Acorn, dual capped H.F. tubes, Single-Ended TV. and F.M. amplifiers, low power transmitting tubes, sub-miniature types, etc. **. . . including direct facilities up to twelve element prongs!**
- ★ ABSOLUTE FREE-POINT LEVER ELEMENT SELECTION: Highest possible, practical order of obsolescence insurance. Locates every tube element regardless of base position.
- ★ ABSOLUTE FREE-POINT, INTER-ELEMENT SHORT-CHECK and Visible Filament Continuity System.
- ★ DUAL SHORT-CHECK SENSITIVITY: Permits selection of tubes for special applications.
- ★ INDIVIDUAL TUBE SECTION TESTS of multi-section tubes.
- ★ A.M. and F.M. CATHODE RAY TUNING INDICATORS directly tested.
- ★ FILAMENT VOLTAGES ¾ to 117 V.
- ★ BALLAST UNIT TESTS.
- ★ NOISE and CONDENSER TESTS.
- ★ MICRO-LINE ADJUSTMENT via continuously variable line voltage control.
- ★ PILOT AND SIGNAL LIGHT TESTS.
- ★ ACCURACY of test circuits closely maintained by use of individual, internal calibrating controls.
- ★ HIGH SPEED ROLLER TUBE-CHART.
- ★ EXTRACTOR FUSE POST.
- ★ Test circuits completely transformer-isolated from power line.
- ★ TELEPHONE-TYPE, CABLED, plastic-insulated, moisture-resistant wire.
- ★ 4⅝" FULL VISION METER: 50 microampere, 2% accuracy.
- ★ TESTS RADIO A, B and C DRY BATTERIES via a "PRECISION" engineered circuit which performance checks each battery under actual load conditions. **Battery quality read directly on a 3-color scale.**

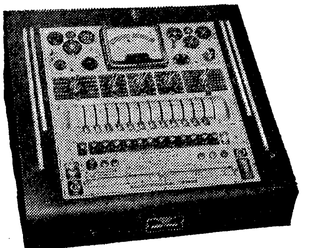
10-54-P (illustrated above) Hardwood, tapered, portable case, 13¾"x17¼"x6¾". With ohmmeter batteries and high voltage test leads. **Net Price**
Code: Habit. 139.50

10-54-C (see 10-12-C illustration and description below) In modern, attractively finished, steel counter cabinet. **Net Price**
Code: Handy. 144.25

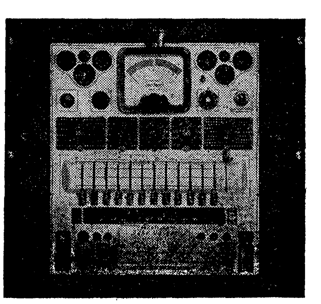
10-54-PM (see 10-12-PM illustration and description below) In standard Panel Mount, with dust cover. **Net Price**
Code: Harem. 144.25

Series 10-12 *Electronamic Tube Master*

Truly Free-Point Tube and Battery Performance Tester.



10-12-C



10-12-PM

The All-Inclusive, Positive Vacuum Tube Performance Test that is not limited to Mutual Conductance Alone.
(See technical details in main catalog)

The 10-00 Series of TUBE and TEST MASTERS represent the culmination of many years' development of tube testing equipment to meet the exacting needs of the rapidly advancing field of electronics.

Incorporating the "PRECISION" ELECTRONAMIC Tube Performance Testing Circuit, plus an advanced, "PRECISION" developed, multiple element, master lever selector system, it truly can be said that the MASTER 10-00 Series offers, to the discriminating equipment purchaser, the highest possible practical order of test results and anti-obsolescence insurance.

TUBE AND BATTERY TESTING FEATURES

The Series 10-12 Electronamic Tube Master incorporates the same time-proven circuit and exacting performance details described for the Series 10-54, above, under the heading: "Tube and Battery Testing Features."

★ **10-12-P** (see 10-54-P illustration and description above) In hardwood, tapered, portable case with tool compartment. **Code: Facil.**
Net Price — $107.50

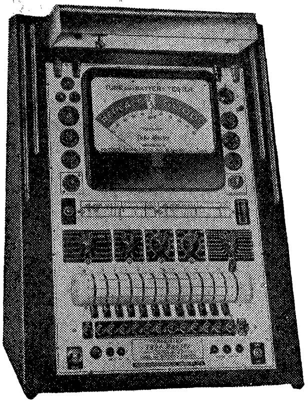
★ **10-12-C** (illustrated at right) In modern, chrome-trimmed, round edged counter cabinet. Fine dull black ripple finish on heavy gauge steel. Size 17"x17⅞"x7½" sloping to 3" at front. **Code: Faith.**
Net Price — $112.25

★ **10-12-PM** (illustrated at right) Consists of 10-12 chassis, mounted onto standard size steel panel, 17½"x19" with dust cover. Fine, dull black ripple finish. **Code: Favor.**
Net Price — $112.25

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

All prices are subject to change without notice

ELECTRONAMIC (Reg U. S. Patent Office)



Series 10-15 *Electronamic Test Master*

DeLuxe Tube and Battery Merchandiser with Large 9" Meter

The All-Inclusive, Positive Vacuum Tube Performance Test that is not limited to Mutual Conductance Alone.

(See technical details in main catalog)

★ Incorporates the **Electronamic** tube performance and battery testing circuit, described for Series 10-54 on page G-89.

★ Designed particularly for equipment-conscious, progressive radio service-sales organizations, and tube-selling sections of department stores.

★ PROMOTE CUSTOMER CONFIDENCE and **tube sales** via this impressive **"Precision"** Tube Merchandiser.

★ DIRECT READING non-confusing tube performance indications in large, easy reading terms of Replace-Weak-Good.

★ ILLUMINATED by custom-built, highly polished, plated reflector.

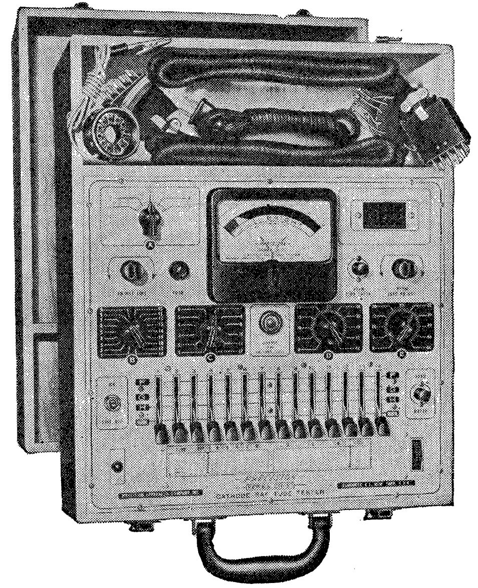
- **10-15 Tube and Battery Merchandiser** (illustrated). Heavy gauge steel cabinet in fine, dull black ripple, with chrome trim and reflector. Size 24" high, 17½" wide, base depth 10" tapering to 4" at top.
Code: Gable. **Net Price — $149.50**
- **10-15PM**—On heavy gauge steel panel with dust cover. Panel 22¾" x 19" for standard rack mount. Fine, dull black ripple finish.
Code: Gavot. **Net Price — $139.00**

Series CR-30 CATHODE RAY TUBE TESTER

TESTS ALL TV PICTURE TUBES

(Magnetic and Electrostatic)

OSCILLOSCOPE AND INDUSTRIAL CATHODE RAY TYPES



SERIES CR-30 IS A COMPLETE, SELF-CONTAINED INSTRUMENT particularly engineered for the very special needs of reliable, rapid and economical cathode ray tube testing, in the field, shop or laboratory.

Series CR-30 is indispensible to the efficient TV Service-Installation Technician, TV Service Laboratory and wherever one is called upon to answer the performance question, "IS IT THE CATHODE RAY TUBE OR IS IT THE CHASSIS?"

Series CR-30 incorporates a BEAM CURRENT TEST CIRCUIT which checks overall electron-gun performance for Proportionate Picture Brightness. Additional direct testing facilities are provided for positive check of accelerating anodes and deflection plate elements.

The Precision CR-30 should not be confused with mere adapters connecting to ordinary receiving tube testers which were never designed to meet the very specialized needs of CR tube checking. Similarly, it is not to be confused with neon lamp units or similar devices of limited technical merit and which do not check all CR tubes or all tube elements.

GENERAL AND TECHNICAL SPECIFICATIONS

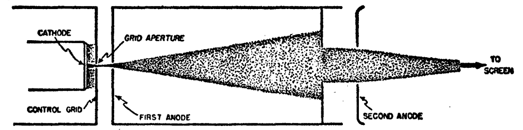
★ **Tests All Modern Cathode Ray Tubes**—Magnetic and Electrostatic picture tubes, 'Scope Tubes and Industrial Types without removal from carton or TV chassis.

★ **Tests All CR Tube Elements**—Not just a limited few.

★ **Absolute Free-Point 14 Lever Element Selection System** for Short-Check, Leakage Testing and Quality Tests. Independent of multiple base pin and floating element terminations. Affords maximum anti-obsolescence insurance.

★ **Beam Current Test Circuit** checks all CR Tubes and Electron-gun in operation. It is the Electron Beam (and NOT total cathode emission) which traces the pictures or patterns on the face of the CR tube.

Total cathode emission can be very high and yet Beam Current (and picture brightness) unacceptably low. **The CR-30 will reject such tubes** because it is a **Beam Current tester.** Conversely, total cathode emission can be low and yet Beam Current (and picture brightness) perfectly acceptable. **The CR-30 will properly pass such tubes** because it is a **Beam Current tester.** The significance of the above rests in the fact that Beam Current (and picture brightness) is primarily associated with the condition of the **center** of the cathode surface and not the overall cathode area. (See illustration below.)



★ **Voltage Regulated, Bridge Type VTVM** provides the heart of the super-sensitive, tube quality test circuit. Such high sensitivity is also required for positive check of very low current anodes and deflection plates.

★ **Multiple Test Sensitivities** plus selectable element test potentials permit proper accommodation of all CR tube types, Magnetic and Electrostatic.

★ **Micro-Line Voltage Adjustment,** which is **Meter-monitored** at filament supply, provides required close control of operating voltages.

★ **Accuracy** of test circuits closely maintained by use of factory adjusted internal calibrating controls; plastic insulated, telephone type cabled wiring; highest quality, conservatively rated components.

★ **Built-in, High Speed, Roller Tube Chart.**

★ **Test Circuits** Transformer isolated from power line.

★ **4⅝" Full Vision Meter** with special scale-plate expressly designed for CR tube testing requirements.

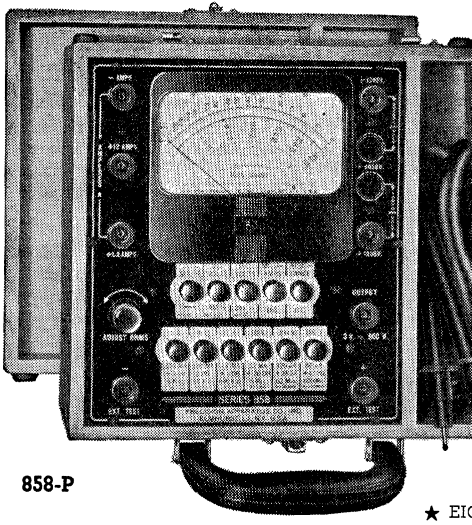
★ **Heavy Gauge Aluminum Panel,** etched and anodized.

★ **PLUS** many other **special "PRECISION"** details and features.

SERIES CR-30—In hardwood, tapered portable case, with hinged removable cover. Extra-Wide Tool and Test Cable Compartment. Overall Dimensions 17¼" x 13¾" x 6¾". Complete with standard picture tube cable, universal CR Tube Test Cable and detailed Instruction Manual.
Code: Daisy. **Net Price — $104.75**

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice



858-P

Series 858 High Sensitivity *Multi-Master*
HIGH SPEED, A.C.-D.C. MULTI-RANGE TEST SET
54 Ranges to
6,000 Volts, 60 Microamperes, 12 Amps., 600 Megs. +70DB.
20,000 and 1,000 Ohms per Volt D.C., 1,000 Ohms per Volt A.C.

Series 858 MULTI-MASTER features a "PRECISION" designed, positive action Push-Button Range and Function selection system, affording the ultimate in operational efficiency.

Designed for reliable measurements in modern TV, F.M., A.M. and other critical electronic circuits where only minute current drain of the measuring instrument can be tolerated.

The dual-range sensitivity feature provides the equivalent of another instrument at standard 1000 ohms per volt sensitivity, in conformance with many point to point voltage readings listed by receiver service manuals.

When employed in conjunction with the Series TV-2 super-high voltage safety test probe (described below), direct reading facilities to 30,000 volts are provided. 60,000 volt multiplier is also available.

★ **858-P** (illustrated) In hardwood, portable case, with tool compartment. Size 9"x10"x4½". Complete with ohmmeter batteries and high voltage test leads. **Code: Judge. Net Price — $61.50**

★ **858-L** In modern bakelite case with plastic carrying handle. Size 7½" x 8½" x 3". Complete with ohmmeter batteries and high voltage test leads. **Code: Jetty. Net Price — $58.75**

SPECIFICATIONS

★ EIGHT D.C. VOLTAGE RANGES both 20,000 and 1000 ohms per volt. 0-3-6-12-60-300-600-1200-6000 volts.

★ EIGHT A.C. and OUTPUT VOLTAGE RANGES at 1000 ohms per volt. 0-3-6-12-60-300-600-1200-6000 volts.

★ EIGHT D.C. CURRENT RANGES: 0-60-120 microamperes. 0-1.2-12-120-600 MA. 0-1.2-12 amps.

★ SIX RESISTANCE RANGES self-contained to 60 megohms. 0-6000-60,000-600,000 ohms. 0-6-60-600 megohms.

★ EIGHT DB RANGES: −26 to +70DB. 600 ohm, 1 mw., zero DB reference level.

★ Two Pin Jacks for all standard ranges.

★ 4⅝" 50 microampere meter, ±2% accuracy. Rugged, double-jewelled D'Arsonval construction.

★ Safety Jacks for 6000 volt ranges.

★ HIGHEST GRADE MATERIALS and plastic insulated wiring employed.

★ ETCHED GRADE MATERIALS and gauge aluminum panels: resistant to moisture and wear.

Series TV Super High Voltage SAFETY TEST PROBES*
Voltage Ranges to 60,000 Volts D.C.
With standard V.T.V.M.
or high sensitivity V-O-M

* U. S. Patent No. Des. 162813

"*PRECISION*" engineering solves the high voltage test problem with utmost safety to the operator. *Series TV has been custom designed and patent protected for YOUR safety FIRST.* Cartridge style high voltage tubular multiplier permits use of a single "TV" probe with many high sensitivity test sets and V.T.V.M.'s. *Full details on reverse side of "PRECISION" catalog price sheet.*

IMPORTANT FEATURES

★ **Custom Molded Polystyrene Head,** heavy duty bakelite handle and triple-ring barrier, specially machined internal lucite components, all spell out "HIGH VOLTAGE ENGINEERED."

★ **High Dielectric Anti-Leakage Paths** and wide, multi-channelled guard-barrier reiterate "HIGH VOLTAGE ENGINEERED."

★ **Internal and External Protective Grounding** — Full handle length grounded internal flash-over-shield. External, grounded arc-back barrier. HIGH VOLTAGE ENGINEERED!

★ **Heavy Duty, Grounded-Shielded Connecting Cable.**

★ **Ceramic, Helical Film-Type, Cartridge Multiplier** manufactured specifically for VERY HIGH VOLTAGE APPLICATION. **Removed and changed quickly, conveniently and without tools!**

★ **Positive Grounds and High Voltage Connections** through high compression contact springs.

SERIES TVP—Test Probe less multiplier cartridge, with .080" pin plug terminations. **Code: Ebony. Net Price — $12.35**

SERIES TVP-A—Similar to TVP above, except terminates in standard screw-on connector for use with most VTVM's. (Less multiplier cartridge.) **Code: Early. Net Price — $12.35**

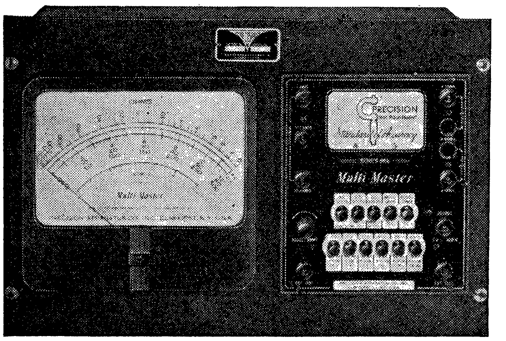
SERIES TV2—With 30 KV cartridge for "Precision" (or any) 20,000 ohms per volt test set with 6000 V. range. **Net Price — $14.75**

SERIES TV-4—With cartridge for ranges to 60 KV for use with "Precision" EV-10A and EV-20. **Code: Excel. Net Price — $14.75**

SERIES TV-4A—Same as TV4 above, except with special adapter for Model EV-10, not EV-10A. **Code: Exact. Net Price — $14.75**

TVM—Cartridge Multipliers only for Series TV. See reverse side of "Precision" catalog price sheet for complete listings.

Series 866 De Luxe *Multi-Master*
Panel-Mounted A.C.-D.C. Test Set,
with 9" Meter and Remote-Control Selector Unit
5000 and 1000 Ohms per V., D.C., 1000 Ohms per V., A.C.



A LABORATORY TYPE HIGH VISIBILITY TEST SET INDISPENSABLE TO THE WELL EQUIPPED, MODERN TEST LABORATORY AND ELECTRONICS CLASSROOM.

The 9" meter and remote-control selector unit afford unparalleled operational efficiency with maximum physical meter protection via panel mounting above the work level.

RANGE SPECIFICATIONS similar to Series 858 above.

5000 and 1000 ohms per volt D.C. 1000 ohms per volt A.C.
54 Ranges to:
6000V., 300 Microamps, 12 Amps., 200 Megs., +70 DB.

★ **866** (illustrated) In standard panel mount, size 19"x12¼" with dust cover. Complete with high voltage test leads and ohmmeter batteries. **Code: Novel. Net Price — $85.00**

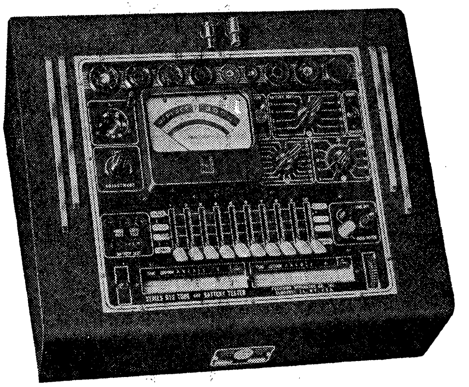
-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series 612 CATHODE CONDUCTANCE TUBE TESTER
A Modern, Free Point, Lever-Operated
TUBE and BATTERY TESTER

The very popular "600" Series brings to modern electronic tube checking *the highest practical order of obsolescence insurance with utmost simplicity of operation, AT MODERATE COST.* This has been achieved with full conformity to the well-known "Precision" standards of quality, workmanship, and performance.

The "600" tube testing parameters are based upon the well-established, time-proven emission testing principles as have been recommended by both tube manufacturers and R.T.M.A. The "600" line affords advanced design features and performance which render it incomparable amongst instruments in its category and price range.

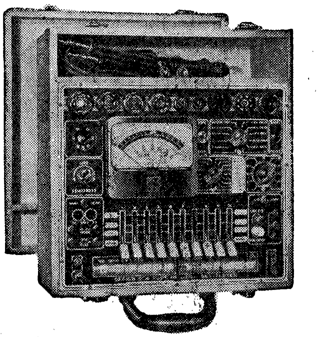


- ★ **612-C** (illustrated) In modern, chrome-trimmed, counter cabinet. Black ripple finish. Size 16" x 13½" x 7", sloping to 3" at front. **Code: Bison. Net Price — $82.25**
- ★ **612-P** In hardwood, portable case (as illustrated for 654, below). Size 12" x 13" x 6". **Code: Begin. Net Price — $79.50**
- ★ **612-MCP** Open style Metal Case Portable. Size 10½" x 12" x 6". **Code: Brine. Net Price — $76.75**
- ★ **612-PM** In standard size panel mount 12¼" x 19" with dust cover. **Code: Blaze. Net Price — $82.25**

TUBE AND BATTERY TESTING FEATURES

- ★ TESTS ALL MODERN TUBE TYPES including 7 pin Acorns, Noval 9 pin, dual capped H.F. tubes, F.M. and TV. amplifiers.
- ★ FILAMENT VOLTAGES ¾ to 117 volts.
- ★ ABSOLUTE FREE-POINT 10 element lever selection for merit and short tests.
- ★ DUAL SHORT-CHECK SENSITIVITY.
- ★ INDIVIDUAL TESTS OF MULTI-SECTION TUBES including tuning indicators.
- ★ BALLAST UNIT TESTS.
- ★ MICRO-LINE ADJUSTMENT
- ★ 4½" METER, 2% ACCURACY.
- ★ NOISE and CONDENSER TEST pin jacks.
- ★ Pilot Light Test Socket.
- ★ DYNAMIC "UNDER-LOAD" TEST for all popular radio A, B, and C dry batteries.
- ★ Built-in, brass geared hi-speed roll chart.
- ★ Anodized, deep-etched, heavy gauge aluminum panel, resistant to wear.
- ★ Panel-mounted Fuse Extractor Post.
- ★ Telephone type cabled, plastic-insulated, moisture resistant hook-up wire.
- ★ Each instrument individually calibrated and sealed.

Series 654 COMBINATION TUBE, BATTERY & SET TESTER
20,000 OHMS PER VOLT D.C. 1,000 OHMS PER VOLT A.C.
Ranges to 6,000 V., 120 Microamperes, 12 Amps., 60 Megs., + 70 DB.



The Series 654 is available in the same four model types as described for the Series 612 above.

Model	Code	Net Price
654-P (Illus.)	**Hardy**	**$109.75**
654-MCP	**Hurry**	**107.00**
654-C	**House**	**112.50**
654-PM	**Heart**	**112.50**

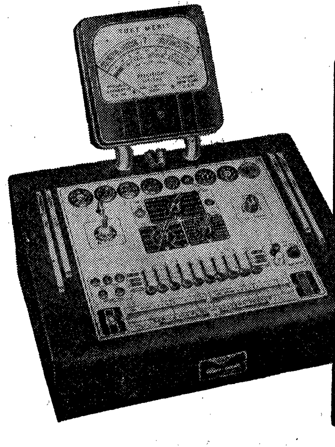
★ **SERIES 654 is an economical, compact, *High Sensitivity Service Laboratory* designed to meet the specific needs of modern electronics service, installation and maintenance, A.M., F.M., and T.V.**

Series 654 incorporates the identical tube and battery testing features as described for the Series 612 above, *PLUS* a complete wide range, high sensitivity, A.C.-D.C. circuit tester.

CIRCUIT TESTING FEATURES

- ★ **5 D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **5 A.C. and Output Voltage Ranges:** 1000 ohms per volt. 0-12-60-300-1200-6000 volts.
- ★ **Ranges to 30,000 Volts D.C.** when used with Series TV-2 Super high voltage test probe. Not included with 654. See page G-91.
- ★ **6 D.C. Current Ranges:** 0-120 microamperes. 0-1.2-12-120 MA. 0-1.2-12 Amperes.
- ★ **3 Wide Resistance Ranges:** 0-600-600,000 ohms. 0-60 Megs. Self-contained batteries.
- ★ **5 Decibel Ranges** from —12 to +70 DB.
- ★ **Fully Rotary Selective** Ranges and Functions.
- ★ **Only 2 Pin Jacks** for all standard ranges.
- ★ Recessed 6,000 V. safety pin jacks.
- ★ 50 microampere, 4⅝" Wide-Angle meter.
- ★ 1% Wirewound and film-type resistors.
- ★ All circuits isolated from power line.

Series 614 DE LUXE TUBE & BATTERY MERCHANDISER
Counter Display Type Tube and Battery Tester
with Large 7" Chrome Trimmed Meter.



The Series 614 has been designed for the progressive tube and battery department where an exceptionally attractive instrument is desired to step-up tube and battery sales with minimum investment.

The extra-large, offset mounted 7" meter provides a full view of test results easily visible to both customer and operator.

The tube and battery testing circuit of Series 614 is electrically identical to that described for the Series 612 at top of this page.

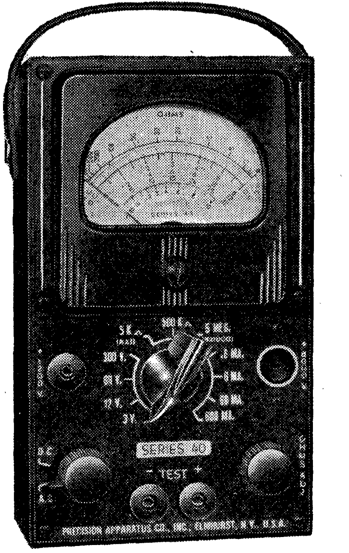
★ **614 Tube and Battery Merchandiser** (illustrated)—In modern, chrome-trimmed, fine black ripple finished cabinet. Offset mounted meter. Cabinet size 16" x 13½" x 7", slopes to 3". **Code: Early. Net Price — $109.00**

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series 40 Compact Wide Range A.C.-D.C. Circuit Tester
31 Self-Contained Ranges to 6000 Volts, 600 MA, +70DB, 5 Megohms
with Full Size, easy reading 3" Rectangular Meter
1000 Ohms per Volt A.C. and D.C.



★ **Series 40** (illustrated) In molded bakelite case with plastic handle. 3¾"x 6¼"x2½". Complete with ohmmeter batteries and test leads.
Code: Visit. Net Price — $26.95

In molded bakelite carying case, Series 40 meets the need for a compact, yet rugged test set to withstand hard usage as is imposed by the service technician, maintenance engineer, production inspector, trouble-shooter, etc.

The Series 40 offers every advanced design feature and full-bodied components as are regularly incorporated in "Precision's" larger multi-range test sets, including: Rotary Range Selection—1% shunts and multipliers—heavy duty insulated pin jacks—Large numeralled, easy reading meter.

ALL RANGES, including 6000 volts and 5 Megohms, are SELF-CONTAINED NO EXTERNAL BATTERIES OR MULTIPLIERS ARE REQUIRED.

RANGE SPECIFICATIONS

- ★ 6 A.C.-D.C. AND OUTPUT VOLTAGE RANGES at 1000 ohms per volt. 0-3-12-60-300-1200-6000 volts.
- ★ 4 D.C. CURRENT RANGES: 0-.6-6-60-600 MA.
- ★ 3 RESISTANCE RANGES: 0-5000-500,000 ohms. 0-5 megs.
- ★ 6 DECIBEL RANGES —22 to +70 DB.
- ★ FULL SIZE 3" RECTANGULAR METER: 400 microamperes ±2% accuracy.
- ★ 1% WIRE & FILM-TYPE RESISTORS.
- ★ ONLY 2 PIN JACKS serve all standard ranges and functions.
- ★ Recessed 6000 volt safety jack.
- ★ Anodized, etched aluminum panel: resistant to moisture and wear.

LC-2 LEATHER INSTRUMENT CASE: Genuine top-grain heavy cowhide case, custom designed for the Series 40. Richly finished in dark brown. **Code: Young. Net Price — $5.75**

Series 85 High Sensitivity Test Set
20,000 Ohms per Volt D.C. 1,000 Ohms per Volt A.C.
34 Self-Contained Ranges to 6000 Volts,
120 Microamperes, 12 Amperes, +70DB, 60 Megohms.

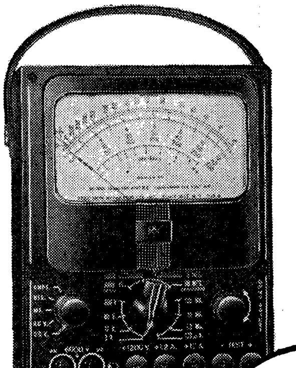
The Series 85 is a bakelite cased, laboratory styled portable instrument.

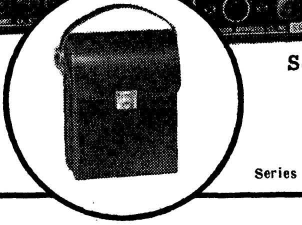
Combining high sensitivity with small overall size, Series 85 is "Application Engineered" for production, lab., school and service-maintenance phases of modern electronics: A.M., F.M., and TV.

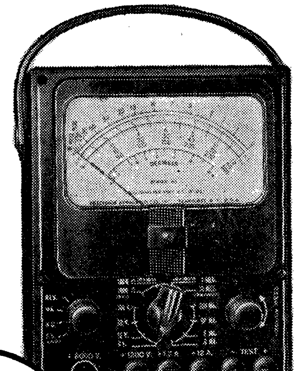
★ When used with the Series TV-2 super-high voltage test probe, D.C. voltage ranges up to 30,000 volts are provided for Television and similar high potential, low current circuits. See page G-91.

SPECIFICATIONS

- ★ **6 D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **6 A.C.-Output Voltage Ranges:** 1000 ohms per volt 0-3-12-60-300-1200-6000 volts.
- ★ **6 D.C. Current Ranges:** 0-120 microamps. 0-1.2-12-120 MA and 0-1.2-12 amps.
- ★ **4 Resistance Ranges:** Self-contained batteries. 0-6000-600,000 ohms; 0-6-60 megs.
- ★ **6 Decibel Ranges:** —26 to +70DB.
- ★ **4⅝" Rectangular Meter.** 50 Microampere. 2% accuracy.
- ★ **1% Wire & Film-type Resistors.**
- ★ **Rotary Range Selection:** All standard functions at only 2 tip jacks.
- ★ Recessed 6000 volt safety jacks.
- ★ Anodized, heavy gauge, etched aluminum panel: resistant to moisture and wear.
- ★ **Series 85** (illustrated) in molded bakelite carrying case with plastic handle. 5½" x 7⅛" x 3". Complete with ohmmeter batteries and test leads.
Code: Waist. Net Price — $39.95


Series 85


Series LC-1


Series 80

Series 80 Wide Range Test Set
1000 Ohms per Volt A.C. and D.C.
34 Self-Contained Ranges to 6000 Volts,
12 Amperes, +70DB, 10 Megohms.

The Series 80, laboratory styled, rotary selective, multi-range circuit tester has been designed to meet the same high calibre performance standards as the Series 85 (at left) but is specifically intended for use wherein greater resistance to electrical and physical overload is of more importance than extremely high sensitivity.

"Application Engineered" for general purpose industrial and radio service-maintenance-test requirements.

SPECIFICATIONS

- ★ **6 A.C.-D.C.-Output Voltage Ranges:** 1000 ohms per volt. 0-6-12-60-300-1200-6000 volts.
- ★ **6 D.C. Current Ranges:** 0-.6-6-60-300 MA and 0-1.2-12 amps.
- ★ **4 Resistance Ranges:** Self-Contained batteries. 0-1000-100,000 ohms. 0-1-10 megohms.
- ★ **6 Decibel Ranges:** —20 to +70DB.
- ★ **4⅝" Rectangular Meter:** 400 microampere, 2% accuracy.
- ★ **1% Wire and Film-type Resistors.**
- ★ **Rotary Range Selection:** All standard functions at only 2 tip jacks.
- ★ Recessed 6000 volt safety jack.
- ★ Anodized, heavy gauge, etched aluminum panel: resistant to moisture and wear.
- ★ **Series 80** (illustrated) In molded bakelite carrying case with plastic handle. 5½"x7⅛"x3". Complete with ohmmeter batteries and test leads.
Code: Weave. Net Price — $34.95

LC-1 LEATHER INSTRUMENT CASE

Custom designed for the Series 80 and 85. Includes a tool and test lead compartment.

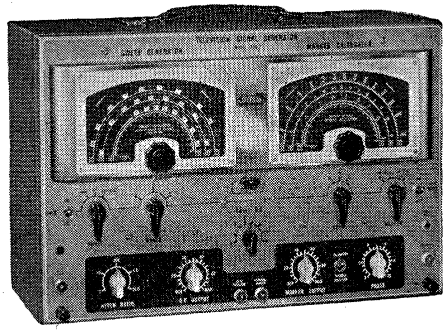
Genuine-top-grain heavy cowhide with waterproof lined suede interior. Adjustable hand or shoulder strap. Positive snap-lock. Richly finished in dark brown.
Code: Yearn. Net Price — $9.50

JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

TELEVISION SIGNAL GENERATOR

No other instrument has ever equaled the Model TVG-2 for quality, desirable and necessary TV alignment features. Just read these brief specifications and make comparisons.



Model TVG-2

Sweep Oscillator: Three convenient ranges, 2 MC thru 38 MC; 38 MC thru 108 MC; 174 MC thru 216 MC are all on fundamentals. Continuous tuning over all ranges. Large accurately calibrated dial with the TV channels clearly indicated. Reversible direction of sweep.

Sweep Width: Provided by electro-mechanical sweep. Adjustable from .1 MC thru 18 MC in 7 steps for fast resetability. Provides that extra width for badly detuned circuits.

Marker Oscillator: Accurately calibrated dial gives complete marker coverage from 4 MC thru 216 MC with all the Television IF frequencies on highly stable fundamentals.

Crystal Oscillator: Separate crystal oscillator for use either as marker or calibrator. Stable circuit oscillates on any crystal fundamental from 4 MC to 20 MC. Output is controlled by selector switch to provide variable marker, crystal marker or both for calibration purposes. A BEAT DETECTOR is also incorporated for audible or visual checking of beat between variable marker oscillator and crystal.

400 Cycle Modulation: Provided for use with either the variable or crystal marker so traps can be adjusted by either audible or meter method.

Oscilloscope Timing: A phased 60 cycle sine wave timing voltage is provided with PHASE CONTROL to provide adjustment of double pattern. BLANKING is also available for single pattern trace with reference base line for measurement.

Video Modulation: Provision made for insertion of video signal to modulate the external marker output making possible "rebroadcasting" of television signals on any channel. Also an audio signal may be used to produce horizontal or vertical lines for linearity checks.

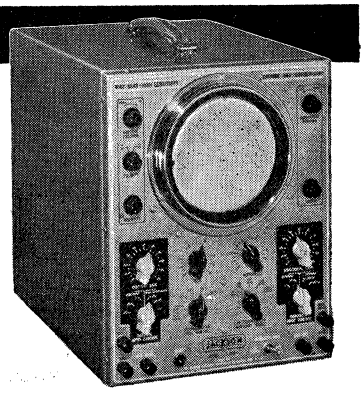
RF Output: Completely controllable with output control and step attenuator. Output impedance 30 ohms. Complete flexibility right at your finger tips.

Size: Same height as other Jackson TV instruments. Dimensions 13″ high, 8¼″ deep, 19⅛″ wide.

Finish and Weight: An all steel gray Ham-R-Tex cabinet — total net weight 30 pounds.

Dealer Net Price..................$245.00

5-INCH OSCILLOSCOPE Model CRO-2



Wide Band Amplifier: Flat within 1.5 db from 20 cycles thru 4.5 megacycles dropping smoothly to a still useful value at 6 megacycles. This feature is absolutely essential for correct showing of TV sync. pulses.

Vertical Deflection Sensitivity: Two ranges with three positions for each range. Has fully compensated attenuators. Excellent transient response. Each unit completely tested for "tilt" and "overshoot."

Sensitivity Ranges: With a band width of 20 cycles thru 100 KC, the sensitivity ranges are .018, .18, 1.8 RMS volts per inch. The wide band position 20 cycles thru 4.5 MC has sensitivity ranges of .25, 2.5, 25 RMS volts per inch.

Horizontal Deflection Sensitivity: Push-pull horizontal amplifiers have a sensitivity for all applications of .55 RMS volts per inch.

Vertical Input Impedance: 1.5 megohms, shunted by 20 micromicrofarads. Direct to plates balanced 6 megohms, shunted by 11 micromicrofarads.

Horizontal Input Impedance: 1.1 megohms.

Linear Sweep Oscillator: Saw tooth wave 20 cycles thru 50 Kilocycles per second in 5 steps. Sine wave sweep of 60 cycles also available. Provision for external sweep synchronization.

Input Calibration: A standard voltage is provided for use in determining unknown voltages. Permits peak-to-peak measurement of all waveforms.

Vertical Polarity Reversal: By merely flipping a switch you can reverse the polarity of the voltage being supplied to the vertical deflection plates, also provides a means for choosing either positive or negative sync. voltages.

Return Trace Blanking: A new amplifier-timer combination for blanking return traces, providing a clearer, sharper image at all times. Prevents confusion in waveform analysis.

Synchronizing Input Control: Four input control positions, Internal — External — 60 cycle — 120 cycle.

Deflection Plate Connections: Direct connections thru capacitors for AC only to deflection plates of CR tube by means of terminal block at back of instrument.

Intensity Modulation: Either 60 cycle internal intensity modulation or external intensity modulation through binding posts on front panel.

Removable Calibration Screen: Clear plastic screen marked in grids of 1/10 inch per division. Easily removable.

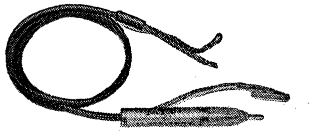
Accessory: Demodulation probe available for using scope as signal tracing instrument.

Size: Same height as other Jackson TV instruments. Dimensions 13″ high, 10¼″ wide, 15⅛″ deep.

Finish and Weight: An all steel gray Ham-R-Tex cabinet — total net weight 26 pounds.

Model CRO-2, Dealer Net....$197.50

Model CR-P, Probe $9.95



DYNAMIC TUBE TESTER

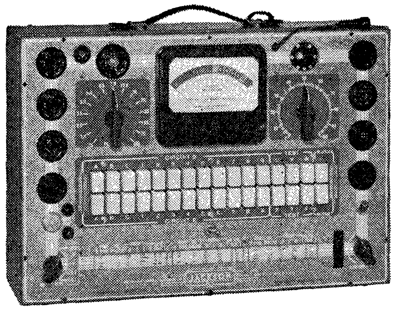
Model 648

This tester incorporates the most important engineering advancements in 12 years of tube tester research, such as the Dynamic test method and sequence switching. The Jackson Dynamic test circuit applies separate element voltages to each tube element. Separate load circuits are also used. These voltages and loads have been carefully selected for each tube to meet most ideally the normal operating condition of the tube. The current flowing only in the plate circuit of the tube under test is indicated on the 4 inch meter in easy-to-read terms.

Sequence Switching makes possible SIMPLIFIED OPERATION, formerly unattainable in Dynamic test methods. There are actually only three control units to be set according to rotary chart listing for each tube. These are: Heater Voltage (upper left), Plate Control (upper right) and the Sequence Switch (center). The only other adjustments are line voltage control and shorts test.

Fast, Accurate Shorts Test lamp indicates only when tube is shorted. The shorts test control moves only through 4 positions — yet completely tests each tube element for possible shorts or leakage. The tube is tested under a heated cathode condition.

Correct Test Voltage and Load Circuits protect tubes under test against damage by overload. Even low voltage battery types are provided with suitably low operating potentials. The full GOOD-BAD scale of the meter is used for each test. The meter is sufficiently sensitive that special "Low scale" readings are not required (such as for diodes, etc.).

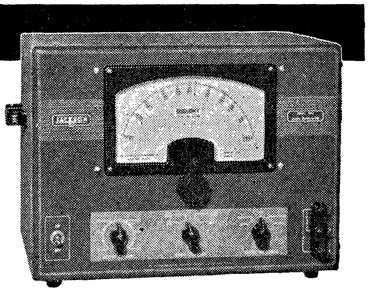


Life-line test shows you accurate forecast of end of tube life. Reduced output caused by over-age gives reduced reading on meter. Lets you catch bad tubes before they actually go bad.

Steel cases and panels finished in gray Ham-R-Tex — approximate net weight of each model 16 pounds.

Model CB48 Counter-Base Only	**$8.50**
Model 648B (Bench-type steel case)	**$104.50**
Model 648P (Portable Tester in wood case)	**$109.50**

AUDIO OSCILLATOR Model 655



The model 655 provides an audio frequency voltage DEVELOPED AT ITS FUNDAMENTAL FREQUENCY. The basic design of this instrument is entirely different from the "beat frequency" type of Audio Oscillator.

FEATURES

Resistance Capacity Tuned Circuit Design, engineered for improved operating characteristics of audio measurements.

No Zero Adjustment — Tuned Fundamental Frequency method provides permanently locked calibration.

Output Characteristics — A choice of either transformer coupled or resistive output is available. The Model 655 meets the most exacting requirements as to **Waveform-Uniform Frequency Characteristics** and **Output Load Impedance Selection.** A special feature of the output system is the 10 ohm tap for low impedance circuits such as speaker voice coils, etc. **Variable Frequency Selection** throughout the four bands. There are over 33 inches of scale length making **Exact** settings possible.

Complete Stability — The stability of frequency calibration is constant throughout the entire range. The stabilized circuit permits large changes in line voltage to occur without affecting frequency or waveform and having negligible effect on output voltage.

Simplified Operation — It is only necessary to select desired **Frequency** and **Output. There Are No Other Controls** — The possibility of errors in operation is therefore eliminated.

High Output Power — More than **Three Times** the output usually available from ordinary audio oscillators.

Construction — Frequency dial is glass enclosed so that calibrations cannot become disfigured. Rugged mechanical features assure trouble free operation under service conditions.

SPECIFICATIONS

Frequency Range — 20 cycles to 200,000 cycles in 4 ranges: 20-200 cycles/200-2000 cycles/2000 to 20,000 cycles/20,000 cycles to 200,000 cycles.

Calibration — Logarithmic variation of frequency over the scale provides constant percentage accuracy at all frequencies.

Scale Length — Over 33 inches.

Output Impedance — Five values of output impedance: 10 ohms/250 ohms/500 ohms/5000 ohms/RESISTIVE. Controlled by selector switch.

Output Power — 500 Milliwatts (20 to 20,000 cycles transformer coupled).

Output Control — Continuously variable from zero to maximum.

Waveform — Less than 5% distortion at all frequencies between 30 and 15,000 cycles.

Frequency Characteristics — Plus or minus 1 DB 30-15,000 cycles using transformer coupled output.

Hum Level — Down more than 60 DB of maximum.

Accuracy — 3% or 1 cycle whichever is greater.

Tubes — 1-6G6G, 1-6SL7GT, 2-6V6GT, 1-5Y3GT furnished installed.

Dimensions — 13" wide x 9½" high x 9½" deep.

Dealer Net Price **$135.00**

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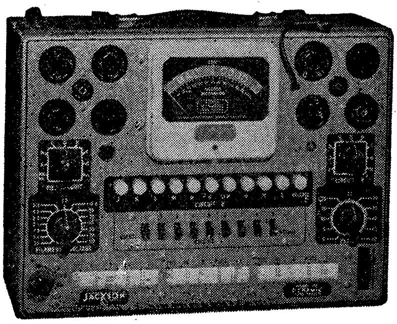
JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO



CHALLENGER DYNAMIC® TUBE TESTER

Model 715

New in design and performance, including the latest Jackson patented switching circuits.

Modern in every feature of construction, appearance, and operation.

Complete with every valuable feature, including provision for CR tube testing.

SPECIFICATIONS

Jackson Dynamic Test Principle: Applies separate element voltages to each tube element, making test under actual use conditions.

High Voltage Power Supply: By testing tubes at higher plate voltages (over 200 volts for some types), more accurate results are obtained. This is an important feature of the Dynamic Tube Tester.

Improved Switching System: Provides spare circuits together with switch and socket positions for future use.

Simplified Operation: Uses latest Jackson "Service Engineered" switching procedure.

Better Readability: Large 4-inch-square meter is easy to read.

Complete Shorts Test: Each tube element is fully tested for possible shorts and leaks.

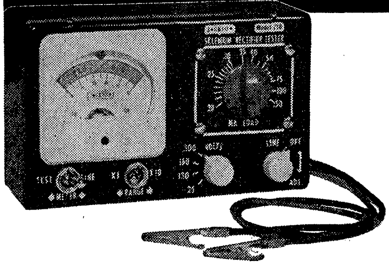
Wide application: Tests all tubes — over 700 types — including television amplifiers and rectifiers.

Built-in Roll Chart: Indicates tube characteristics. One year free supplement service.

Finish and Weight: Finished in gray Ham-R Tex with harmonizing ivory knobs, meter cover, and push-buttons. Net weight, 11 lbs.; shipping weight, 14 lbs.

Dealer Net Price **$79.50**

SELENIUM RECTIFIER TEST SET Model 710



This is another development in the Jackson tradition of excellence. It is a high-quality, pocket-size instrument which incorporates all features required by the modern service man for quickly and completely testing *all* selenium rectifiers used in radio and television applications.

Each instrument is sturdily built and individually adjusted at the factory with precision instruments to give you long-lasting, dependable service. Check your idea of the perfect test unit with the specifications.

SPECIFICATIONS

Tests all types 20 to 650 ma — 25 to 300 V A.C.

Gives positive indication — GOOD or BAD — on 3" meter. Shows voltage drop across rectifier under load.

Has "Line Adjust" for accurate testing; also permanent "loss-proof" color-coded test leads.

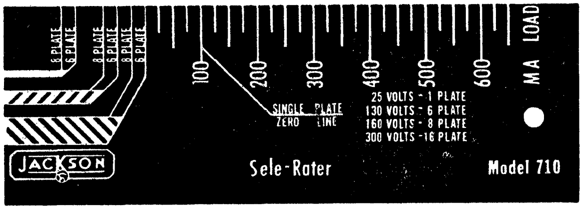
Operates on 110-125 V A.C.

Small, compact — 7" x 3¼" x 4¼".

Net weight, 4 lbs.; shipping weight, 5 lbs.

Dealer Net Price **$29.50**

SELE-RATER

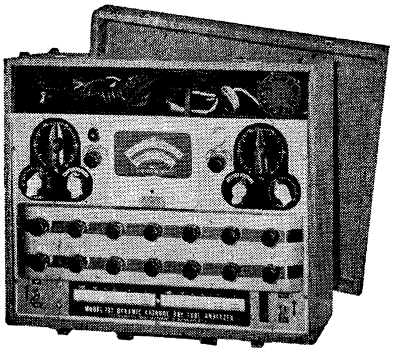


This ingenious "yardstick" (shown two-thirds size) enables you to determine the ratings of selenium rectifiers even though the manufacturers' ratings are not known. No need to study circuit reference books for ratings.
You get a Sele-Rater with your Model 710.

JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

DYNAMIC® CATHODE RAY TUBE ANALYZER



This is the *only* CRT analyzer that completely and accurately tests *all* TV picture tubes, including both magnetic and electrostatic deflected types. It also tests oscilloscope, radar, and other special purpose CR tubes. No need to remove any tube from chassis or carton.

Model 707

SPECIFICATIONS

Beam Current: Test is made to the *final* anode — the only anode that really counts. The meter gives you an accurate forecast of tube life.

Grid Test: The beam current may be up to par; but, if the grid does not have the ability to cut off and control it, the tube is useless. Test voltage is ample for every type tube.

Gas Test: Certain amounts of gas in a CRT will render the tube inoperative. By checking the "gas current" to the FINAL anode, the presence of harmful gases is detected. High gas content indicates that the tube should be replaced as the life of the screen and/or cathode will be very limited.

Shorts Test: All elements are isolated for individual inter-element leakage tests. A circuit of high sensitivity is used to give indications of leakage on a neon lamp.

Roll Chart: Provided for rapid indication of proper selections.

Circuit Selector Switches: Placed on an escutcheon to make them easily accessible for every tube setup and to limit test setting confusion.

Test Voltages: Both high and low voltage power supplies are provided for the various test requirements of a cathode ray tube.

VTVM: The analyzer is designed around a highly sensitive, balanced bridge type VTVM. A continuously variable line voltage adjustment is provided to insure accurate readings.

Meter: An easy-to-read, full vision meter, designed especially for the CRT Analyzer, includes a line voltage adjust point, a "beam current" range, a "gas current" range, and a reference scale.

Case: The durable wooden airplane luggage covered carrying case is provided with ample space for storing the cable and adaptors.

Finish and Weight: Gray Ham-R Tex panel; ivory meter case. Net weight, 22 lbs.; shipping weight, 25½ lbs.

Dealer Net Price **$149.50**

NEW TELE-VOLTER Model 709

"Super Vacuum Tube Volt-Ohm-Meter"

Here is a *portable* instrument you might have designed yourself. For it has everything you'd want in an ideal VTVM, and more. Look at the features. See for yourself why the Jackson TELE-VOLTER, a truly "Service-Engineered" instrument, is the easiest reading, easiest using instrument you've ever seen.

SPECIFICATIONS

D.C. VOLTMETER

Volts: 0 to 1, 5, 10, 50, 100, 500, 1000.

Calibrated Zero Center, positive or negative: 0 to 5, 2.5, 5, 25, 50, 250, 500.

A.C. VOLTMETER

Volts: 0 to 1, 5, 10, 50, 100, 500, 1000.

Frequency Response: Essentially flat to 4.5 MC thru 0-100 scales.

Peak-to-Peak Ranges: 0 to 2.8, 14, 28, 140, 280, 1400, 2800.

Peak values may also be read directly by using the next lower scale than the one for which the instrument is set.

OHM METER

Expanded logarithmic scale gives highly accurate readings in the following ranges: 0 to 1000, 10,000, 100,000; 1 meg., 10 meg., 100 meg., 1000 meg.

ELECTRICAL CHARACTERISTICS

Meter Protection: The 7″ square meter, with hair-line pointer, is electronically protected against overload.

Controls: Range switch, circuit switch (including on-off switch), zero adjust, ohms adjust, probe function switch (built into probe).

Probes: One ground lead and one combination probe for D.C. and A.C./ohms readings. Probe has built-in switch for changing from D.C. to A.C. or ohms.

Scale Colors: Scales are printed in color for maximum ease in use.

Styling: Sloping front style, fully portable. Finished in Gray Ham-R Tex. Red and black harmonizing colors in knobs, meter and nameplate.

Accessories: Model 79P High Voltage Probe for reading DC voltages to 30,000 volts **$14.95**
Model 70 RFP High Frequency (200 MC) Probe **$9.85**

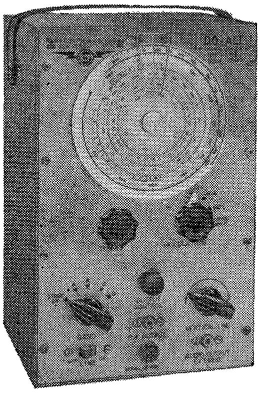
Dimensions and Weight: 8¾″ deep, 8¼″ high, 7¼″ wide. Net weight, 10 lbs. Shipping weight, 13 lbs.

Dealer Net Price **$95.00**

RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

TEST EQUIPMENT



MODEL 750 • DO-ALL TV SIGNAL GENERATOR

UHF - VHF

UHF-VHF completely covered in one instrument.
A Signal, Marker and Pattern Generator covering ALL the UHF and VHF channels for every TV and FM receiver.
RCP's masterful engineering and the inductuner insures accuracy of within ½ of 1% over the entire range of 9 megacycles to 900 megacycles. All VHF frequencies are on FUNDAMENTALS. The RF's and IF's are clearly calibrated on a large etched aluminum dial. This is a valuable marker generator.
Now you can check, test and align front ends, IF's, sound and pix traps, linearity, syncs, sweeps, positioning, focus and deflection all with one portable accurate instrument.
Steady Horizontal bars, Vertical bars and Crosshatch pattern are individually produced on all channels for quick and easy adjustments.
A masterpiece in engineering and performance, this instrument was designed for portable or bench use. It reflects the highest quality in construction and appearance with an attractive brushed aluminum panel and dial in a handsomely finished steel carrying case.

DATA

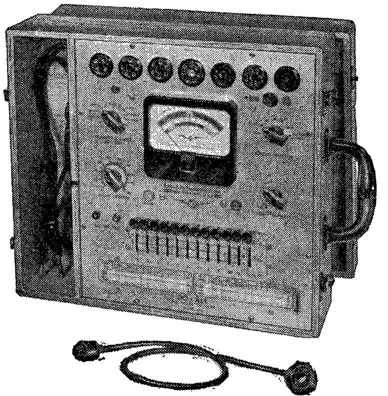
BANDS: 9-11 MC, 21-47 MC, 54-220 MC, 465-690 MC, 650-900 MC.

TUNING: Special anti-backlash drive combined with the inductuner guarantees the extreme accuracy. Dial is continuously calibrated through 340°.

MODULATION: 360 cycles and 141.75 Kilocycles internal modulation has been provided. Unmodulated carrier signal is also available.

MODEL 750
Size: 10¼" x 6½" x 5-9/16".
Weight: 9 lbs.

$\$79^{50}$



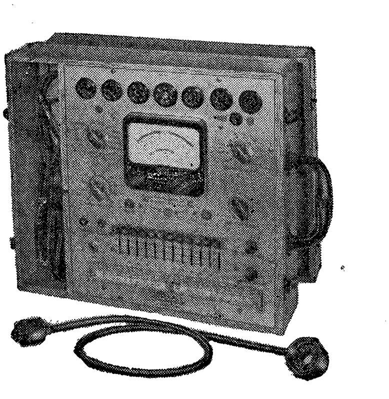
MODEL 324 • DO-ALL TUBE & BATTERY TESTER

The RCP Dynoptimum Free Point Tester

TEST: All TV and Radio Tubes - Cathode Ray Tubes - Batteries - Reactivate CR and other Tubes. Sockets for all standard 4, 5, 6, 7, octal, loctal, miniature and sub-miniature are provided. Tests transmitting, hearing aid, ballast, pilot light, gaseous rectifiers and tuning indicator types as well. All readings are indicated on a large, easily read meter.
The Cathode Ray Tube Tester will check all magnetic deflection types right in the set or carton. Will locate and isolate all shorts or leaks. Also reactivates and revives many otherwise dim or bad picture tubes.
Battery checker tests the most popular portable batteries under load. Indicates true condition of battery under check.
A beautiful, efficient instrument to enhance any repair bench or store counter. Available in both counter and portable models. Both are complete with CR Tube Adaptor Cable.
FEATURES: Self-cleaning lever switches — spare switch for future element additions — Element under test instantly identified — Numbering follows base diagrams — Tapped and multiple filaments individually tested by Free Point switch method. New Double Rollindex — smooth rolling, up-to-date tube chart. Neon Lamp Indicator — hot check short-leakage test.

MODEL 324C—Open style metal case, counter model. Size 13¾" x 12¼" x 4". Weight: 10 lbs.……NET $69.95

MODEL 324PC—Combination portable, counter model. Includes battery test leads, smart looking, hand rubbed oak carrying case with slip-hinge cover. Size: 16¼" x 14¼" x 5". Weight: 12 lbs.……NET $79.50



MODEL 808A • TV-RADIO-CR TUBE TESTER & VTVM

REVOLUTIONARY design includes all the features of the famous RCP Dynoptimum Tube Tester plus a cathode ray tube tester and reactivator plus a vacuum tube voltmeter with ohmmeter.

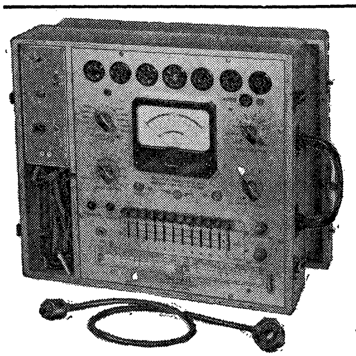
ALL IN ONE UNIT!

A TUBE TESTER: All the features of the famous RCP Dynoptimum free point tube tester—protected against obsolescence—tests all modern standard, miniature, noval base and subminiature tubes. Easily read on 4½" meter. New double Rollindex. Smooth rolling, up to date tube chart.
A CATHODE RAY TUBE TESTER: Will check all magnetic deflection type Television Picture tubes, Locates and isolates all shorts or leaks.
A REACTIVATOR: Revives and reactivates many otherwise dim or bad television picture tubes. Can also be used on other tubes.
A VT VOLTMETER (AC-DC): This really outstanding 17 Range instrument is a VT Voltmeter for AC as well as DC. Balanced bridge type push-pull circuit. Draws negligible current due to high impedance of 25 megohms. Accuracy ±3% DC, ±5% AC. Discriminator alignment scale with zero center. AC and DC volts 0 to 5-25-100-250-1000: db —20 to 16, —6 to 30, 6 to 42, 14 to 50, 26 to 62.
AN OHMMETER: Reads all Resistances 0.2 ohms to 1000 megohms on 5 ranges. Use this instrument also to check condensers for leakage and shorts.
Housed in handsome hand-rubbed oak carrying case with test leads, isolation probe, batteries, etc. Size: 12½"x12¾"x4¾". Weight 12½ lbs.

MODEL 808A—complete, ready to operate……NET $99.95

MODEL No. HVMP-1……NET $8.95

High Voltage Multiplier Probe for Model 808A. Extends range of VTVM to 30,000 volts.



MODEL 8873A • TV SERVISHOP

Never before has here been a single instrument Combination to match this!

- **Cathode Ray Tube Tester**
- **Cathode Ray Tube Reactivator**
- **Tube Tester**
- **Vacuum Tube Voltmeter**
- **AM Signal Generator**
- **FM Signal Generator**
- **AF Signal Generator**

This unit includes an up-to-date tube tester for testing and rejuvenating Cathode Ray Tubes as well as testing all modern, miniature, noval base and sub-miniature tubes. Uses the speedy Double Rollindex Tube Chart. A complete 17 range VTVM with exceptionally high input impedance (25 megohms). Check AC and DC volts with negligible loading of circuit. Accuracy ±3% DC, ±5% AC. Measures ohms from .2 to 1000 megohms. Includes High-Voltage Probe. The Signal Generator is a fixed frequency AM, FM generator and Audio Oscillator.
Advanced engineering results in the fine performance of the Model 808A combination Tube Tester-Reactivator and VTVM with the Model 730 AF-AM-FM Signaligner.

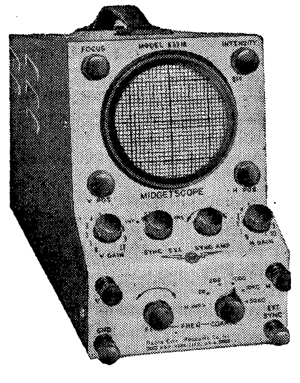
MODEL 8873A—Complete with tubes, batteries, leads, etc., in beautifully finished oak portable case. Size 16½" x 12¾" x 5¼. Weight 18 lbs.……

$\$139^{95}$ NET

RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

TEST EQUIPMENT



MODEL 533M • MIDGETSCOPE

This 3" scope packs a high sensitivity, wide band response instrument within its tiny light weight frame.

FEATURES:

- Designed for attractive appearance.
- Extremely light in weight and small in size.
- Masterfully engineered for top performance.
- All controls on front panel.
- Quality—Dependability—Accuracy—Economy.
- Operates in either horizontal or vertical position.
- Cathode Ray Tube is tilted at best angle for viewing.
- Shielded CRT with protective bezel and graph screen.
- Perfect for TV Servicing in the shop or house.

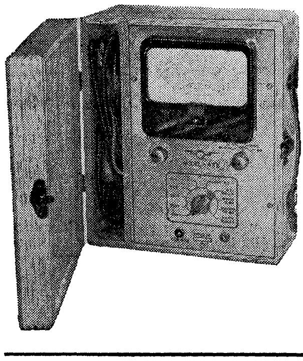
THE MIGHTY MIDGET WEIGHS ONLY 9 POUNDS. Here is a truly miniaturized professional oscilloscope for convenience without loss of performance. A new concept in electronic oscilloscopes.

CHECK THIS PERFORMANCE:

SENSITIVITY: Vertical—20 millivolts (.020 volts for 1" rms deflection on CRT face). Horizontal— .6 volts.
FREQUENCY RESPONSE: 2 db from 20 cycles to 180 kilocycles. Excellent transient response.
PUSH-PULL DEFLECTION: For undistorted response—eliminates parallax. Full vertical and horizontal expansion of trace.
INPUT IMPEDANCE: Vertical—.5 megohms shunted by 50 mmf. Horizontal—.5 megohms shunted by 70 mmf.
TUBE COMPLEMENT: 12AT7, 12AU7, 12AX7, 6J6, 117Z6, 3MP1 CRT.

In metal case with leather handle — Etched panel — Smart brushed aluminum face — Fuse protected — for 105-125 volt, 60 cycle AC operation.

MODEL 533M — complete, ready to operate. Size: 11¾" x 7¾" x 5⅛".......... $\$99^{50}$ ET



MODEL 453 • NEW MASTER MULTITESTER

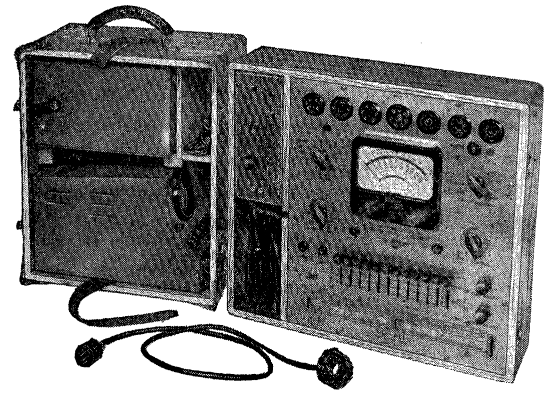
- ***20,000 OHMS PER VOLT MULTITESTER***
- ***400 MEGACYCLES ON HIGH FREQUENCY WITH H.F. PROBE INCLUDED***
- ***25,000 VOLTS WITH SAFETY-HIGH VOLTAGE PROBE INCLUDED***

A brilliant new completely self contained unit. The model 453 was designed for direct metering—eliminates warm-up time, grounding, etc. Assures dependable measurements for TV, FM and AM. Included are regular test leads, high-voltage multiplier probe and high frequency probe.

RANGES:

DC VOLTS: 0-2.5-10-50-250-500-1000-5000-25,000 at 20,000 ohms per volt.
AC VOLTS: 0-2.5-10-50-250-500-1000 volts.
DC MICROAMPS: 0-100
DC MILLIAMPS: 0-10-100-500
OHMS: 0-2-20 Meg.
DECIBELS: —12 to +3 to 15, 14 to 29, 28 to 43, 34 to 49, 40 to 55

Multiplier and shunts selected within 1% accuracy. Handsome—with deeply etched brushed aluminum panel mounted in a sturdy hinged cover oak case with compartment for leads. Size: 10¼" x 11" x 4". Wt. 6¼ lbs. Complete, ready to operate. A terrific instrument at.......... $\$49^{50}$ NET



SERIES 8020 • TV SERVISHOP

The Portable UHF-VHF TV and FM Service Shop

A long time coming—worth waiting for! This complete Television and FM service outfit can go with you to the receiver—or use the units individually in your shop or home.

Check, test and align the set from antenna to picture tube or speaker. All the instruments for necessary measurements right at your fingertips. The Series 8020 Servishop includes:

1. Model 750—The "DO-ALL" TV Signal Generator—UHF-VHF
2. Model 808A—The "DO-ALL" Tube and Set Tester (with Hi-volt probe)
3. Model 533M—The Midgetscope

IN ONE PRACTICAL PORTABLE CASE—Of finely finished natural oak with a compartment for tools, tubes, leads, etc. Size: 15¾"x13-5/16"x11". Wt. 41 lbs. approx.) SERIES 8000—complete, ready to operate.......... $\$310^{00}$ NET

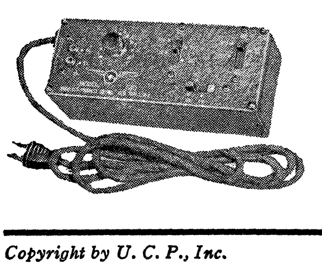
AM - FM - TV SERVISHOP
SERIES 8023

Same as Series 8020 — Includes Models 750-808A (with hi-volt probe) — 533M

MODEL 730—SIGNALIGNER—AF-AM (RF)-FM Signal Generator. **For quickly and easily aligning and checking all circuits in AM and FM receivers. Fits snugly into portable case.**

SERIES 8023—complete, ready to operate.......... $\$341^{00}$ NET

MODEL 730 • UNIVERSAL SIGNALIGNER • AF-AM(RF)-FM SIGNAL GENERATOR

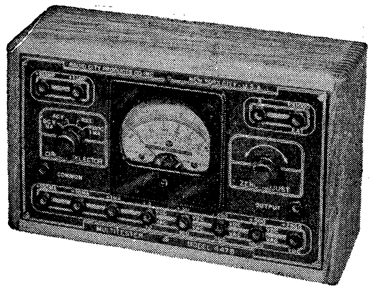


ACCURACY - SPEED - STABILITY! Simplicity, speed and accuracy is accomplished by fixed frequency points at which circuits are calibrated. BROADCAST BAND ALIGNMENT is provided by fixed frequencies of 1500 KC and 550 KC. Intermediate Frequencies of 456 KC and 465 KC are also supplied. Calibration provides for alignment of 460 KC IF systems. FM BAND ALIGNMENT is provided by fixed frequencies at 88 MC and 108 MC which are at the ends of the band. Fixed frequencies of 10.7 MC and 9.1 MC provide for IF alignment. The FM section is frequency modulated for use with ratio detectors. RF frequency deviation is 500 KC. AUDIO FREQUENCY MODULATION is provided for AM at 400 cycles. A separate audio output of 400 cycles is also provided. Calibrated to be accurate within 1%. Suitable trimmers permit recalibration. Perfect operation from either AC and DC lines with equally high accuracy and stability. Entirely safe as the chassis and case are completely isolated from the line. Attenuator provides smooth control from high signal level to a high degree of attenuation.

Complete with tubes, shielded output cable, line cord and plug, ready to use. Attractively finished panel and case. Size: 7"x2¼"x2¾". Wt. 2 lbs. MODEL 730—complete, ready to operate.......... $\$32^{95}$ NET

RADIO CITY PRODUCTS CO., Inc.
NEW YORK 1, N. Y.
TEST EQUIPMENT

MODELS 447B and 447BP • WORLD FAMOUS 447 AC-DC MULTITESTER



These units known and used throughout the world are in a class with other makes of testers that sell for considerably more.

The exceptional value of the 447 series is made possible by the tremendous quantities produced. The resulting very low price and excellent performance characteristics are responsible for its great popularity.

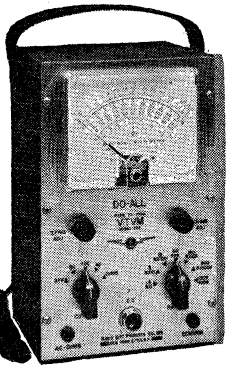
A 3" D'Arsonval meter is used, having an accuracy of 2%. Accuracy of AC measurements are improved by use of a new copper oxide rectifier.

DC VOLTMETER: 0-5-50-250-500-2500 volts
AC VOLTMETER: 0-10-100-500-1000 volts
OUTPUT VOLTMETER: 0-10-100-500-1000 volts
DC MILLIAMETER: 0-10-100-1000 MA
DC AMMETER: 0-1-10 Amperes
OHMMETER: 0-10,000 Ohms, 0-1-10 Megohms Ext.
DECIBEL METER: —8 to +55 decibel

MODEL 447B—Open face instrument supplied in hardwood case. Size 5"x 8½"x3". Wt. 21 oz. Complete with batteries, ready to operate..........NET $17.95

MODEL 447BP—Portable type supplied in hardwood case with carrying handle, cover and test leads. Size: 6½" x 8½" x 4½. Wt. 24 oz. Complete with batteries, ready to operate..........NET $21.95

MODEL 655 • "DO-ALL" PEAK-TO-PEAK VTVM



The RCP Model 655 is an ingenious new Peak-To-Peak VTVM of laboratory quality priced for the serviceman's pocket.

It provides for accurate measurements of complex waveshapes so necessary for TV service and industrial needs. Peak-To-Peak and RMS measurements can be read directly and simultaneously for the analysis of wave-forms in video, syncs. and deflection circuits.

Serves a variety of industrial applications in the service of vibrator power supplies, AC Generators and all equipment utilizing complex waves.

FEATURES:

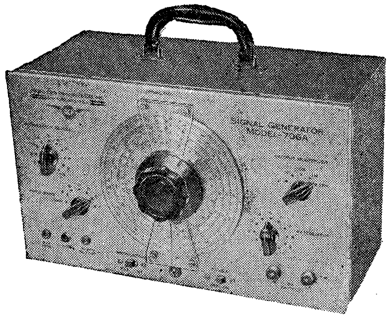
- PEAK-TO-PEAK AC measurements of from .2 V to 2000 V on 7 ranges.
- AC RMS measurements of .1 V to 1500 V on 7 ranges.
- DC measurements of from .02 V to 1500 V on 7 ranges.
- RESISTANCE measurements of from .2 ohms to 1000 Megohms on 7 ranges.

Performance comparable to this instrument can be found only in much higher priced instruments. Of high impedance design, the Model 655 makes use of an electronic balanced bridge-type push-pull circuit and peak-to-peak rectification. The result is an absence of circuit loading, waveform error or frequency distortion.

A handsome looking unit has a brushed aluminum panel, etched for durability and uses a smart new plastic meter. Comes complete with our new "RCP SOLDERLESS" TEST LEADS for operation on 105 to 130 V AC.

Size: 10" x 6" x 5". Weight: 7 lbs. 12 oz. ....NET $59.50

MODEL 706A • "WIDE RANGE" SIGNAL GENERATOR



This new signal generator is the finest performer in its class. For equivalent performance the Model 706A should be compared only with other signal generators selling from $90 to $125. It provides continuous coverage from 150 KC to 220 MC in 8 ranges. Six FUNDAMENTAL ranges cover up through 55 Megacycles.

ACCURACY: Within 1% of calibration adjustment.

STABILITY: And constancy of calibration is assured by special electron-coupled circuit design, permeability adjusted coils and air trimmer capacitors.

MODULATION: 400 cycle sine wave audio oscillator with modulation continously variable from 0% to 80%. Above 80% has no practical application. At this point tremendous distortion occurs in all signal generators. Unmodulated signal is available if desired.

SHIELDING: Thorough shielding of all critical circuits and components either individually or in compartment or both. This includes oscillator tube, coil assembly, attenuator, switching circuit. Transformer is electrostatically shielded.

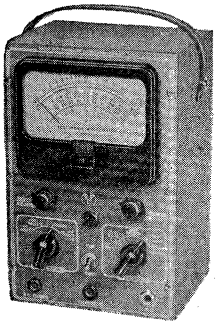
ATTENUATION: Ladder type step attenuator consisting of a multiplier and fine attenuator control.

AUDIO OSCILLATOR: 400 cycles at 50 ohms output impedance is available for external use—terminals on panel.

Eight scales are clearly calibrated—continuous reading from 150 kilocycles to 220 megacycles. Planetary drive gives vernier tuning with no backlash. Tube complement—6BA6, 6SJ7, 6X4.

MODEL 706A—A high quality instrument in performance, construction and appearance. Size: 15"x9"x7". Wt. 14 lbs. Complete with output cable ready for operation on 105-130 volts, 60 cycles.......... $67.50 NET

MODEL 345 • SUPER VACUUM TUBE VOLTMETER



An exceptionally fine 17 range instrument which employs an electronic balanced bridge type push-pull circuit. Draws negligible current from any circuit because of its input impedance of 25 megohms. Accuracy ±3% DC ±5% AC. It is a VT Voltmeter for AC measurements as well as DC.

A discriminator alignment scale with zero center permits operation in both directions.

RANGES:

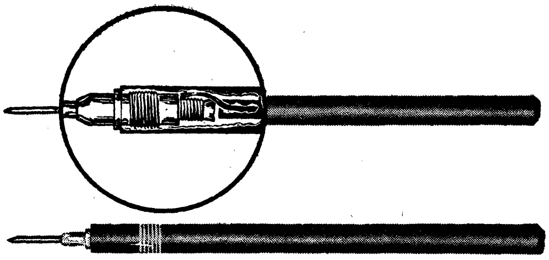
DC VOLTS: 0-5-25-100-250-1000.
AC VOLTS: 0-5-25-100-250-1000.
DB: —20 to 16, —6 to 30, 6 to 42, 14 to 50, 26 to 62.
OHMS: 0-1000-10,000.
MEGOHMS: 0-1-10-1000.

MODEL 345—Complete with isolation probe and leads for operation on 105-130 volts, 50-60 cycles. Attractively finished in steel panel and case. Size: 10"x6"x5". Weight: 8½ lbs.......... $47.50 NET

"RCP SOLDERLESS" TEST PROD No. 950

A completely new patented solderless design. All internal. Assures a better contact electrically and mechanically. Will not cut the wire. Neat smart 5½" pencil type prod permits entering into tight places. Handles are scived to minimize slippage. No more loose caps, lost caps or broken leads. (When ordering be sure to specify color.)

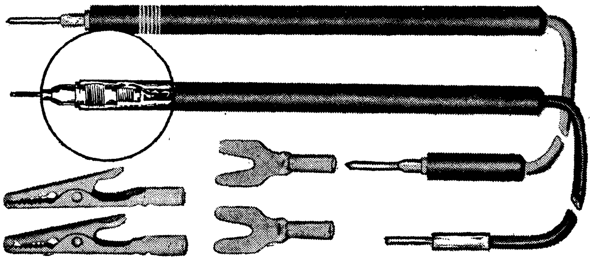
No. 950—Red or Black .... **$0.27 each**



"RCP SOLDERLESS" TEST LEADS No. 921

The finest solderless test leads obtainable. Made with the new "RCP Solderless" test prod (No. 950 described above) which assures a neat, solid, dependable internal connection. Test leads are 48" long, pliable, kinkless 41 strand #18AWG wire insulated for 6000 volts.

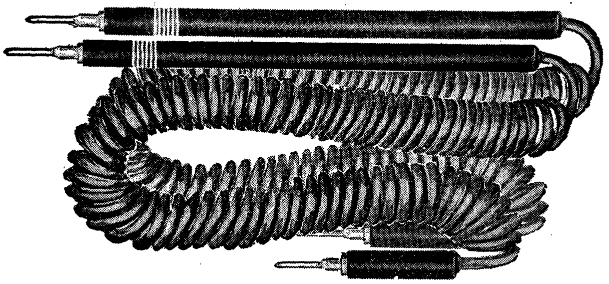
No. 921	**Standard Phone Tip**	**$1.08 pr.**
No. 921S	**Standard Spade Lug**	**1.08 pr.**
No. 921A	**Standard Alligator Clip**	**1.20 pr.**
No. 923	**Insulated Phone Tip**	**$1.41 pr.**
No. 923S	**Insulated Spade Lug**	**1.41 pr.**
No. 923A	**Insulated Alligator Clip**	**1.53 pr.**



RETRACTO-LEAD No. 930

A self coiling retractable test lead that will not lose tension. Made with a fine quality heavily insulated stranded wire that has a built-in permanent curl. The prod is the new "RCP Solderless." The Retracto Lead is needed on every test bench and lab. Extend it for use and then let it pull back and coil itself out of the way. Neat—clean—ready for instant use again. Eliminates tangled lines—shorts—messy benches. Extended leads are 7½ feet long. Phnoe tips are insulated.

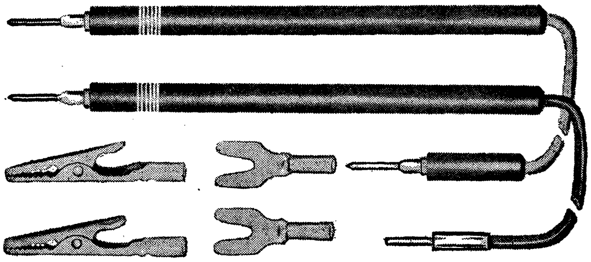
No. 930 .... **$2.95 Pair**



TEST LEAD No. 901

High quality test leads for professional use under all working conditions. Materials are workmanship are tops assuring dependability and long life. Slim, good looking 5½" pencil type prod handles are firmly soldered to well insulated, kinkless, stranded wire. Leads are 48" long.

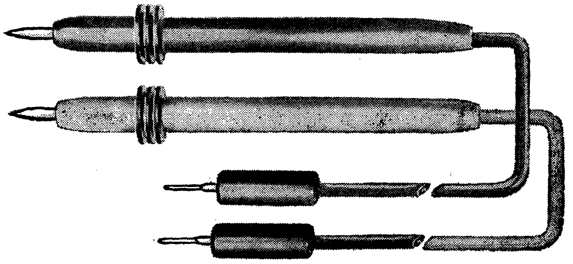
No. 901	**Standard Phone Tip**	**$ .96 pr.**
No. 901S	**Standard Spade Lug**	**.96 pr.**
No. 901A	**Standard Alligator Clip**	**1.08 pr.**
No. 903	**Insulated Phone Tip**	**$1.29 pr.**
No. 903S	**Insulated Spade Lug**	**1.29 pr.**
No. 903A	**Insulated Alligator Clip**	**1.41 pr.**



HEAVY DUTY
HIGH VOLTAGE TEST LEADS No. 910

"Scientific" High Voltage Test Leads are designed for use up to 30,000 volts with a good safety factor. Attractive in appearance, they incorporate the highest quality materials and construction. Features include—7" heavy duty prod—heavy duty hardened steel prod points—triple barrier leakage guard—heavy duty kinkless leads 54" long with negligible leakage.

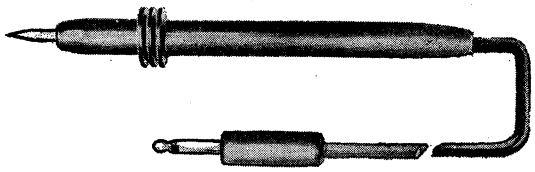
No. 910 .... **$3.60 Pair**



HIGH-VOLTAGE MULTIPLIER PROBE

A fine, well made hi-voltage multiplier probe to extend the range of our units to 30,000 volts. Absolutely safe for handling high voltage. Streamlined tip is convenient for getting into "tight" places.

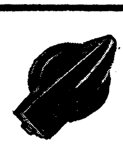
HVMP-1 —For use with Models 808, 654, 345	**$8.95**
HVMP-20—For use with Models 453 and 488A	**8.95**



BAR KNOB

A well designed smart looking bar knob. Will not crack or split. Size: 1¼". Available in red or black.

No. 990 Bk—Black	**10c**
No. 990 Rd.—Red	**10c**



Net

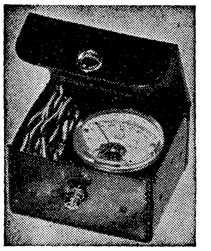
Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

APPLIANCE TEMPERATURE TESTERS

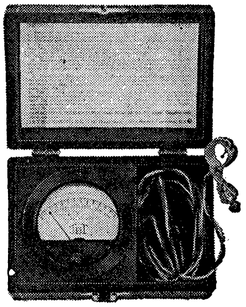
A NEW IDEA IN TESTERS — The need for scientific but sturdy portable test equipment in the appliance service field is met by this exclusive line. Here the user profits from J-B-T's wide experience in building field test sets for many well-known manufacturers of ranges, irons, refrigerators, deep freeze units, and similar equipment. All J-B-T testers include the principle of remote reading of temperature,—and temperature measures the real usefulness of the appliance. Although called appliance testers, these handy portable testers have found a multitude of uses for trouble-shooting, experimenting and research in industry and in laboratories.

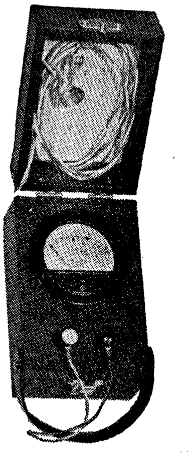
NEW



OVEN TESTERS

MODEL 23-JP-1. Latest addition to the widely-known family of J-B-T oven temperature testers is this modern and compact unit. Like the Models 32-JP-3 and 32-JP-4 described below, this indicating portable pyrometer is designed to save time and furnish reliable information in testing and setting thermostats on electric or gas ranges and other appliances by showing oven temperatures as they change. The same size of dial, 0-650°F., with 2⅜" scale arc reading, is used but covered by an all-plastic instrument front. The indicator is mounted on a black metal panel affixed inside a pocket-sized, black top-grain leather case 4½" x 2⅞" x 4¼" over hardware. Characteristic of more expensive pyrometers, the 23-JP-1 is automatically compensated for ambient temperature. Thus the tester eliminates calculations, avoids likelihood of serious error as temperatures change inside the instrument itself, and gives foolproof direct readings. Supplied with attached SA-116 5½' calibrated thermocouple, clip, and convection shield........**$23.50**

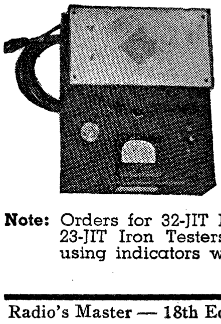




MODEL 32-JP-3. This sturdy, fast reading portable is by far the most widely used oven tester in the country. The rigid outer carrying case 6" x 3⅞" x 3¾" is covered in black leatherette; the glass-covered indicator fits in a 3¼" flanged metal case. The dial shows 0-650°F. in 10° divisions readable to 2½°. Exceptionally fast, continuous response. Automatic compensation for ambient temperature is valuable feature whether the tester is used for service work, sales demonstrations, or inspection. More details on the 32-JP-3 are available in Bulletin JP-103. Price includes attached SA-116 5½' calibrated thermocouple, clip for attaching to grill, and convection shield for steady readings. **$25.05**

MODEL 32-JP-4. Companion tester to the 32-JP-3 with all the features of that tester, plus a leather carrying strap, and binding posts for quick attachment and interchanging of various thermocouples listed on this page, to check irons, washers, waffle-bakers, toasters, roasters, clothes dryers, etc. Range, 0-650°F; black leatherette case 6" x 3⅞" x 3¾". More details on the 32-JP-4 are available in Bulletin JP-104. Price includes SA-116 5½' calibrated thermocouple, clip and convection shield. **$26.15**

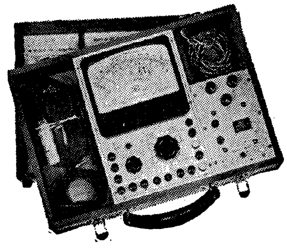
IRON TESTER



MODEL 32-JIT. Self-contained bench type tester; checks all makes of irons; measures thermostat temperatures; and shows open or short circuits. Automatically compensated for room temperature. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. Black metal base; overall size 10" x 12" x 5½", scale 0—650°F, 15 amp. fuse, 6' cord, 110-volt, 50-60 cycles........**$31.65**

Note: Orders for 32-JIT Iron Testers are occasionally filled with 23-JIT Iron Testers. Identical with 32-JIT illustrated, but using indicators with all-plastic front.

ALL-PURPOSE TESTER



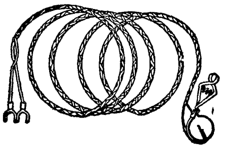
MODEL 61-JRT. This 9 - in - 1 tester speeds accurate temperature adjustment and current analysis of ranges, refrigerators, etc. Rapidly reads four cold zones, —100° F. to +80° F. up to 14' distant; two heat zones 0-600° F. up to 5½' distant; one voltage range 0-300 AC; and with transformer, two current ranges, 0-30 and 0-60 amps, AC. Sturdy, polished walnut case 15½" x 10$\frac{3}{16}$" x 4¾" with handle and slip hinges. Two-color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flash-light cell, replaceable in the field. Temperature scale accuracy ±2% of full scale. Rectified AC readings ±5%. Accessories listed below may be added for testing irons, grills, roasters, washers, etc. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, necessary electrical leads, and AS-TR-2 built-in transformer........**$107.25**

For more details, see Bulletin JRT-349.

MODEL 61-JRT (LESS TRANSFORMER). Same unit, same scales, except does not read in amperes; AS-TR-2 transformer assembly omitted **$93.50**

THERMOCOUPLES

(See next page for Resistance Bulbs and Transformers)



SA-116 with SHIELD and CLIP. Standard flexible No. 22 gauge iron constantan, asbestos insulated, 5½', with attachment clip and convection shield as normally supplied with 23-JP-1, 32-JP-1, 32-JP-2, 32-JP-3, 32-JP-4, 60-JRT and 61-JRT Testers. (See SA-199 for extra quality, glass insulated type). **SA-116**........**$1.80**

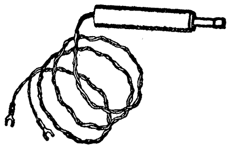
SA-170 (REPLACEMENT THERMOCOUPLE for IRON TESTERS 32-JIT and IT-1). Thermocouple and lead, including aluminum plate and special tip, quickly installed in the field........**$2.10**

SA-175 (PLAIN TIP). For roasters, waffle irons, etc., 5½' iron constantan flexible No. 22 gauge, asbestos insulated, with small ball tip; used where clip and shield of SA-116 not suitable; for Models 32-JP-2, 32-JP-4, 60-JRT, and 61-JRT........**$1.45**

SA-176 (for TOASTERS, etc.) 5½' iron constantan No. 22 gauge asbestos insulated, with special disc to collect heat; easily attached to 32-JP-2 and 32-JP-4 oven testers, also 60-JRT and 61-JRT **$2.55**

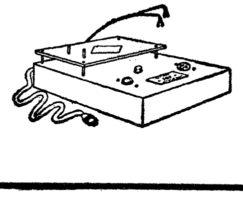
SA-188 (for AUTOMATIC WASHER TEMPERATURES, etc.) $\frac{3}{16}$" diameter copper tube, 4" long, encloses thermocouple for insertion in pipe or sample of water. Has 6' leads for attachment to 32-JP-2 and 32-JP-4 oven testers, also 60-JRT and 61-JRT........**$3.85**

SA-199 with SHIELD and CLIP. Same as SA-116 above, except duplex, non-fraying glass braid construction; diameter .115"; recommended for frequent use with these testers at temperatures above 400°F. **$2.25**



SA-300 (for SURFACE READINGS). Spring-type iron constantan in Transite tip with handle and 5' No. 22 gauge lead for extremely rapid heat readings; for attachment to 32-JP-2, 32-JP-4, 60-JRT and 61-JRT appliance testers **$5.50**

SA-301 (REPLACEMENT TIP FOR SA-300). Transite tip and thermal element only **$2.75**



ACCESSORY IRON TESTER, MODEL IT-1. This attachment is identical with the 32-JIT, except there is no meter. It is easily connected to Models 32-JP-2, 32-JP-4, 60-JRT and 61-JRT. Shows open circuits and shorts, checks sole plate temperatures and thermostats on all types of irons **$16.25**

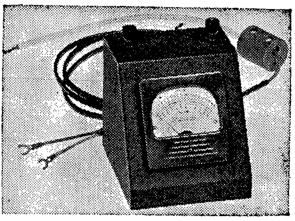
Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

TEMPERATURE INDICATORS

WHERE TO USE: To determine heat rise of motors, transformers and coils; for laboratory furnaces, inspection set-ups, for remote indication of infra-red and other oven temperatures; and to check temperatures in industrial processes such as heat treating and annealing. When used with selector switch, permits centralized reading of one to ten thermocouples, as in Diesel exhaust manifold applications.

MODEL 32-J



MODEL 32-J PYROMETER IN SN-3 STAND. Mounted in sloping front black metal stand, 4¼" high x 4⅜" deep x 4⅛" wide. Compensated for ambient temperature. Medium resistance system, damped for quick reading on 2⅜" scale, assures ruggedness and pointer stability. To retain the ±2% accuracy of the installation: use only the type and resistance of thermocouple and lead which are provided; do not cut extra lead—coil it—change in length changes calibration. A protection tube is not generally required. Many users find it convenient to keep an extra couple and lead on hand.

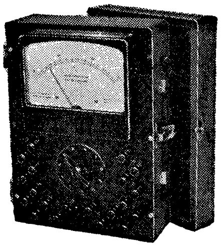
MODEL 32-J IN SN-3 STAND

0°— 650° F— 350° C, includes SA-91 thermocouple, SA-84 lead, and CB-1 connector block........$30.25
0°—1200° F— 650° C, includes SA-87, SA-82, and CB-1........ 30.25
0°—2000° F—1100° C, includes SA-87, SA-82, and CB-1........ 30.25

MODEL 32-J IN SN-5 STAND (not illustrated). With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations.

0°—650° F with SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-86 flexible lead and thermocouple........$34.10

MODEL 60-JPS



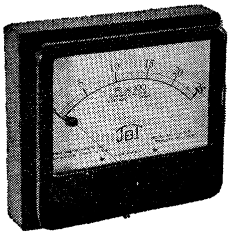
MODEL 60-JPS. This portable makes it easy to **know temperatures at one to ten** locations. Excellent for study of heat in various parts of the same equipment, or in a battery of units. Knife-edge pointer, 5.6" scale. Heavy-duty thermocouple switch has average contact resistance of .00075 ohms or less. Automatically compensated for ambient temperature, indoors or outdoors. To retain accuracy of 1% full scale, use leads and thermocouples equal to resistance and e.m.f.vs-temperature characteristics for which instrument is calibrated. Medium resistance system assures portability. Housed in natural-finish wood case 11⅜" x 8⅝" x 4⅝" over rubber feet. A "must" for inspection, maintenance, and engineering.

60-JPS—0°—600° F with SA-86, 7' thermocouple and lead for small apertures........$101.85
60-JPS—0°—1200° F with SA-88, SA-82, and CB-1........ 104.50
60-JPS—0°—2000° F with SA-88, SA-82, and CB-1........ 104.50

60-JP—For one thermocouple only; furnished with thermocouple and lead same as 60-JPS, but without selector switch.
0°— 600° F, with SA-86........$74.35
60-JP—0°—1200° F, with SA-88, SA-82, and CB-1........ 77.00
60-JP—0°—2000° F, with SA-88, SA-82, and CB-1........ 77.00

Note: When ordering additional thermocouples, specify couples and leads as above. Centigrade equivalent scales available on order.

MODEL 70-J

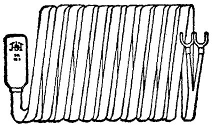


MODEL 70-J PYROMETER, for accurate reading at a distance, has full 6" scale and spade pointer, with accuracy of 1% of total scale deflection. Automatically compensated for ambient temperature. Molded case mounted in metal protecting shell 7⅜" x 8⅛" x 1½". Connections through bottom of case for wall or front-of-board mounting. When ordering, specify which standard scale range: 0°—600° F for 1938 std. I-C; 0°—1200° F for C-A; 0°—2000° F for C-A thermocouples.

PRICE, including 24" thermocouple and 26' lead........$66.00

Note: Centigrade equivalent scales available on order.

RESISTANCE BULBS (FOR COLD TESTING)



SA-142. Bulb with 14' polyethylene lead, for use only with Model 60-JRT; calibration is not interchangeable with SA-162; has no embossed number........$5.50

SA-162. Bulb with 14' polyethylene lead, for use only with Models 50-50 and 61-JRT; identified by embossed part number........$5.50

CL-90 CLAMP. Metal clamp for holding SA-142 and SA-162 resistance bulbs in contact with surfaces up to ¼"........$0.28

TRANSFORMERS

AS-TR-2. Attachment for compartment of 61-JRT all-purpose tester, completely housed, with jumper lead and panel; reads 30 and 60 AC amp. scales on tester........$16.50

AS-TR-3. Attachment for increasing usefulness of 60-JRT all-purpose tester. Includes side rails for attaching inside compartment; fully housed. Reads 30 and 60 AC amp. by dividing volt scale by 10 or 5........$18.15

TEMPERATURE ACCESSORIES

LEAD WIRES. To bring the reference junction within the pyrometer, compensating or extension lead wires should always be used. See the instrument dial for (1) the kind of lead and (2) combined resistance of lead and thermocouple. Standard leads include:

SA-82 6' compensating lead for chromel-alumel couples; duplex, stranded; asbestos-insulated, cotton-braid impregnated with moisture-proof and flame-proof compound; terminals at instrument end; other end tinned for connector block........$1.55

SA-83 26' compensating lead for chromel-alumel as above $4.85

SA-84 6' extension lead for iron-constantan, 1938 calibration; duplex; moisture-proof and flame-proof; prepared as above $1.55

SA-85 26' extension lead for iron-constantăn, 1938 calibration; similar to above........$4.85

SA-86 7' iron-constantan thermocouple and lead combined; twisted pair No. 20 Ga., asbestos-insulated—for intermittent use on 650° F scales; terminals at meter end; other end welded. (Resistance not interchangeable with SA-84 or SA-85)........$1.85

THERMOCOUPLES. For pyrometers and leads above, J-B-T thermocouples are carefully selected, standardized, and tested.

SA-87 12" No. 14 Ga. chromel-alumel, 2-hole ceramic beads, fits 5/16" hole; welded tip........$3.10

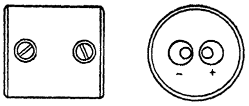
SA-88 same except 24" No. 14 Ga........$3.85

SA-89 12" No. 8 Ga. chromel-alumel, 2-hole ceramic beads, fits 7/16" hole; welded tip........$3.10

SA-90 same except 24" No. 8 Ga........$3.85

SA-91 12" No. 14 Ga. iron-constantan, 1938 calibration; 2-hole ceramic beads, fits 5/16" hole; welded tip........$2.60

Flexible Thermocouple, 7' length, see SA-86 lead wire.



CONNECTOR BLOCK Model CB-1. Lava connector block, withstands high temperatures, accommodates all thermocouples up to No. 6 Ga. Heavy brass connectors keep contact resistance low. Can be used independent of connector head........$1.65

Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

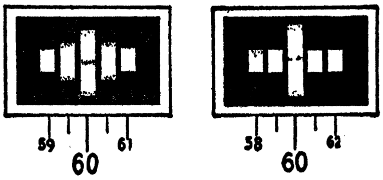
VIBRATING REED FREQUENCY METERS (PATENTED)

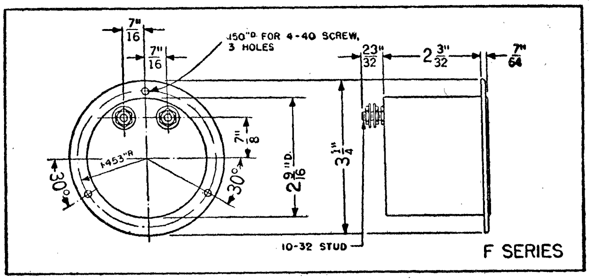
J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, and television service, on engine generator sets, in laboratories, in many types of electronic equipment, on panel and control boards in central stations and industrial plants—wherever constant or known frequency is important to efficient operation of equipment. More than ten years of continuous experience covering many thousands of these instruments are your assurance of quality for both commercial and defense applications.

The response patterns differ with the increments of frequency between reeds. For example, at 60 cycles, half-cycle steps give the broad response shown below at left, whereas full cycle steps bring the sharp response at right.

The patented, simplified design used in the J-B-T meter operates on AC or interrupted DC. The instrument consists of a case, base, dial and central mounting frame, with a series of spring steel reeds screwed to a reed mounting bar, individual driving coil surrounding each bank of reeds, permanent magnet, series resistor and terminal studs.

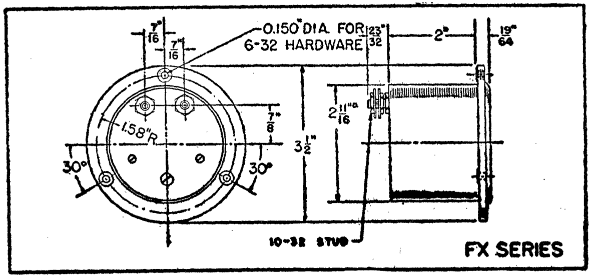
Each reed is adjusted to respond by resonance to but one frequency. As the alternating current (or interrupted direct current) excites the driving coil, the one reed "in tune" with the frequency in the coils will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. Frequency of the current is read on the graduated face of the instrument.





Above: Models 30-F, 31-F, 33-F, 34-F; 3¼" Metal Case

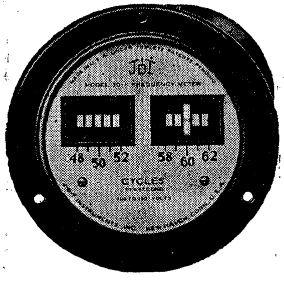
Below: Models 30-FX, 31-FX, 33-FX, and 34-FX; Molded Case Meets Mounting Dimensions of JAN-I-6; ASAC39.1-1951; and MIL-M-6A (Type MR35)



ADVANTAGES: Guaranteed accuracy at reference temperature of 77°F is ±0.3% or better of the frequency being measured, unless otherwise stated. High fatigue safety factor for continuous operation. Temperature compensations are not required as temperature coefficient of reeds is only approximately 75 parts per million per degree F., negative.

All meters are permanently calibrated at the factory and do not require subsequent adjustment. J-B-T reeds have relatively high Q characteristics, an especially desirable factor in electronic circuits. Accuracy is not affected by wave form or external magnetic fields. Built with no pivoted parts and with lock washers at every critical point, these rugged meters can take rougher treatment than many instruments.

CAUTION: If a meter plugged in on a 60 cycle AC power line does not indicate a frequency of exactly 60 cycles, trust the meter! Power supply may momentarily be off-frequency due to changing load conditions beyond the control of the Utility. All J-B-T Vibrating Reed Frequency Meters are accurately calibrated at the factory, entirely independent of frequency of power supply. Production and inspection equipment are checked regularly against National Bureau of Standard frequency signals.



MODEL 30-F
(Operating at 60 cy.)

MODEL 30-F

Range: 48-52 and 58-62 cycles. Double window for ease of reading frequency in either range. Often specified for export. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Accuracy ±0.3% at reference temperature. Flush panel mounting.

30-F, 48-52 and 58-62 cy., 3¼" Metal Case **$27.50**

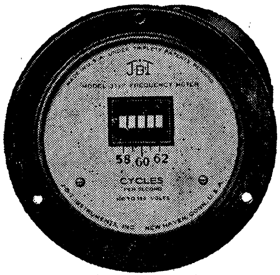
30-FX, 48-52 and 58-62 cy., 3½" Molded Case, JAN-I-6 mtg. **$27.50**

MODEL 31-F

Used in standby power equipment. Handy for accurately measuring frequency of power source. Five reeds, 58-62 cycles, 100-130 volts. Other characteristics same as Model 30-F.

31-F, 58-62 cy., 3¼" Metal Case **$23.65**

31-FX, 58-62 cy., 3½" Molded Case, JAN-I-6 mtg. **$23.65**



MODEL 31-F

JBT
56 58 60 62 64
CYCLES

MODEL 34-FX

MODEL 34-FX

Used where a broader frequency band is desirable. Nine reeds, 56-64 cycles, or in half-cycle steps (accuracy ±0.2%) 58-62 cycles. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Flush panel mounting.

34-F, 56-64 cy., 3¼" Metal Case **$27.25**

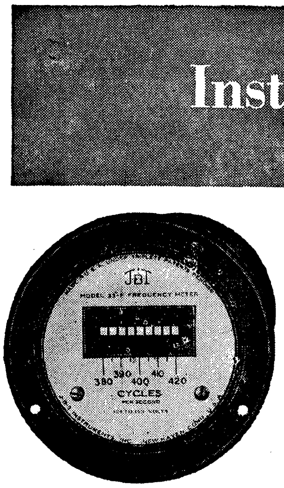
34-FX, 56-64 cy., 3½" Molded Case, JAN-I-6 mtg. **$27.25**

34-F-Z, 58-62 cy., 3¼" Metal Case **$28.90**

34-FX-Z, 58-62 cy., 3½" Molded Case, JAN-I-6 mtg. **$28.90**

Instruments J-B-T Testers

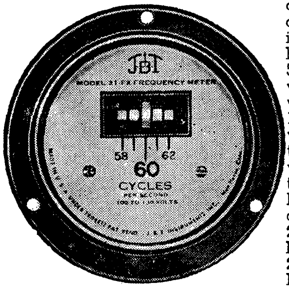
J-B-T INSTRUMENTS, INC.


JBT
MODEL 33-F FREQUENCY METER
380
390
400
410
420
CYCLES
PER SECOND

MODEL 33-F

400-cycle. Used for measuring frequency of high-cycle power sources, including new heavy aircraft. Accuracy ±0.3% at reference temperature. Nine reeds, 380 to 420-cycle range. 100-130 volts; 70 ohms per volt; 1.75 watts power consumption. Flush panel mounting.

33-F, 380-420 cy., 3¼" Metal Case	**$34.10**
33-FX, 380-420 cy., 3½" Molded Case, JAN-I-6 mtg.	**$34.10**

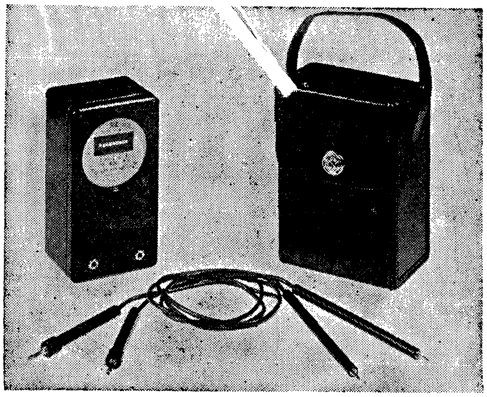

JBT
MODEL 21-FX FREQUENCY METER
58
60
62
CYCLES
PER SECOND
100 TO 130 VOLTS

MODEL 21-FX

Matches other 2½" panel instruments. Meets ASA C39.1-1951 and MIL-M-6A (Type MR25) in depth of case as well as mounting dimensions and mounting hardware. Weighs only 4½ ozs.; 5 reeds; 58-62 cycles; 100-130 volts; 190 ohms per volt; 0.6 watt power consumption. Also 116 to 124 cy.; 160 ohms per volt; 0.7 watt power consumption. 390 to 410 cy.; 85 ohms per volt; 1.3 watts power consumption. Flush panel mounting, see Print MD-20. 400 cy. type also available 380-420 cy.

21-FX, 58-62 cy., 2-11/16" Molded Case	**$22.55**
21-FX, 116-124 cy., 2-11/16" Molded Case	**$25.30**
21-FX, 390-410 cy., 2-11/16" Molded Case	**$27.50**

PORTABLE FREQUENCY TESTERS



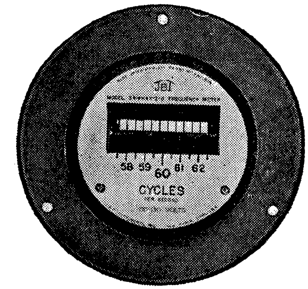
MODEL 33-FP-9L. Handy, compact, portable instrument of exceptional accuracy even under poor wave-form conditions, fluctuating voltage or external magnetic disturbances. Meets exacting test requirements of aviation, signal and communication equipment. Housed in sturdy molded case 5⅞" x 3⅛" x 2⅝" with leather carrying case 6 3/32" x 4¼" x 2¾". 4' leads are supplied complete with sharp 5" insulated test picks and banana plugs. Electrical characteristics identical with 400 cycle 33-F. Model 34-FP-9L electrical characteristics are identical with 60-cycle 34-FX.

33-FP-9L, 380-420 cy., 100-130 volts, nine reeds	**$47.60**
34-FP-9L, 56-64 cy., 100-130 volts, nine reeds	**$40.70**

NOTE ON METER VOLTAGE

J-B-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made only for the purpose of reading two or more voltages, not additional phases.

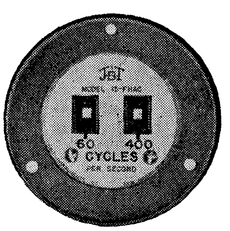
3½" SEALED METERS


JBT
58
59
60
61
62
CYCLES

FHXX TYPE METERS, sealed instrument, glass-to-metal construction, with solder terminals and detachable flange now supersede the FHX sealed meters (Print SK-24). While JAN-I-6 and MIL-M-6A (Type MR36) do not refer to frequency indicators, the FHXX series uses the front mounting dimensions, and meets or exceeds the sealing and electrical requirements including the 3000 volt breakdown. Mounting dimensions are shown below. Standard voltage is 100-130. Electrical characteristics and accuracy are the same as for corresponding models without the HXX designation. Every meter tested for 55,000 ft. altitude. While not regularly stocked, these meters are in production.

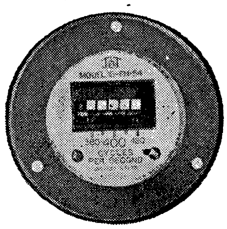
30-FHXX, 10 reeds, 48-52 cy. and 58-62 cy.	$34.30
31-FHXX, 5 reeds, 58-62 cy.	30.45
33-FHXX, 9 reeds, 380-420 cy.	40.90
34-FHXX, 9 reeds, 56-64 cy.	34.05
34-FHXX-11, 11 reeds, 55-65 cy.	36.25
34-FHXX-Z-11, illustrated, 11 reeds, 57.5-62.5 cy.	37.90

1½" SEALED METERS


JBT
MODEL 15-FHAC
60
400
CYCLES
PER SECOND

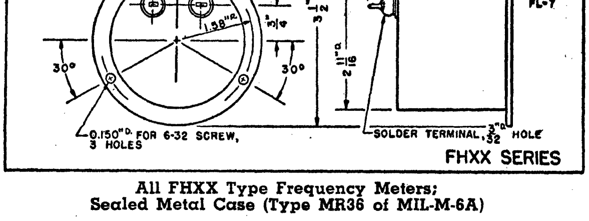
MODEL 15-FHAC. Now used extensively on audio-oscillators as the frequency standard, the model illustrated operates 2 reeds, 60 and 400 cycles, at approximately 8-10 volts for cathode follower circuit. Accuracy ±0.5% at 77°F. Steel case has black telephone finish; solder terminals. Barrel is 1½" diameter; 2.094" detachable flange covers glass-to-metal seal. See complete dimensions below.

15-FHAC	**$20.30**

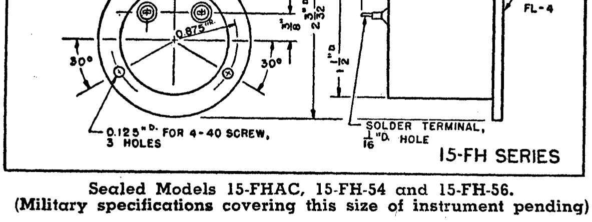

JBT
CYCLES
PER SECOND

15-FH-5 METERS. Use the same 1½" black metal case, glass-to-metal seal, and 2.094" detachable flange as the Model 15-FHAC. The 15-FH-5 series provides 5 reeds in a row for 100-130 volt operation. Used where size and weight are design considerations. 100% inspected for 55,000 ft. altitude. Standard meter, but not regularly stocked. See complete dimensions below.

15-FH-54, 5 reeds, 390-410 cy.	**$25.85**
15-FH-56, 5 reeds, 58-62 cy.	**21.45**


1/2"
1/2"
5/8"
2 1/4"
3/32"
DETACHABLE FLANGE FL-7
1.58"R.
3/4"
3 1/2"D.
2 11/16"D.
30°
30°
0.150"D. FOR 6-32 SCREW, 3 HOLES
SOLDER TERMINAL, 3/32"D. HOLE
FHXX SERIES

All FHXX Type Frequency Meters;
Sealed Metal Case (Type MR36 of MIL-M-6A)


3/8"
3/8"
3/8"
1 9/16"
1/8"
DETACHABLE FLANGE FL-4
0.875"R.
3/8"
2 3/32"D.
1 1/2"D.
30°
30°
0.125"D. FOR 4-40 SCREW, 3 HOLES
SOLDER TERMINAL, 1/16"D. HOLE
15-FH SERIES

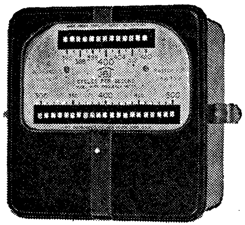
Sealed Models 15-FHAC, 15-FH-54 and 15-FH-56.
(Military specifications covering this size of instrument pending)

Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

ELAPSED TIME METERS AND NEW FREQUENCY METERS

Now 400-cycle Total Time Meters — 400-cycle Broad and Vernier Indicator



MODEL 41-FX. This 2-window instrument is extensively used for electronic and aircraft testing in commercial and military applications. The lower window shows a broad range of 300-500 cycles, with 21 reeds in 10-cycle steps. The upper window gives a vernier effect with 13 reeds indicating 380-420 cycles in 4-cycle steps, with 2-cycle increments in the critical range of 396-404 cycles. Housed in black molded case with flush front 4" x 4", and 2 29/32" deep behind panel over studs, the instrument blends well with other types of panel meters. Made for 100-130 volt operation. Also available with 4 studs for 200-240, 115, and 30 volts as used in aircraft analyzers. Full dimensions on drawing SK-38.

41-FX, 100-130 V **$120.00**
41-FX, triple voltage, without switch........ **135.00**

ELAPSED TIME METERS—60 Cycles

MODEL 31-EX. To record operating time of AC electrical and electronic equipment, this self-starting instrument registers in 1/10th hour steps to 9,999.9 hours, then automatically re-sets. Shows tenths in red numerals, all others in black. Black molded case per diagram below matches FX, 3½" frequency meters, and fully encloses all parts. J-B-T engineers recommend AC elapsed time meters for superior accuracy, especially where voltage or ambient temperatures vary widely. Popular for tube life, TV equipment, punch presses, conveyors, oil burners, maintenance schedules, etc.

31-EX, 60 cy., 110-125 volts **$15.95**
31-EX, 60 cy., 230 volt (not regularly stocked) **$17.05**

MODEL 31-ES. Same as 31-EX except black molded, square case 3" x 3", per print SK-34; 60 cy., 110-125 volts (not regularly stocked) **$17.05**

SEALED ELAPSED TIME METER—60 Cycles

MODEL 31-EHXX. Where rugged requirements make a completely sealed elapsed time meter desirable, this glass-to-metal construction, with flat glass front and 3½" diameter separable flange, often is specified. Heavy-duty solder terminals meet or exceed 3,000 volt breakdown test. Every instrument is inspected in a vacuum chamber. Overall dimensions and appearance match the FHXX series sealed frequency meters per drawing on preceding page. See print SK-53 for complete mounting data. The meter registers in 1/10 hour steps to 9,999.9 hours, then automatically re-sets. Tenths indicator is in red, all others in black.

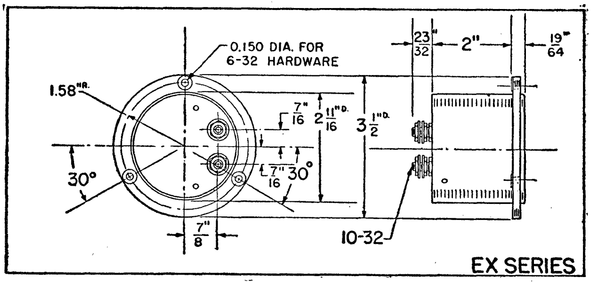
31-EHXX, 60 cy., 110-125 volts **$19.75**

NEW

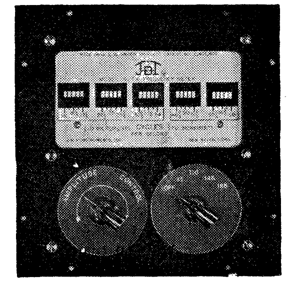
SEALED ELAPSED TIME METER—400 Cycles

MODEL 33-EHXX. The answer to the long-felt need for a stable 400-cycle elapsed time meter compact enough to fit in a 3½" flanged case, with all parts enclosed, is this new 400-cycle elapsed time meter. The instrument initially is being produced only in sealed construction, glass-to-metal, with separable flange, solder terminals, and flat glass front. External appearance matches FHXX series and Model 31-EHXX sealed, 60-cycle, elapsed time meter. A slightly larger case is used per drawing in the next column.

33-EHXX, 400 cy., 0-9,999.9 hours in 1/10 hour steps, 110-125 volts. Price on Request



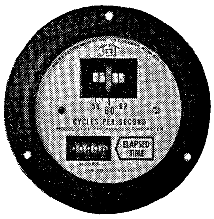
Model 31-EX Molded Case, meets type MR-35 flange dimensions of MIL-M-6A, also JAN-I-6 and ASA C39.1-1951



MODEL 61-FX. Telephone ringing circuits are among the frequencies checked regularly with this panel mounting, 25-reed, 5-window instrument. The first three bands cover 16 to 17-1/3 cycles, 24-1/3 to 25-2/3 cycles, and 32-2/3 to 34 cycles in 1/3 cycle steps. The last two bands show 48-2/3 to 51-1/3 cycles, and 65-1/3 to 68 cycles, with 2/3 cycle reeds. The selector switch provides taps for 85, 110, 145 and 165 volts. An amplitude control knob facilitates maximum reed vibration. Black bakelite front 6⅞" x 7⅛" x 3-1/16" deep behind panel. This instrument is typical of the specialized applications in panel and portable meters which J-B-T engineering and production know-how supply on special order.

61-FX (not regularly stocked), mounting to Print MD-37 .... **$149.50**

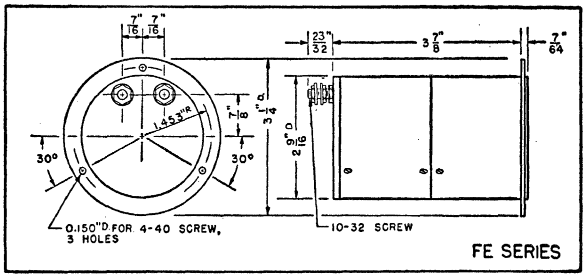
ELAPSED TIME AND FREQUENCY METERS



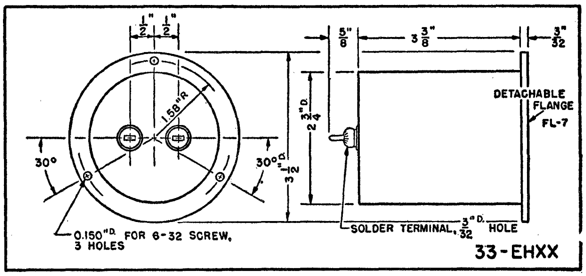
31-FE SERIES. To conserve panel space and centralize information, this panel instrument combines the elapsed time or running time meter with frequency reeds. It is used on motor generator sets and on electrical equipment where maintenance routine calls for periodic servicing. The J-B-T design, proved by years of field experience, uses a separate exciting coil for the reeds to achieve close control of reed amplitude and frequency. Reads 0-9,999.9 hours, and 58-62 cycles with 5 reeds, for 100-130 volt operation; self starting. Tenths shown in red, all other numerals in black. Black metal case with front mounting same as model 31-F. Other dimensions per drawing below. For variations having 7, 9, or 11 reeds, not regularly stocked. See revised print SK-45.

31-FE, 3¼" metal case **$33.00**

31-FEX-1, (per print SK-44—not regularly stocked) 3½" metal flange permanently attached **$34.10**

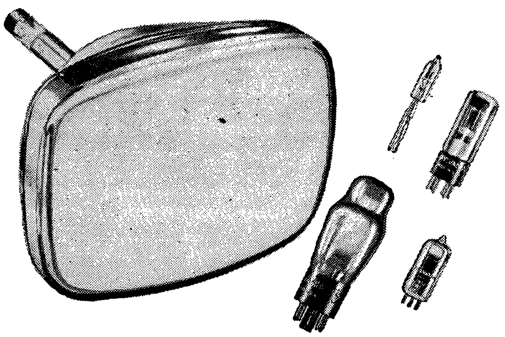


Model 31-FE and variations in 3¼" metal case; 2⅝" diameter recommended drill hole for barrel.



Model 33-EHXX elapsed time meter, 400 cycles only, 3½" metal case; meets type MR-36 flange dimensions of MIL-M-6A, also JAN-I-6 and ASA C39.1-1951

TO ASSURE FINEST TELEVISION SET PERFORMANCE

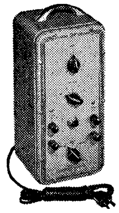


1. *Check with SYLVANIA Test Equipment*
2. *Install High Quality SYLVANIA Tubes*

Quality tested and engineered to highest standards, Sylvania tubes have earned a world-wide reputation for finest performance. Today 7 of the 10 leading television set makers use Sylvania Picture Tubes and Sylvania Receiving Tubes.

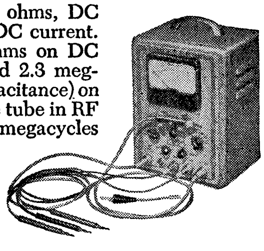
In test equipment, too, Sylvania quality-built components and improved circuit engineering assure you of the last word in accuracy and dependability.

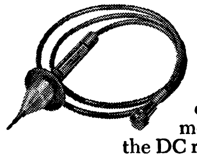
Television Oscilloscope — An exceptionally high-gain wide-band oscilloscope designed for television. Accurately displays any TV pulse or waveshape on a large, eye-saving 7" screen. Sensitivity: 0:01 v./in. Vert. response useful to 4.0 mc. Recommended for servicemen; laboratories; advanced schools and industry. Price: $249.50.



Voltage Calibrator — Accurately measures peak to peak voltage of any wave-form displayed on scope. Uses voltage regulated clipper circuit to give extreme accuracy in spite of line voltage fluctuation. Switch feeds either calibrating voltage or signal voltage to scope. Essential instrument for better service shops and laboratories. Price: $44.50.

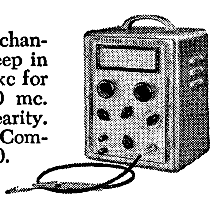
Polymeter—A Vacuum Tube Voltmeter of high sensitivity for measuring ohms, DC volts, AC volts, RF volts and DC current. Input impedance is 17 megohms on DC volts, 2.7 megohms on AC and 2.3 megohms (with only 3 $\mu\mu$f shunt capacitance) on RF. Special subminiature diode tube in RF probe gives flat response to 300 megacycles on scales from 3 volts to 300 volts in five ranges. Zero center seals for FM. Illuminated meter. Accessory probes (type 225) for 30,000 volts DC. Price: $99.50.



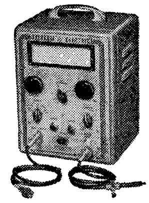


High Voltage Probes—These fine quality Sylvania DC Probes permit the measuring of high voltages by increasing the DC range of polymeters. Type 223 is 10,000 volt probe ($9.95). Other types extend Polymeter range to 30KV ($12.50).

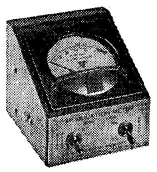
Type 500 Sweep Generator—No mechanical sweep. Uses reactance tube sweep in two ranges; 0-15 mc for TV, 0-600 kc for FM. Fundamentals from 2 to 230 mc. Special circuits to assure extreme linearity. Output 300 to 100,000 microvolts. Companion to 501 Marker. Price: $139.50.



Marker Generator (Type 501) — Provides 2 separate signals for marking an oscilloscope trace of response curves. Accurate adjustment of traps, frequency spotting, measuring band width, and correct adjustment of the popular 4.5 mc. intercarrier sound circuits. VFO covers 15 to 240 mc. range. Price: $129.50.



Modulation Meter — Directly indicates per cent of AM modulation. Compact; requires no direct connection to circuit. Used by amateurs, transmitter builders and others. Indicates carrier shift. Price: $29.50.



For further information concerning Sylvania Tubes or Test Equipment address: Sylvania Electric Products Inc., Dept. 3R-47, 1740 Broadway, N. Y. 19, N. Y.

Tube Testers — 219 counter type, 220 portable type. Composite mutual conductance and emission checker rejects tubes failing either requirement. Relative amount of heater-cathode and inter-element shorts or leakage shown on METER. Designed by a tube manufacturer to check tubes for modern applications. Price: $114.50.

RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; FLUORESCENT LAMPS, FIXTURES, SIGN TUBING, WIRING DEVICES; LIGHT BULBS; PHOTOLAMPS; TELEVISION SETS

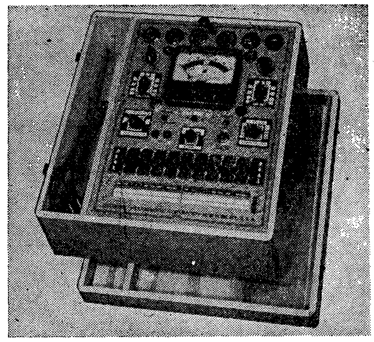
SYLVANIA

EMC Test Equipment Gives More Measurement Value Per Dollar

EMC MUTUAL CONDUCTANCE TUBE TESTER—MODEL 206

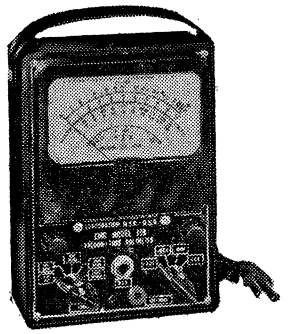
Check These Features

- ✓ Checks mutual conductance on a calibrated micromho scale, as well as an a "Reject-Good" scale.
- ✓ Checks 5 element tubes as pentodes.
- ✓ Checks tubes for gas content.
- ✓ Sufficient plate current to check both emission and mutual conductance.
- ✓ Detects both shorted and open elements.
- ✓ Complete switching flexibility allows all present and future tubes to be tested regardless of location of elements on tube base.
- ✓ Tests tubes for radio frequency and other noise.
- ✓ Tests all tubes from .75 volts to 117 filament volts.
- ✓ Tests all loctal, octal, and miniature tubes.
- ✓ Tests cold cathode, magic-eye, voltage regulator tubes, ballast resistors.
- ✓ Instrument is fused, and fuse is easily replaceable from front of panel.
- ✓ Individual sockets for each tube base type eliminates possible errors.
- ✓ Checks individual sections of multi-purpose tubes.
- ✓ Attractive four-color panel with plenty of eye-appeal. Hard wrinkle finish for durability.
- ✓ Checks sub-miniature tubes.
- ✓ Uses lever types switches.



E M C Series 206 MUTUAL CONDUCTANCE TUBE TESTERS

	Net Prices
Model 206 C—4½" meter in sloping counter case with built-in chart	$79.50
Model 206 P—4½" meter in hand-rubbed carrying case with built-in chart	$83.50
For 220 V. operation add $8.00 to above prices.	
Model CTA—Cathode Ray Tube Adaptor for Model 206	$ 9.95



VACUUM TUBE VOLTMETER

EMC MODEL 106

✓ check these features...

- Specially designed for field alignment of television and radio sets.
- Uses dual triod balanced bridge circuit.
- All functions and ranges completely electronic — meter cannot burn out.
- Zero center position for FM discriminator alignment.
- Uses 1% precision resistors for voltage multipliers.
- 5 DB ranges.
- Full scale deflection of 1½ volts for both AC-DC volts.
- Measures resistance in 5 ranges from .2 ohm to 1000 megs.
- 1 meg. isolating resistor in probe. Housed in compact, portable bakelite case, 4¼" x 5¼" x 2⅞", net wt. 3 lbs.

SPECIFICATIONS:

AC VOLTAGE—5 Ranges: 0 to 1.5, 10, 100, 300, 1000 volts. Input resistance 2 megohms. Frequency response flat from: 25 to 100,000 cycles.

DC VOLTAGE—5 Ranges: 0 to 1.5, 10, 100, 300, 1000 volts (up to 30,000 volts with accessory probe. OHMS: 1000-10,000-100,000-10 megohms, 1000 megohms. 10 megohms center on 1000 megohms range.

DECIBELS—Ranges: —24 to —1.5, —8 to +15, +12 to +35, +21.5 to +44.5, +32 to +55.

MODEL 106 Illustrated	$35.90
MODEL 106 In Kit Form	$23.90
MODEL RFP High Frequency Probe (useful to 200 megacycles)	$ 6.95
MODEL HVP 30,000 Volt Probe for Model 106	$ 8.75

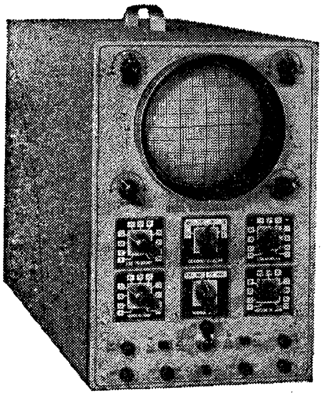
EMC

ELECTRONIC MEASUREMENTS CORP.

280 Lafayette Street New York 12, N. Y.

EMC Test Equipment Gives More Measurement Value Per Dollar

model 600



EMC MODEL 600 SCOPE features the use of a 5UP1 new 5 inch scope tube. The 2-stage, push pull, vertical amplifier has a sensitivity of .02 volts per inch and can be used up to 5 megacycles. A two step attenuator input is available. Synchronization is available on either positive or negative phase of input voltage through the vertical amplifier or from an external source. A multivibrator type of sweep from 15 cycles to 75 kilocycles is incorporated. Direct connections to scope plates available.

SPECIFICATIONS

TUBE COMPLEMENT

1 - 5UP1 cathode ray tube
4 - 12AU7 (vert. & horiz. amplifier & multivibrator)
2 - 5Y3 rectifier tubes
1 - 6C4 phase spliter

POWER REQUIREMENT

105 - 130 volts 50/60 cycles AC - 50 watts

DIMENSIONS

8 3/4" wide X 14" high X 15 1/2" deep,

-------------- MODEL 600 — (completely wired and tested) ------- **$99.50**

MODEL 500 — R. F. Signal Generator

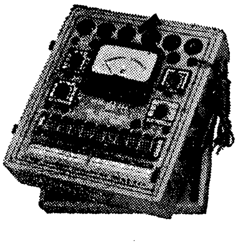
Note These High Quality Features:

1. Employs electrostatically shielded transformer for 115V 60 cycle operation.
2. ALL coils not in use are automatically shorted out.
3. Provision for external modulation.
4. Covers range from 150KC to 36 megacycles on fundamentals—over 100 megacycles on harmonics.
5. Attractive 2 color gray hammertone panel and case.
6. 400 cycle internal modulation available.
7. Uses a highly stable, Hartley-type oscillator circuit.

Model 500	**$29.75**
Model 500K in Kit Form	**$19.75**

EMC MODEL 204 TUBE-BATTERY-OHM CAPACITY TESTER

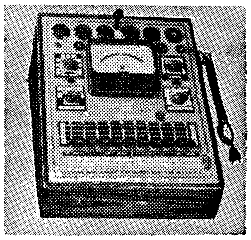
In this model EMC offers a durable, accurate instrument that gives easy, direct readings for all tubes through the standard emission method of testing. It uses four-position lever-type switches and is housed in a hand-rubbed, portable oak carrying case with removable hinged cover.



CHECK THESE FEATURES...

- Tests all tubes including Noval and sub-miniatures.
- Completely flexible switching arrangement.
- Checks batteries under rated load on "reject-good" scale.
- Individual sockets for each type of tube base.
- Tests all tubes from .75 volts to 117 filament volts.
- Tests all cold cathode, magic eye, voltage regulator and ballast tubes.
- Has pilot light indicator.
- Line voltage control compensates for line variations between 105 and 135 volts.
- Built-in roll chart protected by non-breakable transparent plastic.
- Checks for shorts and leakages.
- Checks condenser leakage to 1 meg. ohm.
- Checks resistance up to 4 meg. ohms.
- Checks capacity from .01 to 1 mfd.
- Three-color hammmertone panel.

MODEL 204C	$54.90
MODEL 204P	$55.90



MODEL 205 tube tester

In this durable, accurate instrument EMC offers a model that gives easy, direct readings for all tubes through the standard emission method of testing. It uses four-position lever-type switches and is housed in either a hand-rubbed, portable oak carrying case with removable hinged cover; or in a sloping counter case.

CHECK THESE FEATURES . . .

- ● Tests all tubes including Noval and sub-miniatures.
- ● Completely flexible switching arrangement.
- ● Checks batteries under rated load on "reject-good" scale.
- ● Individual sockets for each type of tube base.
- ● Tests all tubes from .75 volts to 117 filament volts.
- ● Tests all cold cathode, magic eye, voltage regulator and ballast tubes.
- ● Has pilot light indicator.
- ● Line voltage control compensates for line variations between 105 and 135 volts.
- ● Checks for shorts and leakages.
- ● Three-color hammertone panel.

MODEL 205C Sloping counter case — illustrated **$46.50**

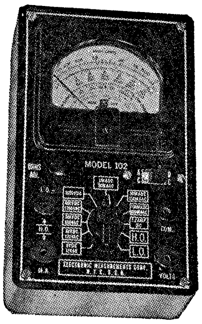
MODEL 205P With hand-rubbed oak carrying case **$47.50**

EMC ELECTRONIC MEASUREMENTS CORP.

280 Lafayette Street New York 12, N. Y.

EMC Test Equipment Gives More Measurement Value Per Dollar

The EMC ECONOMY LINE!



MODEL 102 POCKET VOLOMETER*

(1000 OHMS PER VOLT METER)

Check these Features:

3" SQUARE METER—1 MIL D'ARSONVAL TYPE METER, 2% ACCURATE.

3 AC CURRENT RANGES.

ROUND CORNERED, BAKELITE, MOLDED CASE.

SAME ZERO ADJUSTMENT FOR BOTH RESISTANCE RANGES.

Specifications:

5 AC Voltage Ranges: 0 to 12-120-600-1200-3000 volts.

5 DC Voltage Ranges: 0 to 6-60-300-600-3000 volts.

4 DC Current Ranges: 0 to 6-30-120 ma., 0-1.2 amps.

3 AC Current Ranges: 0 to 30-150-600 ma.

2 Resistance Ranges: 0 to 1000 ohms, 0-1 megohms.

Weight: 1 lb. 5. oz.
Size: 3¾" x 6¼" x 2" deep.

Model 102 .... **$14.90**

MODEL 103 VOLOMETER*

(1000 OHMS PER VOLT METER)

Check these Features:

4½" SQUARE METER—1 MIL D'ARSONVAL TYPE METER, 2% ACCURATE.

3 AC CURRENT RANGES.

ROUND CORNERED, BAKELITE, MOLDED CASE.

SAME ZERO ADJUSTMENT FOR BOTH RESISTANCE RANGES.

Specifications:

5 DB Ranges: —4 to +64 db.

5 AC Voltage Ranges: 0 to 12-120-600-1200-3000 volts.

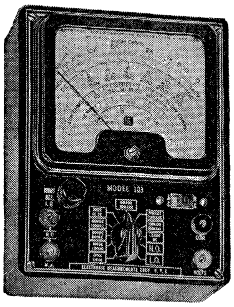
5 DC Voltage Ranges: 0 to 6-60-300-600-3000 volts.

4 DC Current Ranges: 0 to 6-30-120 ma., 0-1.2 amps.

3 AC Current Ranges: 0 to 30-150-600 ma.

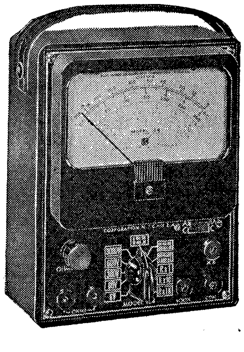
2 Resistance Ranges: 0 to 1000 ohms, 0-1 megohms.

Weight: 2 lbs. 3 oz.
Size: 5¼" x 6¾" x 2⅞"



Model 103... **$18.75**

Model 103-S, same as above but with plastic carrying strap **$19.25**



MODEL 104 VOLOMETER*

(20,000 OHMS PER VOLT METER)

Check these Features:

4½" SQUARE METER—50 MICROAMPERES; ALNICO MAGNET.

ROUND CORNERED, BAKELITE, MOLDED CASE WITH CARRYING STRAP.

3 AC CURRENT RANGES (to 3 amps.).

3 RESISTANCE RANGES (to 20 megohms).

Specifications:

5 DC Voltage Ranges (20,000 ohms/volt): 0 to 6-60-300-600-3000 volts.

5 AC Voltage Ranges (1,000 ohms/volt): 0 to 6-60-300-600-3000 volts.

3 Resistance Ranges: 0-20 K, 0-200 K, 0-20 megs.

3 AC Current Ranges: 0 to 30-300 ma., 0-3 amps.

3 DC Current Ranges: 0 to 6-60-600 ma.

5 DB Ranges: —4 to +67 db.

Weight: 2 lbs. 5 oz.
Size: 5¼" x 6¾" x 2⅞"

MODEL 104 — With carrying strap. Weight: 2 lb., 5 oz. Size: 5¼"x6¾"x2⅞"........**$26.95**

MODEL HVT 30,000 Volt Probe for MODEL 104..**$7.95**

**Reg. trade mark for volt-ohm miliameter.*

EMC ELECTRONIC MEASUREMENTS CORP.
280 Lafayette Street
New York 12, N. Y.

PRECISE MEASUREMENTS COMPANY

BROOKLYN 23, N. Y.

ONE HUNDRED THOUSAND VOLTS!

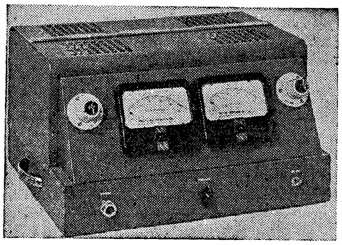
At Fifty Thousand Ohms/Volt
KILOVOLTER Model 4000

- Shielded Polysterene Probe
- Choice of Ranges
- Simple Foolproof Circuits

Measures television and X-ray voltages with extra high input impedances. All voltage is dissipated in the shielded polysterene probe. "Normal-Reverse" key is provided so that probe may be used regardless of polarity of voltage under test. Indicator has large clear scale for easy reading. Additional low leakage path, Special insulated probe is supplied on all 100 KV models.

Model	Range Kilovolts	Price
4000	0-25/50	$67.50
4000-A	0-100	80.00
4000-B	0-50/100	85.00
4000-C	0-10/50/100	95.00

HIGH VOLTAGE POWER SUPPLIES



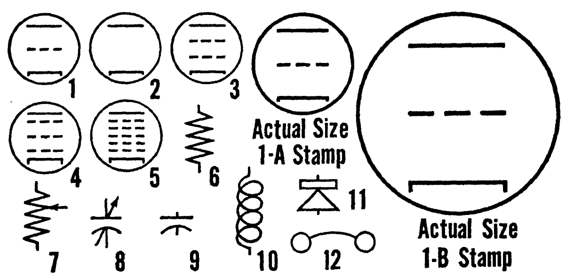
A precision, well constructed high voltage supply for television, meter testing and calibration, electrostatic painting, breakdown tests, nuclear physics and wherever high potentials at low currents are needed. Output is well filtered direct current. Adjustable by means of a control on the front panel. Available with or without meter. Input voltage is 115 v., 60 cycles.

Model		Maximum Voltage	Price
6000		2,500	$60.00
6000-A	With Meter	2,500	80.00
6005		5,000	75.00
6005-A	With Meter	5,000	95.00
6010		10,000	85.00
6010-A	With Meter	10,000	105.00
6015		15,000	95.00
6015-A	With Meter	15,000	115.00
6025		25,000	115.00
6025-A	With Meter	25,000	155.00

Also available with two meters (as ill.) thus current and voltage can be read simultaneously. Perfect for breakdown and leakage measurements. Current limit circuits protect meter on shorts. Price $35 additional. Specify 50 uamps, 100 uamps or 1 mill meter. Same delivery time.

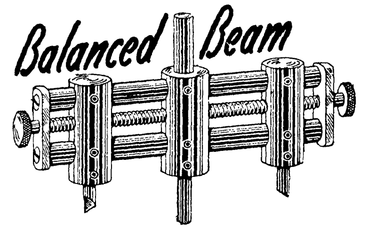
Regulated Power Supplies. Any model (except Model 6000-A) can be had with built-in regulation circuits. Output remains within 5% over most of the range. Same delivery time. Closer regulation on special order.

TRANSPARENT CIRCUIT STAMPS



Provide clear sharp impressions of all the most used radio and electrical circuit symbols. Saves considerable drawing and drafting time and provides a neater looking appearance. Used by leading manufacturers and laboratories. Stamps are crystal clear and easily lined up by looking right through them. Available in two popular sizes. May be purchased separately or in complete set. When ordering, specify stamp number and size.

SIZE A	CIRCUIT STAMP SET	(12 stamps)	$ 8.50
SIZE A	Individual Circuit Stamps	each	.85
SIZE B	CIRCUIT STAMP SET	(12 stamps)	10.00
SIZE B	Individual Circuit Stamps	each	.95



MICRO CIRCLE CUTTER

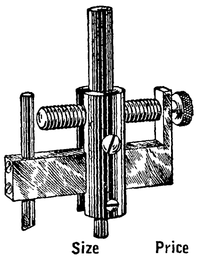
Cuts Metals
•
Woods
•
Plastics

For quickly cutting those extra large hole sizes. Perfect or making washers.

Model	Shank	Size	Price
9	Round	10"	$12.50
10	Round	15"	15.00

Extra cutting bits 50c

MICRO CIRCLE CUTTER

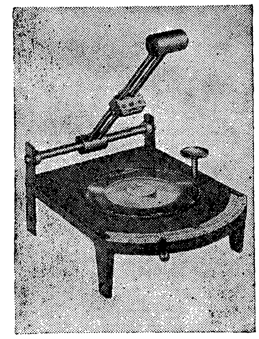


Cuts holes in all types of metals from stainless steel to magnesium. Perfect for plastics and wood. Especially recommended for cutting meter holes in panels.

Built-in micrometer type size control for precise settings. Extra heavy constuction of the main beam and body make it useful for production jobs as well as experimental work. All are equipped with a ¼" high speed steel cutting bit.

Model	Type	Size	Price
1	Round Shank (for drill press or hand drill)	4"	$5.00
1-A	Square Tapered (for hand brace)	4"	5.00
5	Round Shank	6"	7.50
6	Morse #2 Taper	6"	8.50

Extra cutting bits 60c



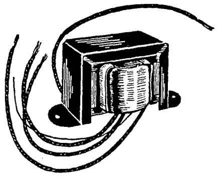
SCALE PRINTING MACHINE

Prints lettering, numbers and divisions on meter scales, metal, paper, plastics. For making experimental name plates, decals, etc. Perfect lettering is assured by use of standard printers type. Many leading instrument manufacturers and laboratories are using our machines. The Model 1500 Scale Printer is illustrated. Send for complete details. Special Printing Machines built to order.

Model 1500
Standard Scale Printing Machine

Prices do not include printers type.

HIGH VOLTAGE TRANSFORMER



Small physical size is the result of engineering studies into this problem. Used for Oscilloscopes, Photoflash Units, and Miniature High Voltage Power Supplies. Primary has tap for rectifier tube. Several diagrams furnished. Provides 4500 Volts D.C.

Price $15.00

Part No.	Primary	Secondary	Size
3 KVT	115 Volts 60 Cycle with 1¼ Volt Tap.	3200 Volts AC at 1 Ma	2" high x 2¼" wide. Base 2⅜" Mtg. Centers 2⅞"

MINIATURE HIGH VOLTAGE VIBRATOR TRANSFORMER

Used for photoflash, portable or isolated power supplies, nuclear physics and where high potentials and small size is required. Uses standard flashlight batteries. Output is adjustable by means of vibrator and resistor. Easily rectified with any of these tubes: 1X2A, 1B3GT, 5642 or 1654. Diagrams for complete power supplies furnished.

Part No.	Primary	Secondary	Price
5 MVT	2 to 6 volts DC or 60 cycle AC	2,000 to 7,000 Volts	$8.50

ELECTRO-GRAPHIC RECORDER

As a result of a number of field tests, we are in the process of adding a number of new features to the ever popular Model 50 Electro-Graphic Recorder. This direct writing instrument will continue to be the same compact size and rugged construction.

INSTRUMENTS BUILT TO SPECIFICATIONS

Precise Measurements Company equipment is used by leading industrial concerns, research laboratories, government and serious amateurs everywhere.

Your Local Distributor will be glad to show you our products

SUPERIOR TEST EQUIPMENT

The New Model TV-11 TUBE TESTER

Specifications:

- Tests all tubes including 4, 5, 6, 7, Octal, Lock-in, Peanut, Bantam, Hearing-aid, Thyratron, Miniatures, Sub-Miniatures, Novals, Sub-Minars, Proximity Fuse Types, etc.
- Tests for "shorts" and "leakages" up to 5 Megohms.
- Uses the new self-cleaning Lever Action Switches for individual element testing. Because all elements are numbered according to pin-number in the RMA base numbering system, the user can instantly identify which element is under test. Tubes having tapped filaments and tubes with filaments terminating in more than one pin are truly tested with the Model TV-11 as any of the pins may be placed in the neutral position when necessary.
- The Model TV-11 does not use any combination type sockets. Instead individual sockets are used for each type of tube. Thus it is impossible to damage a tube by inserting it in the wrong socket.
- Free-moving built-in roll chart provides complete data for all tubes.
- Newly designed Line Voltage Control compensates for variation of any line voltage between 105 Volts and 130 Volts.

EXTRA SERVICE

The Model TV-11 may be used as an extremely sensitive Condenser Leakage Checker. A relaxation type oscillator incorporated in this model will detect leakage even when the frequency is one per minute.

*** NOISE TEST**

Phono Jack on front panel for plugging in either phones or external amplifier will detect microphonic tubes or noise due to faulty elements and loose external connections.

The Model TV-11 operates on 105-130 Volt 60 Cycles A.C. Comes housed in a beautiful hand-rubbed oak cabinet complete with portable cover. Size 11½" x13"x6". Shipping Weight 15 lbs.

$47 50 NET

TELEVISION BAR GENERATOR

Superior Instruments Co.
SICO
HOR LIN
VERT LIN
HOR SWEEP
VERT SWEEP
FUNCTION
Television Cross-Bar Generator
CHANNELS
LINEARITY
POWER
ON
OFF
SWEEP
OUTPUT
SWEEP FREQ

THROWS AN ACTUAL BAR PATTERN ON ANY TV RECEIVER SCREEN!!

TWO SIMPLE STEPS

1. **Connect Bar Generator to Antenna Post of any TV Receiver.**
2. **Plug Line Cord into A.C. Outlet and Throw Switch.**

RESULT: **A stable never-shifting vertical or horizontal pattern projected on the screen of the TV receiver under test.**

Features:

1. Provides linear pattern to adjust VERTICAL linearity, height, centering.
2. Provides linear pattern to adjust HORIZONTAL drive, width, peaking, linearity, centering.
3. Provides vertical sweep signal for adjusting and synchronizing vertical oscillator discharge and output tubes.
4. Provides vertical signal to replace vertical oscillator to check vertical amplifier operation.
5. Provides horizontal sweep signal for adjusting and synchronizing horizontal oscillator A.F.C. and output tubes.
6. Provides horizontal sweep signal to check H.V. section of fly-back and pulse operating power supplies.
7. Provides signal for testing video amplifiers.
8. Can be used when no stations are on the air.

SPECIFICATIONS:

Power Supply: 105-125 Volt 60 Cycles
Power Consumption: 20 Watts
Channels: 2-5 on panel, 7-13 by harmonics
Horizontal lines: 4 to 12 (Variable)
Vertical lines: 12 (Fixed)
Vertical sweep output: 60 Cycles
Horizontal sweep output: 15,750 Cycles

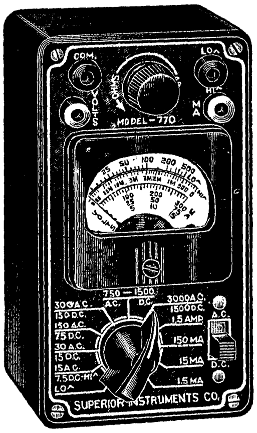
TV BAR GENERATOR COMES COMPLETE WITH SHIELDED LEADS AND DETAILED OPERATING INSTRUCTIONS. ONLY . . .

$39 95 NET

Manufactured by

SUPERIOR INSTRUMENTS CO.
NEW YORK 7, N. Y.

SUPERIOR TEST EQUIPMENT



The new model 770
AN ACCURATE POCKET-SIZE
VOLT-OHM MILLIAMMETER
(SENSITIVITY: 1000 OHMS PER VOLT)

FEATURES

★ Compact-measures 3⅛" x 5⅞" x 2¼".

★ Uses latest design 2% accurate I Mil. D'Arsonval type meter.

★ Same zero adjustment holds for both resistance ranges. It is not necessary to readjust when switching from one resistance range to another. This is an important time-saving feature never before included in a V.O.M. in this price range.

★ Housed in round-cornered, molded case.

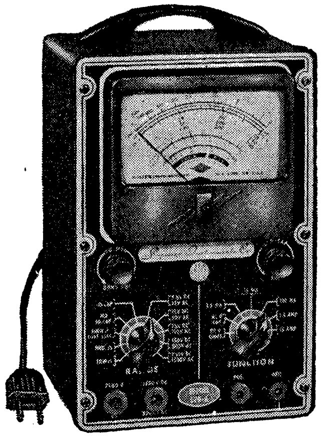
★ Beautiful black etched panel. Depressed letters filled with permanent white, insures long-life even with constant use.

The Model 770 comes complete with self-contained batteries, test leads and all operating instructions.

SPECIFICATIONS

6 A.C. VOLTAGE RANGES:
0—15/30/150/300/1500/3000 VOLTS
6 D.C. VOLTAGE RANGES:
0—7.5/15/75/150/750/1500 VOLTS
4 D.C. CURRENT RANGES:
0—1.5/15/150 MA. 0—1.5 AMPS.
2 RESISTANCE RANGES:
0—500 OHMS 0—1 MEGOHM

$14.90 NET



The new model 670-A SUPER-METER

***A COMBINATION* VOLT-OHM MILLIAMMETER PLUS CAPACITY REACTANCE INDUCTANCE AND DECIBEL MEASUREMENTS**

SPECIFICATIONS:

D.C.VOLTS: 0 to 7.5/15/75/150/750/1,500/7,500 Volts
A.C. VOLTS: 0 to 15/30/150/300/1,500/3,000 Volts
OUTPUT VOLTS: 0 to 15/30/150/300/1,500 3,000 Volts
D.C. CURRENT: 0 to 1.5/15/150 Ma. 0 to 1.5/15 Amperes
RESISTANCE: 0 to 1,000/100,000 Ohms 0 to 10 Megohms
CAPACITY: .001 to 1 Mfd. 1 to 50 Mfd. (Quality test for electrolytics)
REACTANCE: 50 to 2,500 Ohms 2,500 Ohms to 2.5 Megohms
INDUCTANCE: .15 to 7 Henries 7 to 7,000 Henries
DECIBELS: —6 to +18 + 14 to + 38 + 34 to + 58

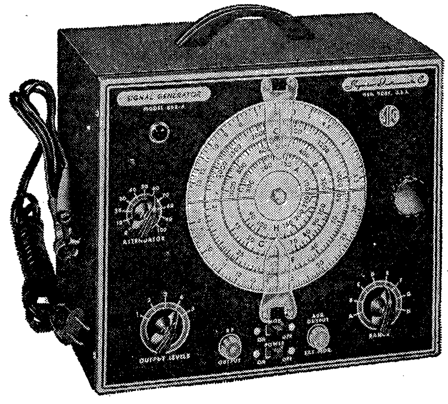
ADDED FEATURE:

The Model 670-A includes a special GOOD-BAD scale for checking the quality of electrolytic condensers at a test potential of 150 Volts.

The Model 670-A comes housed in a rugged, crackle-finished steel cabinet complete with test leads and operating instructions. Measures 6¼" x 9½" x 4½".

$28.40 NET

The new model 660-A—A NEW AC OPERATED
SIGNAL GENERATOR



Provides Complete Coverage for A.M.-F.M. and TV Alignment

• Generates Radio Frequencies from 100 Kilocycles to 60 Megacycles on fundamentals and from 60 Megacycles to 220 Megacycles on powerful harmonics. • Accuracy and stability are assured by the use of permeability trimmed Hi-Q coils. • R. F. available separately or modulated by the internal audio oscillator. Built in 400 cycle sine wave audio oscillator used to modulate the R. F. signal also available separately for audio testing of receivers, amplifiers, hard of hearing aids, etc. • R. F. Oscillator Circuit: A high transconductance heptode is used as an R. F. Oscillator, mixer and amplifier. Modulation is effected by electron coupling in the mixer section thus isolating the oscillator from load changes and affording high stability. • A. F. Oscillator Circuit: A high transconductance heptode connected as a high-mu triode is used as an audio oscillator in a high-C Colpitts Circuit. The output (over 1 Volt) is nearly pure sine wave • Attenuator: A 5 step ladder type of attenuator is used.

Tubes used: 1—6BE6 as R. F. Oscillator, mixer and amplifier. 1—6BE6 as Audio Oscillator. 1—6H6 as Power Rectifier.

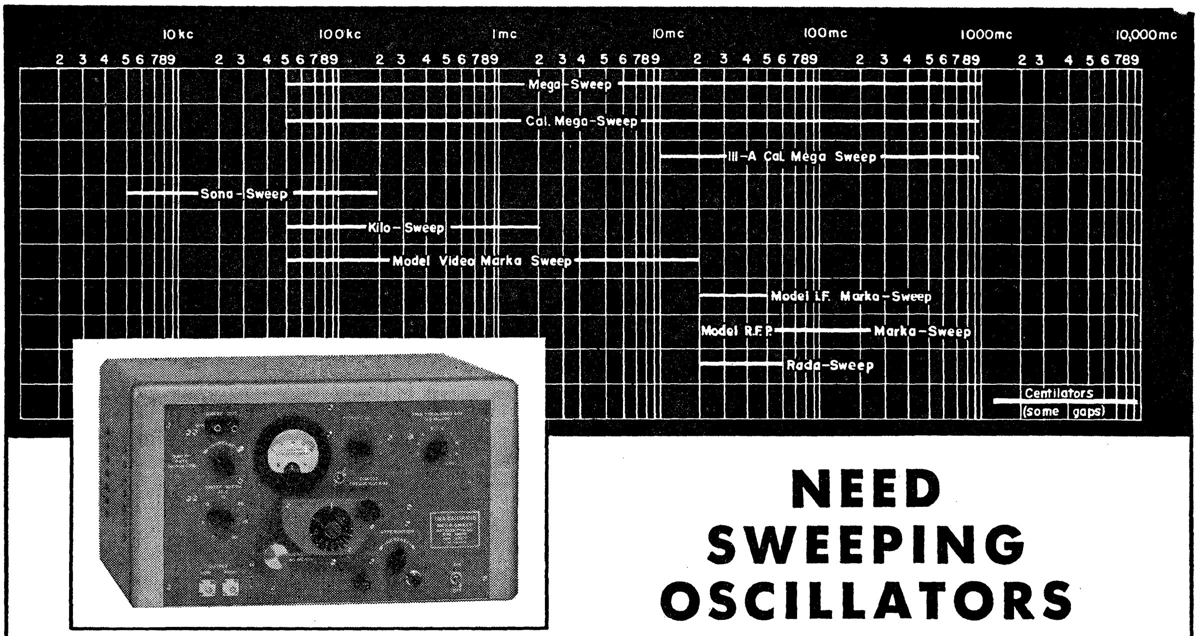
The Model 660-A comes complete with coxial cable, test lead and instructions ....

$42.95 NET

MANUFACTURED BY SICO SUPERIOR INSTRUMENTS CO

Manufactured by

SUPERIOR INSTRUMENTS CO.
NEW YORK 7, N. Y.



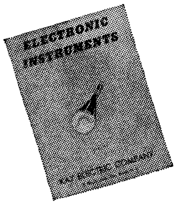
NEED SWEEPING OSCILLATORS

FOR RAPID and ACCURATE VISUAL MEASUREMENTS ?

	Frequency Range	Tuning	Maximum Sweep Width	Markers	Output (Open Circuit)	Price* f.o.b. factory
Mega-Sweep	50 kc -1000 mc	Continuous	30 mc	None	0.1 volt	**$395.00**
Calibrated Mega-Sweep	50 kc - 950 mc	Continuous	30 mc	None	0.1 volt	**425.00**
111-A Calibrated Mega-Sweep	10 mc - 950 mc 450 mc - 900 mc	Continuous	40 mc	None	0.3 volt, 70 ohms 0.6 volt, 300 ohms	**575.00**
Sona-Sweep	5 kc - 200 kc	Continuous	20 kc	Up to six crystal positions	1.0 volt	**525.00**
Kilo-Sweep	50 kc - 2 mc	Continuous	100 kc	Up to six crystal positions	1.0 volt	**525.00**
Model Video Marka-Sweep	50 kc - 20 mc	Three Ranges 50 kc - 5 mc 50 kc - 10 mc 50 kc - 20 mc	Complete Range	Up to six crystal positions	0.6 volt	**495.00**
Model IF Marka-Sweep	20 mc - 50 mc	Four Ranges	500 kc (Narrow) 15 mc (Wide)	Up to nine crystal positions	0.5 volt	**295.00**
Model RF-P Marka-Sweep	All 12 channels, VHF TV Range	Switchable	15 mc	Pix and Sound crystal positions	0.5 volt, 70 ohms 1.0 volt, 300 ohms	**795.00**
Rada-Sweep	30 & 60mc centers; Others, special	Switchable	3 mc (Narrow) 20 mc (Wide)	Up to nine crystal positions	0.5 volt	**395.00**
No. 1214 Centilator	1245 mc - 1460 mc	Continuous	5 mc	None	134 mw	**595.00**
No. 3439 Centilator	3400 mc - 3960 mc	Continuous	40 mc	None	106 mw	**495.00**
No. 4249 Centilator	4240 mc - 4910 mc	Continuous	35 mc	None	115 mw	**450.00**
No. 6274 Centilator	6250 mc - 7425 mc	Continuous	50 mc	None	110 mw	**450.00**
No. 8596 Centilator	8500 mc - 9660 mc	Continuous	60 mc	None	30 mw	**395.00**

**In some cases small extra charge for crystal substitutions or additions*

Marker Generators • Pulse Generators • Random Noise Generators • Spectrum Analyzers • Reflected Energy Measuring Equipment • Attenuators • Noise, Vibration and Speech Analyzers • Gain Measuring Equipment • Tachometers • Other LF, HF, UHF, Microwave Test Equipment.



REQUEST NEW
1952-1953 CATALOG
FOR FULL DETAILS

KAY

KAY ELECTRIC COMPANY

14 Maple Avenue
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Pine Brook, New Jersey

PRECISE — THE FASTEST-GROWING KIT MANUFACTURER IN THE WORLD

Instruments IN KIT & WIRED FORM . . . precise above all else

12,080 HOURS OF ENGINEERING TO BRING YOU THE *NEW AMAZING*

PRECISE MODEL #300 OSCILLOSCOPE!

The Oscilloscope you've been seeking. . . . No other oscilloscope at any price — high or low — with these desirable features — in both Kit and Wired Form:

SPECIFICATIONS: PRECISE MODEL 300 OSCILLOSCOPE —

VERTICAL: Vertical-flat (3db) DC through 5 megacycles with sensitivity of greater than 10 millivolts push-pull (3.94 Millivolts/cm); Constant Resistance; Push-pull input immediately converted to single-ended normal or reverse phase by shorting bar at inputs 1 and 2; Frequency compensated vertical stepping attenuator selects AC or DC inputs; Push-pull DC amplifiers from input through output; Internal electronic mixing through inputs 1 and 2; five-way binding posts.

POSITIONING: Bridge type positioning on vertical and horizontal does not vary tube characteristics.

HORIZONTAL: Frequency compensated stepping attenuator in horizontal amplifier; Push-pull Horizontal out.

BLANKING: Internal (return trace blanked), external (return trace not blanked), 60 cycle or 120 cycle Blanking through Blanking amplifier circuit.

SYNCHRONIZATION: External, Internal Positive, Internal Negative, Internal 60 cycle or Internal 120 cycle synchronization.

SWEEP RATE: Driven or non-driven linear sweeps from 1 cycle to 80KC in five ranges (1-10 cycles uses external C circuit); Trigger potentiometer.

MAGNIFIER: Electronic magnifier and magnifier positioner allow any part of a signal to be magnified up to ten times (equivalent to 70 inches of horizontal deflection).

CALIBRATION: Internal square wave calibrator and potentiometer for using oscilloscope as a VTVM on Peak to Peak measurements.

CALIBRATION SCREEN: Edge-illuminated scale and graticule may be turned on or off; filtered screen.

OUTPUTS ON FRONT PANEL: Plus Gate output; Sawtooth output; 60 cycle phasing output; 60 cycle unphased output; Calibration output.

FOCUSING: Astigmatism, focus and intensity control.

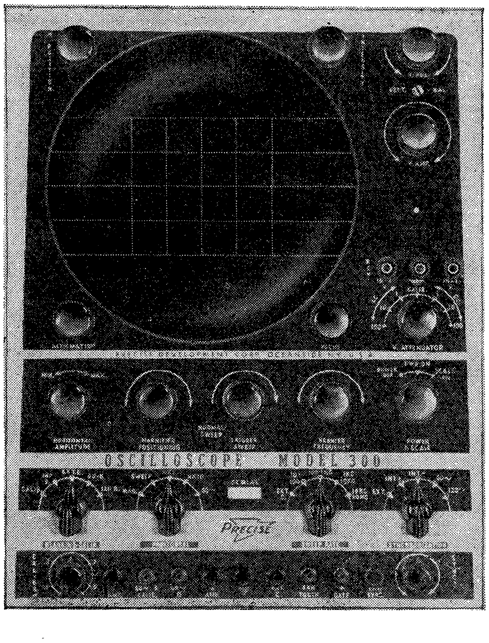
CRT: NEW 7" Tube, normally supplied is medium persistency type 7VP1, or 7JP1 may also be used (oscilloscope green trace) — high persistency types available at additional cost.

DIRECT: Deflection plates available from rear of cabinet.

INTENSITY MODULATION: Z modulation through modulation amplifier.

GENERAL: Low loss components; Over-designed fused power supply for additional circuitry; Deeply etched aluminum panel. New parts from original manufacturers — (NO SURPLUS); Steel cabinet; 11" x 14" x 17"; complete with instruction book and all components; Accessories: Model 912T (MM) Demodulator Probe and Model 960 Capacity Attenuator Probe available at extra cost — please see specifications on following pages.

There are many additional features and circuits in kit form, which may be added to the Model 300. Please write us for descriptive literature.



300K	**kit form**	**$ 94.95**
300W	**factory wired**	**$199.50**

PRECISE
MODEL 610
R. F. SIGNAL GENERATOR

• PRECISE MODEL 610

Newest RF Signal Generator for AM, FM and TV

The first low-priced RF Signal Generator to reach 110 MC on fundamentals, 330 MC on harmonics, with the accuracy and stability of high-priced equipment. PRECISE achieves this by slug and capacity tuning of the coils, along with complete isolation of the Colpitts Oscillator by a Cathode Follower Buffer Output.

The first kit to offer a complete factory pre-assembled and pre-tuned RF Head; Cathode-Follower Output; External Modulation; Speech Amplifier; Bridge Type AF Oscillator; Colpitts RF Oscillator; Drum Dial; Coaxial Fittings; Individually Tuned Coils; Vernier Tuning; Separate RF Section; Complete Shielding, 400 Cycle and 60 Cycle Internal Modulation.

RF FREQUENCIES:

BAND 1—	300KC to 1MC	FUNDAMENTALS
BAND 2—	1MC to 3MC	FUNDAMENTALS
BAND 3—	3MC to 10MC	FUNDAMENTALS
BAND 4—	10MC to 30MC	FUNDAMENTALS
BAND 5—	30MC to 110MC	FUNDAMENTALS
BAND 5A—	60MC to 220MC	2nd HARMONIC
BAND 5B—	90MC to 330MC	3rd HARMONIC

8" x 11" x 5"; leather handle; wrinkle steel cabinet; deeply etched aluminum panel; amphenol type connectors; wt.: 10 lbs. TUBE COMPLEMENT: 6C4, 12AX7, 6X5.

610K	**$23.95**
610KA	**$28.95**
610W (factory wired)	**$39.95**

• PRECISE NEW MODEL 468 — RESISTANCE DECADE BOX

PRECISE AGAIN LEADS THE FIELD with its New Low-Priced Resistance Decade Box. Ideal for specialized service work. Compact in size for Bench Drawers and Tool Boxes. Engineered with the customary Precise Accuracy and Dependability.

5 Separate Switches, 11 Positions on Each; plus or minus 1% for Extreme Accuracy; Readings from 10 OHM to 1,111,110 OHM in 5 Decades. Binding Posts permit quick substitution of equivalent Resistors indicated on Selector Panel. Deeply etched Aluminum Panel; Rugged Construction; Complete with famous Precise Simplified Construction Manual.

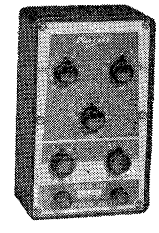
468K	**kit form**	**$18.95**
468W	**factory wired**	**$24.95**

CAPACITY DECADE BOX (Not Illus.)

478K	**kit only**	**$18.95**
478W	**factory wired**	**$24.95**

Prices slightly higher in the West
Prices and specifications
subject to
change without notice

ALL EQUIPMENT HAS THE PRECISE GUARANTEE



3¾" x 6¼" x 2"

SOLD THROUGH LEADING JOBBERS • WRITE FOR CATALOG #53-AR

PRECISE DEVELOPMENT CORP. • Oceanside, New York

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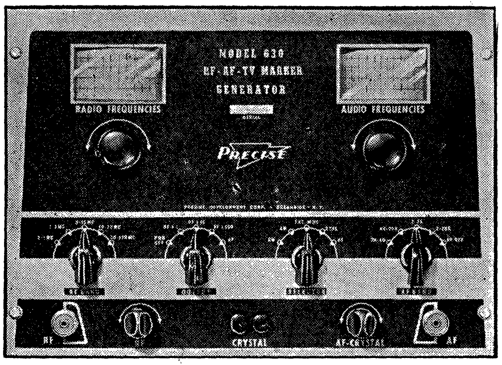
Instruments IN KIT & WIRED FORM . . . precise above all else



• PRECISE MODEL 630

RF-AF-TV and Marker Generator

The very first kit to reach 110 MC on fundamentals, 330 MC on harmonics. The first kit to offer a complete factory preassembled and calibrated RF head. Pre-tuned RF Head; *Audio: 20-20,000 cycles; variable percent modulation; cathode-follower output; stepping attenuator; external modulation; speech amplifier; crystal marker; crystal amplitude control; RF & AF stand-by; Wien Bridge AF Oscillator; Colpitts RF Oscillator; Drum Dials; Coaxial fittings; individually tuned coils; constant output impedance; filtered line; Vernier tuning on RF & AF; Separate RF Section; Complete shielding.

RF FREQUENCIES:		AF FREQUENCIES:
Band 1 —300KC to 1MC	FUNDAMENTALS	Band 1—20 to 40 Cycles
Band 2 — 1MC to 3MC	FUNDAMENTALS	Band 2—40 to 200 Cycles
Band 3 — 3MC to 10MC	FUNDAMENTALS	Band 3—200 to 2K Cycles
Band 4 — 10MC to 30MC	FUNDAMENTALS	Band 4—2K to 20K
Band 5 — 30MC to 110MC	FUNDAMENTALS	
Band 5A— 60MC to 220MC	2nd Harmonic	
Band 5B— 90MC to 330MC	3rd Harmonic	

8 x 11 x 5"; leather handle; wrinkle steel cabinet; deeply etched aluminum panel; amphenol type connectors; wt.: 10 lbs. TUBE COMPLEMENT: 6C4, 6SN7, 6AU6, 6X5.

630K. . . $33^{95}
630KA $38.95
Factory Wired.......$53.95

• PRECISE MODEL 909 Vacuum Tube Voltmeter

WHAT BETTER WAY TO BUY THAN BY MAKING A COMPARISON!

Ceramic precision resistors—1% or better; deeply etched panel; steel cabinet; Amphenol type DC connector; special, separate 5V. AC scale for accuracy on low voltages; 250 V. scale enables you to read line voltages accurately.

FREQUENCY RANGE:
Up to 250 megacycles with PRECISE 912 Probe (avail at additional cost)

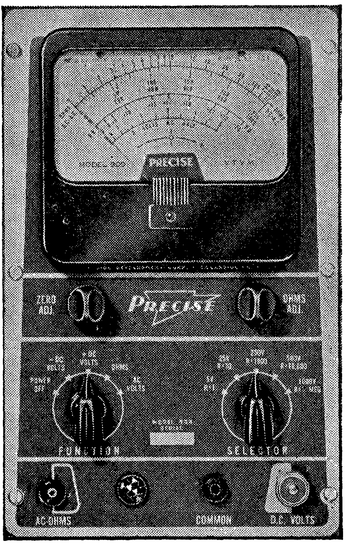
VOLTAGE RANGE:
Up to 30,000 V. with PRECISE 999 High Voltage Probe (avail. at additional cost)

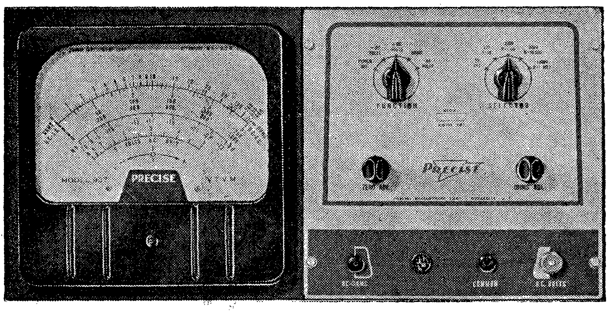
FM & TV:
Special true zero alignment scale for FM & TV discriminators; Burn out proof circuit; 25 Megohm input impedance on DC; complete with test leads and internal battery; oversize 4½" meter; 105-120V., 50-60 cycles, AC; wt.: 10 lbs.; 9½ x 6 x 5".

RANGES:
+DC: 0-5-25-250-500-1000 Volts
—DC: 0-5-25-250-500-1000 Volts
AC: 0-5-25-250-500-1000 Volts
Ohms: Rx1-Rx10-Rx1000-Rx10,000-Rx1,000,000 ohms;
from .2 Ohms to 1 Billion Ohms.
DB; From —20 to +55 DB

TUBE COMPLEMENT:
6SN7, 6AL5, 6X5

909K. . . . .$25^{98}
Factory Wired.......................... $44.98





• PRECISE MODEL 907

Deluxe Vacuum Tube Voltmeter
(Vertical or Horizontal Construction)

Another PRECISE First!

Again giving you the best as a matter of course, in our ever continuing effort to provide "ENGINEERING PRODUCTS" that defy competitive efforts.

GIGANTIC 7½" Meter movement for better visibility, greater accuracy; all the unusual values of the Model 909 in a really DELUXE version. Specifications same as Model 909.
8 x 16 x 5".

Model 907K. . . . . $38^{98}
Factory Wired...$57.98

Prices slightly higher in the West
Prices and specifications subject to change without notice
ALL EQUIPMENT HAS THE PRECISE GUARANTEE

SOLD THROUGH LEADING JOBBERS • WRITE FOR CATALOG #53-AR

PRECISE DEVELOPMENT CORP. • Oceanside, New York

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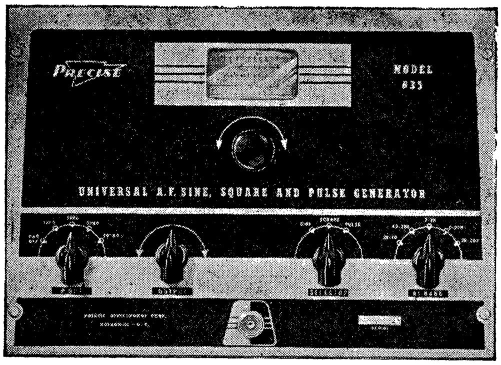
Instruments IN KIT & WIRED FORM . . . precise

above all else



• PRECISE MODEL 635

Universal AF Sine, Square and Pulse Generator

Efficiently and effectively ascertains all Audio and Video troubles
Sine waves; square waves; Wien Bridge Oscillator; Pulses; variable impedance output; voltage regulation insures a veritably constant output; cathode follower output; Minimum overshoot & round-off through 30,000 cycles on square waves and pulses; sine waves through 200,000 cycles.

8 x 11 x 5″; leather handle; wrinkle steel cabinet; deeply etched aluminum panel; amphenol type connectors; wt.: 10 lbs.

TUBE COMPLEMENT:
1—6AU6; 3—6SN7; 1—6X5; 1—6S6

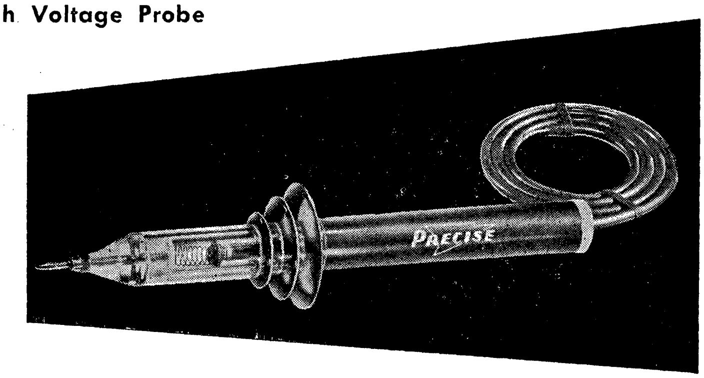
RANGES: 20-40 cycles
40-200 cycles
200-2000 cycles
2000-20,000 cycles
20,000-200,000 cycles

635K. $33.50

Factory Wired $52.50

• Precise Model 999 High Voltage Probe

ODDS ARE MILLIONS OF MILLIONS TO ONE AGAINST A VOLTAGE BREAKDOWN IN THIS ESSENTIAL PROBE.



The PRECISE MODEL 999 High Voltage Probe was designed by high voltage measurements with special emphasis on SAFETY, OPERATIONAL SIMPLICITY AND RUGGED CONSTRUCTION. First in the industry to include any one or more of the following exclusive features:

MULTIPLE INSULATION: The only probe with at least three individual media that must be penetrated before a voltage breakdown could occur.

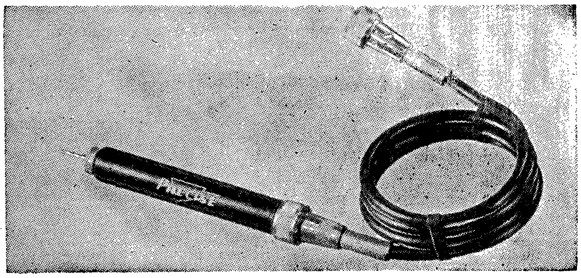
MECHANICALLY SHOCKPROOF CONSTRUCTION: The only probe to utilize a double spring suspension system in order to protect the Ceramic high wattage multiplier resistor.

INTERCHANGEABLE TIPS: The only probe where two tips are supplied — one, the conventional type for probing; the other, an alligator clip for connecting permanently to the circuit.

SWIVEL LEAD CONSTRUCTION: A special-fixed slip-ring arrangement is provided which prevents the test lead cable from snagging or developing high strains at the junction of the cable and probe handle.

INTERCHANGEABLE RESISTORS

999. . . . Wired Only. . . . $6.98



• PRECISE MODEL 960

10 to 1 Capacity Attenuator Probe

PRECISE IS FIRST AGAIN! Precise again sets the pace. . . . This time with the lowest priced Capacity Attenuator Probe, and what's more IT ALLOWS SCOPE MEASUREMENTS TO BE MADE WITH 1/10th THE CAPACITY LOADING EFFECT.

- FREQUENCY RANGE: Through 100 MC, flat through normal commercial oscilloscope frequencies.
- READINGS: Attenuated by a factor of ten to one.
- MAXIMUM A.C.: 1000 Volts.
- INPUT CAPACITY: Less than 7 mmfd.
- Each probe may be individually calibrated.
- Non hydro-scopic insulation.

960
Factory Wired Only
$5.95

• PRECISE MODEL 912 R.F. Probe

Individually calibrated at 75 megacycles for accuracy, impedance and shunt capacity. The lowest priced, finest factory wired and calibrated R.F. Probe in the industry today.

- FREQUENCY RANGE: RMS readings from AF through 250 megacycles. Veritably flat through 100 megacycles
- BUILT IN 600 VOLT BLOCKING CAPACITATOR
- INPUT CAPACITY: The approximate input capacity is less than 3 mmfd and usually about 1.2 mmfd.
- INPUT RESISTANCE: Approximately 200,000 ohms at 1 megacycle
  Approximately 150,000 ohms at 10 megacycles
  Approximately 25,000 ohms at 100 megacycles

Wired Only. . . . $4.25

Prices slightly higher in the West

Prices and specifications subject to change without notice

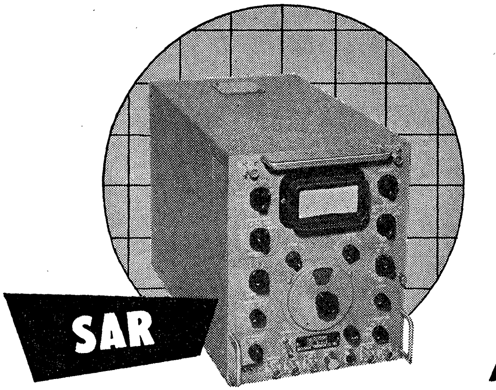
ALL EQUIPMENT HAS THE PRECISE GUARANTEE

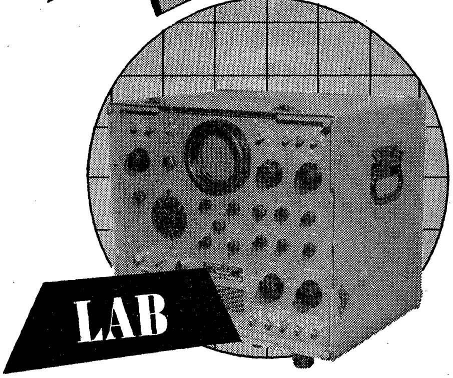
SOLD THROUGH LEADING JOBBERS
WRITE FOR CATALOG #53-AR

PRECISE DEVELOPMENT CORP. • Oceanside, New York

PULSESCOPE®

The Oscilloscope that portrays the Pulse by Waterman





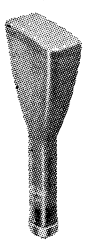
Classic Examples of Precision Engineering...

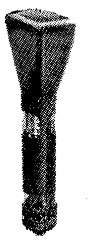
Investigations of complex waves take great strides forward when either a Waterman SAR or LAB PULSESCOPE is employed. Their compactness, portability and precision have established a new high in pulse measurement instruments for all electronic work. Each PULSESCOPE has internally generated markers which are synchronized with the sweep with the basic difference that the sweep in the LAB PULSESCOPE initiates the markers while in the SAR PULSESCOPE it is the crystal controlled markers which initiate the sweep. Power supply requirements of 50 to 1000 c.p.s. at 115 Volts permits operation almost anywhere.

The SAR PULSESCOPE, model S-4-A, is characterized by a pulse rise time of 0.035 microseconds thru a video amplifier with a sensitivity of 0.5 Volts p to p/inch. A vertical delay of 0.55 microseconds is optional. A and S sweeps covering a continuous range from 1.2 to 12,000 microseconds are augmented by R sweeps, which in turn are variable from 2.4 to 24 microseconds. A directly calibrated dial permits R sweep delay readings from 3 to 10,000 microseconds.

The LAB PULSESCOPE, model S-5-A, has equivalent rise time of 0.035 microseconds, a fixed 0.55 microseconds vertical delay and 0.1 Volts p to p/inch sensitivity, so arranged as to assure portrayal of leading edges on displayed signals. A precision calibrated voltage is provided as well as an optional sweep expansion of 10 to 1. A built-in trigger generator voltage is available for synchronizing any associated test equipment.

WATERMAN RAYONIC® CATHODE RAY TUBE DEVELOPMENTS





Since the introduction of the Waterman RAYONIC 3MP1 for miniaturized oscilloscopes, scientists in our laboratories have diligently searched for more perfect answers to present day cathode ray tube problems. Such research led to the introduction of the revolutionary new 3SP and 3XP type cathode ray tubes. These tubes were designed with multi-trace oscilloscopy in mind. Every avenue of practical design was explored to produce tubes with bright, sharp traces and high deflection sensitivity at medium anode potentials.

TUBE	PHYSICAL DATA			TYPICAL VOLTAGES				DEFLECTION FACTOR V/IN.		MAX. VOLTS	
	Face	Length	Base	Anode # 3	Anode # 2	Anode # 1	Grid # 1	D1 to D2	D3 to D4	Anode # 3	Anode # 2
3JP	3 inch Round	10 inches	Medium Diheptal 12 Pin	3000	1500	300 to 515	—22.5 to —67.5	127 to 173	94 to 128	4000	2000
				4000	2000	400 to 690	—30 to —90	170 to 230	125 to 170		
3MP	3 inch Round	8 inches	Small Duodecal 12 Pin		1000	200 to 350	0 to —68	140 to 190	130 to 180		2500
					2000	400 to 700	0 to —126	280 to 380	260 to 360		
3SP	1½x3 inches	9.12 inches	Small Duodecal 12 Pin		1000	165 to 310	—28.5 to —67.5	73 to 99	52 to 70		2750
					2000	330 to 620	—58 to —135	146 to 198	104 to 140		
3XP	1½x3 inches	8.88 inches	Loctal		2000	400 to 690	—22.5 to —67.5	68 to 92	25 to 35		2750

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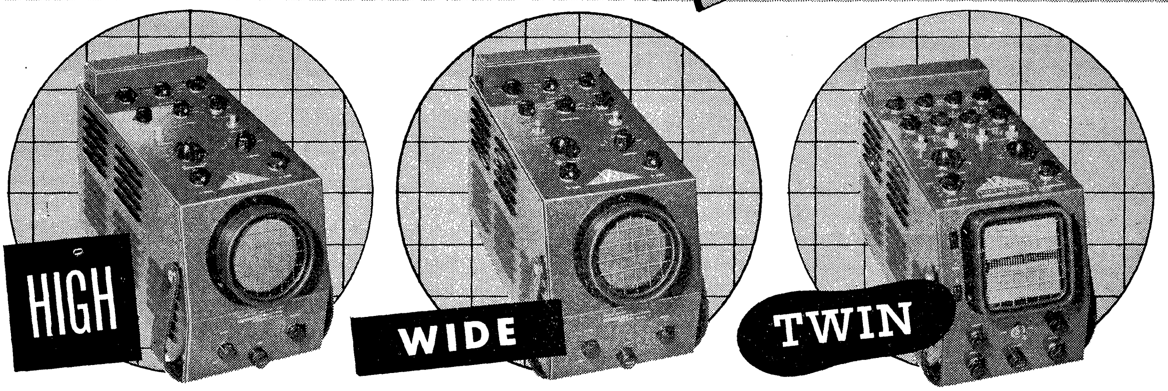
POCKETSCOPE®

The Pocket Oscilloscope by Waterman



...light...compact...accurate...portable

The HIGH, WIDE and TWIN POCKETSCOPES have become the "triple threat" of the oscilloscope industry. Their small size, light weight and incredible performance, has skyrocketed this team of truly portable instruments into unparalleled prominence. Each oscilloscope features DC coupled amplifiers in both its vertical and horizontal channels. The HIGH GAIN, S-14-A POCKETSCOPE, has a vertical sensitivity of 10 millivolts rms/inch, and a frequency response within −2 db from DC to 200 KC, while the WIDE BAND S-14-B POCKETSCOPE is characterized by frequency response within −2 db from DC to 700 KC and a sensitivity of 50 millivolts rms/inch.

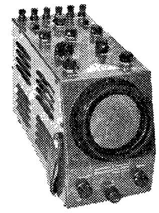
The TWIN POCKETSCOPE is essentially two HIGH GAIN POCKETSCOPES with individual cathode ray tubes, amplifiers, controls, but a common sweep generator. All these are endowed with many identical characteristics. Their sweep generators can be operated as triggered or repetitive over a frequency range from 0.5 cycles to 50 KC, with synchronization polarity optional. Return traces are blanked and provisions are made for modulating the intensity in each cathode ray tube.

Laboratory quality has not been sacrificed in order to accomplish portability and ruggedness. Investigate the many advantages of Waterman POCKETSCOPES.

The INDUSTRIAL POCKETSCOPE, model S-11-A, has become America's most popular DC coupled oscilloscope because of its small size, light weight, and unique flexibility. This compact instrument has identical vertical and horizontal amplifiers which permit the observation of low frequency repetitive phenomena, while simultaneously eliminating undesirable trace bounce. Each amplifier sensitivity is 0.1 Volt rms/inch. The frequency responses are likewise identical, within −2 db from DC to 200 KC.

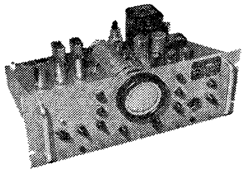
Discover for yourself the amazing utility of this tiny work-horse of industrial electronics.

POCKETSCOPE



S-11-A

RAKSCOPE®



S-12-B

The S-12-B RAKSCOPE is a rack mounted, JANized version of the famous Waterman S-11-A POCKETSCOPE, with the addition of a triggered sweep and a special calibrating circuit for rapid frequency comparisons. The entire oscilloscope is built to occupy but seven inches when mounted in a standard relay rack.

Because provisions are made for applying input signals from the rear, as well as the front, the S-12-B is the ideal combination, systems monitor and trouble-shooting oscilloscope. Investigate the multiple applications of this instrument as an integral part of your own rack mounted apparatus.

WATERMAN PRODUCTS

WATERMAN PRODUCTS CO., INC.

PHILADELPHIA 25, PENNA., U. S. A.
CABLE ADDRESS, POKETSCOPE, PHILA.

Manufacturers of POCKETSCOPES® · RAKSCOPES® · PULSESCOPES® and RAYONIC TUBES®

for PRECISION FREED TEST INSTRUMENTS *for* QUALITY

LOW FREQUENCY "Q" INDICATOR

TYPE NO. 1030

Q=ABCD
A
B
C
D
10 1MF
10×1MF
10×.01MF
10×.001MF
LOW FREQUENCY Q INDICATOR
FREED INSTRUMENT CO. NEW YORK. N.Y. U.S.A.
FREQUENCY
RANGE
GAIN
MULTIPLY BY
WESTON

USES

The Type 1030 Low Frequency "Q" Indicator measures directly the "Q" factor of coils. The instrument can also be used to measure the inductance of coils, distributed capacity, impedances, and dielectric losses. The "Q" Indicator can be used to study the magnetic properties of iron, such as stability of iron cores in function of applied voltages, and iron losses as a function of the frequency.

FEATURES

The main and essential feature of the instrument is that the "Q" factor is read directly without any complicated computations. The possibility of measuring "Q" through the whole audio and supersonic frequency range is provided. The setting up and the measuring of the "Q" of coils is practically instantaneous. The instrument is unaffected by line voltage variations, is entirely self-contained and A.C. operated. Both meters ("multiply-by" and "Q") are protected against overloads and cannot be burned out. The effective frequency range for "Q" measurements is 50 to 50,000 cycles. Due to the fact that the R. C. Oscillator frequency range is from 20 to 200,000 cycles, comparative "Q" Measurements can be made below 50 cycles and above 50,000 cycles. Since the "Q" factor appears as a relative quantity, i.e., a ratio of two voltages, the tracking of the two meters is such that a reasonably good accuracy of "Q" factors is obtained for frequencies above 50,000 cycles. The terminals of the variable decade condensers are available directly on the front panel of the instrument and can therefore be used as a high quality precision variable condenser. The R. C. Oscillator and variable impedance amplifier can be used as a separate low frequency generator with a maximum output power of five watts into a 50 ohm load. The "Q" scale is calibrated from 0 to 50. A high accuracy of measurement is obtained, since for any position of the multipliers, a total of "Q" variation from 0 to 50 is read on a 4 inch meter. "Q" factors of coils can be measured with up to 50 volts across the coil, and therefore makes it possible to determine the stability and the variations of the "Q" factor of coils in function of the applied voltage. The voltage fed into the series circuit is variable from 10 volts to .01 volt.

SPECIFICATIONS

Range of "Q" Measurements: The range of "Q" factors is from .5 to 500 over the frequency range from 50 to 50,000 cycles. The accuracy of "Q" measurement is approximately 5% for frequencies up to 50,000 cycles.

Oscillator Frequency Range: Continuously variable from 20 to 200,000 cycles in four ranges.

Frequency Accuracy: 1% under normal temperature conditions. The frequency stability is better than 2% over a long period of time.

Output Imepedance and Voltage: Four output impedances are available.

(a) 10 ohms impedance — 10 V Output Voltage
(b) 1 ohm impedance — 1 V Output Voltage
(c) .2 ohm impedance — .1 V Output Voltage
(d) .1 ohm impedance —.01 V Output Voltage

Those Impedances are measured at 50,000 cy.

Variable Condenser: The variable condenser is composed of a 10 x 1 mf., 10 x 0.1 mf., 10 x 0.01 mf., 10 x 0.001 mf. decade condenser and a 0.001 mf. variable air condenser.

Power Supply: The instrument is entirely self-contained and A.C operated. Total consumption 200 watts.

	W.	D.	H.
Dimension	19½″	14½″	23″
Weight	120 lbs.		

TYPE 1020-B MEGOHMMETER

USES: The Freed Type 1020-B Megohmmeter is a self contained and a-c operated instrument equally useful in the laboratory or for production testing of the leakage resistance of insulation materials, condensers, cables, motors and transformer windings.

FEATURES: Resistance values indicated directly on a four inch meter protected against over-load.

Rapid and safe to use, test voltage removed from terminals and capacitive component discharged to ground in all positions of multiplier switch. Low resistance in series with component under test provides very short charging time for even the very largest capacitors. Calibration position provided to check accuracy of 500 volts d-c potential.

500 volt test supply electronically regulated.

SPECIFICATIONS

Range: 1 megohm to 2,000,000 megohms in six overlapping ranges selected by a multiplier switch.

Accuracy: Plus or minus 3% on resistance values up to 100,000 megohms; plus or minus 5% from 100,000 to 2,000,000 megohms.

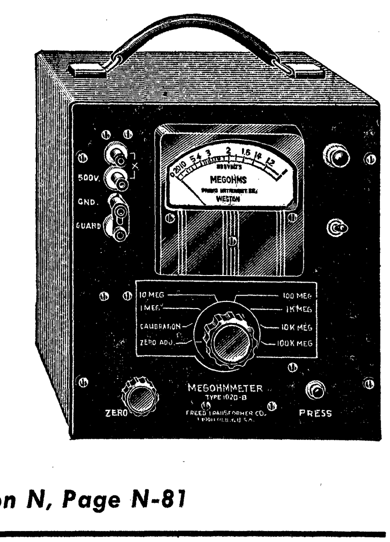
Voltages on Unknown: The voltage applied to the unkown terminals is 500 volts d-c and is independent (less than 1%) of the value of the unknown.

Stability: Line voltage variations from 105-125 volts will cause less than 2% variation in the meter reading.

Power Supply: 105-125 volts A.C. 50-60 cycles 30 watts.

Dimensions: 9½ x 10½ x 8 inches.

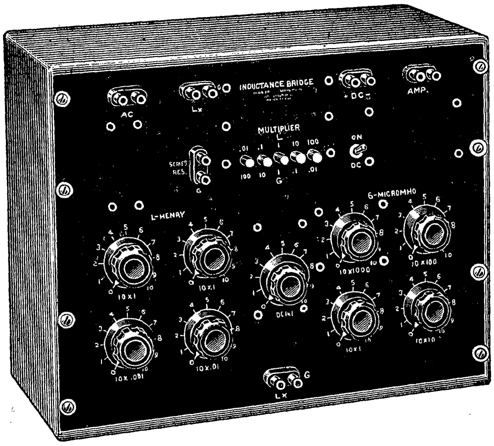
Net Weight: 18 pounds.



For Prices on Freed Test Instruments, refer to Section N, Page N-81

for PRECISION FREED TEST INSTRUMENTS *for* QUALITY

TYPE 1110-A INCREMENTAL INDUCTANCE BRIDGE



USES

The Incremental Inductance Bridge is designed for measuring the inductance of Iron Core components at any frequency up to 10,000 cycles. Inductors can be measured with a superimposed direct current, therefore, the bridge will measure the incremental inductance of coils. The bridge can be used for determination of storage factor, "Q", either at a given frequency in function of the applied voltage or at a given voltage in function of the applied frequency. The bridge can be used by the manufacturers of iron core components, such as filter chokes, high Q coils, and iron core audio and supersonic frequency components. Due to its very wide inductance range the instrument can be used as a general purpose laboratory inductance bridge.

SPECIFICATIONS

Inductance Ranges: One millihenry to one thousand henries in five ranges. Inductance values are read directly from a four dial decade and a multiplier switch. The last range may be extended to 10,000 henries through the use of an external resistance.

Conductance Ranges: One micromho to one mho in five ranges, read directly from a four dial decade and a multiplier switch. This conductance represents the reciprocal of the A.C. resistance of the coil.

"Q" Range: "Q" is measured as the product of Inductance (L) and Conductance (G). The range of "Q" measured on the bridge is 0.5 to 100. Measurement of inductance is independent of the values of "Q".

Accuracy: 1% through the frequency range from 60-1000 cycles 2% for frequencies from 1000 to 10,000 cycles. This accuracy is decreased for extreme positions of the multiplier. Conductance measurements 5% from 60-1000 cycles.

Frequency Range: The bridge is calibrated and adjusted at both 60 and 1000 cycles, but can be used at any frequency up to 10,000 cycles. Errors resulting from stray capacity increase with frequency. Coils having a high inductance should be measured at a low frequency to avoid resonance effect.

Range of Superimposed D.C.: On multiplier switch position L X 100 the D.C. is limited to 10 ma.

On the position L X 10, the D.C. is limited to 250 ma.

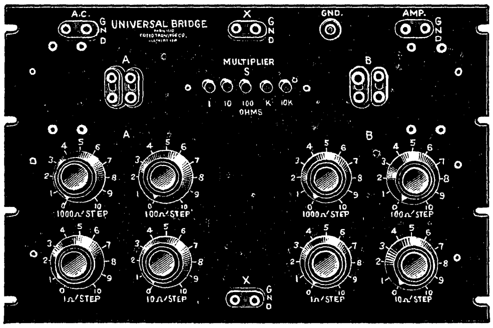
On all other positions the D.C. can be one ampere maximum.

Mounting: The bridge is supplied in a walnut cabinet or on special order for standard rack mounting.

		W	H	D
Dimensions:	Rack:	19"	8"	14"
	Cabinet:	21"	8"	14⅝"

Net Weight: Rack—37 lbs.; Cabinet—48 lbs.

TYPE 1150 UNIVERSAL BRIDGE



FEATURES

The Universal Bridge offers a variety of five possible bridge circuits. A wide range of capacitance, inductance, impedance, and phase angle measurement can be made throughout the frequency spectrum from 20 cycles to 20,000 cycles. By using decade resistors in the variable arms the unknown can be measured to four significant figures.

Operation is simple and both terminals and controls are arranged for convenience and ease of measurements.

SPECIFICATIONS

Frequency Range: The bridge can be used at frequencies from 20 cycles to 20,000 cycles.

Accuracy: All resistors of the bridge arms are adjusted to 0.1%. The absolute accuracy of measurement will depend upon the accuracy of standards used.

Inductance Range: The bridge will measure inductance of coils from 0.1 mh to 1000 henries with an accuracy of 0.5% at 1000 cycles.

Capacitance Range: Condensers from .001 mf to 1 mf can be measured to within 0.5% at 1000 cycles. Condensers below .001 mf should be measured by the substitution method.

Mounting: The bridge is supplied in a walnut cabinet or on special order for standard rack mounting.

	W	D	H
Dimensions:	19"	8½"	12"

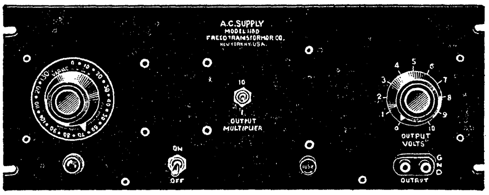
Weight: 32 lbs.

NO. 1180 A.C. SUPPLY

A valuable laboratory instrument with continuously variable output from 1/10 volt to 100 volts at 60 cycles.

Dimensions: Width—19"; Depth 5"; Height 7"

Weight: 13½ pounds.



For Prices on Freed Test Instruments, refer to Section N, Page N-81

for PRECISION FREED TEST INSTRUMENTS *for* QUALITY

TYPE NO. 1170 D.C. SUPPLY

USES

The Type 1170 Power Supply is intended to be used as a dependable source of direct current for the Incremental Inductance Bridge Type No. 1110A. The supply can also be used as a general laboratory substitute for a high voltage storage battery.

DESCRIPTION

The Type 1170 D.C. supply consists of an electronically regulated high voltage supply. Four independent control circuits provide four current ranges, namely 5 milliamperes, 25 milliamperes, 100 milliamperes and 500 milliamperes. The output current is indicated by a multirange 4" meter.

D.C. SUPPLY
FREED TRANSFORMER CO
CURRENT RANGE MA.
5MA
25MA
100MA
500MA
MILLIAMPERES
WESTON
D.C.-ON
D.C. OUTPUT

SPECIFICATIONS

Current Ranges: Four current ranges—5, 25, 100 and 500 milliamperes.
Voltage Ranges: The maximum no load voltages corresponding to the four current ranges are the following: 500 MA—270 volts, 100 MA—270 volts, 25 MA—55 volts, 5 MA—25 volts. On both 500 MA and 100 MA range with the control set to zero. the output voltage is independent of the load.
Voltage Regulation: The unit operates from a 115 volts, 50-60 cycle line. For a line variation of plus or minus 10%, the output voltage shall not vary more than ±1½%.
Power Consumption: Under 500 MA full load the power consumption is 360 watts. Under no load conditions the consumption is 150 watts.
Hum Level: On the 270 volt, 500 milliampere range the hum level under full load condition is 6 millivolts which corresponds to —93 Db.
Mounting: The instrument is supplied for mounting on a 19 inch relay rack or for cabinet mounting.
Dimensions: Rack: 19" W. x 12 3/16" D. x 12¼"; Cabinet: 21½" W. x 15" D. x 14" H.
Net Weight: Rack Mounted—68 lbs. In Cabinet—89 lbs.

NO. 1210 NULL DETECTOR AND VACUUM TUBE VOLTMETER

USES

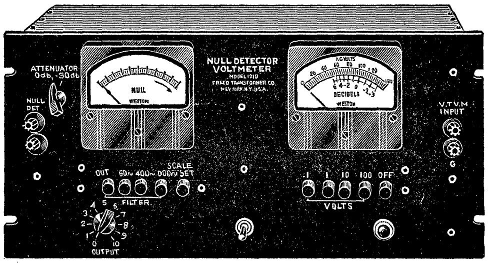
The Type 1210 Null Detector and Vacuum Tube Voltmeter is primarily designed for bridge measurements. The Null Detector indicates the balance of the bridge, and the Vacuum Tube Voltmeter indicates the voltage across the unknown two terminal or four terminal network. The three selective circuits provide means for sharply tuning the instrument to audio frequencies commonly used for measurements. The Vacuum Tube Voltmeter can be used as a general purpose audio Vacuum Tube Voltmeter.

DESCRIPTION

The Type 1210 Null Detector and Vacuum Tube Voltmeter is a combination of the Model 1140 Null Detector Amplifier, and a modified model 1060 high input impedance Vacuum Tube Voltmeter. Both instruments are independent and feed two separate 4" meters.

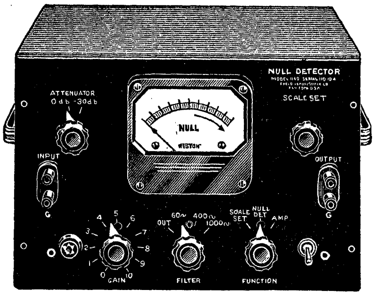
SPECIFICATIONS

NULL DETECTOR
Input Impedance: 1 megohm in parallel with 25 mmf.
Frequency Response: 2 Db from 20 to 20,000 cycles—5 Db at 50,000 cycles.
Null Detector Sensitivity: At 1000 cycles, 100 microvolts will give a 15% meter deflection.
Selective Amplifier: 23 Db second harmonic attenuation at 60 cycles, 400 cycles and 1000 cycles.
VACUUM TUBE VOLTMETER
Voltage Ranges: .01 volts to 100 volts in four ranges—(.1—1—10—100 volts at ¾ of scale.)
Accuracy: 2% of full scale on all four ranges.
Waveform Error: The instrument is a full wave average meter and is free of turnover effects. For small amounts of distortion the accuracy of the instrument is independent of the waveform.



Frequency Range: 20 cycles to 20,000 cycles (1 Db).
Input Impedance: Equivalent to 50 megohms resistance in parallel with a 15 mmf condenser.
Meter Scale: Voltage scale calibrated from 0 to 150. Decibel scale calibrated from—6Db to +3 Db.
Dimensions: Rack Mounting 19" x 9" x 11½".
Net Weight: 25 Lbs.

MODEL 1140 NULL DETECTOR-AMPLIFIER



USES

The Freed Model 1140 Null Detector Amplifier is a sensitive null indicator for bridge measurements, providing visual null indications or aural when used in conjunction with headphones. The unit may also be used as a high gain amplifier for general laboratory work.

DESCRIPTION

Functionally the instrument consists of a high gain linear amplifier with a 30 db. input attenuator in addition to the variable gain control. A four inch panel meter provides visual null indications, the response of the meter circuit is approximately logarithmic over a 40 db. voltage range. Resonant circuits tuned to 60, 400 and 1000 cycles limit the amplifier transmission characteristics to the three audio frequencies commonly used for bridge measurements.

SPECIFICATIONS

Input Impedance: 1 megohm in parallel with 25 mmf. GAIN: 98 db. with 1 megohm load (6 mmf. shunt capacity), down 1.5 db. at 25,000 cycles, down 5 db. at 50,000 cycles, down 2 db. at 20 cycles.
Null Detector Sensitivity: At 1 Kc. 100 microvolts will give a 15% meter deflection.
Selective Amplifier: 23 db. second harmonic attenuation at 60, 400 and 1000 cycles.
Output Impedance: Approximately 50,000 ohms.
Output Voltage: 40 volts undistorted into 1 megohm load, 10 volts into 20,000 ohms.
Power Supply: 105-125 volts, 50-60 cycles, 35 watts consumption.
Mounting: This instrument can be supplied in cabinet model (Type No. 1140) or in a standard relay rack mount with dust cover (Type No. 1140R).
Dimensions: (Type No. 1140) 13½" x 8½" x 10" overall; (Type No. 1140R) 19" L. x 7" W. x 9" D.
Weight: 24 lbs.

For Prices on Freed Test Instruments, refer to Section N, Page N-81

for PRECISION FREED TEST INSTRUMENTS *for* QUALITY

MODEL 1040 A.C.-V.T. VOLTMETER

USES

The type 1040 Vacuum Tube Voltmeter is a high impedance wide frequency range voltmeter which can be used at audio and supersonic frequencies. It is particularly recommended for (1) vibration studies involving very low frequencies, (2) frequency characteristics and gain measurements on amplifiers, (3) transmission losses on telephone circuits: filter and carrier systems up to 250,000 cycles, and (4) acoustic measurements, such as, determination of frequency response of microphones and loudspeakers. Because of the high sensitivity of the instrument, the voltmeter can be advantageously used as a null detector in A.C. bridge measurements. In addition to its use as a voltmeter, the instrument can be used as an ammeter to measure a wide range of currents by connecting it across suitable resistors.

A.C. VOLTS
WESTON
A-C-V-T VOLTMETER
MODEL 1040
FREED TRANSFORMER CO.
.01
.1
10
100

FEATURES

Because of the low input capacity, a high value of input impedance is maintained over the five ranges of the voltmeter. A balanced rectifier, a balanced D.C. amplifier circuit, and a high amount of degeneration throughout the amplifier makes it independent of line voltage variations and changes in tube characteristics. A very important feature of the instrument is the logarithmic voltage scale of the meter. With this type of scale, the percentage accuracy of reading is uniform over the entire scale. Another advantage of the logarithmic scale is that it provides a uniform decibel scale which is a very valuable feature in sound and communication measurements. A zero adjustment and full scale adjustment are provided. These two controls serve for all ranges and no re-setting is necessary when switching from one range to another. The time constant of the instrument is adjusted in order to read very low frequencies of 7 to 10 cycles without any vibration of the needle. The circuit of the meter is arranged so that it can not be burned out by any overload of the instrument. The vacuum tube voltmeter is small, compact, entirely self-contained, A.C. operated.

SPECIFICATIONS

Voltage Ranges: .001 volts to 100 volts in five ranges (.01, .1, 10, and 100 volts full scale).

Accuracy: 2% on full scale on all five ranges, on sinusoidal voltages.

Waveform Error: The instrument is a peak voltmeter calibrated to read RMS values. On distorted waveforms, the percentage deviation of the reading from RMS values may be as large as the percentage of the harmonics present.

Frequency Ranges: 10 to 200,000 cycles, .1 db. variation from 20 cycles to 150,000 cycles: .50 db. variation from 10 cycles to 200,000 cycles.

Input Impedance: Equivalent to 500,000 ohm resistance in parallel with a 15 MMF. condenser.

Stability: Effect of variation in line voltage from 100 volts to 125 volts is 1%. Effect in changes of tubes is less than .5%.

Scale: Logarithmic voltage scale calibrated from 1 to 10 plus a linear decibel scale calibrated from 0 db. to 20 db.

Meter: 4″ suppressed zero 1 MA meter protected against overloads.

Power Supply: The instrument is entirely self-contained and operates on 100-125 volts, 50-60 cycles. Total consumption, 40 Watts.

Dimensions: 4⅞″ High x 5⅝″ Wide x 9⅞″ Long.

Weight: 12 pounds.

NO. 1010 COMPARISON AND LIMIT BRIDGE

USES

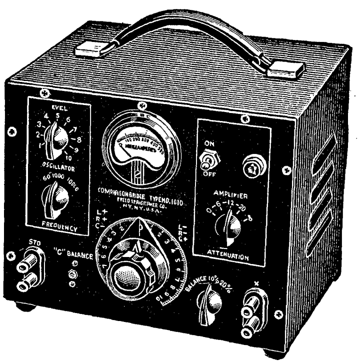
This instrument is a Comparison and Limit Bridge for use in both laboratory and production testing of resistors, condensers and inductors. The manufacturer of these components can use it for production tests, the user for incoming inspection and acceptance tests. The instrument is particularly useful for laboratory work (bridge or filters) where very accurate components are required.

FEATURES

For precision and production testing, the bridge has many advantages. Power line operation and the visual indicator make the instrument completely self-contained. It can be used in noisy locations. Its small size and light weight permit the instrument to be moved easily and to be set up wherever necessary.

DESCRIPTION

The instrument is composed of an oscillator, a bridge and a selective amplifier. The oscillator output is coupled into the bridge through a shielded isolation transformer. A switch is provided which connects either a high or low impedance winding across the bridge, consisting of two fixed resistors, the unknown impedance and the standard. A variable resistor between the two fixed resistors makes it possible to read the percentage difference between the unknown and the standard on a specially calibrated dial. A high gain selective amplifier indicates the balance of the bridge. The general method of testing is the comparison of an unknown component with a standard component of the same type. Accurate percentage measurements are obtained by the use of precision components in the arms of the bridge. The use of high gain amplifier and adequate internal shielding assures a very sharp and distinct balance.
A visual null indicator, consisting of a meter used in connection with the high gain amplifier makes it possible to use the No. 1010 Bridge as a precision limit bridge in production testing.



SPECIFICATIONS

Frequency—Three frequencies are available: 50 to 60 cycles, 1000 cycles and 10000 cycles. The 50 or 60 cycles are taken from the line. The 1000 and 10000 cycles are generated by an oscillator and are accurate to within ±2%.

Range—Two comparison ranges are provided: 5% and 20%. The percentage difference is read directly on a calibrated dial.

Resistor Measurements—Resistors from 1 ohm to 10 megohms may be compared at 60 cycles to an accuracy of ±.1%.

Condenser Measurements—Condensers from 50 mmfd to 10 mfd are measured at 1000 cycles. Condensers above 10 mfd are measured at 60 cycles. Condensers below 50 mmfd may be measured if the ground-unground switch is in the unground position.

Inductor Measurements—Inductors may be measured at 60, 1000 or 10000 cycles depending on their value. Range: 10 microhenries to 1000 henries.

Accuracy—On the 5% position the components can be adjusted to within an accuracy of ±.1%.

Voltage Applied to the Unknown—Two controls are provided to vary the voltage across the unknown. A special low impedance winding is used when measuring small impedances and the voltage across these may be varied from .1 to 1 volts. For higher values of impedance the voltage may be varied from .5 to 15 volts.

Power Supply—105-125 volts; 50-60 cycles.

Tube Complement—The following tubes are required and supplied with the instrument: 1-6X4, 1-6AQ5, 3-12AX7.

Portable—Carrying cabinet of all metal construction.

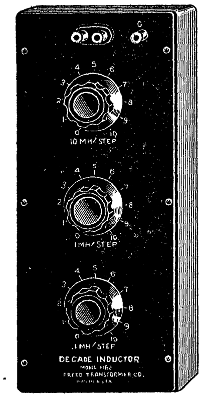
Dimensions—10½″ x 12″ x 12″.

Net Weight—17 pounds.

For Prices on Freed Test Instruments, refer to Section N, Page N-81

for PRECISION FREED TEST INSTRUMENTS *for* QUALITY

DECADE INDUCTORS



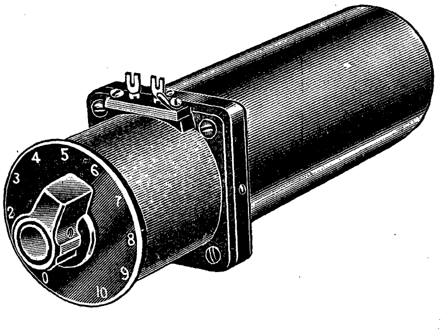
Primarily designed for use in wave filters, tuned circuits and equalizers for audio and supersonic frequencies. The stability, accuracy and high value of "Q" makes these Decade Inductors invaluable laboratory instruments.

No. 1160
10 x 1. HY Steps
10 x .1 HY Steps
10 x .01 HY Steps
500-15,000 Cycles

No. 1161
10 x .1 HY Steps
10 x .01 HY Steps
10 x .001 HY Steps
2000-50,000 Cycles

No. 1162
10 x .01 HY Steps
10 x .001 HY Steps
10 x .0001 HY Steps
10,000-300,000 Cycles

No. 1164
10 x 10 HY Steps
10 x 1 HY Steps
10 x .1 HY Steps
50-1000 Cycles



No. 1163—3 Unit Decade Inductor
10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=60 @ 1,000 cycles.

No. 1280—3 Unit Decade Inductor
10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1310—3 Unit Decade Inductor
10 x 1 HY, 10 x .1 HY, 10 x .01 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1342—3 Unit Decade Inductor
10 x 10 HY, 10 x 1 HY, 10 x .1 HY.
Frequency Range, 200-2,000 cycles.
Q=80 @ 500 cycles.

No. 1260—4 Unit Decade Inductor
10 x 1 HY, 10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=60 @ 1,000 cycles.

No. 1290—4 Unit Decade Inductor
10 x 1 HY, 10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1270—10 x 1 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1240—10 x .1 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1230—10 x .01 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1220—10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1341—Decade Inductor, 10 x 10 HY.
Frequency Range, 200-2,000 cycles.
Q=80 @ 500 cycles.

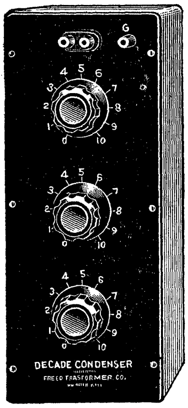
% DISTORTION
METER ADJUSTMENT
DECIBELS
FREQUENCY RANGE KC
R
ΔR
AMPLIFIER GAIN DB
HARMONIC
FUNDAMENTAL
DISTORTION METER
FREED TRANSFORMER CO.
INPUT
ON
OFF

No. 1250 DECADE CONDENSER

High quality Decade Condenser designed for use in Wave Filters, Tuned Circuits and Equalizers for Audio and Supersonic Frequency.

The stability, accuracy and low dissipation factor make this Condenser Decade an invaluable laboratory instrument. 1.110 mf in 0.001 mf steps ±1% accuracy. Maximum Voltage 500 peak.

Dimensions: Width 6″; Depth 4½″; Height 13¾″.
Weight: 8 pounds.

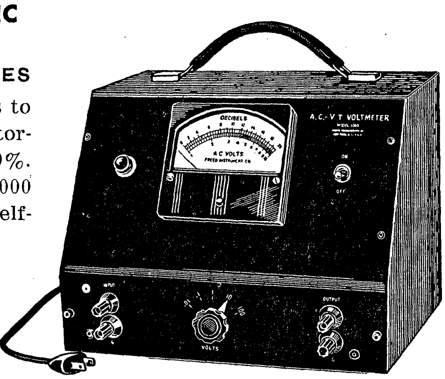


No. 1410 HARMONIC DISTORTION METER

FOR CARRIER FREQUENCIES

Frequency range 20,000 cycles to one megacycle. Harmonic distortion range from 1/10% to 30%. Maximum input voltage 1000 volts. The instrument is self-contained and A.C. operated.

Dimensions: Width 19½″; Depth 10¼″; Height 15″.
Weight: 45 pounds.



No. 1060 VACUUM TUBE VOLTMETER

A 50 Megohm input impedance wide frequency range voltmeter which can be used at audio and supersonic frequencies.

Particularly recommended for: (1) Vibration studies involving very low frequencies. (2) Frequency characteristics and gain measurements on amplifiers. (3) Transmission losses on telephone carrier systems.

High input resistance together with the small input capacity makes the instrument invaluable for high impedance tuned circuit measurements at audio and supersonic frequencies.

For Prices on Freed Test Instruments, refer to Section N, Page N-81

PRECISION INSTRUMENTS
FOR THE RADIO AND ELECTRONIC INDUSTRY

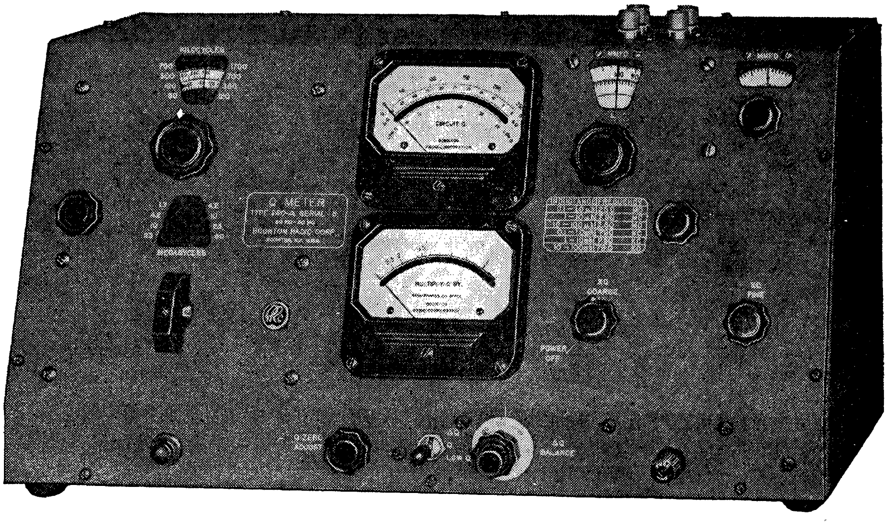
Q-METER

TYPE 260-A

Freq. Range 50 kc. to 50 mc.

Radio frequency circuit design often requires the accurate measurement of Q, inductance, and capacitance values. For this application, the Boonton Radio Q-Meter has become the universal choice of radio and electronic engineers throughout the country.

Each component part and assembly used in the manufacture of this instrument is designed with the utmost care and exactness. Circuit tolerances are held to values attainable only in custom built instruments.



The Type 260-A Q Meter provides a scale for reading low values of Q, as well as a "ΔQ" scale, two paralax-free meters, recessed dials and other desirable features. The beam pentode r.f. oscillator results in good waveform and allows smooth oscillator output variation through screen grid control. The use of a newly developed, low inductance, low resistance injection resistor, a rugged thermocouple running at a comparatively low temperature, and a controlled oscillator output between ranges minimizes the possibility of thermocouple damage. The "LO Q" and "ΔQ" scales greatly facilitate the use of the instrument in measuring the effect on Q resulting from changes in test circuit parameters, as well as allowing closer readings of Q at the lower values.

The symbol Q is commonly used to designate the ratio of reactance to effective resistance of a coil ($Q=2\pi fL/R$) or a condenser ($Q=1/2\pi fCR$). This factor is of fundamental significance in circuit design since it is a "figure of merit" of the reactive elements. By introducing a calibrated r.f. voltage from the self-contained oscillator into the series resonant Q circuit and measuring the voltage across one of the circuit reactances, the ratio of the latter to the applied voltage is the Q of the circuit. The measurement requires a single operation and the circuit Q is read directly on the meter.

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SPECIFICATIONS

Frequency Coverage: 50 kc. to 50 mc. continuously variable in eight ranges.

Frequency Accuracy: Approximately ±1%.

Range of Q Measurements: 10 to 625.

Range of Difference Q Measurements: 0 to 125.

Internal Resonating Capacitance Range:

Main Tuning Dial: 30 to 450 mmf (direct reading) calibrated in 1.0 mmf increments from 30 to 100 mmf: 5.0 mmf increments from 100 to 450 mmf.

Vernier: —3.0 to +3.0 mmf (direct reading) calibrated in 0.1 mmf increments.

Accuracy of Resonating Capacitor:

Main Tuning Dial: Approximately ±1% or 1.0 mmf, whichever is greater.

Vernier: ±0.1 mmf.

Power Supply: 90-130 volts, 60 cps (internally regulated).

Power Consumption: 65 watts.

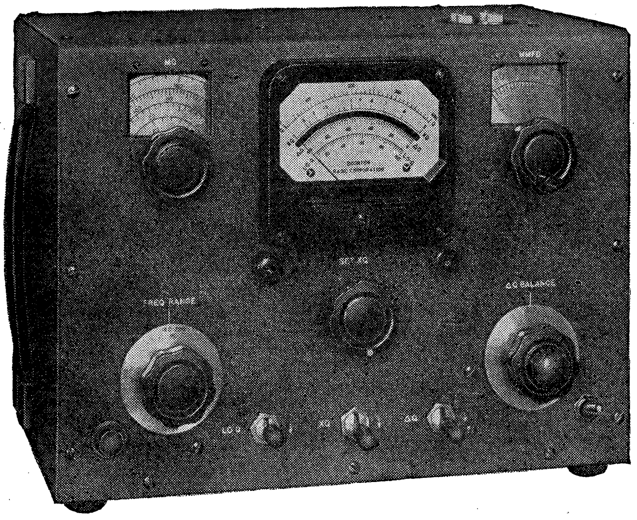
Model available for other Power Supply voltages and frequencies.

Type 103-A Accessory Inductors available for entire frequency range.

Price: $725.00 F.O.B. Factory.

Prices subject to change without notice

PRECISION INSTRUMENTS FOR THE RADIO AND ELECTRONIC INDUSTRY



Q-METER

TYPE 190-A

Frequency Range 20 mc. to 260 mc.

The Q Meter Type 190-A measures Q over a very wide range at VHF. It also measures differences in Q between a reference circuit and other circuit configurations on a sensitive Differential Q Scale. All of the indications are made on a single parallax free meter. The internal variable condenser used to resonate external coils is calibrated at 0.1 mmf intervals and eleven complete turns of the dial are required to cover the capacitance range. This new design includes the results of many years experience in the development and application of Q Meters.

SPECIFICATIONS

Frequency Coverage: 20 mc to 260 mc. Continuously variable in four ranges.

Frequency Accuracy: Calibrated to ± 1%.

Range of Q Measurements: 5 to 1200.

Range of Differential Q Measurements: 0 to 100.

Accuracy of Q Measurements: Circuit Q of 400 read directly on meter can be determined to accuracy of ±7% to 100 mc and to ±15% to 260 mc.

Internal Resonating Capacitance Range: 7.5 mmf to 100 mmf (direct reading) calibrated in 0.1 mmf increments.

Accuracy of Resonating Capacitor: ± 0.2 mmf to 20 mmf
± 0.3 mmf to 50 mmf
± 0.5 mmf to 100 mmf

Power Supply: 90-130 volts—60 cps (internally regulated).

Power Consumption—55 watts.

Weight: 25 lbs.

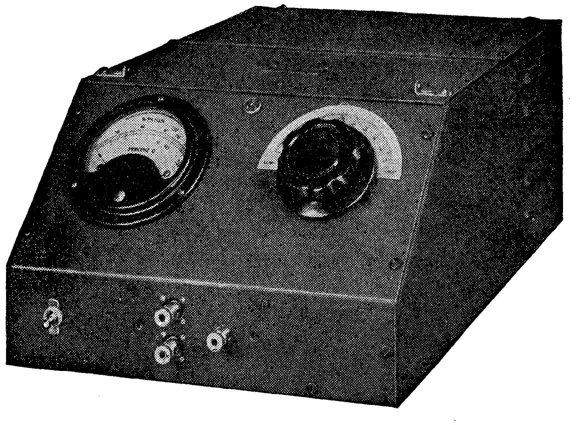
Price: $625.00, F.O.B. Boonton, N. J., U.S.A.

(Specifications subject to change without notice)

QX CHECKER TYPE 110-A

Frequency Range 100 kc. to 25 mc.

The QX-Checker is a production type test instrument specifically designed to compare reactance and relative Q of RF components with approved standards. The two factors, reactance and relative Q, are separately indicated, one on a meter and the other on a condenser dial, so that the deviation of either from established tolerances is immediately shown. Built to laboratory standards, the QX-Checker is a sturdy, fool-proof instrument for use in production work by factory personnel.



SPECIFICATIONS

Oscillator Frequency Range: 100 kc. to 25 mc. in 6 ranges using accessory plug-in coils (two coils furnished with each instrument).

Accuracy of Coil Checks: Coils may be checked against a standard to within about 0.2% with inductance values of 10 microhenries to 10 millihenries and Q of 100 or greater.

Capacitance Range: Capacitance values ranging between approximately 2-1000 mmf. may be checked against a standard to an accuracy of a few tenths of one mmf. if the Q of the capacitor is high.

Power Supply: 100-125 volts, 50-60 cycles, also 200-250 volts, 50 cycles.

Dimensions: Width 12¼", Depth 18", Height 8".

Weight: 26 lbs.

Price $340.00, F.O.B. Boonton, N. J., U.S.A.

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PRECISION INSTRUMENTS
FOR THE RADIO AND ELECTRONIC INDUSTRY

FM-AM SIGNAL GENERATOR

TYPE 202-B

Frequency Range 54 mc. to 216 mc.

The type 202-B FM-AM Signal Generator has been developed to meet the needs of engineers engaged in the design of FM and television receivers for operation within the frequency range of from 54 megacycles to 216 megacycles.

This instrument has been proportioned for maximum conservation of laboratory bench space, with frequency dial, modulation and output meters positioned at eyelevel for maximum readability. The unit is finished in grey wrinkle enamel with engraved panel and is supplied complete with tubes and standard output cable.

SPECIFICATIONS

RF Range: Frequencies from 54 mc. to 216 mc. are covered in two ranges, 54-108 mc. and 108-216 mc.

Main Frequency Dial: The two RF ranges are calibrated directly in megacycles to an accuracy of within ± 0.5%. The dial is also divided in 24 equal divisions for use with the vernier frequency dial.

Vernier Frequency Dial: The vernier frequency dial is divided in 100 divisions and is geared to the main dial through a gear train having a 24:1 ratio. The approximate frequency change per vernier division is 26 kc. on the low range and 52 kc. on the high range.

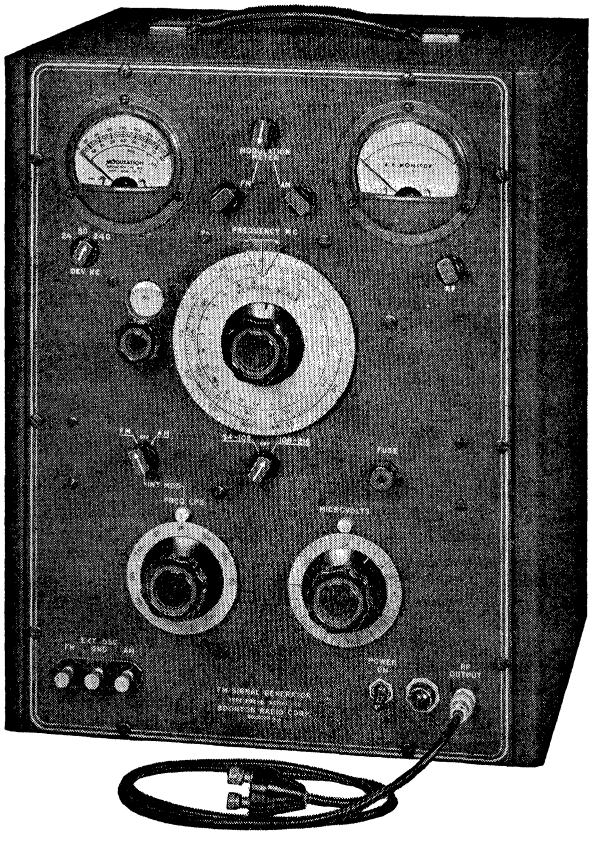
Frequency Modulation (Deviation): The FM deviation is continuously variable from zero to 240 kc. The modulation meter is calibrated in three FM ranges (1) zero to 24 kc., (2) zero to 80 kc. and (3) zero to 240 kc. deviation.

Amplitude Modulation: The modulation meter is calibrated at 30% and 50% amplitude modulation. AM is continuously variable from zero to 50%.

Modulation Controls: Separate potentiometers are provided for continuous control of FM and AM levels.

Modulating Oscillator: The internal AF oscillator may be switched to provide either frequency or amplitude modulation; it may also be switched off. External binding posts permit the use of an external AF oscillator for either FM or AM. Both internal and external AF oscillators may be used simultaneously, thus providing either FM or AM at two modulation frequencies simultaneously or simultaneous FM and AM. The internal AF oscillator provides eight fixed frequencies which may be selected by a rotary type switch—50, 100, 400 cycles and 1, 5, 7.5, 10 and 15 kilocycles, accurate to within 5%. The output voltage of the internal AF oscillator is available at the external binding posts for synchronizing or other purposes.

RF Output Voltage: The RF output voltage is continuously variable over a range from 0.1 microvolt to 0.2 volts at the terminals of the output cable. The impedance at the RF output jack, looking into the instrument, is 53 ohms resistive. The output cable has a 53 ohm resistance termination at the terminal end hence the output impedance of the unit with cable attached is 26.5 ohms.



Distortion: FM distortion at 75 kc. deviation is less than 2% when modulated with the internal AF oscillator or an external AF oscillator having 0.5% distortion or less. At 50% amplitude modulation the distortion is about 5% using the internal AF oscillator and decreases as the modulation percentage is reduced. An external AF oscillator may be employed for amplitude modulation if desired.

Spurious RF Output: All spurious RF output voltages are at least 30 db. below the desired fundamental. The RF leakage is very low.

Fidelity Characteristics: The deviation sensitivity of the FM modulation system as a function of frequency is constant from dc. to over 10 kc. At 15 kc. the deviation as indicated on the modulation meter is 0.5 db. higher than the true value. The amplitude modulation system is also flat from dc. to 10 kc., and departs from nominal by 1.0 db. at 15 kilocycles.

Power Supply: The power supply is self-contained in the instrument for use on 60 cycles, 110 volts.

Accessories: 207A Frequency Converter (Frequency range 0.1 mc. to 55 mc.).

Dimensions: Height: 17"; Width: 13½"; Depth: 11½".

Weight: 35 lbs.

Price: $975.00, F.O.B. Boonton, N. J., U.S.A.

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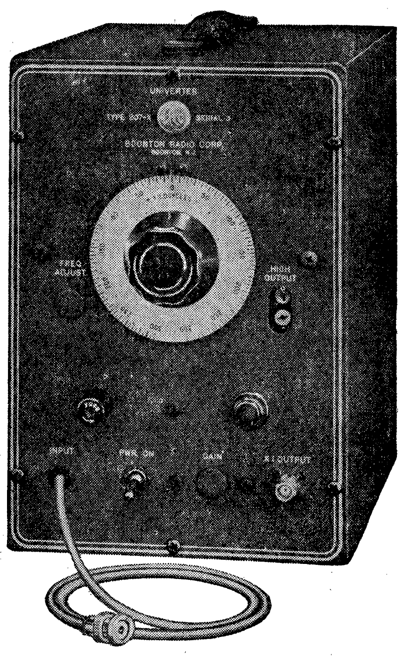
PRECISION INSTRUMENTS FOR THE RADIO AND ELECTRONIC INDUSTRY

UNIVERTER TYPE 207-A

Frequency Range 0.1 mc. to 55 mc.



The Type 207-A Univerter, a frequency converter accessory having unity gain, was designed for use with the Type 202-B and 202-C FM-AM Signal Generator to provide frequency coverage from 0.1 mc. to 55 mc. Thus the Type 207-A Univerter when used with the Type 202-B or 202-C Signal Generator will provide complete FM-AM Signal Generator coverage from 100 kc. to 216 mc. This instrument also enables the frequency and amplitude modulation features of the 202-B or 202-C instrument, as well as the attenuator calibration, to be utilized at these lower frequencies without causing any appreciable distortion.

The 207-A Univerter matches the 202-B and 202-C FM-AM Signal Generators in styling and finish, and is supplied complete with tubes and instruction book.

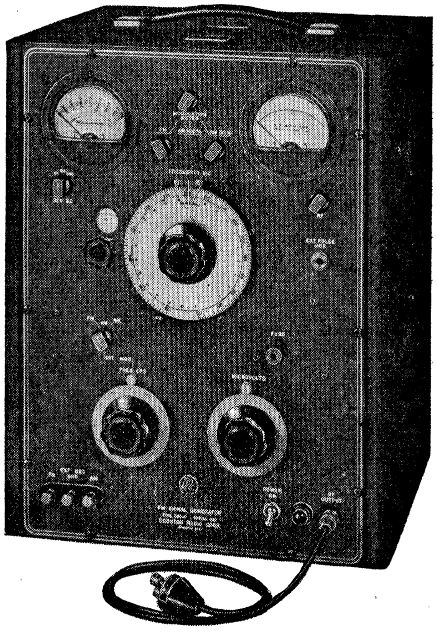
SPECIFICATIONS

RF Range: The Univerter, in combination with the 202-B or 202-C FM-AM Signal Generator, covers a frequency spectrum from 0.1 mc. to 55 mc. (0.3 mc. to 55 mc. with 200 kc. carrier deviation.)
Frequency Increment Dial: This dial is calibrated in increments of 5 kc. from plus 300 kc. through zero to minus 300 kc.
X1 Output: The RF output voltage at the X1 output jack is continuously variable from 0.1 microvolt to 0.1 volt across a 53 ohm load by means of the 202-B or 202-C Signal Generator attenuator. The gain is constant within ±1 db over the frequency range of the instrument.
High Output: A front panel pin jack makes available an uncalibrated high voltage output. The voltage gain at this jack is approximately 7.5.
Output Impedance: The output impedance at the X1 jack is about 53 ohms, the impedance looking into a terminated 53 ohm cable connected to the jack is 26.5 ohms. The impedance at the high output pin jack is approximately 330 ohms.

Power Supply: The 207-A Univerter is designed for use on 60 cycles, 90-130 volts, 45 watts.
Dimensions: H: 11½" W: 7⅜" D: 10½"
Weight: 20 lbs.
Price: $345.00 F.O.B. Boonton, New Jersey

TELEMETERING SIGNAL GENERATOR TYPE 202-D

Frequency Range 175 mc. to 250 mc.



The Type 202-D Signal Generator is a precise and reliable instrument well suited to the specialized requirements of telemetering engineers for rapidly analyzing and evaluating over-all system performance.

SPECIFICATIONS

RF Range: 175-250 megacycles in one range, accurate to ± 0.5%. Main frequency dial also calibrated in 24 equal divisions for use with vernier frequency dial.
Frequency Modulation (Deviation): The FM deviation is continuously variable from zero to 240 kc. The modulation meter is calibrated in three FM ranges: (1) 0-24 kc., (2) 0-80 kc., and (3) 0-240 kc. deviation.
Amplitude Modulation: Utilizing the internal audio oscillator, amplitude modulation at any one of eight audio frequencies between 50 c. and 15 kc. may be obtained over the range of 0-50%, with meter calibration points at 30% and 50%. By means of an external audio oscillator the RF carrier may be amplitude modulated to substantially 100%. A front panel jack is provided which permits direct connection of an external modulating voltage source to the final stage for pulse and square wave modulation.
RF Output Voltage: The RF output voltage is continuously variable over a range from 0.1 microvolt to 0.2 volt at the terminals of the output cable. The impedance at the RF output jack, looking into the instrument, is 53 ohms resistive.
Distortion: FM: The over-all distortion at 75 kc. is less than 2% and at 240 kc. less than 10%. AM: The distortion present at the RF output for 30% amplitude modulation is less than 3% and for 50% AM less than 6.5. At 100% the distortion is 12% to 15% depending upon the modulating frequency.
Outside Cabinet Dimensions: 17" H, 13½" W, 11½" D.
Weight: 35 lbs.
Price: $980.00, F.O.B. Boonton, N. J., U.S.A.

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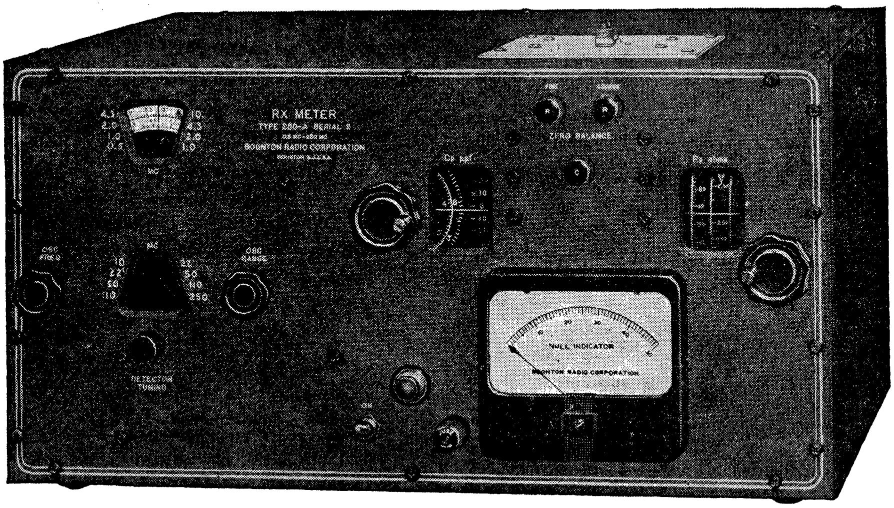
PRECISION INSTRUMENTS FOR THE RADIO AND ELECTRONIC INDUSTRY

THE RX METER TYPE 250-A

A Completely Self-Contained High Frequency Bridge



Frequency Range
0.5 to 250 mc.

The RX Meter measures equivalent parallel resistance, capacitance or inductance of two terminal networks over a wide frequency range (0.5 to 250 mc.). The range of measurement for parallel resistance is 15 to 100,000 ohms, for parallel capacitance 0.1 to 120 mmfd and for parallel inductance 0.001 microhenries to 100 millihenries. By indirect methods resistances with values from 0 to 15 ohms can be measured. Resistance values are directly indicated and no corrections are necessary over the frequency range. At higher frequencies small corrections, as indicated in the instruction book, are necessary to obtain the highest accuracy in the measurement of capacitance and inductance. The automatic gain control on the null indicator avoids meter damage and permits indication at all times of the correct direction for adjusting to balance. The low noise high gain amplifier-detector results in high sensitivity near the balance point.

The RX Meter is self-contained requiring no external units for its operation. This feature permitted an integrated design eliminating difficulties arising from leakage, hand effects or improper matching which can occur when several different units must be inter-connected in the laboratory.

The RX Meter Type 250-A has particular application to the measurement of the impedance of unbalanced, two terminal components or networks which require moderate values of capacitance to resonate the reactance present. Measurements can be made on two terminal or three terminal balanced networks by use of one-half wavelength of high quality coaxial cable as a matching element. Networks which require values of capacitance beyond the range of the Cp dial to resonate the reactance can be measured in most cases by use of a high quality auxiliary parallel capacitors or inductors.

All measurements made by the RX Meter are indicated in equivalent parallel values. The equivalent series values can be readily obtained by use of simple formulas included in the Instruction Book.

The RX Meter can be used to determine the parameters of the impedance of resistors over its frequency range, the characteristics of antennas and the characteristic impedance, velocity of propagation and attenuation of transmission lines. It can also be used to determine the characteristics of broad band IF transformers, filters, transistors, attenuators, thermistors, crystal diodes and vacuum tubes.

SPECIFICATIONS

Frequency Range: 0.5 to 250 mc. continuously variable in eight self-contained ranges.

Frequency Accuracy: ±1%.

Resistance Range (Rp): 15 to 100,000 ohms. Values from 0 to 15 ohms can be determined by indirect means.

Accuracy of Resistance Measurements:

$$\pm\left(2 + \frac{Fmc}{200} + \frac{Rp}{5000} + \frac{Q}{20}\right)\% \pm 0.2 \text{ ohms}$$

where Fmc = frequency in megacycles.
Rp = Equivalent parallel resistance as indicated by the RX Meter dial.
$Q = \frac{Rp}{Xp}$ as determined from RX Meter indications.

Capacitance Range (Cp): 0 to 20 mmfd. By use of auxiliary resonating coils this range may be extended to 0 to 120 mmfd.

Accuracy of Capacitance Measurements:

$$\pm\ (0.5 + 0.0002F^2\text{mc})\ \% \ \pm 0.15 \text{ mmf}$$

where Fmc = Frequency in megacycles.

Inductance Range (Lp): Values of Lp which will resonate with capacities from 0 to 100 mmf over the frequency range may be determined. By the use of auxiliary series resistors, values of Lp may be measured over the following ranges:

Frequency	Lp Minimum	Lp Maximum
0.5 mc	0.01 microhenries	100 millihenries
250 mc	0.001 microhenries	0.4 microhenries

Voltage Applied Across Unknown Impedance: DC voltage = 0 RF voltage = Approximately 0.1 to 0.5 volts.

Power Requirements: 105-125 volts 50-60 cps., 60 watts. (Power supply of instrument internally regulated.)

Tubes: Instrument is supplied complete with the following tubes: 2 Type 5718, 1 Type 6AB4, 2 Type 6AG5, 1 Type OD3, 1 Type 5Y3, 1 Type 6H-6, Ballast Tube.

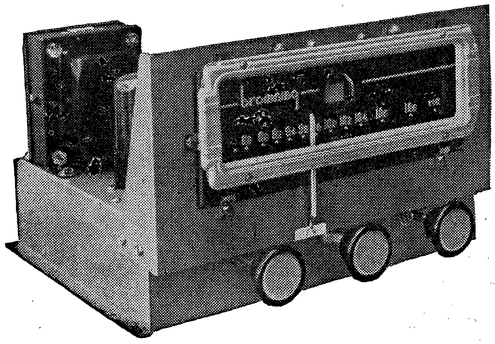
Dimensions: Height 10"; length 20"; depth 12".

Weight: 40 pounds.

Price: $1250.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO Corporation
BOONTON·N·J·U·S·A·

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.



BROWNING FM TUNER MODEL RV-31

Expressly for the discriminating listener . . . . a fine instrument. The rumble of tympani, the "bite" of strings, woodwinds and brasses, are thrillingly present in the fully balanced output of this tuner. Gives quiet, undistorted reproduction of sound even when lightning or man-made static makes ordinary radio reception impossible.

Every factor that influences quality of reproduction, dependability, convenience of installation and operation, has been critically examined and improved, neglecting neither the point of view of the engineer nor that of the listening perfectionist.

ELECTRICAL FEATURES

- Tuning range 88 to 108 megacycles.
- Employs Armstrong receiving method.
- High sensitivity for fringe area reception and better quieting in urban areas. 3 microvolts for 20 db quieting.
- Selectable AFC—Automatic Frequency Control may be disabled if desired. Local oscillator is temperature compensated for drift-free operation without AFC.
- Cathode follower output stage to feed any high-fidelity amplifier at low impedance. Hum possibilities and high frequency losses due to cable capacitance are minimized.
- Audio inputs for PHONO, TV and RECORDER are selectable by panel switch for introduction to audio amplifier. Tuner volume control governs level from any source.
- Self-contained power supply.
- 115 volt 50/60 cycle operation. 60 volt-amperes input.
- Two 115 volt power outlets provided at rear of chassis for convenience in powering amplifiers and turntables. May be switched with tuner ON-OFF switch.
- New, low noise level, all triode RF section for high gain with minimum noise.
- Tube complement: Five 6AU6, two 12AT7, one 6J6, one 6AL5.
- Tuning indicator—6AL7. Rectifier tube—5Y3.

MECHANICAL FEATURES

- Physically small—easily adapted to any custom installation where space may be limited.
- Dial escutcheon, knobs, shielded wire and connectors supplied.
- Edgelighted dial in modern style with knobs and escutcheon in black and silver motif.
- Improved construction and high quality components for trouble free operation.
- Dimensions—Height 6½"; Width 11"; Depth 9".
- Weight 10 lbs. Shipping weight 14 lbs.

NET PRICE (COMPLETE WITH TUBES) $99.50

BROWNING FM-AM TUNER
MODEL RJ-42

This new Browning FM-AM tuner is particularly engineered for use with the modern, full-control amplifier. It provides high-fidelity reception in the FM band and high sensitivity, high-quality reception of AM signals.

ELECTRICAL FEATURES

FM SECTION

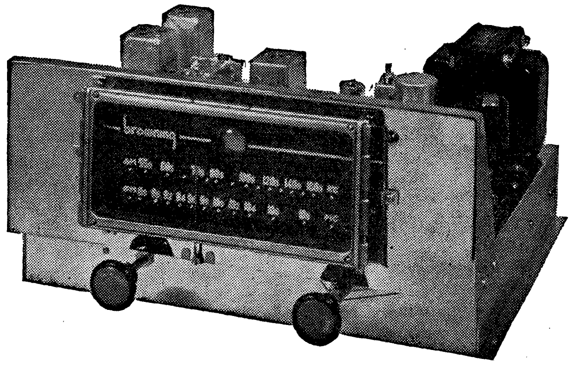
- Tuning range—88 to 108 megacycles.
- Armstrong receiving method—dual limiters and discriminator.
- Selectable AFC—Automatic Frequency Control may be disabled by means of panel switch. Local oscillator is drift-compensated for operation without AFC.
- Sensitivity—3 microvolts for 20 db. quieting.
- Fidelity—correct de-emphasis network for flat response from 20 cycles to 20,000 cycles within ½ db.
- All-triode RF section for best signal-to-noise ratio.

AM SECTION

- Tuning range—540 to 1650 kilocycles.
- Superheterodyne circuit using triple-tuned IF transformers.
- Separate AVC detector to minimize audio distortion.
- Sensitivity—1 to 2 microvolts.
- Fidelity—audio output flat from 20 cycles to 5500 cycles within 3 db. Response down 6 db. at 6800 cycles.
- Sharp and effective 10-kilocycle whistle filter; has no effect on the AM fidelity.
- Provision for using FM lead-in for AM antenna.

GENERAL

- Only two controls—one for tuning and one to select OFF-AM-FM (with AFC)—FM.
- Presettable output level control to match amplifier input requirements.



- Cathode-follower output common to both FM and AM to feed signals to audio amplifier at low impedance, minimizing hum pickup and high-frequency losses.
- 115-volt, 50/60 cycle operation.
- Tube complement: two 12AT7, one 6J6, four 6AU6, two 6AL5, one 6BA6, one 6BE6, one 6BD6, one 12AU7. Rectifier 5Y3 and 6AL7 tuning indicator.
- Fixed-level output to feed tape recorder.

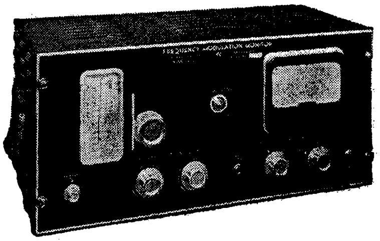
MECHANICAL FEATURES

- Edge-lighted, slide-rule dial; dial escutcheon, knob, shielded wire, and connectors furnished.
- Dimensions: 14½" wide, 11½" deep, 7" high.
- Weight: 18 lbs. Shipping weight 23 lbs.

NET PRICE (COMPLETE WITH TUBES) $166.50

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING FREQUENCY MODULATION MONITOR MODEL MD-33



- Complete coverage from 25 to 174 megacycles in two bands. No crystals or plug-in coils.
- Meter indication of swing up to 20 kilocycles with tone modulation.
- Flasher indication of excessive voice peak modulation. Dual range circuit permits setting to two predetermined levels facilitating use with normal and split channel operation.
- Modulation swing determination accuracy within 1000 cycles. Assures fullest use of channel. Checks modulation for compliance with F.C.C. regulations.

SIMPLIFIED OPERATION

Tune in your carrier using the meter as a tuning indicator. Identify the carrier by dial reading and audio output. Read swing due to tone on meter or check for overmodulation peaks on the peak flasher. Enter results in the station log!

CIRCUIT DESIGN

The MD-33 is basically a superheterodyne-type FM receiver using Armstrong method of reception with dual limiters and linear discriminator. Audio output from discriminator metered by accurate, compensated, vacuum-tube voltmeter. Multi-vibrator-type flasher circuit coupled to voltmeter circuit gives zero delay indication on modulation peaks. Any possible interference from FM broadcast stations easily removed by trap adjustable from front panel. Linear amplifier circuit feeds audio output, usable for oscilloscopic examination of modulation or for aural monitoring with suitable amplifier and speaker. Flasher circuit can be adjusted to indicate at any two levels of modulation swing from 5 to 20 kilocycles. Unless otherwise specified, units are supplied with flasher circuit set to indicate 7.5 or 15 kilocycle swing. Two-position switch on rear of chassis selects either range of flasher. Minimum signal required for measurement is 1 millivolt from 25 to 140 megacycles and somewhat less than 2 millivolts from 140 to 174 megacycles.

ELECTRICAL FEATURES

- Tuning continuously variable between 25 and 75 megacycles and between 75 and 174 megacycles.
- Sensitivity better than 1 mv. to 140 megacycles and better than 2 mv. from 140 to 174 megacycles. Signals may be read at much lower levels than those required for measurement.
- Automatic Frequency Control applied to local oscillator facilitates tuning and assists in continuous monitoring of station.
- Large panel meter indicates up to 20 KC. with tone modulation.
- Peak flasher indicates overmodulation by shortest voice peaks. Two preset flasher limits are selectable by switch at rear of chassis.
- Panel jack for monitoring with earphones.
- Audio output of approximately 5 volts RMS adjustable by panel control.
- Metering circuits stabilized for changing line voltage.
- Provision made for 72 ohm coaxial antenna lead-in.
- Tube complement: Five 6AU6, three 6SN7, two 12AT7, one 6AL5, one 12AU7, and one 6BC5. One 5Y3 is used as a rectifier and one VR-150 as a voltage regulator.
- Power input 105 to 125 volts 50/60 cycle A.C. 95 watts.

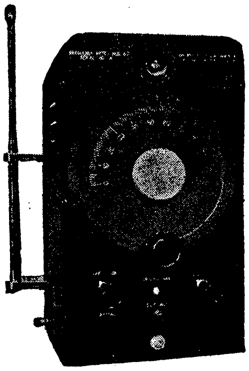
MECHANICAL FEATURES

- Constructed on standard size 8¾" aluminum rack panel.
- Panel finished in dark green with frosted aluminum markings and characters.
- Fluted aluminum knobs.
- Rugged steel cabinet finished in durable green wrinkle.
- Dimensions: Height 9"; Width 20½"; Depth 12".
- Weight 40 lbs. Shipping weight 55 lbs.

NET PRICE F.O.B. WINCHESTER, MASS. $335.00
(COMPLETE WITH TUBES)

BROWNING FREQUENCY METERS

Browning frequency meters are precision-built instruments designed to check frequencies in various ranges from 100 kilocycles to 200 megacycles. Custom-built and hand-calibrated, each of the meters listed below is equipped with a 100 KC CRYSTAL USED AS SECONDARY STANDARD WHICH IS EASILY COMPARED WITH WWV RADIATIONS ALLOWING EVERY FREQUENCY METER TO BE CHECKED IN THE FIELD. Some of the outstanding electrical features are:



MODEL S-7

MODEL S-4

- From 1 to 5 specified frequencies in 1.5-100 mc. range.
- Accuracy ± .0025% of the specified frequency.
- Stable electron-coupled oscillator used in special circuit.
- Visual detection of zero beat with cathode-ray indicator.
- 110-115-volt ac/dc operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- **Tubes: one 6SC7; one 6SA7; one 6J5; one 6SK7; one 6U5; one 25Z6 and one VR90 voltage regulator.**

MODEL S-7

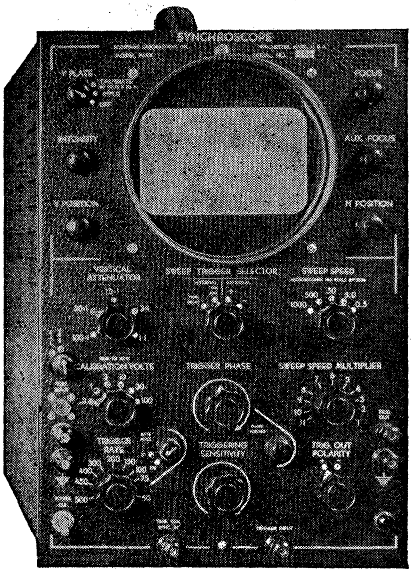
- Calibrated for One or Two frequencies in 72-76 and/or 152-174 mc. bands.
- Accuracy ±.0025% of the specified frequency.
- Deviation chart supplied for instant determination of deviation from assigned frequency.
- Cathode-ray indicator for accurate setting of ECO calibration.
- 115-volt ac/dc operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- Tubes: one 6SL7; one 6SA7; one 6J5; one 6SK7; one 25Z6; one VR-90; and one 6U5 tuning indicator.

MECHANICAL FEATURES OF ALL MODELS

- Rugged steel cabinet with ⅛" aluminum panel.
- Machined main dial graduated in 100 divisions over 180 degrees. Vernier allows reading of 1/10 of dial division.
- Panel finished in black leatherette.
- All labels engraved in panel surface.
- Dimensions: 13½" high, 7⅝" wide, 6⅞" deep.
- Weight: 15 lbs. Shipping weight 18½ lbs.

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING SYNCHROSCOPE MODEL P4-EX



NET PRICE $465.00
F.O.B. WINCHESTER, MASS.

This instrument is designed for viewing repetitive or non-repetitive phenomena occurring in electronic circuits, especially those of short duration where a triggered sweep is necessary. Internal trigger generator with phaseable output triggers permits use of the P4-EX as a timing source for equipment requiring external triggering. Vertical and horizontal calibration facilities permit measurement of both time and amplitude.

ELECTRICAL FEATURES

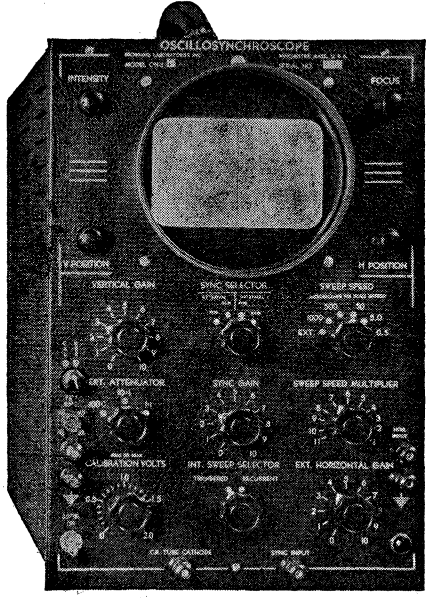
- Five-inch type 5UP cathode-ray tube, available in P1, P7 or P11 screens, with an accelerating potential of 2600 volts.
- Triggered sweep writing rate continuously variable from 1.0 to 25,000 microseconds per inch.
- Sweep speed controls directly calibrated, within ±10%, in microseconds per horizontal screen division.
- Sawtooth recurrence rate: 50 to 5,000 cycles per second, from internal generator.
- Triggered sweep repetition rate: up to trigger-to-sweep ratios of 50:1.
- External trigger requirements: 5 volts, positive or negative; rise time 20 volts per microsecond.
- Internal timing generator: 50 to 5,000 cycles per second. May be synchronized with external positive signals of 10 volts or greater.
- Trigger timing: may be phased from 500 microseconds in advance of sweep start to 500 microseconds following sweep start.
- Vertical amplifier bandwidth: down 3 db. at 5 cycles and 5 mc.
- Vertical amplifier deflection sensitivity: 1.0 volt per inch.
- Vertical amplifier attenuator: ratios of 100, 30, 10, 3, and 1 to 1.
- Calibration voltages: 0.3, 1, 3, 10, 30, 100 volts p. to p. to amplifier input; 100 volts to deflection plate. Accuracy ±5% at 115 volts line voltage.
- Beam modulation connection: at rear panel; positive signals blank sweep.
- Vertical deflection plate connection: at rear panel.
- Tube complement: four 6BC5, two 6C4, three 6AL5, three 6SN7, one 6AU6, one 12AU7, one 6BG6G, one 5U4G, two 2X2A, one OA2, one 6BE6, one 2D21, one 6J6, one 5UP1.
- Power input: 115/230 volts, 50-60 cycles, 180 volt-amperes.

MECHANICAL FEATURES

- Steel cabinet finished in black wrinkle.
- Steel panel finished in black leatherette.
- Copper-plated steel chassis with lacquer finish.
- Controls grouped by function for operating convenience.
- Dimensions: 10" wide, 14½" high, 16¾" deep.
- Weight: 50 lbs. Shipping weight: 60 lbs.

BROWNING OSCILLOSYNCHROSCOPE
MODEL ON-5A — MODEL ON-5X

This new, low-priced instrument is designed to satisfy the requirements for **basic laboratory equipment** to be used in pulse work. It provides exceptional flexibility with sweep writing rate continuously variable over a wide range, broad frequency coverage and high sensitivity; it is self-calibrating on both the X and the Y axis. All these advantages are provided at exceptionally low cost.



ELECTRICAL FEATURES

- Five-inch 5UP1 cathode-ray tube operates at accelerating potential of 2600 volts.
- Triggered sweep writing rate continuously variable from 1.0 to 25,000 microseconds per inch.
- Sweep speed controls directly calibrated, within ± 10%, in terms of microseconds per screen division (horizontal deflection) for both triggered and sawtooth operation.
- Sawtooth recurrence rate: 10 cycles to 100 KC.
- Triggered sweep will operate at any rate from a single sweep up to a frequency determined by the desired sweep time; will also operate from regularly recurrent signals to display up to ten cycles of the phenomena for a single, triggered sweep.
- Sweep may be triggered (or synchronized when operated as recurrent sawtooth) by positive or negative sine-wave or pulse signals of 0.5 volts (external) or 0.75 inches deflection (from vertical amplifier).
- Vertical amplifier has flat frequency response, within 3 db., from 5 cycles to 5 megacycles per second with deflection sensitivity of .15 volt/inch p.p.
- Model ON-5X contains a .45 microsecond vertical amplifier delay line to permit triggering of the sweep by observed pulses for one-inch deflection, at maximum gain. Rise time of .08 microseconds.
- Three-step attenuator for gain control 1:1, 10:1, and 100:1 — plus continuous adjustment over entire range.
- Horizontal amplifier operates from 500 KC down to d.c. thus allowing use of extremely slow sweeps; deflection sensitivity is 2.0 volts RMS per inch.
- Peak-to-peak vertical calibration voltages of 0-2, 0-20, and 0-200 can be switch-selected; accuracy is ± 10%.
- Cathode connection, brought out to front panel, allows external blanking and marker connection.
- Direct connection to all deflection plates at rear terminal board.
- Total power requirement is 180 volt-amperes at 115 volts, 60 cycles.
- Tube complement: one 5UP1; two 6C4; eight 6BC5; two 6AL5; one 12AU7; two 6BG6G; one 5U4G; two 2X2A; two OA2; two 6SN7.
- Operates on 115/230 volts, 50/60 cycles.

MECHANICAL FEATURES

- Steel cabinet finished in dark green wrinkle.
- Aluminum panel finished in dark green.
- Copper-plated steel chassis with lacquer finish.
- Controls grouped by function for operating convenience.
- Free-view screen has graduated X- and Y-axis scales.
- Dimensions: 10" wide, 14½" high, 16¾" deep.
- Weight: 50 lbs.; shipping weight: 60 lbs.

NET PRICES: FOB WINCHESTER, MASS.

MODEL ON-5A	**$485.00**
MODEL ON-5X (with video delay)	**$535.00**

BROWNING PROBE MODEL FJ-2

This low-capacity probe is available as an accessory for the Oscillosynchroscopes Model ON-5A and Model ON-5X. Complete with 6-foot cable, this unit has a voltage attenuation of 10:1, an input capacitance of approximately 12 mmf, and an input resistance of 2.2 megohms.

NET PRICE $20.00 — FOB WINCHESTER, MASS.

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING SWEEP CALIBRATOR — MODEL GL-22A

MECHANICAL FEATURES

- Provided with steel cabinet finished in black wrinkle.
- Panel finished in black leatherette with labels engraved into surface.
- All output connections on front panel.
- Insulated universal binding posts used for output connections.
- Dimensions: Height 9", Width 20½", Depth 12".
- Weight: 35 lbs. Shipping weight: 52 lbs.

Designed for use with oscilloscopes and synchroscopes as a source of timing markers for the measurement of sweep intervals.

ELECTRICAL FEATURES

- Provides markers of 0.1, 1.0, 10, 100 microseconds either positive or negative with variable amplitude to 50 volts.
- Generates variable width, variable amplitude gate for blanking or timing purposes.
- Contains own trigger generator with positive and negative trigger outputs.
- Markers may be initiated from external trigger or from internal generator. May be synchronized with triggers up to 100 KC. repetition rate.
- Voltage regulation to timing circuits.
- 115 volt, 60 cycle operation. 110 volt-amperes input.
- Tube complement: one Type 6BE6, one 6J6, three 6V6GT, one 6SN7, one 5Y3GT, one VR-105, one 6X5GT, two 12AU7, one 6H6, one 6SH7, one 6AG7, and one 2050.

Net Prices, F.O.B. Winchester, Mass.

Cabinet Style	**$295.00**
Rack Panel	**$285.00**

BROWNING MODEL TVN-11 KLYSTRON POWER SUPPLY

The Model TVN-11 is an extremely well regulated power supply which will provide all necessary voltages for the operation, modulated or unmodulated, of small Klystrons and other low power reflex tubes. An internal modulator permits square wave or sawtooth modulation while internal metering is provided for critical oscillator currents and voltages.

ELECTRICAL FEATURES

- Regulated beam voltage adjustable from 225 to 450 volts at 50 milliamperes. Will go to 500 volts at slightly reduced load.
- Beam voltage and current indicated by illuminated 4" meter.
- Regulated reflector voltage continuously adjustable from −25 to −875 volts. Two calibrated controls give steps and vernier coverage of entire range with excellent accuracy.
- Diode protection prevents reflector from going positive.
- Regulation of beam or reflector voltage better than 1% with 105 to 125 volt line variations.
- Ripple content of beam or reflector voltage less than 15 mv.
- Square wave modulation continuously variable from 500 to 5000 cycles with panel control calibrated in frequency.
- Sawtooth modulation continuously variable from 10 to 60 cycles. Panel control is calibrated in frequency.
- Sawtooth, square wave, or external modulation voltage adjustable in amplitude by panel control. Internal modulation variable from 0 to 100 volts.
- Portion of sawtooth or square wave modulation available at front panel connector.
- Either modulation may be synchronized from an external source or from the 60 cycle line.
- Beam voltage stand-by switch to control oscillator while heaters remain on.
- Power input is approximately 150 watts and depends upon load being supplied.
- Operates on 115/230 volts 50/60 cycles A.C.

MECHANICAL FEATURES

- Standard 8¾" x 19" rack panel construction. Supplied in individual steel cabinet.
- Panel is finished in modern style. Frosted aluminum characters on dark green background.
- Illuminated 4" meter for ease of reading beam voltage and current.
- Sturdy JAN power output connector for quick disconnect or transfer.
- Terminal board type of construction for easy servicing.
- Weight: 45 lbs.

PRICE: $325.00 F.O.B. WINCHESTER
(COMPLETE WITH TUBES)

BROWNING MODEL TAA-16B SWR AMPLIFIER

The Model TAA-16B SWR Amplifier is a highly sensitive standing wave ratio meter. Amplifier may be operated broadband or selective between 500 and 5000 cycles with new protection circuits to prevent burnouts of bolometers and crystals. Output may be fed to meter reading SWVR or to D.C. Recorder output connector.

ELECTRICAL FEATURES

- Broadband or selective operation between 500 and 5000 cycles by means of panel controls.
- Peak frequency of selective response continuously variable.
- Sensitivity for full scale meter deflection is 10 microvolts for broadband and 5 microvolts for selective operation.
- Dual selectable inputs will accommodate crystal or bolometer detectors with individual gain controls and bolometer bias adjustments for each channel.
- Special input circuits protect crystal or bolometer from accidental burnout. Warning light indicates presence of D.C. at input connectors.
- Four inch illuminated meter indicates SWR in terms of voltage and db. as well as bolometer current for either input.
- Step control provides attenuation of 0, 20, or 40 db. Master gain control allows continuous adjustment from zero to full gain.
- D.C. Recorder output permits making permanent record of observed SWR information.
- Critical D.C. voltages are electronically regulated.
- Power requirements are 115/230 volts at 50/60 cycles A.C.

MECHANICAL FEATURES

- Standard 8¾" x 19" rack panel construction. Supplied in individual steel cabinet.
- Panel is finished in modern style. Frosted aluminum characters on dark green background.
- Fluted aluminum knobs match panel legend.
- Terminal board construction for easy servicing.
- All connectors are standard type BNC.
- Dimensions (in cabinet): Height 9"; width 20"; depth 12".
- Weight: 35 lbs. Shipping weight: 45 lbs.

PRICE: $365.00 NET F.O.B. WINCHESTER, MASS.
(COMPLETE WITH TUBES)

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING OSCILLOSYNCHROSCOPE
MODEL OA-16

OSCILLOSYNCHROSCOPE

The Model OA-16 is an instrument which combines the functions of an oscilloscope and a synchroscope and is suitable for observing repetitive phenomena or single transients. D.C. amplifications with extended high frequency response and sweeps ranging from seconds to microseconds make this instrument extremely versatile.

ELECTRICAL FEATURES

VERTICAL AMPLIFIER

- Bandwidth—from D.C. to 5 megacycles, where response is 3 db. down.
- Transient response—better than .08 microseconds.
- Deflection sensitivity—50 peak-to-peak millivolts per inch with amplifier at full gain.
- Attenuation—step control by factors of 1000, 100, 10, and 1; continuous adjustment between steps.
- Input impedance—2 megohms, 40 mmf. maximum.
- Undistorted deflection—(through use of vertical positioning controls) on symmetrical signals approximately 10 inches. With undirectional signals, D.C. balance adjustment will permit similar 10 inch deflection. This feature is derived from 5x signal expansion design.
- D.C. Balance—Internal provisions for balancing out input D.C. components up to 600 volts (positive or negative) at the 1000:1 attenuator position, 400 volts at 100:1, 40 volts at 10:1, and 4 volts at 1:1. Balancing voltage can be checked by internal calibrated voltage source using substitution method.
- Signal delay—0.8 microseconds (to permit sweep to start before signal is applied to deflection plates).
- Stability—trace position remarkably independent of line voltage due to extensive regulation and circuit balancing.
- Separate A.C. input with blocking condenser available.

VERTICAL DEFLECTION CALIBRATION VOLTAGE

- Waveform—60 cycle square wave.
- Accuracy—Calibration accurate to 5%.
- Introduction—Applied through panel switch to vertical amplifier following attenuator. Any deflection range adequately covered.

HORIZONTAL SWEEP

- Type of sweep—triggered or recurrent.
- Sweep Speeds—0.4 microsecond per centimeter with maximum fast sweep expansion, to 1 second per centimeter.
- Accuracy—sweep calibration accurate to 10%.
- Expansion—All sweeps below the fastest range may be expanded 5 times for detailed examination.
- Stability—All D.C. voltages regulated for best sweep stability.

SYNCHRONIZATION AND TRIGGERING

- Sweep may be synchronized (recurrent operation) or triggered by:
  1. Vertical amplifier signals of greater than 0.1 volts amplitude.
  2. External pulses (positive or negative) of 2 volts or greater amplitude.
- Sweep frequency division—recurrent sweep will operate in synchronism with as many as 30 pulses per sweep.

HORIZONTAL AMPLIFIER

- Bandwidth—from D.C. to 1 megacycle, where response is 3 db. down.
- Deflection sensitivity—50 peak-to-peak millivolts per centimeter. (120 millivolts per inch.)
- Attenuation—step control by factors of 1000, 100, 10, and 1; continuous adjustment between steps.
- Input impedance—2 megohms, 40 mmf.
- Undistorted deflection—(through the use of positioning controls) approximately 20 inches. This feature is derived from 5x signal expansion design.
- D.C. Balance—Internal provisions for balancing out input D.C. components up to 600 volts (positive or negative) at the 1000:1 attenuator position, 400 volts at 100:1, 40 volts at 10:1, and 4 volts at 1:1.
- Stability—extensive regulation of voltages provides good trace stability with changing line voltage.
- Separate A.C. input with blocking condenser available.

DIRECT CONNECTIONS FOR DEFLECTION

- Both vertical and horizontal deflection plates are brought out to a terminal board at the back of the cabinet for introduction of signals directly to the cathode ray tube.
  Vertical input sensitivity 40 volts per inch.
  Horizontal input sensitivity 60 volts per inch.
- Inputs can be used balanced or unbalanced. No internal blocking condensers are used between inputs and deflection plates.

TRACE OBSERVATION FEATURES

- Cathode ray tube—type 5ABP (flat face).
- Accelerating potential—3000 volts.
- CR Tube blanking—normally blanked during retrace time. CR tube cathode connection brought out on panel for external beam modulation.
- Screen over tube face—conveniently ruled and edgelighted. Brilliance adjustable for viewing and photographic recording.

MECHANICAL FEATURES

- Blower for cooling instrument interior.
- Chassis shelf construction for ease of servicing.
- Rugged construction and highest quality components used throughout.
- Bezel around cathode ray tube correct size for normal camera clamps.
- Aluminum chasses and steel cabinet for light, yet rugged, construction.
- Panel etched—frosted letters on green background for truly modern appearance.
- Dimensions—Width 13¼"; Height 15¾"; Depth 22".
- Weight—Approx. 60 lbs.

NET PRICE F.O.B. WINCHESTER, MASS. $745.00
(COMPLETE WITH TUBES)

BROWNING OSCILLOSYNCHROSCOPE MODEL OL-23

OSCILLOSYNCHROSCOPE

The Model OL-23 is an instrument which combines the functions of an oscilloscope and a synchroscope and is suitable for observing repetitive phenomena or single transients. Broadband amplification and fast sweeps, along with high beam accelerating potential, make the OL-23 particularly desirable in observing and measuring steep wavefronts and fast pulses.

ELECTRICAL FEATURES

VERTICAL AMPLIFIER

- Bandwidth—down not more than 3 db. at 10 megacycles and 5 cycles. Down 6 db. at approximately 15 megacycles.
- Transient response—better than .035 microseconds.
- Deflection sensitivity—.15 peak-to-peak volts per inch with amplifier at full gain.
- Attenuation—step control by factors of 1, 5, 25, 125, or 625; continuous adjustment between steps.
- Input impedance—2 megohms, 40 mmf. With probe 2 megohms, 11 mmf.
- Undistorted deflection—(through use of vertical positioning control) on symmetrical signals, over 4 inches; on undirectional signals, better than 2 inches.
- Signal delay—0.3 microseconds (to permit sweep to start before signal is applied to deflection plates).
- Input connections—dual inputs through BNC connectors, switch selected.

VERTICAL DEFLECTION CALIBRATION VOLTAGE

- Waveform—square wave, approximately 1000 cycles.
- Amplitude—0-1, 0-10, 0-100 volts continuously variable.
- Accuracy—Calibration accurate to 5%.

HORIZONTAL SWEEP

- Type of Sweep—triggered or recurrent.
- Sweep Speeds—0.1 microsecond per centimeter to .011 seconds per centimeter.
- Calibration—two controls; product of control settings indicates sweep time per centimeter with accuracy of 5%.
- Sweep length—variable from approximately 7 centimeters to 15 centimeters. Adjustment of sweep length does not affect sweep speed.
- Expansion—by means of sweep delay; sweep expansion up to the maximum sweep speed of sweep generator.
- Stability—All D.C. voltages regulated for best sweep stability.

SWEEP DELAY

- Function—delays start of triggered sweep from initiating trigger.
- Circuit—phantastron, powered from regulated voltage source.
- Controls—continuous by means of range switch and vernier. Calibrated in microseconds.
- Delay time—three ranges with maximums of 100, 1000, and 10,000 microseconds.
- Minimum delay—approximately 3 microseconds.

SYNCHRONIZATION AND TRIGGERING

- Sweep may be synchronized (recurrent operation) or triggered by:
  1: Vertical amplifier signals (ahead of signal delay line which produce 1/4 inch or more deflection).
  2. External pulses (positive or negative) of 0.5 to 200 volts amplitude.
  3. Internal trigger generator.

EXTERNAL SWEEP INPUT

- Deflection factor—0.5 volts per inch.
- Undistorted deflection—5 inches.
- Bandwidth—down 3 db. at 200 kilocycles.

TRIGGER GENERATOR

- Repetition rate—50 to 5000 pps. in two continuously calibrated ranges.
- Outputs—positive and negative pulses, simultaneously available at panel connectors.
- Trigger amplitude—100 volts.
- Trigger duration—2 microseconds.

SWEEP GATE OUTPUT

- Waveform—negative pulse.
- Amplitude—50 volts.
- Duration—same as total sweep duration.
- Accelerating potential—second anode 2000 volts; intensifier 4000 volts; both voltages regulated.
- CR Tube blanking—normally blanked during retrace time. CR tube grid connection brought out to panel for external beam modulation. 20 volt negative pulse will blank beam.
- Screen over tube face—conveniently ruled and edgelighted. Brilliance adjustable for viewing and photographic recording.

MECHANICAL FEATURES

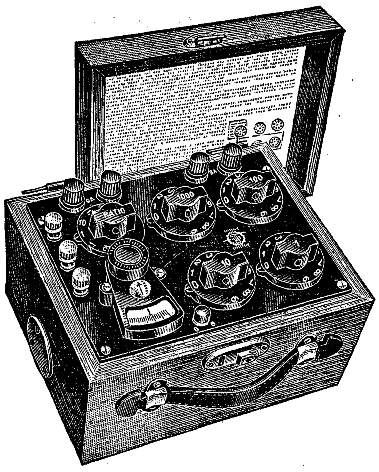
- Blower for cooling instrument interior.
- Chassis shelf construction for ease of servicing.
- Rugged construction and highest quality components used throughout.
- Bezel around cathode ray tube correct size for normal camera clamps.
- Aluminum chasses and steel cabinet for light, yet rugged, construction.
- Panel etched—frosted letters on green background with frosted aluminum knobs for truly modern appearance.
- Dimensions—Width 13¼"; Height 15¾"; Depth 22".
- Weight—Approx. 60 lbs.

NET PRICE F.O.B. WINCHESTER, MASS. $890.00

(COMPLETE WITH TUBES)

Industrial Instruments

Electrical Test Equipment



WHEATSTONE BRIDGE

● A carefully engineered bridge made for all around use in lab., plant, or field. Both models contain own 4½-volt battery power supply and galvanometer. Provision for external batteries and galvanometer if desired. Both models have ratio dial settings of .001, .01, .1, 1, 10, 100, and 1000 as well as built-in resistance standards of 1, 10, 100, and 1000-ohm decades. Ratios are guaranteed to .05% tolerance. Resistance dial resistors to .1%. Self-cleaning, four-leaf phosphor bronze wiper switches with detent mechanism mounted below panel. Galvanometer of well-known moving-coil type. Separate binding posts for use of external galvanometer if desired, and for use of bridge as resistance decade. Hardwood case with removable cover. 9¼″ x 7½″ x 6¼″ h. Wt. 9¼ lbs. net; 12¼ lbs. shipping.

MODEL RN-1. Standard Portable Wheatstone Bridge, complete with batteries .... **Net Price $138.00**

MODEL RN-2. Standard Portable Wheatstone Bridge with Murray & Varley Loops .... **Net Price $154.00**

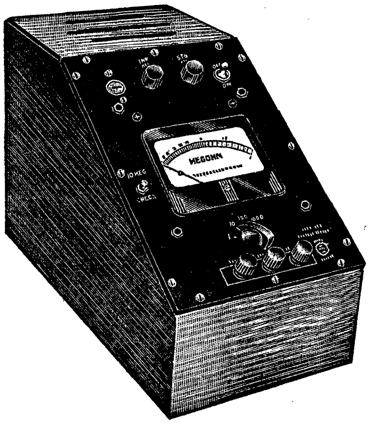
MEGOHM METER

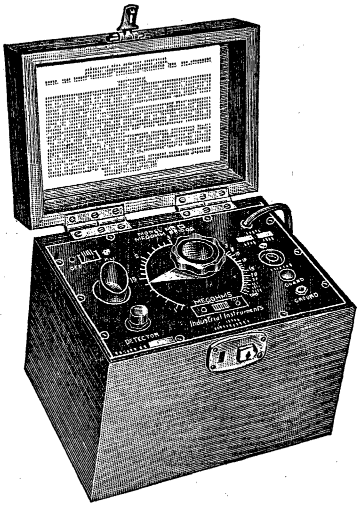
● For high-speed testing of condenser leakage resistance, insulation resistance and insulation measurements in production and inspection of components. Terminals for charging capacitors prior to test. Self-contained power source up to 200 volts. Internal checking standard to check and adjust calibration. Broad scale meter. Accuracy within ±1% based on full scale current. Range of 1 megohm to 100,000 megohms on four multiplier ranges of 1, 10, 100, and 1000. Highest range can be extended to 500,000 megohms using external supply. Hardwood case. Sloping bakelite panel designed for production use. 15″ x 8″ x 10″ h. Wt. 19 lbs. net; 23 lbs. shipping.

MODEL L-2A. Megohm Meter with tubes .... **Net Price $160.00**

MODEL L-4A. Megohm Meter having 200 volt DC and 500 volt DC measuring voltage .... **Net Price $195.00**

MODEL L-6B. Megohm Meter having continuously variable source voltage 100-600 volts DC and built-in voltmeter to check voltage. **Net Price $245.00**





MEGOHM BRIDGE

● A fast, accurate instrument for routine inspection work. May be used by laboratory workers, or production workers. Very simple to operate. "Magic Eye" replaces costly and delicate galvanometer. Operates from AC power line. Self-contained DC source. Accuracy within 5% from 1 to 15 on scale; as close as readable on remainder of scale. Hardwood case with slip-hinge removable cover. 8″ x 5¾″ x 7″ h. Wt. 6¼ lbs. net; 8¼ lbs. shipping.

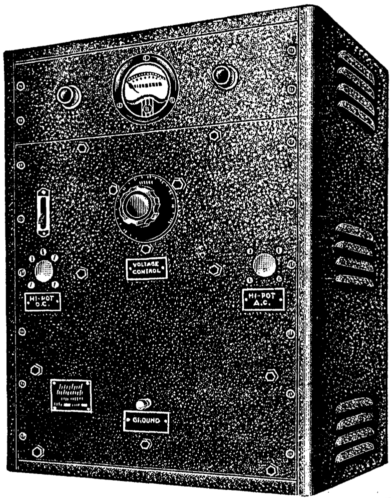
MODEL MB-8. 1 megohm to 1,000 megohms; 100 megohms to 100,000 megohms 500 Volts, D.C. Bridge source .... **Net Price $95.00**

MODEL MB-11. 1 megohm to 1,000 megohms; 10 megohms to 10,000 megohms; 100 megohms to 100,000 megohms .... **Net Price $132.00**

Industrial Instruments

Electrical Test Equipment

VOLTAGE BREAKDOWN TESTER



● A simple, positive, safe and quick means of testing voltage breakdown of materials and components. Step-up transformer accurately controlled by Variac. Continuously variable over entire range, 0 to 4,000 v. DC. For safety, load is limited to 5 milliamperes over full range. Also safety switch if instrument is removed from case. Operates on AC line. Warning light indicates instrument is operative. Voltage breakdown indicated by red light.

MODEL P-1. Voltage Breakdown Tester with tubes. 15″ x 8″ x 10″. Hardwood case with fine-grained crackle enamel sloping panel. Wt. 29 lbs. net; 32 lbs. shipping. (Not illustrated)..**Net Price $165.00**

MODEL P-2. Voltage Breakdown Tester with tubes and additional 0 to 3,000 v. AC outlet. 15″ x 8″ x 10″. Wt. 29 lbs. net; 32 lbs. shipping. (Not illustrated)..**Net Price $200.00**

MODEL P-3. Voltage Breakdown Tester with tubes. Upright, crackle enamel finish cabinet of metal. Range 0 to 10,000 v. DC, 0 to 8,000 v. AC..**Net Price $385.00**

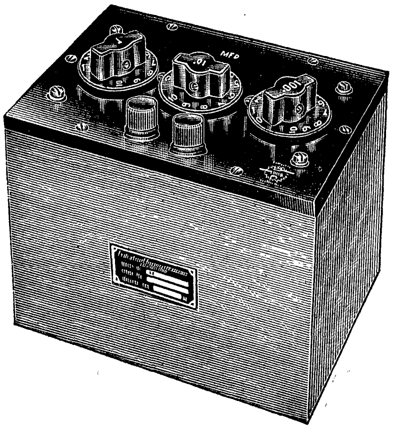
RESISTANCE DECADES

● Available in standard models with resistance ranges of .9 to 999,990 ohms total. Accuracy to ±0.1%. Self-cleaning, four-leaf phosphor bronze wiper switches with detent mechanism mounted below the panel. Hardwood case. Models DR-1 to DR-4, 5¾″ x 8″ x 4″ h.; wt. 4 lbs. net; 6 lbs. shipping. Models DR-10 to DR-14, 4⅛″ x 6″ x 4″ h.; wt. 3 lbs. net; 5 lbs. shipping. Models DR-50 to DR-52, 6⅛″ x 9″ x 4¼″ h.; wt. 5 lbs. net; 7 lbs. shipping.

Model No.	Total Resistance Ohms	Decade Steps	Accuracy	Net Price
DR-1A	999,000	9x(1,000+10,000+100,000)	±.1%	$ 70.00
DR-2A	99,900	9x(100+1,000+10,000)	±.1%	56.00
DR-3	9,990	9x(10+100+1,000)	±.1%	54.00
DR-4	999	9x(1+10+100)	±.1%	50.00
DR-10	.9	9x.1	±.1%	22.00
DR-11	9	9x1	±.1%	22.00
DR-12	90	9x10	±.1%	22.00
DR-13	900	9x100	±.1%	22.00
DR-14	9,000	9x1,000	±.1%	25.00
DR-50	9,999.9	9x(.1+1+10+100+1,000)	±.1%	83.00
DR-51	99,999	9x(1+10+100+1,000+10,000)	±.1%	88.00
DR-52	999,990	9x(10+100+1,000+10,000+100,000)	±.1%	100.00

CAPACITANCE DECADES

● Instrument calibrated directly in capacitance so that reading from left to right, the dial settings will give the exact value in microfarads. Progressive adjustment in .01, .001, or .0001 mfd. steps depending on model. .001 to 11.1 mfd. can be obtained by group assembly. All units employ paper or mica capacitors of highest quality and stability. Enclosed in hardwood case. DK-4, DK-10 and DK-2A, 8″ x 5½″ x 7¼″ H.; wt. 8 lbs.; 12 lbs. shipping. DK-5, DK-11, 11″ x 8¼″ x 7″ H.; wt. 10 lbs. net; 12 lbs. shipping.



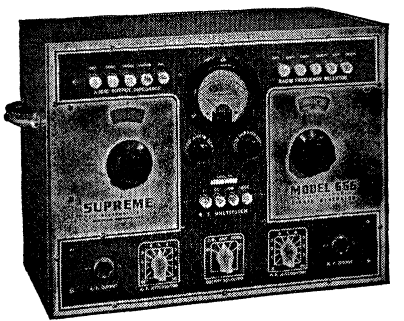
Model	Capacitance Mfd. Steps	Accuracy	Dielectric Section	P.F.	Peak Volts	Price
DK-5	11.1 in .01	1%	.01 Mica	.2%	700 DC	$ 85.00
			.1 paper	1%	400 DC	
			1.0 paper	1%	400 DC	
DK-4	1.11 in .001	1%	.001 mica	.2%	700 DC	70.00
			.01 mica	.2%	700 DC	
			.1 paper	1%	400 DC	
DK-2A	1.11 in .001	1%	Mica throughout	.2%	700 DC 500 AC 60 cycle	150.00
DK-10	111 in .0001	.5% or 10 mmfd.	Mica throughout	.2%	700 DC 500 AC 60 cycle	100.00
DK-11	11.1 in .01	.5%	.01 Mica	.2%	700 DC	165.00
		.5%	.1 mica	.2%	500 DC 60 cycle	
		1%	1.0 paper	1%	400 DC	

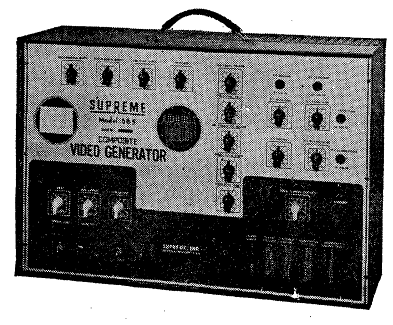
SUPREME

Since 1927

"Supreme by Comparison"

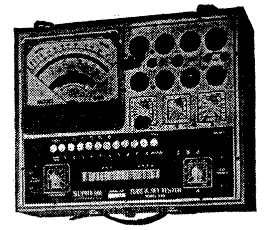
AF, RF, and TELEVISION SIGNAL GENERATORS





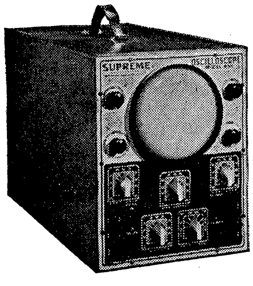
Whether you need a dependable signal source for testing audio devices, video circuits or RF and IF amplifiers, you will find Supreme Signal Generators a pleasure to use. Illustrated on the left is a popular general purpose combination AF and RF Signal Generator frequently seen on the service benches of better electronic technicians everywhere. To the right is that well known Supreme Composite Video Generator which delivers the standard RTMA Television synchronizing signal—even the equalizing pulses to assure proper interlace. Ideal for hams setting up amateur television stations. For complete information request Data Sheet No. RM-365-66-3.

TUBE TESTERS



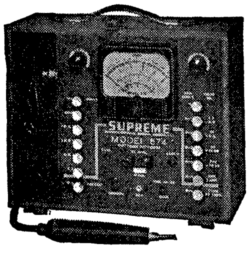
Supreme Tube Testers are known for giving dependable service over long periods of use. All circuits employed in Supreme Tube Testers demonstrate the ultimate in design flexibility to minimize obsolescence. New tube setting data is published in the Supreme Test Equipment Bulletins and mailed quarterly, at no charge, to all test instrument users on our mailing list to keep them up-to-date. Send your name and address to our Service Division, Attention: RM-TSS-3, and get on this list.

OSCILLOSCOPES

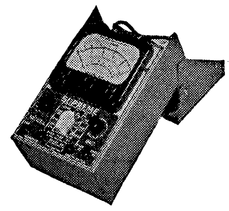


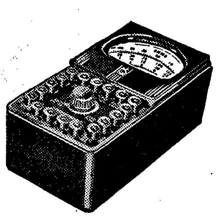
A Supreme oscilloscope is a most versatile instrument around the rig, in the lab and on the electronic service technician's test bench. Its applications multiply day by day. Supreme makes both the general purpose and wide range types. Additional data supplied on Data Sheets RM-350-660-3.

VOLT—OHM—MILLIAMMETERS

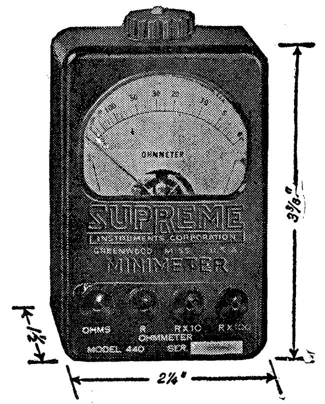


There is a Supreme multimeter to fit most every need and budget. Sensitivities from 1000 to 20,000 ohms/volt in both single function and multi-function types. Also, Vacuum Tube Voltmeters. Request Data Sheets RM-342-74-3.

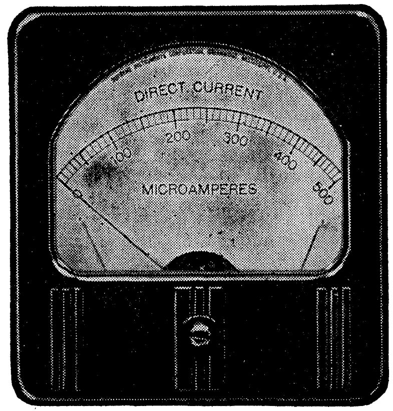




PANEL METERS



Every year more and more manufacturers are selecting Supreme meters as initial equipment in hundreds of electrical and electronic devices. Quality built in every respect with many outstanding features such as — EFFICIENT ALNICO BAR MAGNET — SELECTED PIVOTS AND JEWELS — HIGH TORQUE MOVEMENT—STRONG TOUGH POINTER—RUGGED MOVING ELEMENT. Available in a variety of sizes and types with or without special dials. Write for Spec. Data No. RM-3400-3.



Amateurs •
Engineers •
Technicians •

YOUR REQUESTS FOR additional information and price quotations will receive prompt handling at Supreme. Besides the items illustrated above, we are often called upon to produce special purpose panel meters and testing instruments for industrial organizations, public utilities, and government services. Perhaps, with our know-how plus our design, testing and manufacturing facilities, we can solve a problem for you.

WRITE Supreme, Inc., Box 5523, Greenwood, Mississippi, U.S.A.

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

PILOT LIGHT ASSEMBLIES

for

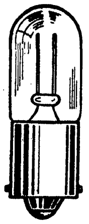
T-3¼ NEON LAMP • NE-51

11/16" MOUNTING HOLE

BUILT-IN RESISTOR

(Patent No. 2,421,321)

All of these assemblies are listed by Underwriters' Laboratories, Inc.



NE-51

For 110 and 220 volts

The new NE-51 lamp is especially useful for pilot lights to be operated on commercial voltages. It has a distinctive orange-red glow and consumes very little current.

MULTI-VUE CAP

In addition to the advantages given by the provision of the built-in resistor, these assemblies offer another feature that is especially important in obtaining effective indication with the NE-51 lamp. The "Multi-vue" cap shown at the right gives a high degree of visibility by directing an increased amount of light toward the eye when the indicator is viewed from any angle. When it is desirable to view the electrodes directly, the clear caps shown below are very effective. For concentrating the light into a beam the metal lens holders are equipped with convex lenses as shown.

CATALOGUE NUMBERS

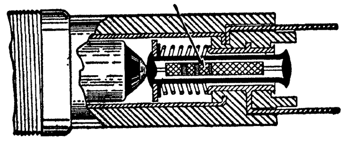
521308-991	Multivue cap, Screw terminals (Fig. 1)
531308-991	Multivue cap, Screw terminals (Fig. 2)
91408-931	Long clear cap, Soldering terminals (Fig. 4)
95408-931	Clear cap, Soldering terminals (Fig. 3)
81408-111	Screw-in cap, Convex lens, Soldering terminals (Fig. 20)
80408-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 21)
801308-831	Screw cap, Dome plastic lens, Screw terminals
51408-111	Screw cap, Convex lens, Soldering terminals (Fig. 22)
511308-111	Screw cap, Convex lens, Screw terminals

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2*, Amber-3, Blue-4*, White-5, Yellow-6, Clear-7

***not recommended with neon lamps.**

BUILT-IN RESISTOR



PATENTED
No. 2,421,321

External resistors will be furnished which will permit use of these pilot lights on voltages higher than 220 volts.

Equipped with BINDING SCREWS

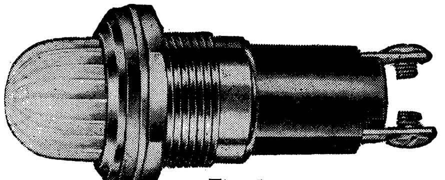


Fig. 1

Multivue caps

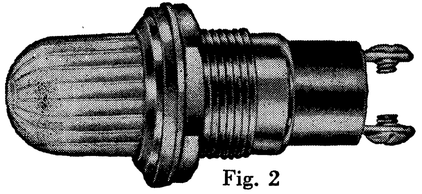


Fig. 2

Equipped with SOLDERING TERMINALS

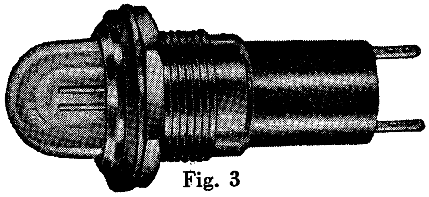


Fig. 3

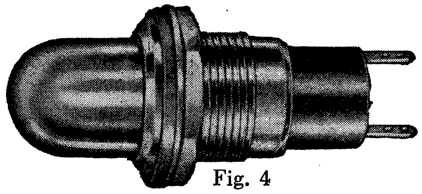


Fig. 4

This series of pilot light assemblies is unique and has several exclusive features. The resistors are permanently built into the high quality DIALCO designed socket.

This socket is constructed with heavy molded bakelite insulation in which the terminals are securely anchored. The insulated socket is mounted in a threaded bushing equipped with nut and shakeproof washer for mounting on a panel of any usual thickness.

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

CAPS

All illustrations are approximately actual size

FRICTION

Convex lens

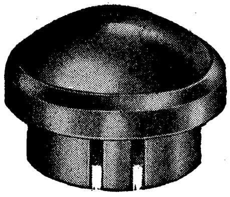


Fig. 5

BAYONET

Convex lens

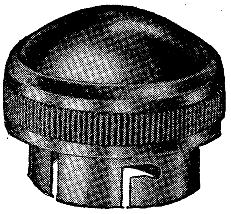


Fig. 6

SCREW

Torpedo lens

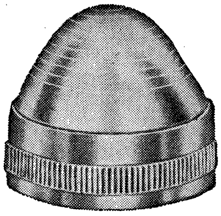


Fig. 7

Large convex lens

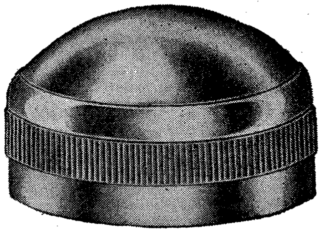


Fig. 8

SCREW

Dome plastic lens

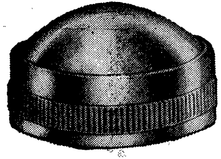


Fig. 9

Faceted lens

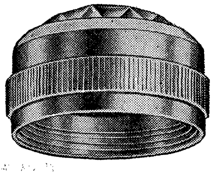


Fig. 10

Convex lens

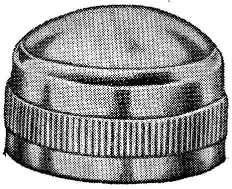


Fig. 11

Large torpedo lens

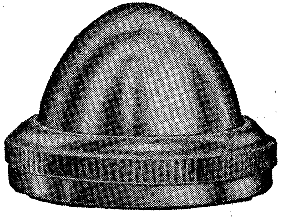
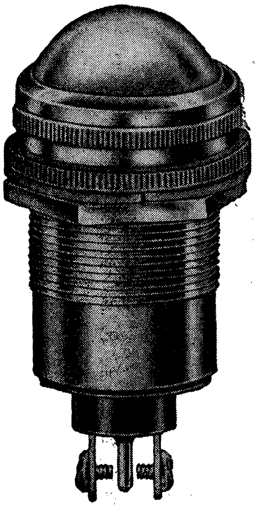


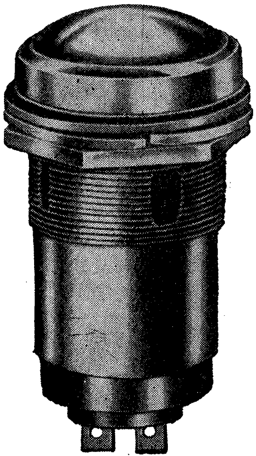
Fig. 12

ASSEMBLIES FOR 1 INCH MOUNTING HOLE

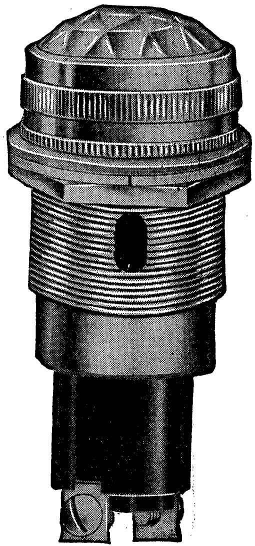
DOUBLE CONTACT BAYONET



Screw terminals Fig. 15

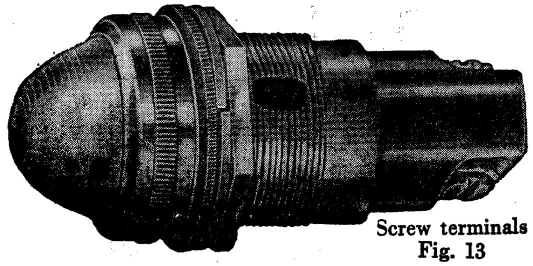


Soldering terminals Fig. 17

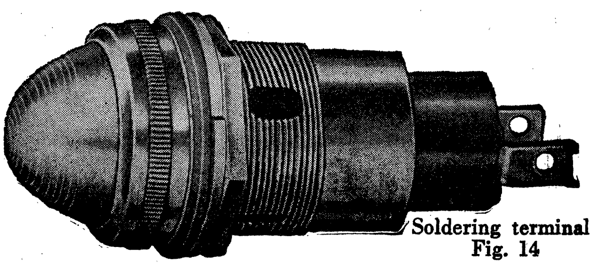


Screw terminals Fig. 16

CANDELABRA SCREW



Screw terminals
Fig. 13



Soldering terminals
Fig. 14

DIALIGHT CORPORATION

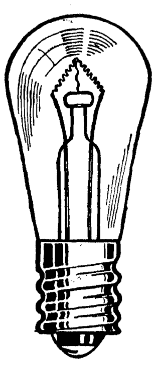
Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

CATALOG NUMBERS FOR ENCLOSED ASSEMBLIES

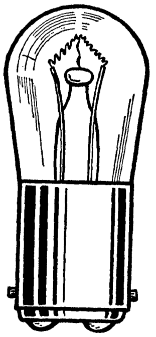
Mount in one inch clearance hole

UNDERWRITERS' LISTED



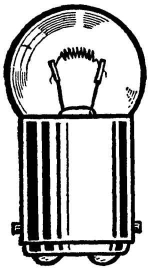
For S-6 Lamp with Candelabra Screw Base

51901-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 13)
61901-111	Screw cap, Large convex lens, frosted back (Fig. 8) Screw terminals (Fig. 13)
51901-431	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig 13)
19901-531	Screw cap, Large torpedo lens (Fig. 12) Screw terminals (Fig. 13)
51101-111	Screw cap, Convex lens, frosted back (Fig. 11) Soldering lugs (Fig. 14)
41901-111	Bayonet cap Convex lens (Fig. 6) Screw terminals (Fig. 13)
31901-111	Friction cap Convex lens (Fig. 5) Screw terminals (Fig. 13)
47901	Light Shield cap (Fig. 19) Binding Screw terminals (Fig. 13)
71101-111	Mechanical dimmer (Fig. 18) Soldering terminals (Fig. 14)
78101-111	Polaroid dimmer (Fig. 18) Soldering terminals (Fig. 14)



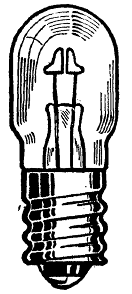
For S-6 Lamp with Double Contact Bayonet Base

513202-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 16)
613202-111	Screw cap, Large convex lens, frosted back (Fig. 8) Screw terminals (Fig. 16)
513202-111	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig. 16)
803202-531	Screw cap, Torpedo lens (Fig. 7) Screw terminals (Fig. 16)
413202-111	Bayonet cap Convex lens, frosted back (Fig. 6) Screw terminals (Fig. 16)
313202-111	Friction cap Convex lens, frosted back (Fig. 5) Screw terminals (Fig. 16)



For G-6 Lamp with Double Contact Bayonet Base

51704-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 15)
51704-431	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig. 15)
80704-531	Screw cap, Torpedo lens (Fig. 7) Screw terminals (Fig. 15)
80704-841	Screw cap, Dome plastic lens, matted back (Fig. 9) Screw terminals (Fig. 15)
51204-111	Screw cap, Convex lens, frosted back (Fig. 11) Soldering terminals (Fig. 17)
41204-111	Bayonet cap Convex lens (Fig. 6) Soldering terminals (Fig. 17)
31204-111	Friction cap Convex lens (Fig. 5) Soldering terminals (Fig. 17)



For NE-45 Neon Glow Lamp, Candelabra Screw Base

51914-131	Screw cap, Convex lens (Fig. 11) Binding screw terminals (Fig. 13)
80914-841	Screw cap, Dome lens (Fig. 9) Binding screw terminals (Fig. 13)
41914-131	Bayonet cap Convex lens (Fig 6) Binding screw terminals (Fig. 13)
31914-131	Friction cap Convex lens (Fig. 5) Binding screw terminals (Fig. 13)
51114-131	Screw cap, Convex lens (Fig. 11) Soldering terminals (Fig. 14)
80114-531	Screw cap, Torpedo lens (Fig. 7) Soldering terminals (Fig. 14)

COLOR—The final figure 1 in the above number indicates RED LENS COLOR. If other color is desired, change final figure to one from table below.

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

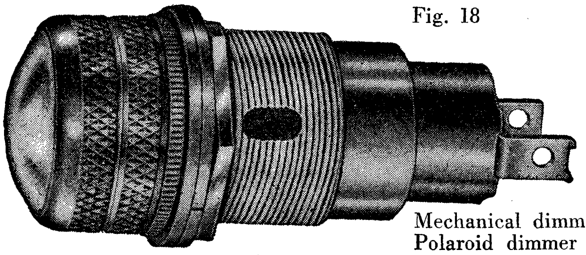


Fig. 18

Mechanical dimmer
Polaroid dimmer

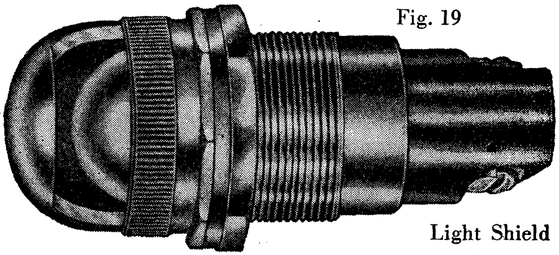


Fig. 19

Light Shield

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

PILOT LIGHT ASSEMBLIES

ASSEMBLIES FOR T-3¼ LAMPS

MINIATURE BAYONET BASE

(for low voltages)

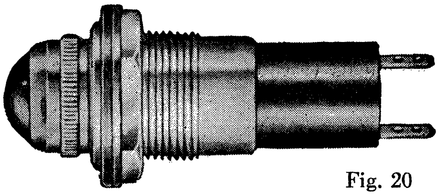


Fig. 20

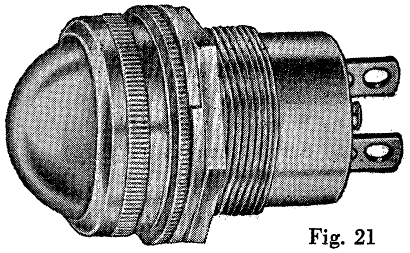


Fig. 21

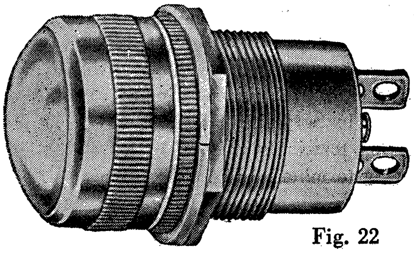


Fig. 22

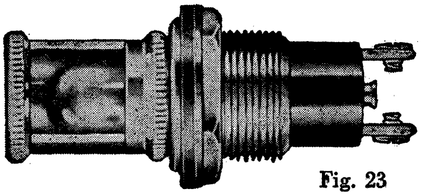
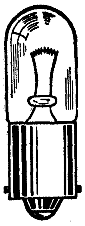


Fig. 23

CATALOGUE NUMBERS



521310-991	Multivue cap, Screw terminals (Fig. 1)
531310-991	Multivue cap, Screw terminals (Fig. 2)
91410-931	Long clear cap, Soldering terminals (Fig. 4)
95410-931	Clear cap, Soldering terminals (Fig. 3)
81410-111	Screw-in cap, Convex lens, Soldering terminals (Fig. 20)
80410-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 21)
801310-831	Screw cap, Dome plastic lens, Screw terminals
51410-111	Screw cap, Convex lens, Soldering terminals (Fig. 22)
511310-111	Screw cap, Convex lens, Screw terminals
211310	Light shield cap Screw terminals (Fig. 23)
93410-111	Polaroid dimmer cap, Convex lens, Soldering terminals (Fig. 25)
98410-111	Dimmer cap, Convex lens, Soldering terminals (Fig. 24)

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

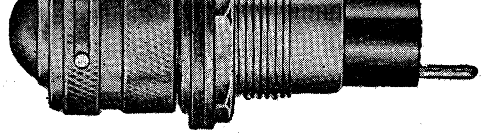
Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

Smaller assemblies as illustrated in Figs. 20, 23, 24 and 25 mount in 11/16″ clearance hole. Figs. 21 and 22 require 1″ clearance hole.

MECHANICAL and POLAROID DIMMERS

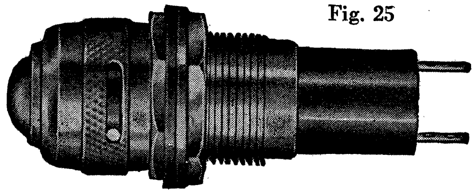
mechanical

Fig. 24



polaroid

Fig. 25



Any of the mechanical dimmers can be supplied in either the "Complete Blackout" or the regulation type.

DIALIGHT CORPORATION

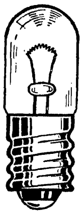
Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

PILOT LIGHT ASSEMBLIES

A SELECTION OF OPEN TYPES

For T-3¼ Low voltage Incandescent Lamps



Miniature Screw Base

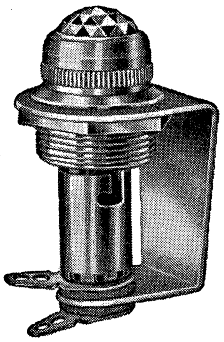
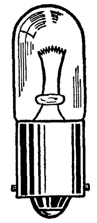


FIG. 26

Typical assemblies for bayonet base lamp. Available also for screw type, see listing below.



Miniature Bayonet Base

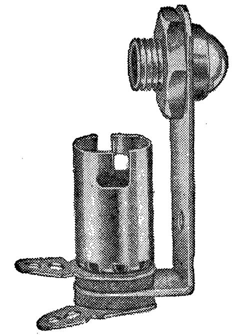


FIG. 28

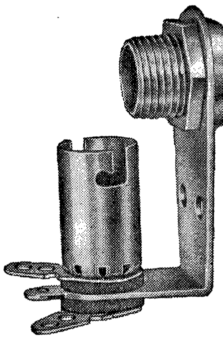


FIG. 27

DIALCO

CATALOGUE NUMBERS

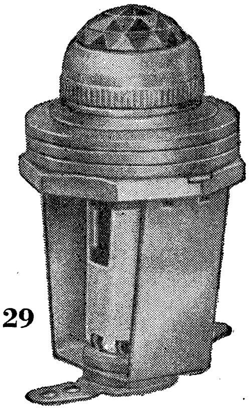


FIG. 29

Octagon lock nut and bracket on these two units welded into one-piece construction.

Assemblies for T-3¼ miniature bayonet base lamps

No. 810B-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Fig. 26
No. 710-121	Convex ½″ lens.	For 7/16″ mounting hole.	Fig. 27
No. 755-621	Convex 11/32″ lens.	For 9/32″ mounting hole.	Fig. 28
No. 857B-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Fig. 29
No. 67B-111	Convex ¾″ lens.	For 13/16″ mounting hole.	Fig. 30

Assemblies for T-3¼ miniature screw base lamps

No. 810M-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Similar to Fig. 26
No. 510-121	Convex ½″ lens.	For 7/16″ mounting hole.	Similar to Fig. 27
No. 555-621	Convex 11/32″ lens.	For 9/32″ mounting hole.	Similar to Fig. 28
No. 855-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Similar to Fig. 29
No. 66M-111	Convex ¾″ lens.	For 13/16″ mounting hole.	Similar to Fig. 30

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

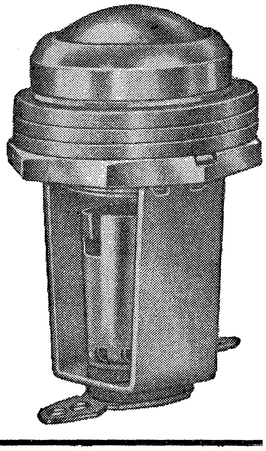


FIG. 30

DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

BROOKLYN 37, N. Y.

PILOT LIGHT ASSEMBLIES

A SELECTION OF OPEN TYPES

For Candelabra Screw Base Lamps

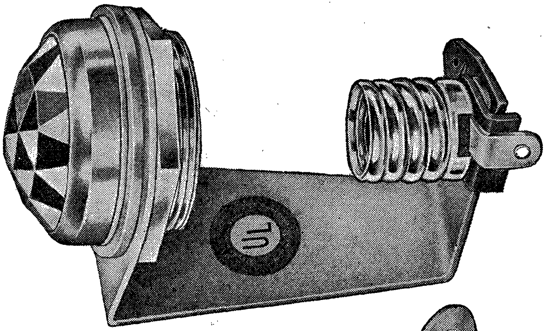


FIG. 31

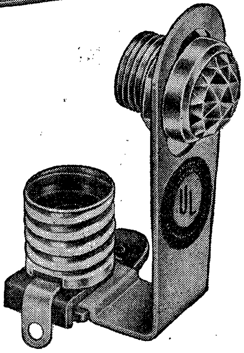


FIG. 32

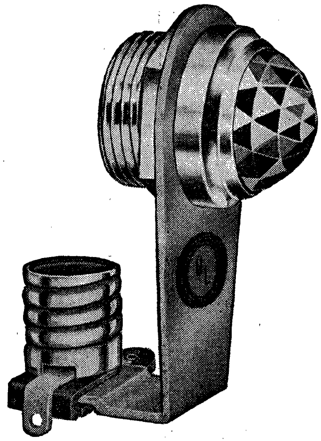
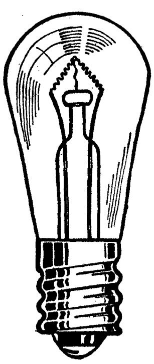


FIG. 33



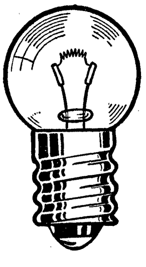
For S-6 Incandescent Lamps, candelabra screw base

No. 10-18-14-431 Faceted ½″ Lens (for 7/16″ mounting hole) (Fig. 32)
No. 25-18-15-431 Faceted ⅝″ Lens (for 11/16″ mounting hole) (Fig. 33)
No. 31-18-16-431 Faceted 1″ Lens (for 1″ mounting hole) (Fig. 31)

All of the above assemblies are listed by Underwriters' Laboratories, Inc.

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7



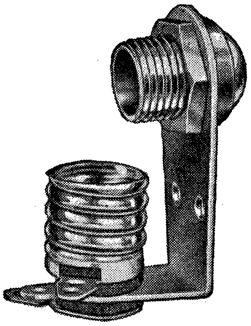


FIG. 34

For G-6 Low voltage lamps, candelabra screw base

No. 610-121 Convex ½″ lens
Fig. 34 (for 7/16″ mounting hole)

Octagon lock nut and bracket on these two units welded into one-piece construction.

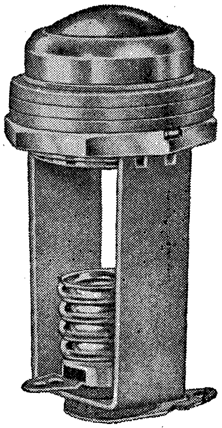
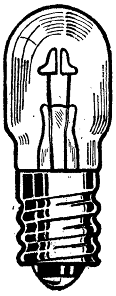


FIG. 36



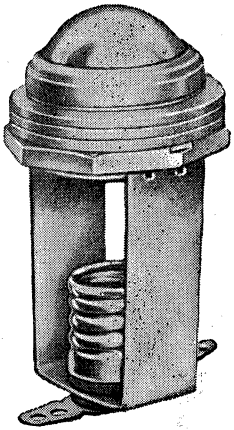


FIG. 35

For NE-45 Neon Glow Lamps, candelabra screw base

No. 67BN-831 Dome Plastic Lens (¾″ diam.) Fig. 35
No. 66N-131 Convex Glass Lens (¾″ diam.) Fig. 36
(Both mount in 13/16″ hole. Cap removable)

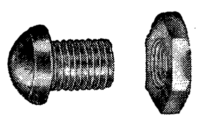
DIALIGHT CORPORATION

Foremost Manufacturer of Pilot Lights

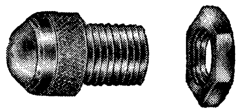
BROOKLYN 37, N. Y.

Lens Holders with Lenses for Panel Mounting

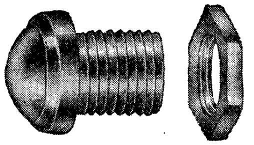
Screw Types Are Complete With Nut for Shank



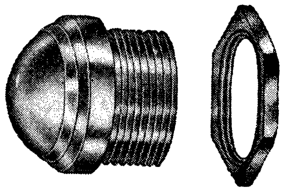
5006-111
9/32″-27 thread



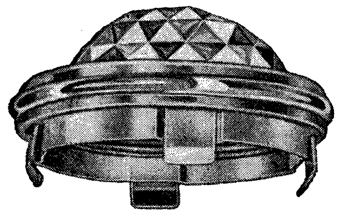
7005-111
3/8″-24 thread



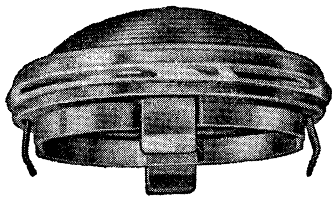
10006-111
7/16″-27 thread



25006-111
11/16″-27 thread

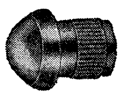


34-431
GLASS LENS

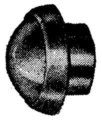


34-841
PLASTIC LENS

These holders snap into 1½″ hole



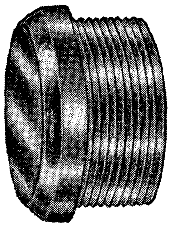
6004-111
9/32″ hole



38-111
⅜″ hole

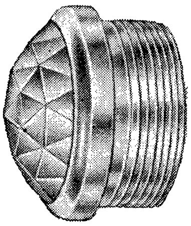
PUSH-IN TYPES

FLAT



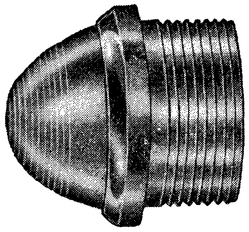
76006-231

FACETED



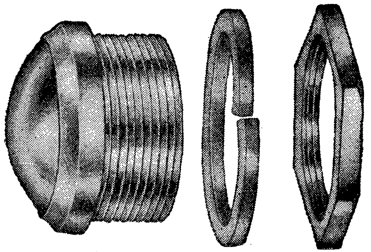
76006-431

TORPEDO



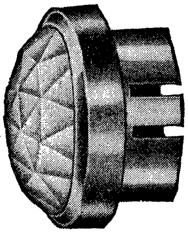
76006-531

CONVEX



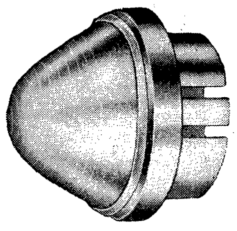
76006-111

FACETED



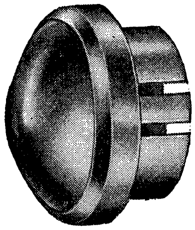
31-431

TORPEDO



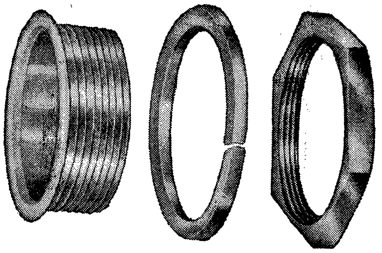
31-531

CONVEX



31-111

BUSHING



31246

The above two groups mount in 1″ clearance hole. The upper series lock to the panel and are tamper proof. The lower series permit lamp replacement from the front of the panel.

LENS COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

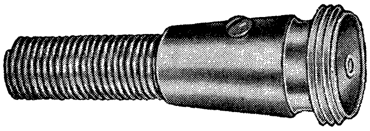
Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

CONNECTORS FOR SINGLE CONDUCTOR CABLE FOR MICROPHONES - SPEAKERS - PICK-UPS - JACKS

(using cable shield for second conductor)

The fittings shown here are designed for use with standard metal shielded single conductor cable up to 1/4″ diameter. These connectors are heavily constructed from solid brass and all exposed parts are chrome plated and highly polished.

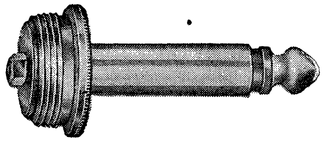
The cable end connectors are provided with rugged wire spring protectors which prevent sharp bends at the connection. The protector is soldered to the cable sheath and secured in the connector by a set screw so that all strain is relieved from the conductor.



No. 101

MALE CONNECTOR FOR CABLE

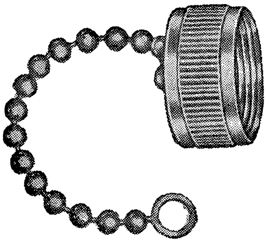
With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.



No. 102

PLUG WITH MALE CONNECTOR

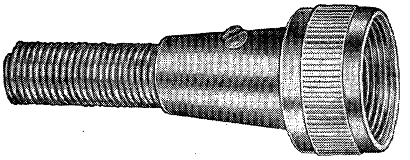
Fits standard jacks



No. 103

CAP AND CHAIN

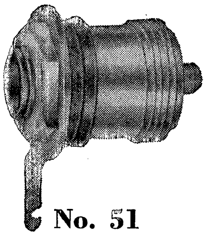
To protect unused male connectors. Chain secured by screw prevents loss when removed to make connection.



No. 100

FEMALE CONNECTOR FOR CABLE

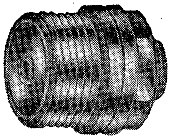
With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.



No. 51

MALE CONNECTOR FOR CHASSIS

Has sprung center contact which grounds before cable connection is broken preventing open circuit howls.



No. 50

MALE CONNECTOR FOR CHASSIS

Shell grounds to panel — or may be insulated by washers. Fit 3/8″ — 24 threaded hole or may be secured by nut.

No. 50 P

MALE CONNECTOR FOR CHASSIS

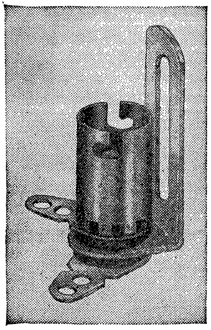
(Similar to No. 50 above)

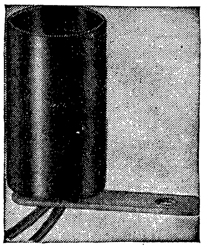
Designed for force fit in hole in panel. Requires no nut to secure in place.

SOCKETS
BRACKET MOUNTED

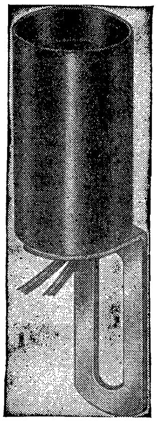
MINIATURE BAYONET

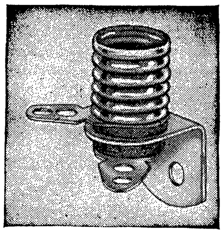
MINIATURE SCREW


No. 7 Series


No. 2 Series
FIBRE TUBE

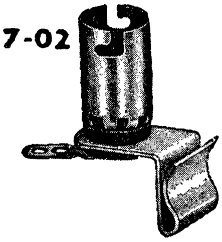
Wire Leads


No. 3 Series
MOLDED BAKELITE


No. 5 Series

Socket suffix	Bracket Description
—01	Plain clip, upturned
—02	Plain clip, downturned
—03	Clip with ears, upturned
—04	Clip with ears, downturned
—05	Right angle, upturned, slotted. Slot—⅞″ x 3/16″
—06	Right angle, downturned, slotted. Slot—⅞″ x 3/16″
—07	Plain socket, no bracket
—08	Right angle, downturned, short. Hole Size—5/32″
—09	Right angle, upturned, short. Hole Size—5/32″

Socket suffix	Bracket Description
—11	Square U-shaped. Hole Size—5/32″
—12	Horizontal (no bend), short. Hole Size—5/32″
—13	Horizontal (no bend), slotted. Slot—⅞″ x 3/16″
—14	Vee with locking tongue, short—1″
—15	Vee with locking tongue, short—1¼″
—16	Vee with locking tongue, intermediate—1-5/16″
—17	Vee with locking tongue, long—1⅜″
—18	Vee with locking tongue, long—1½″
—19	Right angle, upturned, long. Hole Size—9/64″
—20	Right angle, downturned, long. Hole Size—9/64″

7-02


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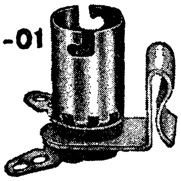

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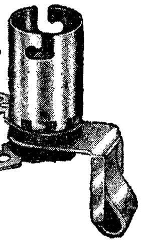

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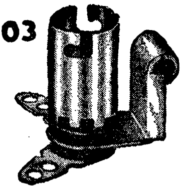

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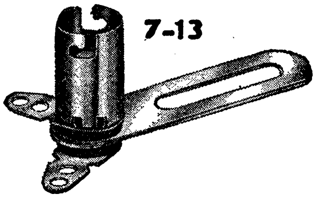

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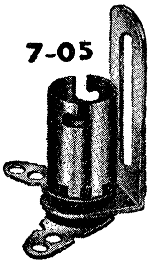

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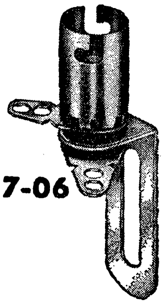

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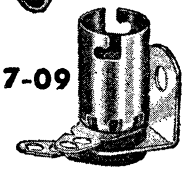
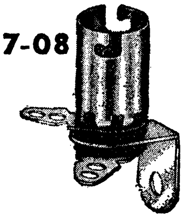
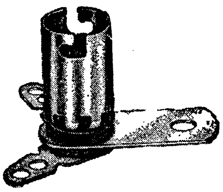
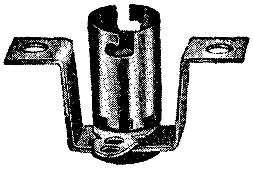


7-08


7-12


7-11


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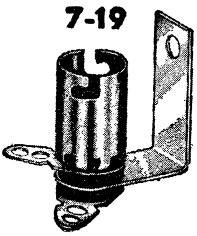

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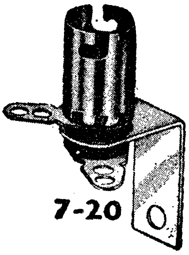
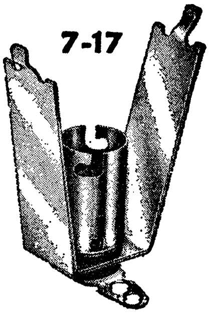


7-17


DIALCO

SOCKETS

BRACKET MOUNTED

75 Watts, 125 Volts

UNDERWRITERS'

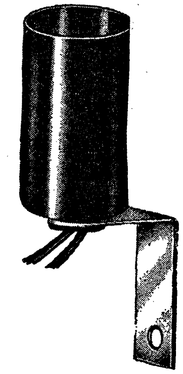
LISTED UNDER REEXAMINATION SERVICE UNDERWRITERS' LABORATORIES, INC.

UL

LISTED

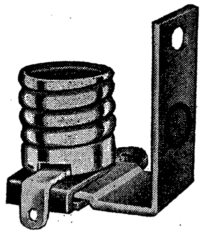
No. 4 Series
Wire Leads

Insulated with heavy molded Bakelite. Square shoulder locks into square hole in bracket — all securely held by large tubular rivet.

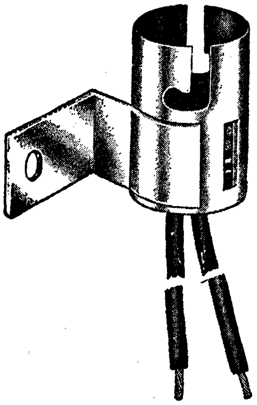


IDEAL FOR S-6 and C-7 LAMPS

No. 18 Series



Soldering Terminals (locked in position)



No. 12 Series
CERAMIC DISK

No. 12 Series — Double Contact Bayonet Ceramic Insulating Disk

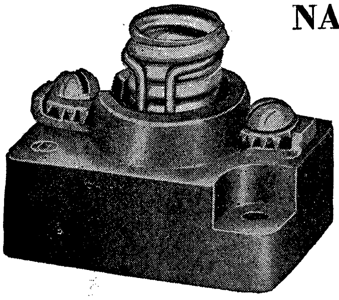
The new "12" series socket is constructed with a high quality ceramic disk supporting the socket contacts. Recesses in the disk receive the lead wires so that no live metal is exposed.

Wire Leads

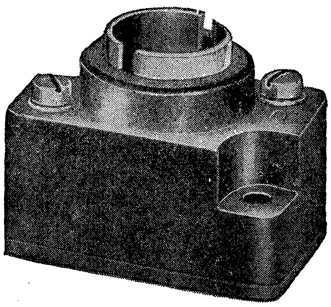
The standard flexible leads are of plastic insulated approved wire, 18 gauge. Usual length is 8 inches; longer leads will be supplied when specified.

Many Bracket Types

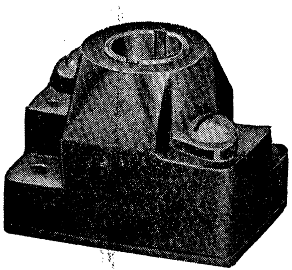
NAVY SPECIFICATION SOCKETS



Candelabra screw 9S2036
Candelabra screw 9S5038
(not illustrated)



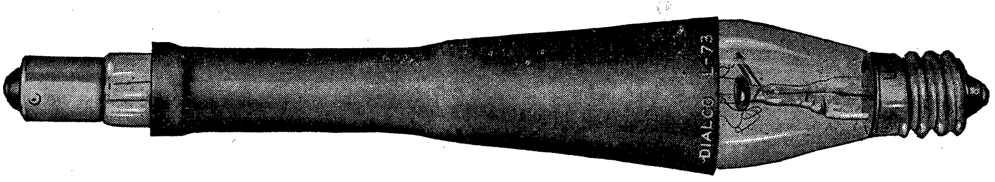
Double Contact bayonet 9S4634



Miniature bayonet
9S4931

LAMP INSTALLER

The DIALCO lamp installer shown below is a useful tool in installing lamps and in servicing pilot lights.



No. L-73

No. L-45
For NE-45 Neon

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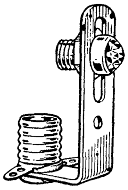
DRAKE *Dial and Jewel* PILOT LIGHT ASSEMBLIES

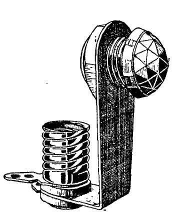
JEWEL LIGHT ASSEMBLIES


No. 5 Type

11/32" JEWEL . . VERTICAL MOUNTING

Adjustable to the focal length of any miniature screw or bayonet lamp. Mounts in 9/32" diameter hole on panels up to ¼" thick. Tested at 125 volts. Faceted glass. Panel Hardware, bright nickel — other parts cadmium. Standard colors.

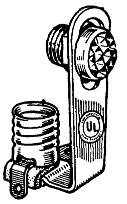
No. 5	Miniature Screw
No. 5B	Miniature Bayonet


No. 10 Type

½" JEWEL . . VERTICAL MOUNTING

Mounts in 7/16" hole on panels up to ¼" thick. Tested at 125 volts. Standard colors. Faceted glass. Panel Hardware, bright nickel — other parts cadmium. No. 10B has bracket with oblong hole permitting adjustment to obtain best position for lamp filament back of Jewel.

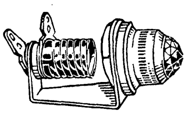
No. 10	Miniature Screw
No. 10G	Miniature Bayonet
No. 10B	Miniature Bayonet


No. 10C Type

½" JEWEL . . VERTICAL MOUNTING
UNDERWRITERS APPROVED

Candelabra screw base Jewel light which is Underwriters Approved for 75 watt — 125 volt service. Takes minimum depth behind panel. Oblong hole permits adjustment for placing lamp filament behind Jewel for maximum illumination. Mounts in 7/16" hole on panels up to ¼" thick. Standard colors. FAC-SP-SFB glass finishes. Standard plating.

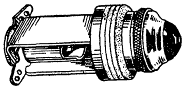
No. 10C	Candelabra Screw


No. 20 Type

½" JEWEL HORIZONTAL MOUNTING

Lamp removable from front of panel. Mounts in 11/16" hole. Tested at 125 volts. Standard colors. Faceted glass. Regular plating.

TYPE NUMBER	STYLE SOCKET	DEPTH BACK OF PANEL	PANEL THICKNESS
20	Min. Bayonet	1-13/32"	0" to 7/64"
30	Min. Bayonet	1-7/32"	¼"
40	Min. Bayonet	1-11/32"	⅛" to 15/64"
20S	Min. Screw	1-1/16"	0" to 15/64"
30S	Min. Screw	15/16"	¼"


No. 80 Type

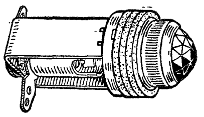
½" POLARIZED VARIABLE INTENSITY

Incorporates use of polarized discs to regulate light intensity. A partial turn of the Jewel dims the light. Supplied with three fibre washers to compensate for different panel thicknesses. Mounts in 11/16" hole. Finish bright nickel. Standard Colors. Regularly supplied with smooth gloss frosted on back only. Other glass types optional.

TYPE NUMBER	STYLE SOCKET
80	Miniature Bayonet
80S	Miniature Screw

½" JEWEL . . . HORIZ. MOUNTING

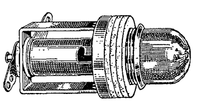
Specially designed for use on more than one thickness of panel. Supplied with two fibre washers which compensate for panel thicknesses. Mounts in 11/16" hole. Lamp removable from front of panel. Tested at 125 volts. Regular plating. Faceted jewel in standard colors.


No. 50 Type

TYPE NUMBER	STYLE SOCKET	DEPTH BACK OF PANEL	PANEL THICKNESS
50	Min. Bayonet	1-9/16"	0" to ¼"
50.5	Min. Bayonet	1½"	17/64" to ⅜"
50S	Min. Screw	1⅛"	0" to ¼"
50.5S	Min. Screw	1⅛" to 1¼"	17/64" to ⅜"

⅝" PLASTIC CAP HORIZONTAL MOUNTING

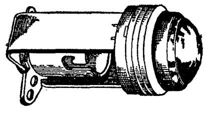
Gives wide angle vision . . . easily seen from sides. Lamp removable from front of panel. Supplied with three 1/16" thick fibre washers for adjustment of thickness of panel. Mounts in 11/16" hole. Tested at 125 volts. Regular plating. Colors: amber, colorless, green and red.


No. 51 Type

Type No.	Length A to B	Length C to D	Style Socket	Number of Spacing Washers Required				
51	1⅛"	1 15/16"	Min. Bay.	Panel thickness	1/16"	⅛"	3/16"	¼"
				Washers	3	2	1	0
51.5	1"	1 15/16"	Min. Bay.	Panel thickness	¼"	5/16"	⅜"	
				Washers	2	1	0	
51S	⅞"	1 11/16"	Min. Screw	Panel thickness	1/16"	⅛"	3/16"	¼"
				Washers	2	1	0	0

A to B: length of socket assembly without lamp. C to D: overall length of socket assembly with lamp installed.

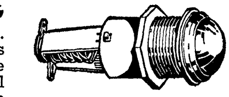
¾" JEWEL . . . HORIZ. MOUNTING


No. 60 Type

Polished chrome "slip-fit" bezel. Mounts in 13/16" hole. Supplied with fibre washers to compensate for panel thickness. Miniature types tested at 125 volts. Candelabra type stands 1000 volts breakdown. Standard colors. No. 60 Types are regularly supplied with colorless smooth glass frosted on back, behind which is placed a colored disc so glass appears white until lamp is lighted.

TYPE NUMBER	STYLE SOCKET
60	Min. Bayonet
60N	Cand. Screw for NE45 lamp
60S	Min. Screw
60T	Cand. Screw for 115v, 6W, T4-½ lamp

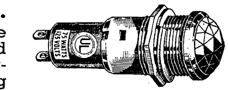
1" JEWEL . . . HORIZ. MOUNTING


No. 75 Type

Easy to install. Has "slip-fit" bezel. Mounts in 1" diameter hole on panels up to ½" thick. Will withstand a voltage breakdown of 1000 volts. No. 75 will take any candelabra screw base lamp up to 1⅞" long and ⅞" diameter. Nos. 175 and 275 take any miniature lamp up to 1-3/16" long and ⅞" diameter. All parts are burnished cadmium plated except the bezel, which has a highly polished chrome finish. Standard colors. No. 75 Types are regularly supplied with colorless smooth glass frosted on back, behind which is placed a colored disc so that glass appears white until the lamp is lighted. Comes in FAC, SP or SFB. *We recommend smooth plain glass for use with Neon Glow Lamps.*

TYPE NO.	STYLE SOCKET	TYPE NO.	STYLE SOCKET
75	Candelabra	275	Min. Bayonet
175	Min. Screw	375	S. C. Cand. Bayonet or Bay.

1" JEWEL . . . *Underwriters App.*


No. 75AP

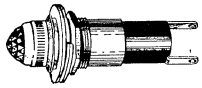
A heavy-duty Candelabra screw base assembly designed to be used on rugged equipment. UL for 125 volt 75 watt service. The socket assembly and mounting tube are one piece. Solder terminals. Mounts in 1" hole on panels up to ½" thick. Panel Hardware, highly polished chrome. All other parts cadmium plated. Standard colors in FAC, SP or SFB glass. Depth back of panel 2¼".

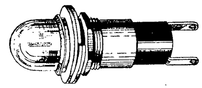
Dial and Jewel PILOT LIGHT ASSEMBLIES

TOTALLY ENCLOSED MINIATURE BAYONET ASSEMBLIES

UNDERWRITERS LISTED

The 100N and 101N assemblies are designed for use with the NE51 neon glow lamps. With proper current limiting resistors they can be operated on any voltage over 65 volts AC and 90 volts DC. Resistor is built into the housing. Units carried in stock have 100,000 ohm resistors for 115 volt operation. The 100 and 100N have glass Jewels. The 101 and 101N have transparent plastic domes. The fluted-on-inside type plastic dome has three times the visibility of the plain cap. All types mount in 11/16" diameter hole on panels up to ⅜" thick. Breakdown 2000 volts. 101 and 101N come in amber, colorless, red and milky white in the transparent; and blue, green, red, milky white, and yellow in the translucent.

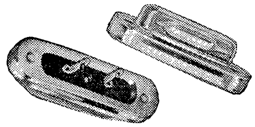

No. 100 Type
½" JEWEL


No. 101 Type
PLASTIC DOME

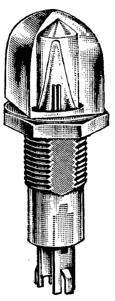
WITH BUILT-IN RESISTORS FOR NEON GLOW LAMPS . . . NO. 100N AND NO. 101N.

NEON INDICATOR LIGHTS

for maximum visibility . . .


No. 110 FLUSHLITE

NO. 110 FLUSHLITE is Underwriters Listed. Comes equipped with NE-2 neon lamp with built-in 100,000 ohm Resistor. Can be mounted by two screws or on studs on either front or back of panel. Body is milky white polystyrene. Rated at 125 volts, 1/10 watt.


No. 105 POSTLITE

NO. 105 POSTLITE comes equipped with NE-2 neon lamp with built-in 100,000 resistor. Body and head molded in one piece from clear, colorless polystyrene. Mounts in ½" diameter hole. Rated at 125 volts, 1/10 watt.

LOOK FOR THIS

DRAKE DISPLAY BOARD

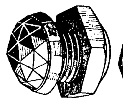
AT YOUR DEALER

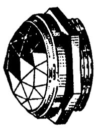
It shows a representative assortment of DRAKE units . . . will help you in selecting exactly the right Jewel or Pilot Lights for your requirements.

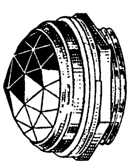
JEWELS

THREADED TYPE WITH NUTS

No. 14-15 . . . Shank ⅜" long, 9/32" O.D.
No. 16-17 . . . Shank ⅜" long, 7/16" O.D.
No. 16L-17 . . . Shank ½" long, 7/16" O.D.
No. 16S-17 . . . Shank 9/32" long, 7/16" O.D.
No. 60A3-27 . . . Shank ⅜" long; 11/16" O.D.


TYPES 16-17
11/32" Jewels


No. 60A3
¾" Jewels


No. 75A3-C
1" Jewels

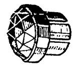
No. 75A3-C — 1" threaded jewel, mounts in 1" hole on panels up to ¼" thick. Complete assembly supplied with fibre washer, hex nut, and lockwasher.

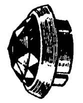
No. 60A3-27 and 75A3-C POLISHED CHROME FINISH. OTHER NOS. NICKEL FINISH.

SLOTTED TYPES

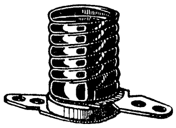
No. 22 . . . Shank ⅛" long, ⅜" O.D.
No. 23 . . . Shank 3/16" long, ⅜" O.D.
No. 24 . . . Shank ¼" long, 9/32" O.D.

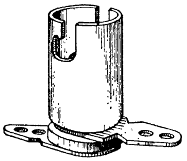
DIAMOND CUT JEWELS IN STANDARD COLORS

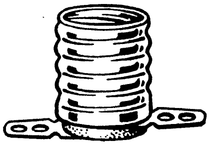

No. 24
11/32"
JEWEL


Nos. 22, 23
½"
JEWEL

DIAL LIGHT ASSEMBLIES

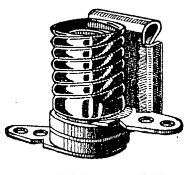

117H
MINIATURE SCREW

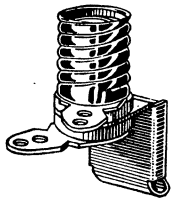

217H
MINIATURE
BAYONET


417H
CANDELABRA SCREW

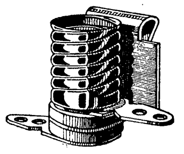
Code numbers for Types:
MIN. SCREW — 100 SERIES; MIN. BAYONET — 200 SERIES; CAND. SCREW — 400 SERIES.

CLIP BRACKET TYPES

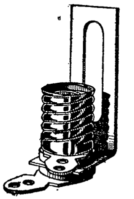

103AH - 203AH
403AH

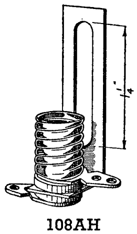

103CE
203CE - 403CE

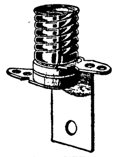
WITH FLANGE BRACKETS


104AH - 204AH
404AH
WITH
FLAT BRACKETS

MISCELLANEOUS TYPES


106AE
206AE
406AE


108AH
208AH
408AH

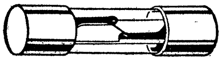

109CH
209CH
409CH

BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.

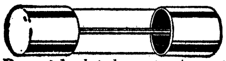


Formerly called 8AG.
Dimension ¼ x 1 inch, Glass tube.

Provide high speed action necessary to protect sensitive instruments.

Test specification—carry 100%, open at 200% in 5 seconds.

Voltage	Symbol	Amperes	List Price
250 or less	**MJB**	1/500	$0.70
"	**MJB**	1/200	.30
"	**MJB**	1/100 or 1/32	.20



Formerly called 8AG
Dimension ¼ x 1 inch, Glass tube.

Provide high speed action necessary to protect instruments.

Test specification—carry 100%, open at 200% in 5 seconds.

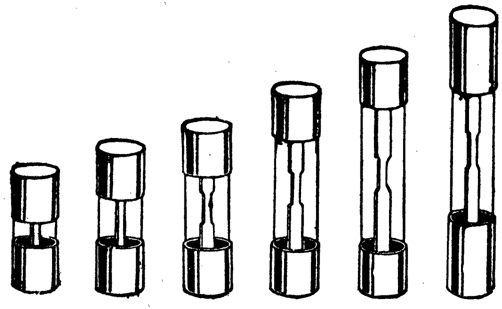
AGX are listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**MJW**	1/16 or ⅛	$0.15
"	**AGX**	⅛	.15
"	**AGX**	¼, ⅜ or ½	.12
125 or less	**AGX**	¾	.12
"	**AGX**	1, 1½ or 2	.10

The MJW fuses are special low resistance fuses.

BUSS FUSES — SFE STANDARD

All cuts actual size. Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fuseing.



SFE 4 SFE 6 SFE 9 SFE 14 SFE 20 SFE 30

Glass tube — diameter ¼ inch. Length as per table below.

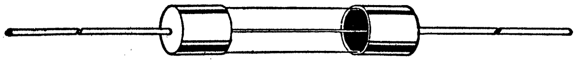
Test specification—carry 100%, open at 125% in ½ hour.

Listed as approved by Underwriters' Laboratories.

Made according to specifications of Society of Automotive Engineers.

Voltage	Symbol & Amperes	Length Inches	Pounds per 100	List Price
32 or less	**SFE4**	⅝	.70	$0.05
"	**SFE6**	¾	.71	.05
"	**SFE9**	⅞	.72	.04
"	**SFE14**	1 1/16	.77	.04
"	**SFE20**	1¼	.83	.035
"	**SFE30**	1 7/16	1.05	.06

BUSS PIG-TAIL FUSES



¼ x 1¼ inch Glass tube fuse with 1¾ inch leads of No. 20 tinned copper wire. Symbol GJV.

¼ x 1⅛ inch Paper tube fuse with 1¾ inch leads of No. 20 tinned copper wire. Symbol GJC.

Test specifications — carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**GJV**	⅛, ¼, ⅜, ½ or ¾	$0.20
"	**GJV**	1, 1½, 2 or 3	.15
"	**GJC**	⅛, ¼, ⅜, ½ or ¾	.20
"	**GJC**	1, 1½, 2 or 3	.15

BUSS GLASS TUBE FUSES, ¼ x 1¼ inch

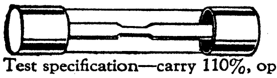
AGC and MTH 4, 5 and 6 MTH 8

Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**AGC**	⅛, ¼, ⅜, ½ or ¾	$0.15
"	**AGC**	1, 1½, 2 or 3	.07
"	**MTH**	4, 5 or 6	.10
"	**MTH**	8	.15



Formerly called 3AG

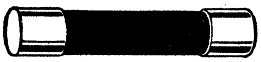
Test specification—carry 110%, open at 135% in 1 hour.

Voltage	Symbol	Amperes	List Price
32 or less	**AGC**	5, 6 or 7½,	$0.05
"	**AGC**	10 or 15,	.04
"	**AGC**	25 or 30	.05

20 ampere size is an SFE 20 fuse.

Sizes larger than 30 ampere are not recommended as clips or fuse holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use MDL Fusetron dual-element fuses.

BUSS CERAMIC TUBE FUSES ¼ x 1¼ inch



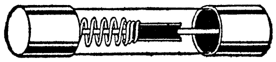
Formerly called 3AB

Test specification—carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories, 15 amps and less.

Voltage	Symbol	Amperes	List Price
250 or less	**ABC**	10, 12, 15 or 20	$0.15

FUSETRON FUSES, ¼ x 1¼ inch



Glass tube —
Dual-Element type

A FUSE WITH A LONG TIME-LAG

These fuses avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits — they have a thermal cutout which functions on low overloads — the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% in 1 hour.

Approximate blowing time:		**MDL**		**MDX**	
at 200%	load	25	sec.	12	sec.
at 300%	"	8	"	3	"
at 500%	"	3	"	½	"

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes
250 or less	**MDL**	1/100, 1/32, 1/16, 1/10, 15/100, 2/10, 3/10, 4/10, ½, 6/10, 8/10 or 1
125 or less	**MDL**	1¼, 1 6/10, 2, 2½, or 2 8/10
"	**MDX**	3 2/10, 4, 5 or 6¼
32 or less	**MDL**	3 2/10, 4, 5, 6¼, 8, 10, 15, 20, 25 or 30

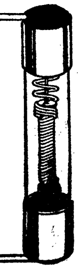
FUSETRON PIG-TAIL FUSES

These are MDL fuses with 1½ inch tinned wire leads. 0 to 8 amp. have No. 20 wire, 10 to 15 amp. have No. 16 wire and 20 to 30 amp. have No. 14 wire.

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Symbol MDV

For sizes and all other information see MDL fuses above.



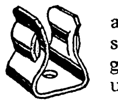
BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of Radios, Instruments and Electronic Equipment

BUSS FUSE CLIPS for ¼ inch Fuses

(SFE 4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MTH fuses)



Spring bronze clips are made of Herculoy — a bronze of distinctly superior quality for spring clips. This metal gives clips great gripping strength and ability to retain spring under adverse conditions.

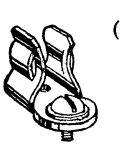
Beryllium copper clips combine low electrical resistance with great gripping strength. This means maximum electrical conductivity and results in cooler operation of clips and fuse.

Size of mounting hole; .130 to .135 inch.
Center of hole to back-stop; .125 to .135 inch:
Min. length of contact surface; 8/32 inch
Maximum height; 14/32 inch
Maximum width; 11/32 inch

		List Price
4548	Spring bronze clip, Nickel plated.	$0.02
4592	Beryllium copper clip, Silver plated.	.05

BUSS CLIP ASSEMBLIES for ¼ inch Fuses

(SFE 4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MJW, MTH fuses)



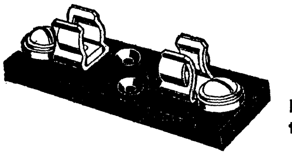
Clips as described above. Brass terminal. 3/16 inch 6-32 washer head terminal screw. ¼ inch 4-40 flat head iron mounting screw.

4431 includes No. 4548 spring bronze clip, terminal screw, terminal and mounting screw. List Price $0.10

4432 includes No. 4592 beryllium copper clip, terminal screw, terminal and mounting screw. List Price $0.13

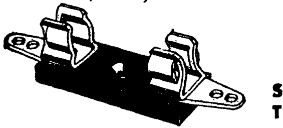
BUSS FUSE BLOCKS

Bakelite base blocks 3/16 inch thick. Countersunk mounting holes for No. 6 flat head screws. Brass No. 6 terminal screws. No. 4548 spring bronze clips.



Full base, Screw terminal Blocks

For Fuses	One Pole	List Price	Two Pole	List Price	Three Pole	List Price
SFE4	4511	$0.35	4521	$0.70	4531	$1.00
SFE6	4516	.35	4526	.70	4536	1.00
SFE9	4517	.35	4527	.70	4537	1.00
SFE14, AGX, MJB	4514	.35	4524	.70	4534	1.00
SFE20, ABC, AGC, MDL, MTH	4512	.35	4522	.70	4532	1.00



Small base, Solder Terminal Blocks

For Fuses	One Pole	List Price	Two Pole	List Price	Three Pole	List Price
SFE 4, AGX, MJB	4520	$0.15	4485	$0.30	4403	$0.45
SFE20, ABC, AGC, MDL, MTH	4405	.15	4408	.30	4411	.45

Other standard and special fuses, fuse blocks and fuse holders

If the fuses, blocks and holders shown do not fit your requirements ask for information on other types.

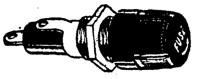
Fuses and fuse mountings to meet JAN and Military specifications also are available.

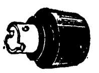
If you have a special problem in protection send description or sketch giving number of circuits, type of fuse, terminals, etc., desired. We welcome such inquiries.

BUSS FUSE HOLDERS

Make it convenient to mount fuse on any equipment.
Changing or inspection of fuse is easy and quick.
Holder has removable knob. Fuse projects beyond body of holder and is not held tight on other end when knob is removed.
Fuse and contacts are protected from dirt and fumes.
Good contact on fuse is made certain by strong coil spring pressure. Poor contact heating that often causes fuse to blow needlessly is eliminated.
Holder bodies are made of black bakelite. All current carrying parts are of brass or copper. Terminals and all contact parts are bright alloy plated.

PANEL MOUNTED HOLDERS for ¼ inch Fuses





Holders are inserted through hole in panel and are locked in place by nut on holder. They can be used on panels up to 5/16 inch thick.

Bayonet type knob requires only quarter turn to remove fuse. No screw driver is needed.

Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen or come off.

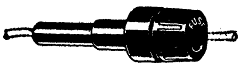
Vibration will not cause failure of terminals as they are designed to stand severe service.

Neoprene washer and steel locking nut (zinc plated, chromate dipped) furnished with each holder.

Wire hole in terminals; .115 inch.
Normal current carrying capacity; 15 amperes.
Listed as approved by Underwriters' Laboratories.

		List Price
HJM	for ¼ x 1 inch fuses (AGX, MJB, MJW, SFE 14)	$0.40
HKP	for ¼ x 1¼ inch fuses (ABC, AGC, SFE20, MDL, MTH)	.40

IN-THE-LINE HOLDERS for ¼ inch fuses



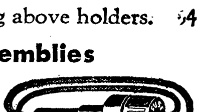
These holders are for mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — a pressure spring that is used under contact in base of holder.

Holders can also be mounted in panel up to 5/16 inch thick by means of a No. 9969 Spring nut (Nut not furnished). Flat spot on holder permits it to be locked against rotation.

Normal current carrying capacity: 15 amperes.

Symbol		List Price
HDI	for ¼ x 1 inch fuses (AGX, MJB, MJW, SFE 14) Takes No. 18 or smaller wires.	$0.20
HDJ-A	for ¼ x 1¼ inch fuses (ABC, AGC, MDL, MTH, SFE 20) Takes No. 18 or smaller wires.	.20
HDJ-B	for ¼ x 1¼ inch fuses as above) Takes No. 14 or 16 wires.	0
No. 9969	Spring nut for panel mounting above holders.	.4

Holder-and-Fuse Assemblies

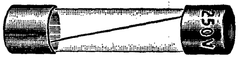


Assembly consists holder, fuse and 19 inch loop of No. 14 wire already staked and soldered to terminals.

Offer simplest way to install protection. Wire can be cut to give leads of desired length. A spring nut, furnished with holder, can be used to mount holder on panel up to 3/32 inch thick.

		List Price
HRJ	Complete with SFE 20 fuse	$0.40
HRI	Complete with SFE 14 fuse	.40
HRH	Complete with SFE 9 fuse	.40

3 AG "LITTELFUSES"



¼" x 1¼"

Standard Package—100

Blow Time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200%	0–2 minutes

311000 Series **Littelfuses**—Quick to medium-blowing fuses—for use in radios, auto-radios, amplifiers, etc. Straight-type fuse element—positioned to center of fuse—makes open link always in the visible portion of fuse.

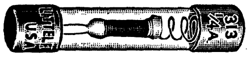
Catalog No.	Amp. rating	Max. volt	**List Price, each**
311005.	5	32	**$0.05**
31107.5	7½	32	**.05**
311010.	10	32	**.04**
311015.	15	32	**.04**
311020.	20	32	**.035**
311025.	25	32	**.05**
311030.	30	32	**.05**

312000 Series **Littelfuses**—Quick-acting fuses—for low time-lag applications similar to the **311000** fuse series above. Protective-coated elements, on fuses to 3 amperes, prevent oxidation and promote clean break on fusion. Diagonal element alignment of this fuse assures accurate alignment and calibration, even when the fuse element is expanded by heat.

Catalog No.	Amp. rating	Max. volt.	**List Price each**
312.062	1/16	250	**$0.15**
312.125	⅛	250	**.15**
312.187	3/16	250	**.15**
312.250	¼	250	**.15**
312.375	⅜	250	**.15**
312.500	½	250	**.15**
312.750	¾	250	**.15**
312001.	1	250	**.07**
31201.5	1½	250	**.07**
312002.	2	250	**.07**
312003.	3	250	**.07**
312004.	4	250	**.10**
312005.	5	250	**.10**
312006.	6	250	**.10**
312008.	8	125	**.15**

Approved by Underwriters' Laboratories.

3 AG "SLO-BLO" "LITTELFUSES"



¼"x 1¼"

Standard package—100

Blow time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200	60 seconds max. 5 seconds min.

313000 Series **Littelfuses**—**Slo-Blo** fuses with high time-lag to withstand heavy surges—quick on shorts. Designed for circuits with equipment having high inductive or capacitative surges, such as magnets, solenoids, etc., and for circuits with heavy starting currents, such as motors and lamp circuits. Anti-fatigue construction (compound element, with spring and resistor) makes these fuses ideal for intermittent-duty circuits on vibrators, control circuits, hi-tension electric fences, small magnets, coils, etc. **"Pioneered by Littelfuse."**

Catalog No.	Former No.	Amp. rating	Max. volt.	**List Price, each**
313.010	1259	1/100	125	$0.25
313.032	1261	1/32	125	**.25**
313.062	1262	1/16	125	**.25**
313.100	....	1/10	125	**.25**
313.125	1263	1/8	125	**.25**
313.150	....	15/100	125	**.25**
313.187	1263-A	3/16	125	**.25**
313.200	....	2/10	125	**.25**
313.250	1264	1/4	125	**.25**
313.300	....	3/10	125	**.25**
313.375	1265	3/8	125	**.25**
313.400	....	4/10	125	**.25**
313.500	1266	1/2	125	**.25**
313.600	....	6/10	125	**.25**
313.750	1267	3/4	125	**.25**
313.800	....	8/10	125	**.25**
313001.	1268	1	125	**.25**
3131.25	....	1¼	125	**.20**
31301.5	1041-C	1½	125	**.20**
31301.6	....	1-6/10	125	**.20**
313002.	1042-C	2	125	**.20**
31302.5	....	2½	125	**.20**
313003.	1043-C	3	125	**.20**
31303.2	....	3-2/10	125	**.20**
313004.	....	4	125	**.20**
313005.	1080-C	5	125	**.20**
3136.25	....	6¼	32	**.20**
313008.	....	8	32	**.20**
313010.	1081-C	10	32	**.20**
313015.	1082-C	15	32	**.20**
313020.	1083-C	20	32	**.20**

Approved by Underwriters' Laboratories through 5 amps.

3 AB "TINY MIGHTY" "LITTELFUSES"

UL
TINY-MIGHTY LITTELFUSE
15A

¼" x 1¼"

Standard package—100.

Blow Time

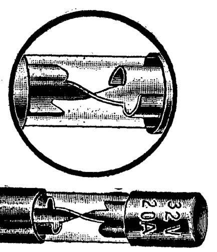
Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200%	0–2 minutes

314000 Series **Littelfuses**—The smallest Underwriters' Laboratory approved fuses in ratings this high. Steatite enclosed, arc-quenching, powder filled fuses. Shatter-proofed against quick shorts. Medium time lag. Recommended for use with amplifiers, rectifiers, battery charging equipment, small generators, control panels, amusement devices, communication and electronic equipment, radios, signal apparatus, small motor circuits, etc. Take less space than N.E.C. fuses—**"Pioneered by Littelfuse."**

Catalog No.	Amp. rating	Max. volt.	**List Price, each**
314008.	8	250	**$0.15**
314010.	10	250	**.15**
314012.	12	250	**.15**
314015.	15	250	**.15**
314020.	20	250	**.15**

Approved by Underwriters' Laboratories through 15 amps.

LITTELFUSE "Quicker than a Short Circuit"



4 AG Aircraft Fuse showing reinforced twisted element

20
32V
20A
LITTELFUSE
MADE IN US

Bakelite-enclosed 4 AB Fuse

AIRCRAFT LITTELFUSES—ANTI-VIBRATION TYPE

Especially designed for Aircraft Service. Characteristics: High Mechanical Strength—Resistance to Fatigue—Long Vibration Life

CONSTRUCTION: Glass-enclosed. Littelfuse Locked Cap Assembly (no cements) prevents loosening of caps. High visibility transparent label for amperage. Elements mechanically depolarized by twisting at 90° (see illustrations) are braced against extreme vibration. "Gooseneck" non-crystallizing fuse element takes up expansion and contraction. Ratings 5 amps. or less use Spring and Link. Service life six times simple wire. The 4 AG and 5 AG sizes are supplied for Aircraft tervices for their strength and greater carrying capacity han 3 AG fuses.

BAKELITE-ENCLOSED: 4 AB and 5 AB fuses recommended where severe overloads might shatter glass.

CURRENT RATING: Rated to NEC specifications to carry 10% overload indefinitely, to blow on 35% overload within 1 hr., and 100% overload within 2 min.

VOLTAGE RATING: Voltage at which fuses will break without arcing over, or bursting under short circuit conditions.

VIBRATION FACTOR: Minimum hours these fuses endure our Magnetic Vibrator operating 120 cycles a second, while carrying the rated current. Acceleration is 10 times the worst field conditions.

4AG "LITTELFUSES"

1 1/4" x 9/32" Dia.
Unit Wt.—3.5 Gms.

Cat. No.	Former No.	Amp. Rating	Max. Volt.	Price Each
"Slo-Blo"				
413.100	—	1;10	250	.30
413.150	—	15;100	250	.30
413.200	—	2;10	250	.30
413.250	1452C1;4	1;4	250	.30
413.300	—	3;10	250	.30
413.400	—	4;10	250	.30
413.500	1452C1;2	1;2	250	.30
413.600	—	6;10	250	.30
413.800	—	8;10	250	.30
413001	1091C	1	250	.25
4131.25	—	1-1;4	250	.25
41301.6	—	1-6;10	250	.25
413002	1092C	2	250	.25
41302.5	—	2-1"2	250	.25
413003	1093C	3	250	.25

4AG "LITTELFUSES" (Con.)

1 1/4" x 9/32" Dia.
Unit Wt.—3.5 Gms.

Cat. No.	Former No.	Amp. Rating	Max. Volt.	Price Each
41303.2	—	3-2;10	250	.25
413004	—	4	32	.25
413005	1094C	5	32	.25
4136.25	—	6-1;4	32	.25
413008	—	8	32	.25
413010	1095C	10	32	.25
413015	1096C	15	32	.25
413020	1097C	20	32	.25
413025	1098C	25	32	.25
413030	1099C	30	32	.25
413035	—	35	32	.25
413040	1100C	40	32	.25
Aircraft				
411010.	1095	10	32	.13
411015.	1096	15	32	.13
411020.	1097	20	32	.13
411025.	1098	25	32	.13
411030.	1099	30	32	.13
411035.	—	35	32	18.

4AB "LITTELFUSES"

1 1/4" x 9/32" Dia.
Unit Wt.—3.75 Gms.

Cat. No.	Former No.	Amp. Rating	Max. Volt.	Price Each
414001.	1091B	1	250	.25
414002.	1092B	2	250	.25
414003.	1093B	3	250	.25
414005.	1094B	5	125	.25
414010.	1095B	10	125	.25
414015.	1096B	15	125	.25
414020.	1097B	20	125	.25
414025.	1098B	25	32	.25
414030.	1099B	30	32	.25
414035.	—	35	32	.25
414040.	1100B	40	32	.25

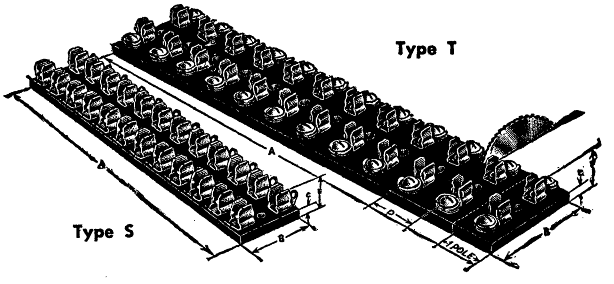
*Good for power supplies up to 25 KVA at 115V—400 cycles.

5AG "LITTELFUSES"

1 1/2z x 13/32" Dia.
Unit Wt.—8.5 Gms.

Cat. No.	Former No.	Amp. Rating	Max. Volt.	Price Each
"Slo-Blo"				
513001.	1160C	1	250	$0.25
513002.	1161C	2	250	.25
513003	1162C	3	250	.25
513005.	1163C	5	32	.25
513010.	1164C	10	32	.25
513015	1165C	15	32	.25
513020	1166C	20	32	.25
513025	—	25	32	.25
513030.	1167C	30	32	.25
513040	1168C	40	32	.25
513050.	1169C	50	32	.25
513060.	1222C	60*	32	.25
Aircraft				
511010.	1164	10	32	.15
511015.	1165	15	32	.15
511020.	1166	20	32	.15
511025.	1442	25	32	.15
511030.	1167	30	32	.15
511035.	1472	35	32	.15
511040.	1168	40	32	.15
511050.	1169	50	32	.18
511060.	1222	60*	32	.18

*Carries only 100% rating on life test.



NEW FUSE MOUNTING PANELS

Open type fuse panels, stocked in 12-pole units as shown—we cut them to 1, 2, 3, 4 or more poles as ordered, or you may cut them in your plant (1/8" allowance for saw cut).

Fuse Type	Mtg. Type	Dim. "B"	Dim. "C"	Dim. "D"	Dim. "E"
8AG	S	1 3/8	3/16	5/8	21/32
3AG	S	1 5/8	3/16	5/8	21/32
3AG	T	2 3/8	7/32	29/32	11/16
4AG	T	2 3/8	7/32	29/32	13/16
5AG	T	2 3/4	9/32	31/32	1 1/32

Mountings with Solder Terminals—Type "S". Phosphor-Bronze, bright-dipped finish "Lug-Clips" are firmly anchored to black Bakelite base—have non-turning anchors. For 8AG and 3AG size fuses.

Mountings with Screw Terminals—Type "T". Spaced to U/L requirements for equipment circuit protection. Nickel plated brass screw terminals, nickel plated fuse clips. Type 356 (3AG) and type 556 (5AG or Midget) have cupped wire-retaining washers under terminal screws as required by U/L. Type 456 (4AG) has lock washers or terminals.

FOR 3AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
356001	1	25/32	$0.35
356002	2	1 11/16	0.70
356003	3	2 19/32	1.05
356004	4	3 1/2	1.40
356005	5	4 13/32	1.75
356006	6	5 5/16	2.10
356007	7	6 7/32	2.45
356008	8	7 1/8	2.80
356009	9	8 1/32	3.15
356010	10	8 15/16	3.50
356011	11	9 27/32	3.85
356012	12	10 3/4	4.20

FOR 4AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
456001	1	25/32	$0.40
456002	2	1 11/16	.75
456003	3	2 19/32	1.10
456004	4	3 1/2	1.45
456005	5	4 13/32	1.80
456006	6	5 5/16	2.15
456007	7	6 7/32	2.50
456008	8	7 1/8	2.85
456009	9	8 1/32	3.20
456010	10	8 15/16	3.55
456011	11	9 27/32	3.90
456012	12	10 3/4	4.25

FOR 5AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
556001	1	27/32	$0.50
556002	2	1 13/16	.95
556003	3	2 25/32	1.40
556004	4	3 3/4	1.85
556005	5	4 23/32	2.30
556006	6	5 11/16	2.75
556007	7	6 21/32	3.20
556008	8	7 5/8	3.65
556009	9	8 19/32	4.10
556010	10	9 9/16	4.55
556011	11	10 17/32	5.00
556012	12	11 1/2	5.45

FOR 3AG FUSES—TYPE "S"

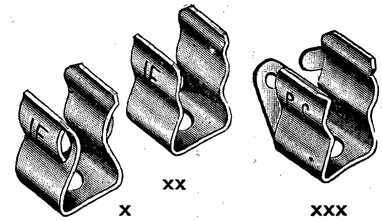
Catalog No.	No. Poles	Dim. "A"	List Price Each
357001	1	1/2	$0.15
357002	2	1 1/8	.30
357003	3	1 3/4	.45
357004	4	2 3/8	.60
357005	5	3	.75
357006	6	3 5/8	.90
357007	7	4 1/4	1.05
357008	8	4 7/8	1.20
357009	9	5 1/2	1.35
357010	10	6 1/8	1.50
357011	11	6 3/4	1.65
357012	12	7 3/8	1.80

FOR 8AG FUSES—TYPE "S"

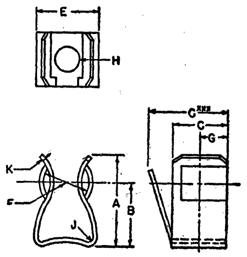
Catalog No.	No. Poles	Dim. "A"	List Price Each
387001	1	1/2	$0.15
387002	2	1 1/8	.30
387003	3	1 3/4	.45
387004	4	2 3/8	.60
387005	5	3	.75
387006	6	3 5/8	.90
387007	7	4 1/4	1.05
387008	8	4 7/8	1.20
387009	9	5 1/2	1.35
387010	10	6 1/8	1.50
387011	11	6 3/4	1.65
387012	12	7 3/8	1.80

LITTELFUSE *"Quicker than a Short Circuit"*

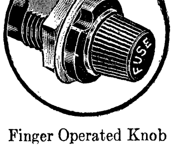
LITTELFUSE BERYLLIUM COPPER AND PHOSPHOR BRONZE FUSE CLIPS



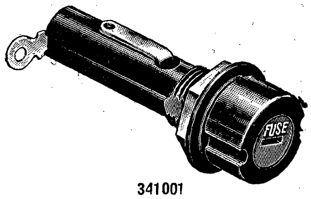
Littelfuse fuse clips are available in three standard styles: "X," with "ears" or fuse stops; "XX," earless; and "XXX," "Lug-Clips," a new **Littelfuse** clip having a lug or solder terminal made as an integral part of the clip. All styles are furnished in either Phosphor-Bronze or Beryllium Copper.



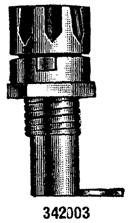
Catalog Number	Former Number	Fuse Adaptation	Type	DIMENSIONS							Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
				A	B	C	E	F	G	H			
BERYLLIUM COPPER CLIPS													
SILVER PLATED—WITH FUSE STOP "EARS"													
121001	1216B	SFE, 3AG & 8AG Fuses	X	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	$0.05
123001	1217B	4AG & 4AB Fuses	X	9/16	3/8	13/32	.385	9/32	3/16	.171	1.6	1	.08
125001	1218B	5AG, Hi-Voltage-Midget	X	3/4	1/2	7/16	1/2	13/32	7/32	.196	3	2	.15
127001	1219	N.E.C.-30 Fuses	X	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.5	2	.18
129001	1221	Standard Hi-Voltage	X	1 7/32	13/16	.750	7/8	13/16	5/16	.265	14.5	4	.40
SILVER PLATED—EARLESS TYPE													
121002	1417	SFE, 3AG & AB, & 8AG	XX	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.05
123002	1437	4AG & 4AB	XX	9/16	3/8	13/32	.385	9/32	3/16	.171	1.6	1	.08
125002		5AG, Hi-Voltage-Midget	XX	3/4	1/2	7/16	1/2	13/32	7/32	.196	3	2	.15
127002	1475	N.E.C.-30 Fuses	XX	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.5	2	.18
129002	1476	Standard Hi-Voltage	XX	1 7/32	13/16	.750	7/8	13/16	5/16	.265	14.5	4	.40
SILVER PLATED—"LUG-CLIP"—SOLDER TERMINAL ATTACHED													
121004	New	SFE, 3AG, AB, & 8AG	XXX	29/64	1/4	37/64	11/32	1/4	5/32	.131	1.2	1	.08
123004	New	4AG & 4AB Fuses	XXX	9/16	3/8	3/4	.385	9/32	3/16	.171	1.7	1	.12
125004	New	5AG & Midget Fuse	XXX	3/4	1/2	.820	15/32	13/32	7/32	.196	3.5	2	.20
PHOSPHOR BRONZE CLIPS													
BURNISHED NICKEL PLATE—WITH FUSE STOP "EARS"													
101001	1011B	SFE, 3AG & AB, & 8AG	X	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.02
103001	1319	4AG & 4AB	X	9/16	3/8	13/32	.385	9/32	3/16	.173	1.7	1	.04
105001	2049	5AG, Hi-Voltage-Midget	X	3/4	1/2	7/16	1/2	13/32	7/32	.196	3.2	2	.05
107001	5048	N.E.C.-30 Fuses	X	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.8	2	.06
109001	1463	Standard Hi-Voltage	X	1 7/32	13/16	.750	7/8	13/16	5/16	.265	15.6	4	.16
BURNISHED NICKEL PLATE—EARLESS TYPE													
101002	125-2	SFE, 3AG & AB, 7AG & 8 AG	XX	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.02
104002		4AG & 4AB	XX	9/16	3/8	13/32	.385	9/32	3/16	.173	1.7	1	.04
105002	2049B	5AG, Hi-Voltage-Midget	XX	3/4	1/2	7/16	15/32	13/32	7/32	.196	3.2	2	.05
107002	SP-178	N.E.C. 30 Fuses	XX	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.8	2	.06
109002		Standard Hi-Voltage	XX	1 7/32	13/16	.750	7/8	13/16	5/16	.265	14.5	4	.16
BRIGHT-DIP PHOSPHOR BRONZE—"LUG CLIP" SOLDER TERMINAL ATTACHED													
101003		SFE, 3AG & AB & 8AG	XXX	29/64	1/4	37/64	11/32	1/4	5/32	.131	1.2	1	.03
103003		4AG & 4AB	XXX	9/16	3/8	3/4	.385	9/32	3/16	.171	1.7	1	.05
105003		SFE, 3AG & AB & 8AG	XXX	3/4	1/2	.820	15/32	13/32	7/32	.196	3.5	2	.08



Finger Operated Knob



341001



342003

"LITTELFUSE"
FUSE EXTRACTOR POSTS

Quicker, safer method for mounting and changing fuses. Held in end of removable knob, fuse is easily replaced by unscrewing knob. Available with finger-operated knob or with screw driver slot knob.

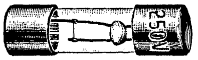
Catalog No.	Former No.	Descr.—Knob, How Operated	Mtg. Hole	Length Under Panel	List Price Each
341001	1075S	3AG—Screw Driver	.500–.505″	2 3/32	$0.45
342001	1075F	3AG—Finger	.500–.505″	2 7/32	.45
342003	......	3AG—Miniature	.500–.505″	1.035	.45
342006	......	3AG—Miniature—Watertight	.620–.625″	1.312	2.35
342008	......	3AG—Miniature—Dustproof	.500–.505″	1.035	.55
442006	......	4AG—Finger—Watertight	.620–.625″	1.312	2.35
442007	......	4AG	.620–.625″	1.312	2.20
570001	......	5AG	.850–.855″	1.472	1.35
571004	......	5AG—Finger	.850–.855″	1.472	1.50
371001	1087S	8AG—Screw Driver	.500–.505″	2 3/32	.45
372001	1087F	8AG—Finger	.500–.505″	2 7/32	.45

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

LITTELFUSE "Quicker than a Short Circuit"

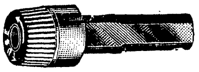
8AG INSTRUMENT *high speed* LITTELFUSES

Locked Cap Assembly and other exclusive Littelfuse features for protection of delicate test equipment, galvanometers, microammeters, milliammeters, voltmeters, etc. Glass-enclosed: 1 x ¼" dia., accurately rated, high speed action, short time lag. Voltage ratings up to 250 V., AC or DC. For higher voltages use fuses in series.



Catalog No.	Former No.	Amp. Rating	Max. Volt.	APPLICATIONS			List Price Ea.
				Volt-meters Ohms P.V.	All Magnetic Movement Milliammeters	Thermo-couples	
361.002	....	1/500	250	Over 1000	Galvanometers	0-0.1 to 0-0.5	$0.70
361.005	1000	1/200	250	Over 1000	Galvanometers	Up to 0.1	.30
361.010	1001	1/100	250	1000	Up to 0-1	0-5 to 0-10	.20
361.031	1002	1/32	250	500-1000	0-1 to 0-10	0-10 to 0-25	.20
361.062	1003	1/16	250	100-500	0-10 to 0-25	0-25 to 0-60	.15
361.125	1004	⅛	250	20-100	0-25 to 0-75	0-75 to 0-150	.15
361.250	1005	¼	250	10-20	0-75 to 0-150	0-115 to 0-200	.15
361.375	1006	⅜	250	5-10	0-150 to 0-250	0-200 to 0-300	.15
361.500	1007	½	250	3-5	0-250 to 0-350	0-300 to 0-400	.15
361.750	1007-A	¾	250		0-350 to 0-500	0-400 to 0-600	.15
361001.	1008	1	250		0-500 to 0-750	0-600 to 0-1000	.10
36101.5	1008-A	1½	250		0-750 to 0-1000	0-1000 to 0-1500	.10
361002.	1009	2	250		0-1000 to 0-1500	0-1500 to 0-2000	.10
361003.		3	250		0-1500 to 0-2000	0-2000 to 0-3000	.10
361005.		5	32		0-2000 to 0-4000	0-3000 to 0-5000	.10

BAKELITE IN-LINE FUSE RETAINER



Designed to hang in the cable or mount in the chassis, the inline fuse retainer molded of high impact bakelite is primarily for low-voltage applications: car radios, heaters, spot lights, clocks, etc.

The disassembled unit consists of the bakelite body receptacle, bakelite knob with metal insert, one spring, two knife-edge rivet contacts.

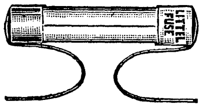
155000 Series—Assembled with an 8" loop of wire lead:

155004A	For 4-amp SFE and 1AG fuses
155006A	For 6-amp SFE fuses
155009A	For 9-amp SFE and 7AG fuses
155014A	For 14-amp SFE and 8AG fuses
155020A	For 20-amp SFE and 3AG fuses

List Prices

.30 ea.

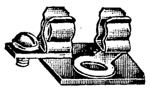
Catalog Number	Description	List Price Each
	3AG SLO-BLO PIGTAIL FUSES	
315.010	1/100 amp. (125 volt)	$.30
315.032	1/32 amp. (125 volt)	.30
315.062	1/16 amp. (125 volt)	.30
315.100	1/10 amp. (125 volt)	.30
315.150	15/100 amp. (125 volt)	.30
315.200	2/10 amp. (125 volt)	.30
315.250*	¼ amp. (125 volt)	.30
315.300	3/10 amp. (125 volt)	.30
315.400	4/10 amp. (125 volt)	.30
315.500*	½ amp. (125 volt)	.30
315.600	6/10 amp. (125 volt)	.30
315.800	8/10 amp. (125 volt)	.30
315001.	1 amp. (125 volt)	.30
3151.25	1¼ amp. (125 volt)	.25
31501.6	1-6/10 amp. (125 volt)	.25
315002.	2 amp. (125 volt)	.25
31502.5	2½ amp. (125 volt)	.25
31503.2	3-2/10 amp. (125 volt)	.25
315004.	4 amp. (125 volt)	.25
315005.	5 amp. (125 volt)	.25
	3AG PIGTAIL FUSES	
318.062	1/16 amp. (250 volt)	.20
318.125	⅛ amp. (250 volt)	.20
318.250*	¼ amp. (250 volt)	.20
318.375	⅜ amp. (250 volt)	.20
318.500*	½ amp. (250 volt)	.20
318.750	¾ amp. (250 volt)	.20
318001.	1 amp. (250 volt)	.12
31801.5	1½ amp. (250 volt)	.12
318002.	2 amp. (250 volt)	.12
318003.	3 amp. (250 volt)	.12
318004.	4 amp. (250 volt)	.15
318005.	5 amp. (250 volt)	.15
	8AG T.V. FUSES (No Pigtail)	
362.125	⅛ amp. (250 volt)	.15
362.250*	¼ amp. (250 volt)	.15
362.375*	⅜ amp. (250 volt)	.15
362.500	½ amp. (250 volt)	.15
362.750	¾ amp. (250 volt)	.15
362001.	1 amp. (250 volt)	.10
36201.5	1½ amp. (125 volt)	.10
362002.	2 amp. (125 volt)	.10
362003.	3 amp. (125 volt)	.10
362005.	5 amp. (125 volt)	.05



*Most commonly used by large volume set manufacturers.

All above fuses approved by Underwriters' Laboratories except 315004 and 315005.

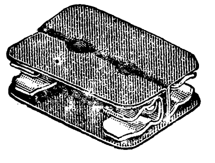
METER BACK MOUNTING



Cat. No. 383002 (1059)—Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base, 1" x 1⅛". Length over screw terminal, 1½". Standard Package 20. Weight ½ lb.

List Price Each..............$0.20

TV SNAP ON FUSE HOLDER



Time saver for pigtail replacement. Snap on blown pigtail, then use regular fuse in other side. No soldering.

In order to provide TV service men with their demand for a larger, more compact unit of TV Snap On Fuse Holders, Littelfuse has produced a package of 10 of the holders in a hard, long-wearing, plastic box.

No. 094025

List Price, per box, $3.00

General Fuse for circuit insurance

3AG ¼" x 1¼" HIGH VOLTAGE SERIES

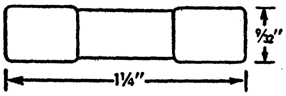
Catalog No.	Nominal Rating	Maximum Voltage	Continuous Duty	Blows within 1 hr. at	Blows within 2 min. at	Res. Ave. Ohms	List Price ea.
3AG 1/16	62 mA	250V	68.2 mA	83.7 mA	124 mA	6	$.15
3AG 1/8	125 mA	250V	137.5 mA	168.8 mA	250 mA	6	.12
3AG 1/4	250 mA	250V	275.0 mA	337.5 mA	500 mA	4	.12
3AG 3/8	375 mA	250V	412.5 mA	506 mA	750 mA	2.35	.12
3AG 1/2	500 mA	250V	550 mA	675 mA	1.00 A	1.44	.11
3AG 3/4	750 mA	250V	825 mA	1.01 A	1.50 A	.84	.11
3AG 1	1 A	250V	1.10 A	1.35 A	2.00 A	.22	.07
3AG 1-1/2	1.5 A	250V	1.65 A	2.03 A	3.00 A	.15	.07
3AG 2	2 A	250V	2.20 A	2.70 A	4.00 A	.07	.07
3AG 3	3 A	250V	3.30 A	4.05 A	6.00 A	.05	.07
3AG 4H	4 A	250V	4.40 A	5.40 A	8.00 A	.05	.08
3AG 5H	5 A	250V	5.50 A	6.75 A	10.0 A	.03	.08
3AG 6H	6 A	250V	6.60 A	8.10 A	12.0 A	.025	.08
3AG 8H	8 A	125V	8.80 A	10.8 A	16.0 A	.02	.13
3AG 8S*	8 A	250V	8.80 A	10.8 A	16.0 A	.02	.13

Other ratings and fuses with special performance characteristics on request.

3AG HV Designed for general application, fuses of the 3AG High Voltage Series blow quickly under overload. They are recommended for the protection of primary circuits connected to house main lines, and may also be used for low voltage circuits where the standard 3AG Low Voltage Series does not list a fuse of the required rating.

PIG-TAILS Fuses of this series may be ordered with pig-tails by adding the symbol "PT" to the catalog number. (EX. 3AG 5H PT—for the 3AG High Voltage Series, 5 amp. fuse with pig-tails.) The pig-tails are 1½" long leads of #20 (.032") AWG tinned copper wire.

*This fuse contains a filler. As such, a blown fuse is not always readily recognizable.



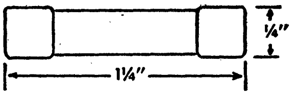
4AG 9/32" x 1¼" STANDARD SERIES

4AG 1	1.0 A	250V	1.10 A	1.35 A	2.00 A	$.10
4AG 2	2.0 A	250V	2.20 A	2.70 A	4.00 A	.10
4AG 3	3.0 A	250V	3.30 A	4.05 A	6.00 A	.10
4AG 5	5.0 A	32V	5.50 A	6.75 A	10.0 A	.12
4AG 10	10 A	32V	11.0 A	13.5 A	20.0 A	.12
4AG 15	15 A	32V	16.5 A	20.3 A	30.0 A	.12
4AG 20	20 A	32V	22.0 A	27.0 A	40.0 A	.12
4AG 25	25 A	32V	27.5 A	33.8 A	50.0 A	.12
4AG 30	30 A	32V	33.0 A	40.5 A	60.0 A	.12
4AG 35	35 A	32V	38.5 A	47.3 A	70.0 A	.13
4AG 40	40 A	32V	44.0 A	54.0 A	80.0 A	.13

Other ratings and Fuses with special performance characteristics on request.

4AG Stand. Fuses of the 4AG Standard Series may be considered a ruggedized version of the corresponding 3AG Series, since these fuses afford greater protection against shock, virbration and rough handling than do the fuses of the 3AG Series. Due also to their heavier design, fuses of the 4AG Standard Series are available in higher ratings up to 40 amps. nominal load. Most of the applications of this series are found in aircraft installations and wherever rugged construction is of major importance.

General's exclusive "Lightning Bolt" link is incorporated into the design of all fuses in this series from 15 amps. up—affording great shock and vibration resistance in that range.



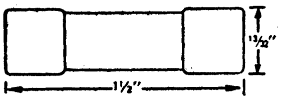
3AG ¼" x 1¼" LOW VOLTAGE SERIES

Catalog No.	Nominal Rating	Maximum Voltage	Continuous Duty	Blows within 1 hr. at	Blows within 2 min. at	Res. Ave. Ohms	List Price ea.
3AG 5	5 A	32V	5.50 A	6.75 A	10.0 A	.03	$0.05
3AG 6	6 A	32V	6.60 A	8.1 A	12.0 A	.025	.05
3AG 7-1/2	7.5 A	32V	8.25 A	10.1 A	15.0 A	.02	.05
3AG 10	10 A	32V	11.0 A	13.5 A	20.0 A	.01	.04
3AG 12	12 A	32V	13.2 A	16.2 A	24.0 A	.009	.04
3AG 15	15 A	32V	16.5 A	20.3 A	30.0 A	.008	.04
3AG 20	20 A	32V	22.0 A	27.0 A	40.0 A	.006	.03½
3AG 25	25 A	32V	27.5 A	33.8 A	50.0 A	.0055	.05
3AG 30	30 A	32V	33.0 A	40.5 A	60.0 A	.005	.05

Other ratings and fuses with special performance characteristics on request.

3AG LV Fuses of the 3AG Low Voltage Series blow quickly under overload. Suitable for battery circuits not over 32 volts and other low voltage applications, they are frequently used in portable radios and other equipment of this type. The 15 amp. (and higher) fuses have the exclusive "Lightning Bolt" construction which makes them specially resistant to shock and vibration. For lower ratings, use fuses of the 3AG High Voltage Series.

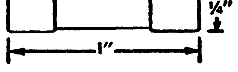
PIG-TAILS Fuses of this series may be obtained with pig-tails by adding the symbol "PT" to the catalog number. (For example: 3AG 5PT—for the 3AG Low Voltage Series, 5 amp. fuse with pig-tails.) For fuses up to and including 8 amps., pig-tails are 1½" in length of #20 (.032") AWG tinned copper wire. For higher ratings under 20 amps. pig-tail wires are of the same length, but of #16 (.051") AWG tinned copper wire; pig-tails for fuses of 20 amps. and higher are of the same length, but of #14 (.064") AWG tinned copper wire. However, pig-tail fuses of 20 amps. or more are not recommended, particularly if the equipment is subject to shock and vibration during operation.



5AG 13/32" x1½" STANDARD SERIES

5AG 1	1.0 A	250V	1.10 A	1.35 A	2.00 A	$.13
5AG 2	2.0 A	250V	2.20 A	2.70 A	4.00 A	.13
5AG 3	3.0 A	250V	3.30 A	4.05 A	6.00 A	.13
5AG 4	4.0 A	32V	4.40 A	5.40 A	8.00 A	.13
5AG 5	5.0 A	32V	5.50 A	6.75 A	10.0 A	.13
5AG 10	10 A	32V	11.0 A	13.5 A	20.0 A	.12
5AG 15	15 A	32V	16.5 A	20.3 A	30.0 A	.12
5AG 20	20 A	32V	22.0 A	27.0 A	40.0 A	.12
5AG 25	25 A	32V	27.5 A	33.8 A	50.0 A	.12
5AG 30	30 A	32V	33.0 A	40.5 A	60.0 A	.12
5AG 35	35 A	32V	38.5 A	47.3 A	70.0 A	.13
5AG 40	40 A	32V	44.0 A	54.0 A	80.0 A	.13
5AG 50	50 A	32V	55.0 A	67.5 A	100 A	.13
5AG 60	60 A	32V	60.0 A	81.0 A	120 A	.13

5AG Stand. Fuses of the 5AG Standard Series are similar in application and performance to the corresponding 4AG fuse types, except that they can be supplied with ratings up to 60 amps. 5AG fuses are supplied primarily for aircraft equipment, but may also be used in ground equipment which is subject to heavy shock and vibration.



8AG ¼" x 1" INSTRUMENT SERIES

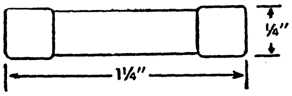
8AG Fuses of the 8AG Series were designed especially for application in electrical measuring equipment and instruments (i.e., voltmeters, ammeters, milliameters, microammeters, rectifying crystals, plate voltage supply circuits and other electronic equipment), where a quick break under overload conditions is required. They are now used also by some manufacturers of television receivers and other electrical equipment.

PIG-TAILS Fuses of this series may be ordered with pig-tails by adding the symbol "PT" to the catalog number. (EX. 8AG 5 PT—for the 8AG Series, 5 amp. fuse with pig-tails.) For fuses up to and including 5 amps., pig-tails are 1½" in length of #20 (.032") AWG tinned copper wire. For higher ratings under 20 amps., pig-tail wires are of the same length, but of #16 (.051") AWG tinned copper wire. Pig-tails for fuses of 20 amps. are of the same length, but of #14 (.064") AWG tinned copper wire. However, pig-tail fuses of 20 amps. are not recommended, particularly if the equipment is subjected to shock and vibration during operation.

	mA		mA	mA	mA		
8AG 1/500	2	250V	2.2	2.70	4	3500	$.70
8AG 1/200	5	250V	5.5	6.75	10	500	.30
8AG 1/100	10	250V	11.0	13.5	20	250	.20
8AG 1/32	31	250V	34.1	41.9	62	40	.20
8AG 1/16	62	250V	68.2	83.7	124	6	.15
8AG 1/8	125	250V	137.5	168.8	250	3	.15
8AG 1/4	250	250V	275	337.5	500	4	.12
8AG 3/8	375	250V	412.5	506	750	1.89	.12
					A		
8AG 1/2	500	250V	550	675	1.00	1.09	.12
				A			
8AG 3/4	750	250V	825	1.01	1.50	.64	.12
	A		A				
8AG 1	1.0	250V	1.10	1.35	2.00	.25	.08
3AG 1-1/2	1.5	250V	1.65	2.03	3.00	.12	.08
8AG 2	2.0	250V	2.20	2.70	4.00	.10	.08
8AG 3	3.0	125V	3.30	4.05	6.00	.04	.08
8AG 5	5.0	125V	5.50	6.75	10.0	.03	.08
8AG 10	10	32V	11.0	13.5	20.0	.01	.08
8AG 15	15	32V	16.5	20.3	30.0	.008	.08
8AG 20	20	32V	22.0	27.0	40.0	.006	.08

Other ratings and fuses with special performance characteristics on request.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY



3AG ¼" x 1¼"

TIME-LAG SERIES

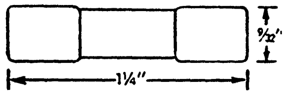
3AG TL Fuses of the 3AG Time-lag Series will withstand a limited overload for a length of time, but will blow quickly under a very heavy overload. Though they will blow in less than one hour at 135% of the nominal load, they nevertheless will withstand an overload of 200% of the nominal for at least six seconds. This characteristic makes the fuses of the 3AG Time-lag Series ideal for many applications where the circuit must be protected against a small overload of long duration—at the same time affording positive protection against a very heavy short overload.

Most fuses of this series contain a spring loaded fuse element and as such, are highly resistant to shock, vibration and rough handling.

PIG-TAILS Fuses of this series may be ordered with pig-tails by adding the symbol "PT" to the catalog number. (For example: 3AG ¼TL PT—for the 3AG ¼ amp. time-lag fuse with pig-tails.) For fuses up to and including 8 amps., pig-tails are 1½" in length of #20 (.032") AWG tinned copper wire. For higher ratings under 20 amps., pig-tail wires are of the same length, but of #16 (.051") AWG tinned copper wire; pig-tails for fuses of 20 amps. and higher are of the same length, but of #14 (.064") AWG tinned copper wire. However, pig-tail fuses of 20 amps. or more are not recommended, particularly if the equipment is subject to shock and vibration during operation.

Catalog No.	Nominal Rating	Max. Volt.	Continuous Duty	Blows within 1 hr. at	Blows within 1 hr. but not less than 6 sec. at	List Price ea.
3AG 1/100 TL	10 mA	250V	11 mA	13.5 mA	20 mA	$.25
3AG 1/32 TL	31 mA	250V	34.1 mA	41.9 mA	62 mA	.25
3AG 1/16 TL	62 mA	250V	68.2 mA	83.7 mA	124 mA	.25
3AG 1/10 TL	100 mA	250V	110 mA	135 mA	200 mA	.25
3AG 1/8 TL	125 mA	250V	137.5 mA	168.8 mA	250 mA	.25
3AG 15/100 TL	150 mA	250V	165 mA	203 mA	300 mA	.25
3AG 2/10 TL	200 mA	250V	220 mA	270 mA	400 mA	.25
3AG 1/4 TL	250 mA	250V	275 mA	337.5 mA	500 mA	.25
3AG 3/10 TL	300 mA	250V	330 mA	405 mA	600 mA	.25
3AG 3/8 TL	375 mA	250V	412.5 mA	506 mA	750 mA	.25
3AG 4/10 TL	400 mA	250V	440 mA	540 mA	800 mA	.25
3AG 1/2 TL	500 mA	250V	550 mA	675 mA	1.00 A	.25
3AG 6/10 TL	600 mA	250V	660 mA	810 mA	1.20 A	.25
3AG 3/4 TL	750 mA	250V	825 mA	1.01 A	1.50 A	.25
3AG 8/10 TL	800 mA	125V	880 mA	1.08 A	1.60 A	.25
3AG 1 TL	1.00 A	125V	1.10 A	1.35 A	2.00 A	.25
3AG 1 1/4 TL	1.25 A	125V	1.38 A	1.69 A	2.50 A	.21
3AG 1 1/2 TL	1.50 A	125V	1.65 A	2.03 A	3.00 A	.21
3AG 1 6/10 TL	1.60 A	125V	1.76 A	2.16 A	3.20 A	.21
3AG 2 TL	2.00 A	125V	2.20 A	2.70 A	4.00 A	.21
3AG 2 1/2 TL	2.50 A	125V	2.75 A	3.38 A	5.00 A	.20
3AG 2 8/10 TL	2.80 A	125V	3.08 A	3.78 A	5.60 A	.20
3AG 3 TL	3.00 A	125V	3.30 A	4.05 A	6.00 A	.20
3AG 3 2/10 TL	3.20 A	125V	3.52 A	4.32 A	6.40 A	.20
3AG 4 TL	4.0 A	125V	4.40 A	5.4 A	8.00 A	.20
3AG 5 TL	5.0 A	125V	5.50 A	6.75 A	10.0 A	.20
3AG 6 1/4 TL	6.25 A	32V	6.88 A	8.44 A	12.5 A	.20
3AG 8 TL	8.0 A	32V	8.80 A	10.8 A	16.0 A	.20
3AG 10 TL	10 A	32V	11.0 A	13.5 A	20.0 A	.20
3AG 15 TL	15 A	32V	16.5 A	20.3 A	30.0 A	.20
3AG 20 TL	20 A	32V	22.0 A	27.0 A	40.0 A	.20
3AG 25 TL	25 A	32V	27.5 A	33.8 A	50.0 A	.20
3AG 30 TL	30 A	32V	33.0 A	40.5 A	60.0 A	.20

Other ratings and fuses with special performance characteristics on request.



4AG 9/32" x 1¼"

TIME-LAG SERIES

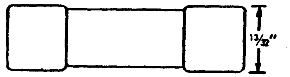
4AG TL Fuses of the 4AG Time-lag Series are far more rugged than the 3AG Time-lag Series, and are especially suitable for use wherever the fuses must stand rough treatment, as in aircraft equipment.

These fuses will withstand a limited overload for a length of time, but will blow quickly under very heavy overload. Though they will blow in less than one hour at 135% of the nominal load, they nevertheless will withstand an overload of 200% of the nominal for at least six seconds. This characteristic makes the fuses of the 4AG Time-lag Series ideal for many applications where the circuit must be protected against a small overload of long duration—at the same time affording positive protection against a very heavy short overload.

Most fuses of this series contain a spring loaded fuse element and as such, are highly resistant to shock, vibration and rough handling.

Catalog No.	Nominal Rating	Max. Volt.	Continuous Duty	Blows within 1 hr. at	Blows within 1 hr. but not less than 6 sec. at	List Price ea.
4AG 1/10 TL	100 mA	250V	110 mA	135 mA	200 mA	$.30
4AG 15/100 TL	150 mA	250V	165 mA	203 mA	300 mA	.30
4AG 2/10 TL	200 mA	250V	220 mA	270 mA	400 mA	.30
4AG 1/4 TL	250 mA	250V	275 mA	338 mA	500 mA	.30
4AG 3/10 TL	300 mA	250V	330 mA	405 mA	600 mA	.30
4AG 4/10 TL	400 mA	250V	440 mA	540 mA	800 mA	.30
4AG 1/2 TL	500 mA	250V	550 mA	675 mA	1.00 A	.30
4AG 6/10 TL	600 mA	250V	660 mA	810 mA	1.20 A	.30
4AG 8/10 TL	800 mA	250V	880 mA	1.08 A	1.60 A	.30
4AG 1 TL	1.0 A	250V	1.10 A	1.35 A	2.00 A	.25
4AG 1 1/4 TL	1.25 A	250V	1.38 A	1.69 A	2.50 A	.25
4AG 1 6/10 TL	1.6 A	250V	1.76 A	2.16 A	3.20 A	.25
4AG 2 TL	2.0 A	250V	2.20 A	2.70 A	4.00 A	.25
4AG 2 1/2 TL	2.5 A	250V	2.75 A	3.38 A	5.00 A	.25
4AG 3 TL	3.0 A	250V	3.30 A	4.05 A	6.00 A	.25
4AG 3 2/10 TL	3.2 A	32V	3.52 A	4.32 A	6.40 A	.25
4AG 4 TL	4.0 A	32V	4.40 A	5.40 A	8.00 A	.25
4AG 5 TL	5.0 A	32V	5.50 A	6.75 A	10.0 A	.25
4AG 6 1/4 TL	6.25 A	32V	6.88 A	8.44 A	12.5 A	.25
4AG 8 TL	8.0 A	32V	8.80 A	10.8 A	16.0 A	.25
4AG 10 TL	10 A	32V	11.0 A	13.5 A	20.0 A	.25
4AG 15 TL	15 A	32V	16.5 A	20.3 A	30.0 A	.25
4AG 20 TL	20 A	32V	22.0 A	27.0 A	40.0 A	.25
4AG 25 TL	25 A	32V	27.5 A	33.8 A	50.0 A	.25
4AG 30 TL	30 A	32V	33.0 A	40.5 A	60.0 A	.25
4AG 35 TL	35 A	32V	38.5 A	47.3 A	70.0 A	.25
4AG 40 TL	40 A	32V	44.0 A	54.0 A	80.0 A	.25

Other ratings and fuses with special performance characteristics on request.



5AG 13/32" x 1½"

TIME-LAG SERIES

5AG TL Fuses of the 5AG Time-lag Series are similar in application and performance to the corresponding 4AG fuse types, except that they are heavier and more rugged.

These fuses will withstand a limited overload for a length of time, but will blow quickly under a very heavy overload. Though they will blow in less than one hour at 135% of the nominal load, they nevertheless will withstand an overload of 200% of the nominal for at least six seconds. This characteristic makes the fuses of the 5AG Time-lag Series ideal for many applications where the circuit must be protected against a small overload of long duration—at the same time affording positive protection against a very heavy short overload.

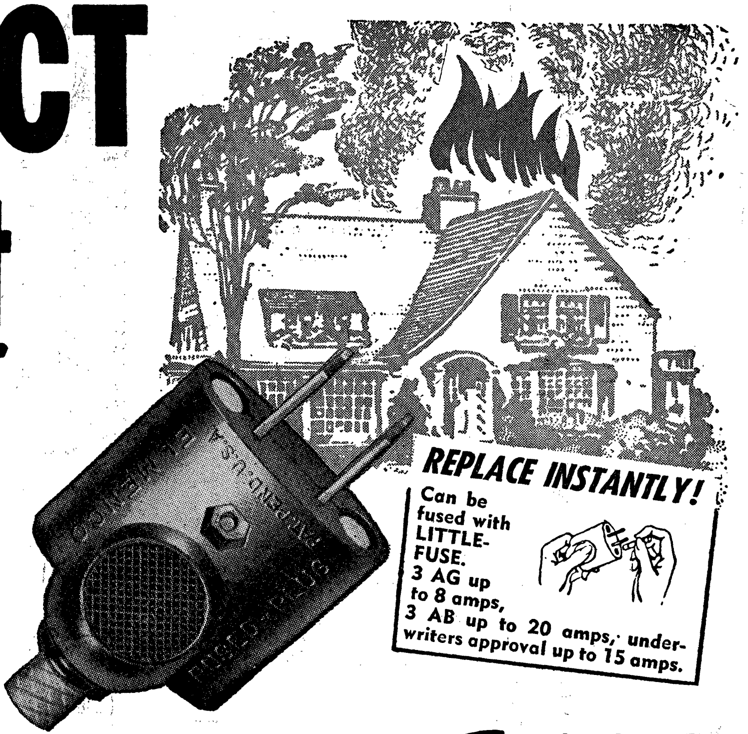
Most fuses of this series contain a spring loaded fuse element and as such, are highly resistant to shock, vibration and rough handling.

Catalog No.	Nominal Rating	Max. Volt.	Continuous Duty	Blows within 1 hr. at	Blows within 1 hr. but not less than 6 sec. at	List Price ea.
5AG 1/10 TL	100 mA	250V	110 mA	135 mA	200 mA	$.30
5AG 15/100 TL	150 mA	250V	165 mA	203 mA	300 mA	.30
5AG 2/10 TL	200 mA	250V	220 mA	270 mA	400 mA	.30
5AG 3/10 TL	300 mA	250V	330 mA	405 mA	600 mA	.30
5AG 4/10 TL	400 mA	250V	440 mA	540 mA	800 mA	.30
5AG 1/2 TL	500 mA	250V	550 mA	675 mA	1.00 A	.25
5AG 6/10 TL	600 mA	250V	660 mA	810 mA	1.20 A	.25
5AG 8/10 TL	800 mA	250V	880 mA	1.08 A	1.60 A	.25
5AG 1 TL	1.0 A	250V	1.10 A	1.35 A	2.00 A	.25
5AG 1 1/2 TL	1.5 A	250V	1.65 A	2.03 A	3.00 A	.25
5AG 1 6/10 TL	1.6 A	250V	1.76 A	2.16 A	3.20 A	.25
5AG 2 TL	2.0 A	250V	2.20 A	2.70 A	4.00 A	.25
5AG 2 1/2 TL	2.5 A	250V	2.75 A	3.38 A	5.00 A	.25
5AG 3 TL	3.0 A	250V	3.30 A	4.05 A	6.00 A	.25
5AG 3 2/10 TL	3.2 A	32V	3.52 A	4.32 A	6.40 A	.25
5AG 4 TL	4.0 A	32V	4.40 A	5.40 A	8.00 A	.25
5AG 5 TL	5.0 A	32V	5.50 A	6.75 A	10.0 A	.25
5AG 6 1/4 TL	6.25 A	32V	6.88 A	8.44 A	12.5 A	.25
5AG 8 TL	8.0 A	32V	8.80 A	10.8 A	16.0 A	.25
5AG 10 TL	10 A	32V	11.0 A	13.5 A	20.0 A	.25
5AG 15 TL	15 A	32V	16.5 A	20.3 A	30.0 A	.25
5AG 20 TL	20 A	32V	22.0 A	27.0 A	40.0 A	.25
5AG 25 TL	25 A	32V	27.5 A	33.8 A	50.0 A	.25
5AG 30 TL	30 A	32V	33.0 A	40.5 A	60.0 A	.25
5AG 40 TL	40 A	32V	44.0 A	54.0 A	80.0 A	
5AG 50 TL	50 A	32V	55.0 A	67.5 A	100 A	
5AG 60 TL	60 A	32V	60.0 A	81.0 A	120 A	

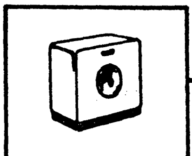
Other ratings and fuses with special performance characteristics on request.

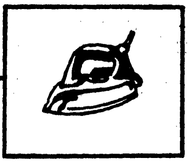
for circuit insurance General Fuse

PROTECT against • • • • • • • Fire hazards!



REPLACE INSTANTLY!
Can be fused with LITTLE-FUSE.
3 AG up to 8 amps,
3 AB up to 20 amps,· underwriters approval up to 15 amps.

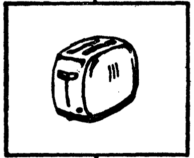


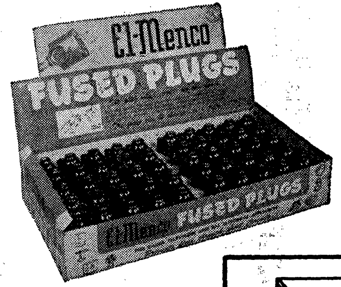


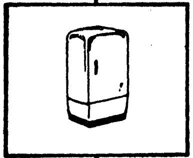
LIST PRICE
39¢
Less Fuses

ELMENCO

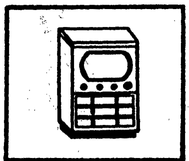
FUSED PLUGS

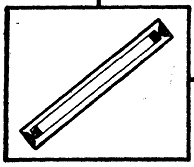


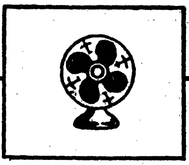


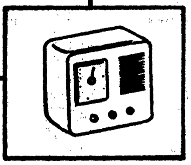


SALES GETTING DISPLAY
MAKES ELMENCO
EASY TO SELL
EASY TO SEE









MANUFACTURED BY

**ELMENCO
PRODUCTS CO.**

COMPLETE PROTECTION!

The Elmenco Fused Plug is like any standard plug, is light in weight, but easier to handle because of finger grips. However, it contains 2 small fuses which provides complete protection against damage to the appliance and to the main line. The blown fuse is easy to remove and simple to replace. Fits any standard wall outlet.

NEW MARKETS!
GREATER VALUE!

Approved by Underwriters Laboratories and used by many of the largest manufacturers of radio and electronic equipment, battery chargers, washing machines, curling irons, lighting equipment, automatic relay equipment, motors of every description, and practically every other' type of product that constumes electricity.
Every wired home, office and store is a prospect.

**We list a few of the larger consumers of the
ELMENCO FUSED PLUG**

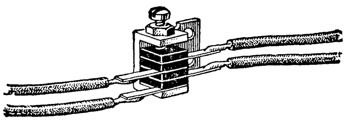
- Auto-Lite
- Bell Telephone Labs.
- Bulldog Electric
- Cambridge Instrument
- Canaday Cooler
- Dictaphone
- Dila-Therm
- Eagle Electric
- Eastman Kodak
- Electro-Physical Labs.
- General Electric
- Gerlat Lighting
- I. B. M.
- Buick Motors
- Philco
- R. C. A.
- Sylvania
- Thomas Edison
- Webster-Chicago
- Western Electric
- Westinghouse

● ELECTROX*
Low-Capacity
RECTIFIER UNITS

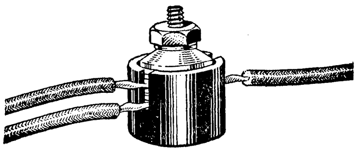
Used by most leading test set manufacturers as original components in their equipment.

*Trade Mark Reg. U. S. Pat. Off.

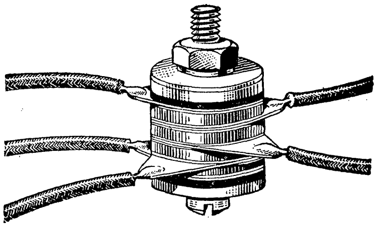
Full and half wave, low-capacity copper oxide rectifiers for instruments, test sets and similar applications. Electrox Rectifiers are made by a pioneer manufacturer of high-quality, dry disc rectifiers. Each type is specially adapted to meet the individual requirements of the user; each unit is individually inspected, tested, and guaranteed right. For dependability, get genuine Electrox Rectifiers!



TYPE A-4
CAT. NO. 5020



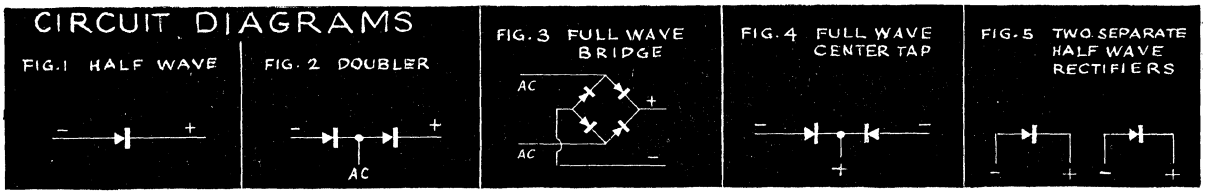
TYPE B-2
CAT. NO. 5047
CAT. NO. 5049



TYPE C-4
CAT. NO. 5017

Max. Continuous Rating			Circuit Diagram Fig.	Element Diam. Inches	No. of Elements	Connections	Lead Length Inches	Type	Cat. No.
D.C. M.A.	D.C. Volts	A.C. Rms. Volts							
1	1	1.5	3	1/8	4	4 leads	4	AA-4	5064
5	3	4	3	3/16†	4	4 leads	3	A-4	5020
13		3	1	7/16	1	2 leads	3	B-1	5048
13		4	4	7/16	2	3 leads	3	B-2	5047
13		3*	2	7/16	2	3 leads	3	B-2	5049
20	3	4	3	7/16	4	5 leads	3	B-4	5016
32		3	1	3/4	1	2 lugs		C-1	5011
32		3*	2	3/4	2	3 leads		C-2	5057
32		3*	5	3/4	2	4 lugs		C-2	5010
64	3	4.1	3	3/4	4	5 lugs		C-4	5014
64	3	4.1	3	3/4	4	5 leads	3	C-4	5017

*3 volts A.C. per element. †3/16" square.



CIRCUIT DIAGRAMS
FIG. 1 HALF WAVE
FIG. 2 DOUBLER
FIG. 3 FULL WAVE BRIDGE
FIG. 4 FULL WAVE CENTER TAP
FIG. 5 TWO SEPARATE HALF WAVE RECTIFIERS
AC
+
−

SCHAUER MANUFACTURING CORP. • Cincinnati 36, Ohio

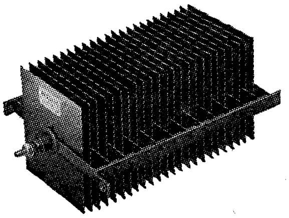
Makers, since 1930, of high-quality, dry disc rectifiers.

BRADLEY RECTIFIERS AND PHOTOCELLS | VACUUM PROCESSED FOR PERFORMANCE AS RATED

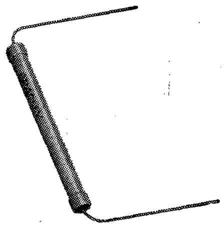
SELENIUM

- Bradley's exclusive vacuum process assures dependability and long life.

POWER RECTIFIERS (SE11 Series) Power Rectifiers, Ratings from 50 milliamperes to thousands of amperes. Available in half-wave, full-wave bridge, voltage multiplier, center tap full-wave, polyphase and special connections to customer's requirements. Supplied with. or without brackets. Full wave ratings per plate convection cooled:

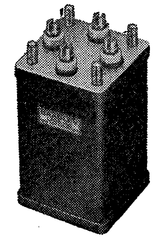


Type R Plate size 1" x 1" to .2 amperes.
Type S Plate size 1 3/16" x 1 3/16" to .3 amperes.
Type T Plate size 1½" x 1½" to .6 amperes.
Type U Plate size 2" x 2" to 1.2 amperes.
Type V Plate size 3" x 3" to 3.0 amperes.
Type W Plate size 4" x 4" to 6 amperes.
Type X Plate size 5" x 6" to 12 amperes.

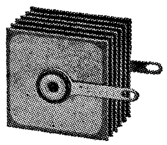


MINIATURE HIGH VOLTAGE RECTIFIERS (SE8 Series) Completely sealed in phenolic housings, or (SE6) hermetically sealed in glass tubes. Ratings up to 6000 volts peak inverse and 12.5 ma D.C. per unit. Units in series for higher voltage. Sizes from ¼" diameter to ⅝" diameter.

VALVES (SR Series) For magnetic amplifier and special applications. Hermetically sealed to meet all specifications.



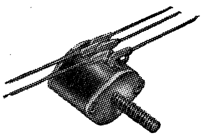
RADIO-TV RECTIFIERS (RS Series) Rated from 50 ma to 500 ma D.C. output. Peak inverse up to 500 volts. Plate size from 1" x 1". Length ½" to 1½".

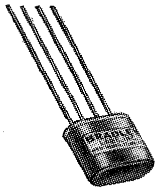


COPPER OXIDE

- Vacuum processing and gold contacts assure minimum aging, minimum temperature error.

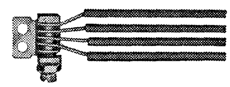
HIGH CONVERSION RATIO RECTIFIERS (CX4D Series) for electric control and instrument work. Ratings to 100 ma D.C. output and up to 12 volts A.C. Completely enclosed housing. Size ⅞" x ¾", from ½" to 2" long. Single 6-32 screw mounting.





MINIATURE HERMETICALLY SEALED RECTIFIERS (CX23 Series) Modulators and bridges with matched sections for detecting phase differentials in A.C. currents and small D.C. potentials applied to balanced A.C. circuits. Maximum 2 volts continuous as modulators, 6 volts as bridges.

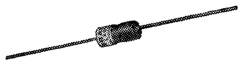
INSTRUMENT RECTIFIERS (CX2E Series) Rated up to 6 volts. A.C., 4.5 volts D.C., 5 ma D.C. for conventional circuits and special current control applications. Two 7/64" diameter mounting holes. 3" gold leads.



MODULATORS AND VARISTORS (CX3E Series) with current and temperature characteristics balanced to better than 1% over a range of -40°C. to 70°C. Up to 12 volts A.C., 8 volts D.C., 5 ma D.C. Hermetically sealed.

DIODES

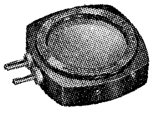
Selenium and Cuprous Oxide



For low current diode requirements. Excellent stability over a broad range of temperatures. Rugged and conservatively rated to provide a wide margin of sustained operating dependability under overload conditions of moderate severity.

PHOTOELECTRIC CELLS

Self-Generating



Convert light into electric energy. No external power source required. No current drain when inoperative. Rugged, light weight, true to rating. Many sizes, shapes, mountings.

FOR MORE INFORMATION

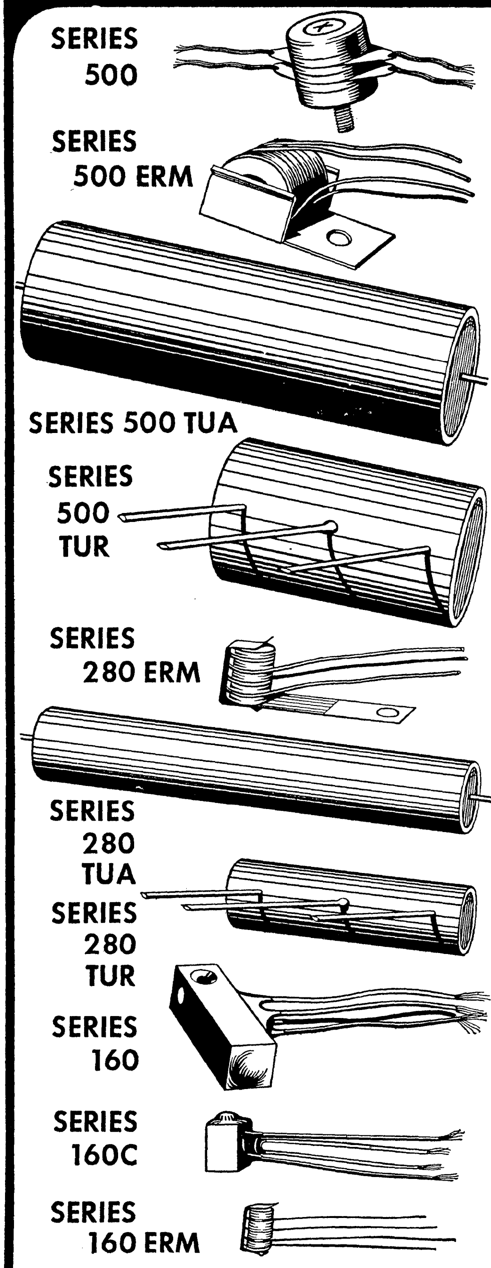
Please write for a copy of THE BRADLEY LINE. We welcome special rectification problems.

Bradley LABORATORIES, INC.

BRADLEY LABORATORIES, INC.
168R COLUMBUS AVENUE, NEW HAVEN 11, CONNECTICUT

CONANT Miniature Metallic Rectifiers

STANDARD SINCE 1933



ALL RECTIFIERS SHOWN ACTUAL SIZE

INTERNAL CIRCUITS

Standard rectifiers are connected internally according to one of the five circuit diagrams shown.

SERIES 500 Copper oxide only. Color coded. Welded lead wires 3" long. Synthetic lacquer-enamel finish. Single 6-32 stud mounting. Available in special types. Cell diameter .500". Cell rating 5 r.m.s. volts, 30 average mils.

SERIES 500-ERM Copper oxide or selenium. Color coded. Solid lead wires 3" long. Lacquer finish. Single hole mounting. Available in special types. Cell diameter .500". Cell ratings, copper oxide 5 r.m.s. volts, 30 average mils; selenium, 25 r.m.s. volts, 30 average mils.

SERIES 500-TUA Selenium only. Color coded. Solid axial leads 3" long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Half wave types only for high voltage. Cell diameter .500". Cell rating 25 r.m.s. volts, 30 average mils. Per cell ratings subject to derating according to rectifier design.

SERIES 500-TUR Selenium only. Color coded. Solid radial leads 3" long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Cell diameter, .500". Cell rating 25 r.m.s. volts, 30 average mils. Per cell ratings subject to derating according to rectifier design.

SERIES 280-ERM Copper oxide or selenium. Color coded. Solid lead wires 3" long. Lacquer finish. Mounts by "Bracketerminal" combining cathode (plus) terminal and mounting bracket. Available in standard types only. Cell diameter .280". Cell rating, copper oxide, 5 r.m.s. volts, 10 average mils; selenium, 25 r.m.s. volts, 10 average mils.

SERIES 280-TUA Selenium only. Color coded. Solid axial leads 3" long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Half wave types only, for high voltage. Cell diameter .280". Cell rating 25 r.m.s. volts, 10 average mils. Per cell rating subject to derating according to rectifier design.

SERIES 280-TUR Selenium only. Color coded. Solid radial leads 3" long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Cell diameter .280". Cell rating 25 r.m.s. volts, 10 average mils. Per cell rating subject to derating according to rectifier design.

SERIES 160 Copper oxide or selenium. Color coded. Welded lead wires 3" long. Fully enclosed and sealed in molded phenolic case. Mounts by #2 screw. Cell diameter .160". Cell rating, copper oxide, 5 r.m.s. volts, 5 average mils; selenium, 25 r.m.s. volts, 5 average mils.

SERIES 160-C Copper oxide or selenium. Color coded. Welded lead wires 3" long. Fully enclosed and sealed in welded brass case. Mounts in midget fuse clip. Cell diameter .160". Cell rating, copper oxide, 5 r.m.s. volts, 5 average mils; selenium, 25 r.m.s. volts, 5 average mils.

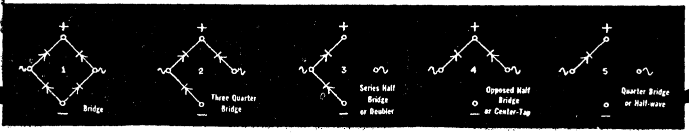
SERIES 160-ERM Copper oxide or selenium. Color coded. Solid leads 1" long. Lacquer finish. Mounts by lead wires only. Cell diameter .160". Cell rating, copper oxide, 5 r.m.s. volts, 5 average mils; selenium, 25 r.m.s. volts, 5 average mils.

Standard rectifiers are connected internally according to one of the five circuit diagrams shown.

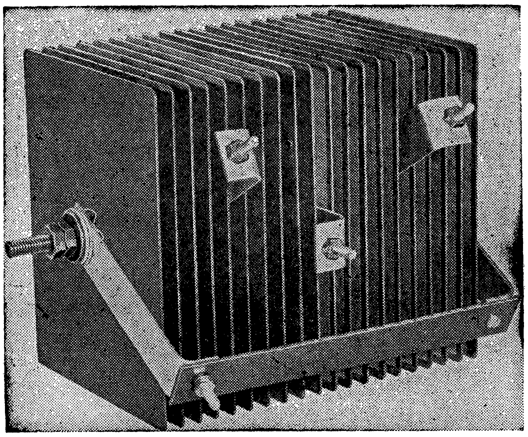
Series 500, 160 and 160-C are the well known standard line of instrument rectifiers and are constructed to the highest standards of quality. Construction is conventional.

TUA (tubular, axial leads) and TUR (tubular, radial leads) construction is desirable especially in rectifiers designed for high voltage operation. Total enclosure of the stack however limits heat radiation necessitating derating of cells.

ERM (external resilient member) construction insures maintenance of optimum stack pressures regardless of ambient or operating temperatures. Rectifiers in ERM construction are smaller, lighter and cheaper.


+
1
Bridge
2
Three Quarter Bridge
3
Series Half Bridge or Doubler
4
Opposed Half Bridge or Center-Tap
5
Quarter Bridge or Half-wave

STANDARD SINCE 1933



Sarkes Tarzian

"Centre-Kooled"

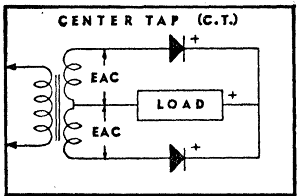
POWER RECTIFIERS

SINGLE PHASE—FULL WAVE RECTIFIER STACKS

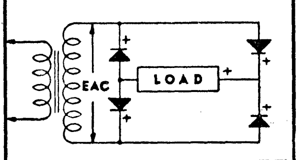
DC OUTPUT At 35°C. Amb.		CIRCUIT	Max. AC Input	APPROXIMATE DIMENSIONS—Refer to			Figure	Catalog
Volts	Max. Amps.	Refer to Diagram	Volts	A	B	C		No.
6-10	2	C.T.	13	3"	2¼"	3"	2	D-10
6-10	4	C.T.	13	4"	2¼"	4"	2	D-11
6-10	6	C.T.	13	4"	2½"	4"	2	D-12
6-10	8	C.T.	13	5"	2¼"	6"	2	D-13
6-10	12	C.T.	13	5"	2½"	6"	2	D-14
6-10	15	C.T.	13	4¼"	2¼"	12"	3	D-15
6-10	22.5	C.T.	13	4¼"	2½"	12"	3	D-16
6-20	2	BR.	26	3"	3"	3"	2	D-17
6-20	4	BR.	26	4"	3"	4"	2	D-18
6-20	6	BR.	26	4"	3¾"	4"	2	D-19
6-20	8	BR.	26	5"	3"	6"	2	D-20
6-20	12	BR.	26	5"	3¾"	6"	2	D-21
6-20	15	BR.	26	4¼"	3"	12"	3	D-22
6-20	22.5	BR.	26	4¼"	3¾"	12"	3	D-23
20-40	2	BR.	52	3"	4½"	3"	2	D-24
20-40	4	BR.	52	4"	4½"	4"	2	D-25
20-40	6	BR.	52	4"	6"	4"	2	D-26
20-40	8	BR.	52	5"	4½"	6"	2	D-27
20-40	12	BR.	52	5"	6"	6"	2	D-28
20-40	15	BR.	52	4¼"	4½"	12"	3	D-29
20-40	22.5	BR.	52	4¼"	6"	12"	3	D-30
40-60	2	BR.	78	3"	5¾"	3"	2	D-31
40-60	4	BR.	78	4"	5¾"	4"	2	D-32
40-60	6	BR.	78	4"	8¼"	4"	2	D-33
40-60	8	BR.	78	5"	5¾"	6"	2	D-34
40-60	12	BR.	78	5"	8¼"	6"	2	D-35
40-60	15	BR.	78	4¼"	5¾"	12"	3	D-36
40-60	22.5	BR.	78	4¼"	8¼"	12"	3	D-37
60-100	.5	BR.	130	1.6"	5"	1.6"	1	D-38
60-100	1	BR.	130	2"	5"	2"	1	D-39
60-100	2	BR.	130	3"	8⅝"	3"	2	D-40
60-100	4	BR.	130	4"	8⅝"	4"	2	D-41
60-100	6	BR.	130	4"	12⅞"	4"	2	D-42
60-100	8	BR.	130	5"	8⅝"	6"	2	D-43
60-100	12	BR.	130	5"	12⅞"	6"	2	D-44
100-120	.5	BR.	156	1.6"	5⅞"	1.6"	1	D-45
100-120	1	BR.	156	2"	5⅞"	2"	1	D-46
100-120	2	BR.	156	3"	10"	3"	2	D-47
100-120	4	BR.	156	4"	10"	4"	2	D-48
100-120	6	BR.	156	4"	15¼"	4"	2	D-49
100-120	8	BR.	156	5"	10"	6"	2	D-50
100-120	12	BR.	156	5"	15¼"	6"	2	D-51

CIRCUITS AND DIMENSIONAL DIAGRAMS

CENTER TAP (C.T.)



BRIDGE (BR.)



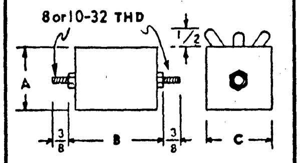


FIGURE-1

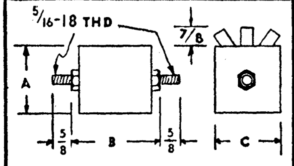


FIGURE-2

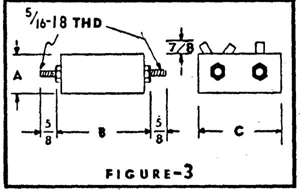


FIGURE-3

ALL DIMENSIONS ARE APPROXIMATE

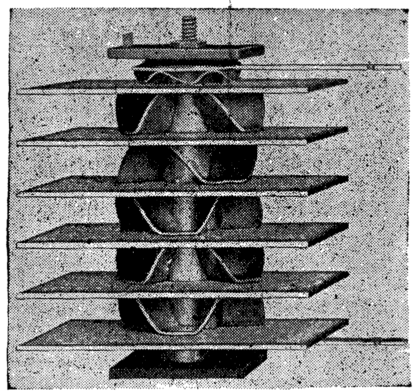
SARKES TARZIAN, INC., RECTIFIER DIVISION

Dept. RM

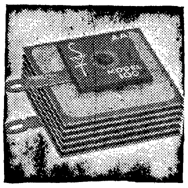
Sarkes Tarzian

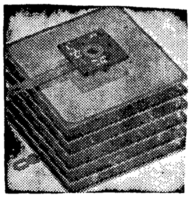
"Centre-Kooled"

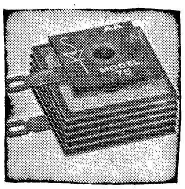
SELENIUM RECTIFIERS

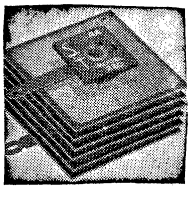

(Radio Type)

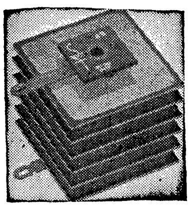
For All DC Power Requirements











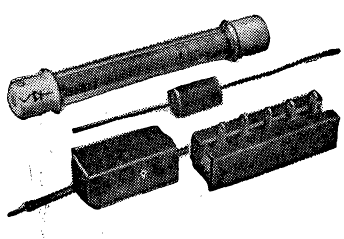
Model No.	Max. DC Current	Max. RMS Input Voltage	Max. RMS Current (MA)	Max. Inverse Peak Voltage	Max. Peak Current (MA)	Dimensions	Application
35	35	130	90	380	350	3/8"x5/8"x5/8"x5/8"	Boosters
65	65	130	162	380	650	13/32"x1"x1"x11/16"	B+ Supply—Portable & AC-DC Radio
75	75	130	187	380	750	13/32"x1"x1"x13/16"	B+ Supply—Portable Radio
100	100	130	250	380	1000	13/32" x1¼"x1¼"x13/16"	B+ Supply—AM-FM Radio
100A	100	130	250	380	1000	13/32"x1"x1"x1"	B+ Radio
150	150	130	375	380	1500	13/32" x1¼"x1¼"x13/16"	B+ Supply—Radio-Television
200	200	130	500	380	2000	13/32"x1.6"x1.6"x1"	B+ Supply—Television
250	250	130	625	380	2500	13/32" x1.6"x1.6"x15/16"	B+ Supply—Television
300	300	130	750	380	3000	13/32"x1.6"x1.6"x1⅞'	B+ Supply—Television
350	350	130	875	380	3500	13/32"x2"x2"x15/16"	B+ Supply—Television
450	450	130	1125	380	4500	13/32"x2"x2"x1⅞"	B+ Supply—Radio-Television
108	100	160	250	440	1000	13/32" x1¼"x1¼"x31/32"	B+ Supply—½ Wave, Mobile Radio-TV
78D	75	160	187	440	750	13/32"x1"x1"x1⅝"	B+ Supply—Doubler —Radio-Television
108D	100	160	250	440	1000	13/32" x1¼"x1¼"x1⅝"	B+—Doubler —Radio-Television
208D	200	160	500	440	2000	13/32" x1.6"x1.6"x1⅝"	B+—Doubler —Radio-Television
154B	150	25	270	35	1800	13/32"x1"x1"x11/16"	Filament—Relay Supply
304B	300	25	540	35	2400	13/32" x1¼"x1¼"x11/16"	Filament—Relay Supply
604B	600	25	1080	35	4000	13/32" x1.6"x1.6"x11/16"	Filament—Relay Supply

HIGH VOLTAGE SELENIUM RECTIFIERS

Sarkes Tarzian high voltage selenium rectifiers are designed for use in photo-flash supplies, cathode ray oscilloscopes, television receivers, high potential test equipment, and electronic equipments used by military forces.

Designated as Type 0 for current ranges to 5 milliamperes and as Type 1 for current ranges to 25 milliamperes, the units are available in half wave, full wave bridge, and center tap stacks. Both types are available with voltage ratings to 4000 in a single unit and hundreds of thousands of volts by using multiple units in series. In center tap and bridge circuits the maximum allowable D.C. current is 10 MA for Type 0 and 50 MA for Type 1 assemblies.

The Type 0, in a glass enclosure is hermetically sealed for high humidity operation (Half Wave units only) and mounting is by means of silver plated ferrules. The bakelite enclosed Type 0 rectifiers are designed for normal commercial use and electrical connection is made by means of axial pigtail leads. For inverse voltage ratings to 208 volts A.C. the unit is self supporting; longer assemblies require a mounting clip.



SELENIUM RECTIFIER Handbook

The Type 1 rectifier is available only in square bakelite enclosures. The unit, normally supplied, is not hermetically sealed; however, it is possible to "capsulize" the Type 1 rectifier for high humidity applications.

For complete information or engineering assistance—write, phone or wire. No obligations on your part.

New Handbook Available 80 pages of valuable information about Selenium Rectifiers . . . 48 pages of Radio & Television circuit diagrams . . . 20 pages on Power Rectifiers . . . 3 pages of High Voltage Rectifiers . . . a 7 page cross index replacement guide. (Price 50 cents)

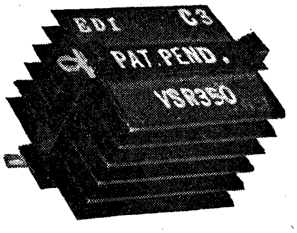
SARKES TARZIAN, INC., RECTIFIER DIV.

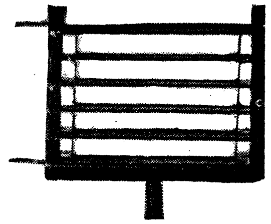
Dept. RM

VENTISEL

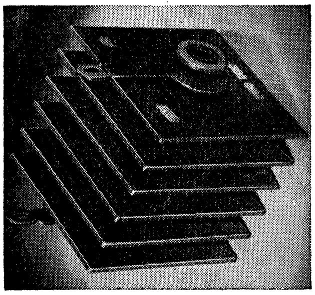
THE SELENIUM RECTIFIER

with no center pressure





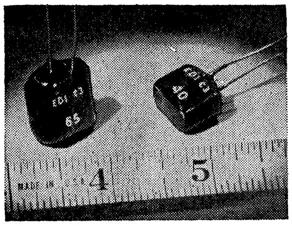
TYPE	Plate Size	Max. A.C. Input	Max. Peak Inv.	Cont. D.C. Current	Approx. Rect. Drop	List Price
VRS 75	13/16″ sq.	130V.	380V.	75 Ma.	5V.	$1.60
VRS100	13/16″ x 1″	130V.	380V.	100 Ma.	5V.	1.95
VRS150	1 5/16″ x 1″	130V.	380V.	150 Ma.	5V.	2.30
VRS200	1 5/16″ x 1 11/32″	130V.	380V.	200 Ma.	5V.	2.75
VRS250	1 5/16″ x 1½″	130V.	380V.	250 Ma.	5V.	2.95
VRS300	1 5/16″ x 1 23/32″	130V.	380V.	300 Ma.	5V.	3.05
VRS350	1 13/16″ x 1½″	130V.	380V.	350 Ma.	5V.	3.75
VRS500	1 13/16″ x 2″	130V.	380V.	500 Ma.	5V.	4.45



RECTISEL

The Conventional Open Type Selenium Rectifier

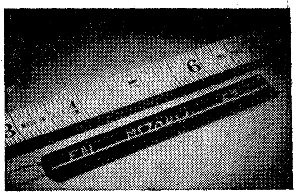
TYPE	Plate Size	Max. A.C. Input	Max. Peak Inv.	Cont. D.C. Current	Approx. Rect. Drop	List Price
PRS65	⅞″ Sq.	130V.	380V.	65 Ma.	5V.	$1.36
PRS75	⅞″ Sq.	130V.	380V.	75 Ma.	5V.	1.60
PRS100	1″ Sq.	130V.	380V.	100 Ma.	5V.	1.95
PRS150	1¼″ Sq.	130V.	380V.	150 Ma.	5V.	2.30
PRS200	1⅜″ Sq.	130V.	380V.	200 Ma.	5V.	2.75
PRS250	1½″ Sq.	130V.	380V.	250 Ma.	5V.	2.95
PRS300	1½″ Sq.	130V.	380V.	300 Ma.	5V.	3.05
PRS350	1½″ x 2″	130V.	380V.	350 Ma.	5V.	3.75
PRS500	2″ Sq.	130V.	380V.	500 Ma.	5V.	4.45



NEW PLASTISEL

Sealed Miniature Selenium Rectifier

TYPE	Dimensions	Max. A.C. Input	Max. Peak Inv.	Cont. D.C. Current	Approx. Rect. Drop	List Price
RS25	7/16″ Sq. x 7/16″ Lg.	130V.	380V.	25 Ma.	5V.	$1.00
RS40	9/16″ Sq. x 7/16″ Lg.	130V.	380V.	40 Ma.	5V.	1.15
RS65	¾″ Sq. x 7/16″ Lg.	130V.	380V.	65 Ma.	5V.	1.36
RS75	13/16″ Sq. x 7/16″ Lg.	130V.	380V.	75 Ma.	5V.	1.60
RS100	⅞″ Sq. x 7/16″ Lg.	130V.	380V.	100 Ma.	5V.	1.95
RS150	1 1/16″ Sq. x 7/16″ Lg.	130V.	380V.	150 Ma.	5V.	2.30
RS200	1¼″ Sq. x 7/16″ Lg.	130V.	380V.	200 Ma.	5V.	2.75



MINISEL

High Voltage — Low Current

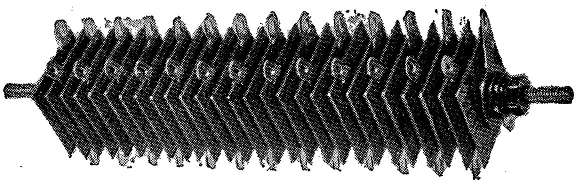
Rectifiers

POWERSEL

Industrial

Power

Rectifiers



The entire facilities of the E.D.I. Engineering Department are available to assist you with your problem. There is no obligation for this service. A letter, telegram, or phone call will result in a prompt reply.

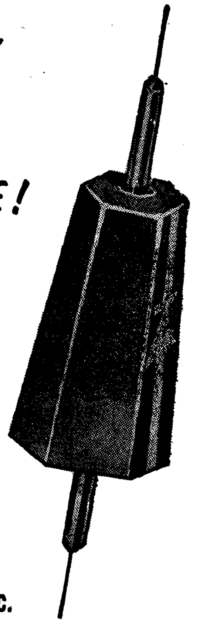
ELECTRONIC DEVICES, INC.

Precision Rectifier Division

BROOKLYN 15, N. Y.

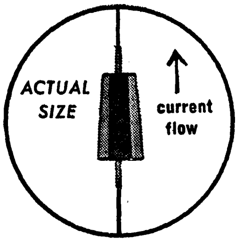
Germanium Diodes

FEATURING POLARITY AT A GLANCE!



Radio Receptor's new Germanium Diodes feature polarity at a glance combined with simplicity of construction and sound design principles. The distinctive tapered shape of the glass-filled phenolic cartridge body speeds assembly because operators can see at a glance the correct direction of assembly.

Users are enthusiastic over the quality of the product which gives a maximum of trouble-free operation even under the most adverse conditions. Radio Receptor Germanium Diodes are currently being used in walkie-talkies, computers, TV sets, tuners and other electronic applications.



All values measured at 25° C.

CODE NO.	MINIMUM FORWARD CURRENT AT 1 VOLT (MA)	MAXIMUM REVERSE CURRENT (MICRO-AMPERES)	†AVERAGE RECTIFIED CURRENT (MA MAX)	‡MINIMUM REVERSE VOLTS	MAXIMUM CONTINUOUS REVERSE OPERATING VOLTS	DIODE PRICE
1N34	5.0	50 @-10V, 800 @-50V	50	75	60	1.35
1N34A	5.0	30 @-10V, 500 @-50V	50	75	60	1.80
1N38	3.0	6 @-3V, 625 @-100V	50	120	100	2.65
1N38A	4.0	5 @-3V, 500 @-100V	50	120	100	4.00
1N48	4.0	833 @-50V	50	85	70	1.40
1N51	2.5	1,667 @-50V	25	50	40	.85
1N52	4.0	150 @-50V	50	85	70	2.85
1N55	3.0	300 @-100V, 800 @-150V	50	170	150	4.45
1N55A	4.0	500 @-150V	50	170	150	7.25
1N58	4.0	800 @-100V	50	120	100	2.25
1N58A	4.0	600 @-100V	50	120	100	2.80
1N63	4.0	50 @-50V	50	125	100	6.35
1N64	Minimum of 0.100 MA in 44 MC test circuit			20		1.20
1N65	2.5	200 @-50V	50	85	70	1.40
*1N69	5.0	50 @-10V, 850 @-50V	40	75	60	2.05
	Rectification efficiency: 35% minimum in 100 MC test circuit					
*1N70	3.0	25 @-10V, 300 @-50V	30	125	100	5.25
1N72	Noise figure as a mixer better than 15DB @ 750 MC with 43.5 MC-IF circuit having a noise bandwidth of 3 MC and a noise figure of 4 DB.					1.80
1N75	2.5	50 @-50V	50	125	100	5.55
*1N81	3.0	10 @-10V	30	50	40	4.30
1N82 Silicon	Noise figure as a mixer better than 12DB @ 750 MC with 43.5 MC-IF circuit having a noise bandwidth of 3 MC and a noise figure of 4 DB.					1.90
1N110	Noise figure as a mixer better than 12DB @ 750 MC with 43.5 MC-IF circuit having a noise bandwidth of 3 MC and a noise figure of 4 DB.					1.90

---

* JAN type.

† Average half wave rectified current at 60 CPS and 25° C. Consult us for ratings at other conditions.

‡ For zero dynamic resistance.

Radio Receptor Germanium Diodes may hold the answer to many of your problems. Our engineers will be glad to study your requirements and submit their recommendations . . . Write us!

Seletron and Germanium Division

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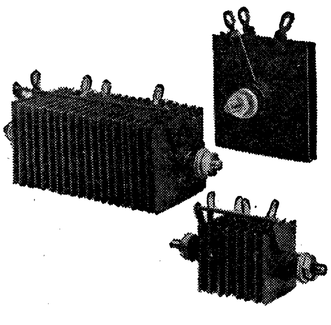
Seletron
SELENIUM RECTIFIERS

INDUSTRIAL TYPE SELENIUM RECTIFIERS DISTRIBUTED BY JOBBERS

SINGLE PHASE—FULL WAVE BRIDGE—RESISTIVE-INDUCTIVE LOAD—FIGURE NO. 1

D.C. OUTPUT @ 35°C.			INPUT R.M.S. VOLTS	SELETRON RECTIFIER CODE NO.	RECTIFIER DIMENSIONS IN INCHES See Figure No. 2					RECTI-FIER PRICE	BRACK-ETS EACH
MAX. AMPS	APPROX. VOLTS				A	B	C	D	E		
	NEW	AGED									
0.9	18.6 15.2 10.8	17.6 14.1 9.7	24 20 15	Q1B1S1F	2	1-9/16	1-1/2	1-1/2	3/8	$ 2.40	.17
1.4	19.0 15.3 10.9	18.0 14.2 9.9	24 20 15	S1B1S1F	2-1/16	1-11/16	2	2	1/2	4.16	.22
3.2	18.0 15.1 10.7	17.0 13.8 9.5	24 20 15	U1B1S1F	3-7/8	2-5/8	3	3	5/8	6.34	.22
6.0	18.0 15.0 10.6	17.0 13.5 9.2	24 20 15	W1B1S1F	3-7/8	2-5/8	4	4	3/8	8.82	.28
10.0	18.0 14.9 10.5	17.0 13.7 9.4	24 20 15	H1B1S1F	4-3/16	2-15/16	6	5	1-3/8	12.38	.44
20.0	18.0 14.9 10.5	17.0 13.7 9.4	24 20 15	H1B2S1F	6-1/16	4-13/16	6	5	1-3/8	23.43	.44
30.0	18.0 14.9 10.5	17.0 13.7 9.4	24 20 15	WH1B3S1F	9-1/4	8	6	5	1-3/8	35.26	.44
0.45	37.0 30.0 21.6	35.0 28.0 19.4	48 40 30	P2B1S1F	3-1/16	2-5/16	1-3/16	1-3/16	3/8	5.00	.17
0.9	37.0 30.0 21.6	35.0 28.0 19.4	48 40 30	Q2B1S1F	3-1/16	2-5/16	1-1/2	1-1/2	3/8	5.64	.17
1.4	38.0 31.0 22.0	36.0 29.0 20.0	48 40 30	S2B1S1F	3-3/8	2-5/8	2	2	1/2	7.60	.22
3.2	37.0 30.0 21.6	35.0 28.0 19.4	48 40 30	U2B1S1F	5	3-3/4	3	3	5/8	11.25	.22
6.0	37.0 30.0 21.6	35.0 28.0 19.4	48 40 30	W2B1S1F	5	3-3/4	4	4	3/8	16.08	.28
10.0	37.0 30.0 21.0	34.0 27.0 18.8	48 40 30	H2B1S1F	5-13/16	4-9/16	6	5	1-3/8	22.71	.44
16.0	37.0 30.0 22.0	35.0 28.0 19.3	48 40 30	H2B2S1F	9-1/2	8-1/4	6	5	1-3/8	42.73	.44
24.0	37.0 30.0 22.0	35.0 28.0 19.3	48 40 30	H2B3S1F	13-1/16	11-13/16	6	5	1-3/8	61.95	.44
0.9	111 92 56	105 84 49	144 120 80	WQ6B1S1F	7-5/8	6-7/8	1-1/2	1-1/2	3/8	14.65	.17
1.4	114 95 60	108 89 54	144 120 80	WS6B1S1F	8-9/16	7-13/16	2	2	1/2	21.32	.22
2.4	112 93 58	106 87 52	144 120 80	U6B1S1F	9-7/8	8-5/8	3	3	5/8	27.53	.22
6.0	110 91 56	103 84 48	144 120 80	WW6B1S1F	12-13/16	11-9/16	4	4	3/8	44.46	.28
0.9	130 106 71	122 98 63	168 140 100	WQ7B1S1F	8-5/8	7-7/8	1-1/2	1-1/2	3/8	16.57	17
1.4	133 108 74	126 102 67	168 140 100	WS7B1S1F	9-11/16	8-15/16	2	2	1/2	24.56	.22
2.4	131 106 72	123 99 64	168 140 100	U7B1S1F	11-1/16	9-13/16	3	3	5/8	31.29	.22
6.0	129 104 70	120 96 61	168 140 100	WW7B1S1F	14-1/2	13-1/4	4	4	3/8	50.97	.28



Rugged, high powered, center protected SELETRON Selenium Rectifiers are ideal for diversified industrial applications because of their flexibility and high efficiency over a wide range of load. Typical of such uses are installations operating elevators in more than 150 office buildings in New York and Chicago and the spectacular Eveready searchlight on New York's Great White Way.

RECTIFIER CIRCUITS, CONNECTIONS AND DIMENSIONS

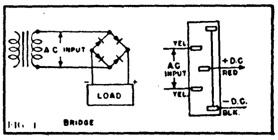


FIG. 1 BRIDGE

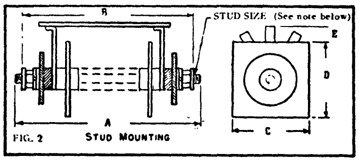


FIG. 2 STUD MOUNTING

NOTE: #10-32 for all stacks with code numbers starting P, Q, S, WQ, WS. #5/16-18 for all stacks with code numbers starting U, W, H, WW, WH.

Our engineering department will be glad to aid you in the solution of your rectifier problems without obligation. Write for booklet on SELETRON Selenium Rectifiers.

Seletron and Germanium Division
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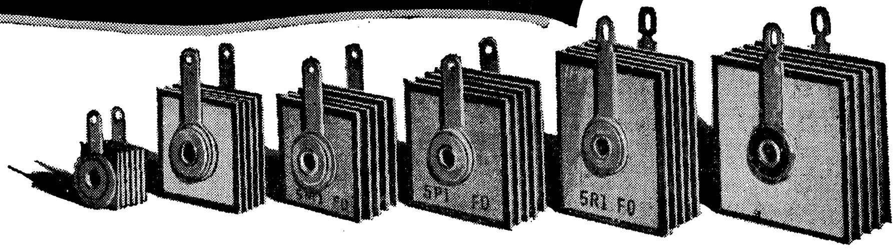


MINIATURE SELETRON SELENIUM RECTIFIERS

MODEL NO.	PLATE SIZE	STACK THICK-NESS	MAX. INPUT VOLTAGE R.M.S.	MAX. PEAK INVERSE VOLTAGE	MAX. D.C. OUTPUT CURRENT	LIST PRICE
1M1	1" sq.	3/8"	25	75	100 MA	$0.58
8Y1	1/2" sq.	9/16"	130	380	20 MA*	1.14
16Y1	1/2" sq.	15/16"	260	760	20 MA*	2.28
8J1	11/16" sq	9/16"	130	380	65 MA	1.27
5M4	1" sq.	11/16"	130	380	75 MA	1.52
5M1	1" sq.	7/8"	130	380	100 MA	1.83
5P1	13/16" sq.	7/8"	130	380	150 MA	2.10
6P2	13/16" sq.	13/16"	156	456	150 MA	2.26
5R1	1½"x1¼"	7/8"	130	380	200 MA	2.56
5Q1	1½" sq.	1⅛"	130	380	250 MA	2.76
6Q1	1½" sq.	1⅛"	156	456	250 MA	2.82
6Q2	1½" sq.	1⅜"	156	456	250 MA	2.82
6Q4 (1)	1½" sq.		130	380	300 MA	2.87
5QS1	1½"x2"	1⅛"	130	380	350 MA	3.72
6QS2	1½"x2"	1¼"	156	456	350 MA	3.96
6QS4 (1)	1½"x2"		156	456	350 MA	3.96
5S1	2" sq.	1⅛"	130	380	500 MA	4.00
6S2	2" sq.	1⅜"	156	456	500 MA	4.25

Current ratings above are for a maximum plate temperature of 75° C when the rectifiers are new, in a maximum ambient temperature of 45° C. Recommended plate temperature for new rectifiers is 70° C. Output current ratings are based on R.M.S. rectifier current not in excess of 2.5 times rated output current.

*This rectifier is rated at 25 MA when used with a 47 ohm series resistor.

(1) Stud mounted—overall: 2".

Seletron

SELENIUM RECTIFIERS

Miniature SELETRON Selenium Rectifiers are specified by an ever increasing number of engineers in the U. S. and throughout the world for radio, television and other electronic applications. The small size and thorough dependability under all types of punishing conditions make them ideal wherever long life and high efficiency are needed. The wide range of available sizes is listed to the left.

See your local distributor for your requirements.

Seletron and Germanium Division

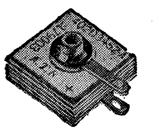
RADIO RECEPTOR COMPANY, INC.

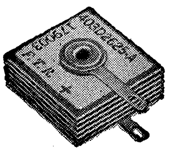
RR Since 1922 in Radio and Electronics RR

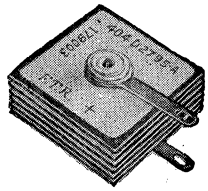
Sales Dept.: 251 W. 19th St., New York 11, N. Y. • Factory: 84 N. 9th St., Brooklyn 11, N. Y.

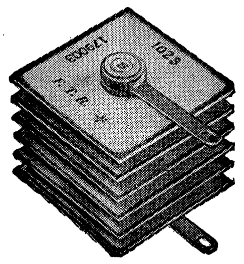
Federal Radio—TV Selenium Rectifiers

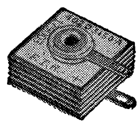
The revolutionary rectifier with unlimited use in radio • television • electronics

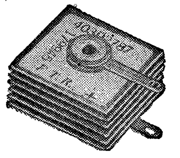


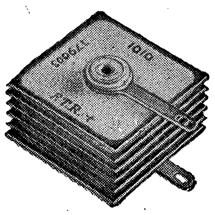


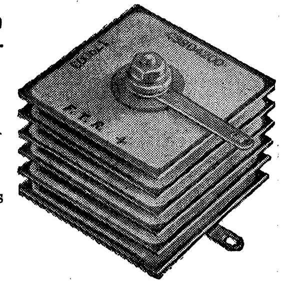












Federal Cat. No.	Output MA-DC	Max. Input (RMS) Volts	Max. Input (RMS) MA	Min. Ser. Res. "R" Ohms	Peak Inverse Volts (Max.)	Peak Current (Max.)	Plate Size	Application	List Price Each
1159	20	130	54	50	380	200	⅜" Dia.	B+ Booster; Bias	$1.55
1002A	65	130	175	22	380	650	1" Sq.	B+ AC-DC (5 tube)	1.50
1003	75	130	200	22	380	750	1" Sq.	B+ 3-way Radios	1.85
1101A	100	130	270	22	380	1000	1" Sq.	B+ Radios, Telev.	1.90
1004A	100	130	270	22	380	1000	1 13/64 x 1 9/32	B+ Radios, Telev.	2.05
1005A	150	130	410	15	380	1500	1 13/64 x 1 9/32	B+ Radios, Telev.	2.25
1006A	200	130	540	5	380	2000	1 17/32" Sq.	B+ Television	3.15
*1028A (1010)	250	130	675	5	380	2500	1 17/32" Sq.	B+ Booster; Bias	3.15
1090A	300	130	810	5	380	3000	1 17/32" Sq.	B+ Television	3.30
1023 (1206)	350	130	945	5	380	3500	1¾" Sq.	B+ Television	4.10
1130 (1056)	400	130	1080	5	380	4000	2" Sq.	B+ Television	4.25
1179 (1021)	500	130	1350	5	380	5000	2" Sq.	B+ Television	4.40
1022	450	160	1200	5	460	4500	2" Sq.	B+ Television	4.95
1016	300	25	350	....	35	1500	1 13/64 x 1 9/32	Bridge Rectifier	2.40
1017	600	25	700	....	35	3000	1 17/32" Sq.	Bridge Rectifier	3.15
1013	360	9†	......	....	....	....	1 17/32" Sq.	Battery Charger	1.40
1018	1600	26‡	......	....	....	....	4¼" lg. (Mtg. Plt.)	Battery Charger	3.85
1001	75	20	200	....	35	750	1" Sq.	Bias Rectifier	.80

*Eyelet construction — Replaces catalog No. 1010.

†The input voltage shown is the maximum which may be applied in a half-wave rectifier circuit for battery charging.

‡The input voltage shown is the maximum which may be applied to the outside terminals in a center-tap rectifier circuit.

Letter "A" after catalog number indicates locking lug.

Federal Selenium Rectifier Replacement KITS are a Hit with Servicemen!

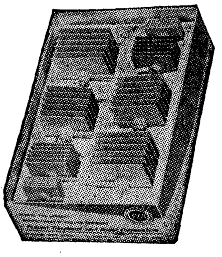
Each Kit contains 2 of each of 4 "Preferred Types" for MOST Radio-TV Replacements

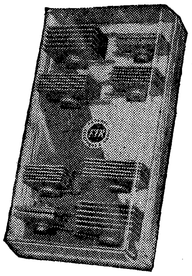
KIT #1

Contains types for handling approximately 9 out of 10 TV replacement jobs:

2—FTR 1004A....100 MA, 130 V
2—FTR 1028A....250 MA, 130 V
2—FTR 1023......350 MA, 130 V
2—FTR 1021......450 MA, 130 V

Federal's 8-unit Kits are the convenient, time-saving way for servicemen to make replacements "on the spot."





KIT #2

Clear plastic utility package, containing types for most radio replacements:

2—FTR 1002A.......... 65 MA, 130 V
2—FTR 1003A.......... 75 MA, 130 V
2—FTR 1004A..........100 MA, 130 V
2—FTR 1005A..........150 MA, 130 V

Federal Replacement Kits are valuable aids in servicing more than 35,000,000 selenium rectifiers now in the field.

Consult your local Federal Distributor or write to Federal direct

America's First and Largest Manufacturer of Selenium Rectifiers

Federal's Popular Selenium Rectifier Handbook
New, greatly enlarged edition. Contains a wealth of valuable design and application data on America's most complete line of miniature selenium rectifiers.
Each $0.50

Federal's
Miniature Selenium Rectifier
Handbook

PACKAGED POWER
SELENIUM RECTIFIER STACKS
by Federal

Federal has America's largest stock of stacks for all popular applications . . . available for prompt shipment. Special design data and prices for the asking.

Price List and Data Sheet — Effective Sept. 15, 1951

NOTE: Ratings for 35° C. Ambient; Resistive or Inductive loads; all designs shown are for single phase full wave rectfication.

Maximum D.C. Output (Approximate)‡		Rectifier Stack Code Number	Maximum A.C. Input Volts	*Rectifier Stack Dimensions		Catalog Number	Net User's Price
Volts	Amps.			A	B±$\frac{1}{16}$″		
10	3.0	106C1AX1	13	3⅜″	1$\frac{9}{16}$″	2100	$ 6.67
	6.0	133C1AX1	13	4⅜″	1¾″	2101	8.33
	12.0	136C1AX1	13	5″x6″	1¾″	2102	11.91
20	3.0	106B1AX1	26	3⅜″	2$\frac{1}{16}$″	2103	9.42
	6.0	133B1AX1	26	4⅜″	2$\frac{11}{16}$″	2104	12.58
	12.0	136B1AX1	26	5″x6″	2¾″	2105	20.50
40	3.0	106B2AX1	52	3⅜″	3$\frac{9}{16}$″	2026	15.00
	6.0	133B2AX1	52	4⅜″	5″	2107	21.17
	12.0	136B2AX1	52	5″x6″	5¼″	2108	34.00
60	3.0	106B3AX1	78	3⅜″	4½″	2118	20.00
	6.0	133B3AX1	78	4⅜″	6¾″	2033	29.17
	12.0	136B3AX1	78	5″x6″	7$\frac{5}{16}$″	2085	46.92
80	3.0	106B4AX1	104	3⅜″	5½″	2109	24.92
	6.0	133B4AX1	104	4⅜″	8$\frac{9}{16}$″	2110	37.17
	12.0	136B4AX1	104	5″x6″	9$\frac{5}{16}$″	2111	59.84
100	1.0	139B5AX1	130	2″ sq.	5⅜″	2112	16.25
	2.4	106B5AX1	130	3⅜″	6⅝″	2113	29.83
	6.0	133B5AX1	130	4⅜″	10$\frac{9}{16}$″	2114	45.17
120	0.3	103B6AX1	156	1$\frac{9}{32}$″x1$\frac{13}{64}$″	4¾″	2115	14.17
	0.6	104B6AX1	156	1$\frac{17}{32}$″ sq.	4⅞″	2036	16.34
	1.0	139B6AX1	156	2″ sq.	6$\frac{7}{16}$″	2116	18.75
	2.4	106B6AX1	156	3⅜″	7⅝″	2038	34.92
	6.0	133B6AX1	156	4⅜″	12$\frac{5}{16}$″	2117	53.17

*A dimension is cell size.
B dimension is mounting size.

‡Resistive or Inductive Loads.

Federal
all-purpose
SELENIUM RECTIFIER ASSEMBLY KIT

PER KIT
$19.95
User's Price

A KIT for "Make-it-Yourself" Fans!

Federal's All-Purpose
SELENIUM RECTIFIER ASSEMBLY KIT

Enables hobbyists, repairmen, electrical technicians and others to build their own selenium rectifiers for a wide range of AC-to-DC applications. Simple, illustrated instructions show how to assemble a total of

24 VARIATIONS OF 3 RECTIFIER TYPES—

Half-wave, Full-wave Center-Tap, and Full-wave Bridge — including Full-wave Battery Charger. Kit contains eight 5″ x 5″ plates and all hardware necessary to assemble any one of the possible combinations.

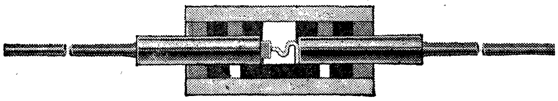
Consult your local Federal Distributor or write to Federal direct

INTERNATIONAL RECTIFIER CORPORATION

EL SEGUNDO
CALIFORNIA

Diodes

GERMANIUM



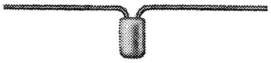
The Germanium Diodes produced by International Rectifier Corporation are the result of extensive research directed toward the production of superior products. The units available embody a completely new design for germanium diodes. Novel assembly and construction techniques are employed in their production.

Type No.	Min. Fwd. Current In Ma +1V	Maximum Inverse Current In Ma		Peak Inverse Voltage 25° C	Avg. Output Current In Ma 25° C	Peak Output Current In Ma 25° C
		−10 V	−50 V			
1N48	4.0		0.83	85	50	150
1N51	2.5		1.66	50	25	100
1N52	4.0		0.15	85	50	150
1N63	4.0		0.05	125	50	150
1N65	2.5		0.20	85	50	150
1N69*	5.0	0.05	0.85	75	40	125
1N70*	3.0	0.025	0.30	125	30	90
1N75	2.5		0.05	125	50	150
1N81*	3.0	0.01		50	30	90

*Jan Types
Ambient temperature range:— 50° to + 75° C.
Average shunt capacitance: 0.8 micromicrofarads.
Surge current (1 sec.): 400 ma at 25°.

WRITE FOR BULLETIN GD-1

SELENIUM



Actual Size

A line of sub-miniature selenium diodes has been developed for use in numerous electronic equipment where space is at a premium and the ambient temperature is high.

Some of the uses for these units are for bias supplies, sensitive relays, digital and analog computers, hearing aids, electronic organs and many compact airborne electronic equipment.

◆

DIAMETER: From 1/8″ to 13/32″
LENGTH: From 1/4″ to 1/2″
RMS applied voltage: From 26 volts to 208 volts
DC output voltage: From 20 volts to 160 volts
DC output current: avg. from 200 microamperes to 10 milliamperes
Leakage at 10 volts RMS: 0.6 μa to 2.4 μa
Potted in thermosetting compound
Temperature Range: From −60° C to 100° C
Available in 1 to 8 cell Diodes

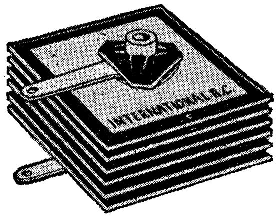
WRITE FOR BULLETIN SD-1

INTERNATIONAL RECTIFIER CORPORATION

General Offices: 1521 E. Grand Ave., El Segundo, Calif. • Phone: ORegon 8-3778
Chicago Branch Office: 205 West Wacker Drive • Phone: Franklin 2-3889
New York Branch Office: 501 Madison Avenue, New York 22, New York • Phone PLaza 5-8665

International Selenium Rectifiers

MINIATURE RECTIFIERS



As easily installed as a Resistor or Condenser.

Only 2 Soldering Operations required.

130 Volts RMS

Peak Inverse Volts: 380

FOR ELECTRONIC APPLICATIONS UP TO 1,000 MA

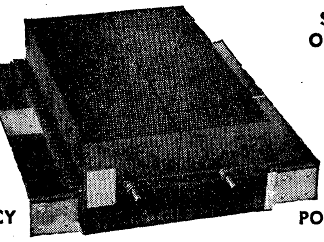
Approximate Voltage Drop: 5 volts

RATINGS AVAILABLE

Type No.	RS75	RS100	RS150	RS200	RS250	RS1000
Current (ma)	75	100	150	200	250	1000

SEND FOR BULLETIN IS-1249

POWER RECTIFIERS



Suitable for Oil Immersion

EFFICIENCY TO 87%

POWER FACTOR 95%

RATINGS TO 250 KW

FOR ELECTROPLATING, BATTERY CHARGING, ELEVATOR AND AIRCRAFT POWER SUPPLY UNITS, ETC.

PARTIAL LIST OF POWER RECTIFIERS

TYPE NO.	DC VOLTS	DC AMPS	SIZE PLATE
D507	0—15	0.5	1¼" Sq.
D510	0—15	3.0	3" Sq.
D513	0—15	14.0	6¼"x 7¼"
D517	15—30	3.0	3" Sq.
D520	15—30	14.0	6¼"x 7¼"
D521	95	5.0	4⅜" Sq.

WRITE FOR BULLETIN C-349

HIGH VOLTAGE RECTIFIERS

CARTRIDGE TYPE

RATINGS TO 25 KV AND 75 MA.

In half-wave, voltage doubler or bridge circuits *From ¼" to 1¼" O.D. or built to your specifications*

TYPICAL APPLICATIONS

BIAS SUPPLIES	ELECTROSTATIC PROCESSES
CONDENSER TESTING	GEIGER COUNTERS
CATHODE RAY TUBES	INVERSE PEAK SUPPRESSORS
ELECTRON MULTIPLIERS	PHOTOFLASH POWER SUPPLIES

TELEVISION CIRCUITS

TYPE V-HF SERIES

½ WAVE — 5 MA. DC

TYPE V-HF SERIES

DC OUTPUT VOLTAGE	RECTIFIER PART NO.	DC OUTPUT VOLTAGE	RECTIFIER PART NO.
20	V1HF	1000	V50HF
60	V3HF	2000	V100HF
100	V5HF	3000	V150HF
400	V20HF	4000	V200HF

TYPE Y-HP SERIES

½ wave—11 MA. DC

DC OUTPUT VOLTAGE	RECTIFIER PART NO.	DC OUTPUT VOLTAGE	RECTIFIER PART NO.
20	Y1HP	1000	Y50HP
60	Y3HP	2000	Y100HP
100	Y5HP	3000	Y150HP
400	Y20HP	4000	Y200HP

TYPE U-HF SERIES

½ wave—1.5 MA. DC

¼" Diameter Rating to 4,000 v. DC

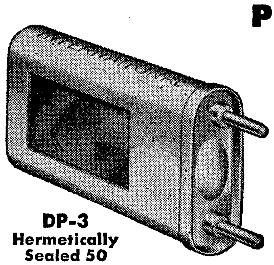
Fit standard automotive type Fuse clips

PARTIAL LIST OF U-HF SERIES AVAILABLE

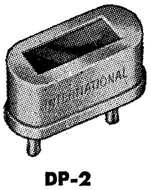
DC OUTPUT VOLTAGE	RECTIFIER PART NO.	STD. AUTO-TYPE FUSE CLIP	MAX. LENGTH INCHES
200	U10HF	7-AG	27/32
360	U18HF	7-AG	27/32
500	U25HF	8-AG	31/32
600	U30HF	3-AG	1-7/32
700	U35HF	9-AG	1-3/8

WRITE FOR BULLETIN H-1

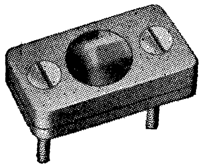
PHOTO-ELECTRIC CELLS SELF-GENERATING TYPE



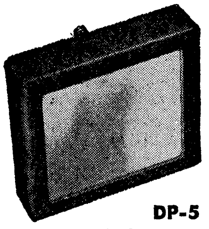
DP-3
Hermetically Sealed 50 microamperes at 100 foot-candles



DP-2
Hermetically Sealed 25 microamperes at 100 foot-candles

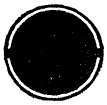


A-2M
13 microamperes at 100 foot-candles



DP-5
Hermetically Sealed Up to 600 microamperes at 100 foot-candles

Unmounted Cells Available



Write for Bulletins PC-649, PPC-250, HPC-450, HPC-252

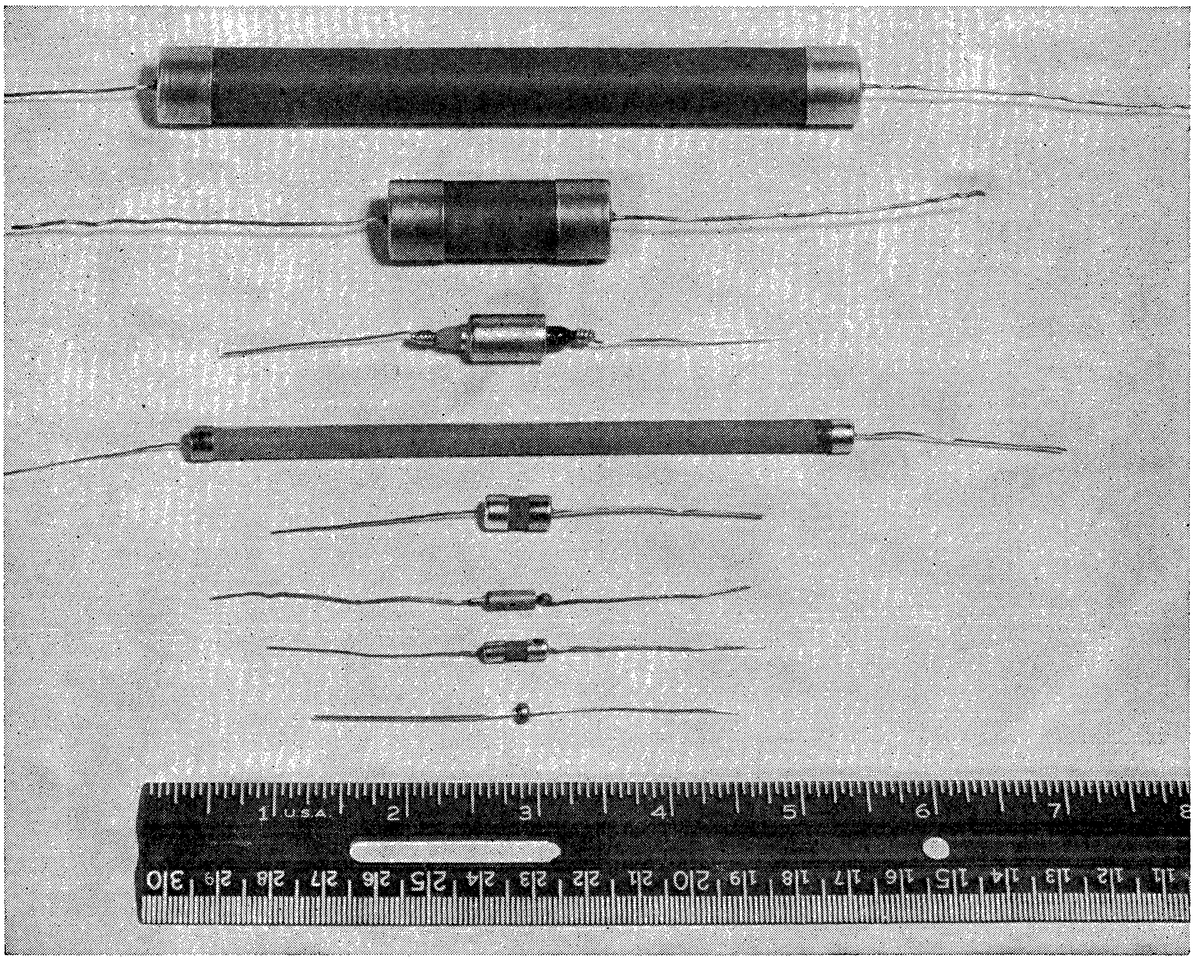
International
RECTIFIER CORPORATION

GENERAL OFFICES:
1521 E. Grand Ave.
El Segundo, Calif.
Phone El Segundo 1890

CHICAGO BRANCH OFFICE:
205 W. Wacker Dr.
Franklin 2-3889

New York Branch Office: 501 Madison Avenue, New York 22, New York • Phone PLaza 5-8665

MINIATURE SELENIUM RECTIFIERS



General Electric manufactures a complete line of selenium rectifiers, including miniature cell assemblies used in electronics applications. Because of their low forward resistance and reverse resistance, G-E selenium rectifiers have high efficiency and exceptionally long life.

The standard line of Miniature Selenium Rectifiers consists of ratings of 50 ma and below at 26 to 5200 volts RMS. Stacks are enclosed in Textolite* tubes or metal-clad to meet Government specifications relating to environmental protection. Either lead or bracket mountings can be furnished.

For complete information on G-E metallic rectifiers, consult your nearest General Electric Agent, or write to Section 640-333, General Electric Company, Schenectady 5, New York.

You can put your confidence in—

GENERAL ELECTRIC

*Registered trade-mark of General Electric Co.

Travel to the
northernmost Army outpost —
in "shooting" distance of the Pole
— you'll find National
receivers on the job!

FROM FROZEN WASTE TO STEAMING JUNGLE

Slash your way
through the African jungle
to a movie company
on location — you'll find
National receivers
on the job!

Literally, you'll find National receivers all over the world — on Navy ships at sea — on South American mountain tops — in the offices of London's famed Scotland Yard — on hazardous expeditions like Kon-Tiki! No wonder National is the number one choice of experienced amateurs — for top performance under all conditions, year in and year out!

National

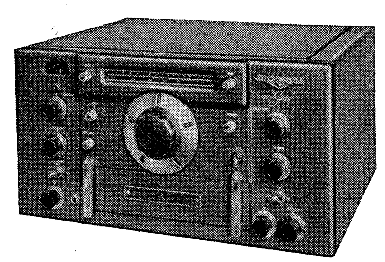
NC EST. 1916 ®

NATIONAL COMPANY, Inc.
MALDEN, MASSACHUSETTS

ELECTRONIC EQUIPMENT AND COMPONENTS

WORLD FAMOUS *National* RECEIVERS

EST. 1916



HRO-Sixty

COVERAGE: 50-430 kc., 480 kc.-35 mc. And 50-54 mc Voice, CW. NFM (with adaptor).

FEATURES: Edge-lighted, direct frequency-reading scale with one range in view at a time. 3 I.F. stages at 456 kcs. employing 12 permeability-tuned circuits on all bands plus one I.F. stage at 2010 kcs. on all frequencies above 7 mcs. Switching is done automatically when coil set is plugged in. Built-in, isolated heavy-duty power supply. Sensitivity of 1 mv. or better at 6 db. sig./noise. Selectivity variable from 8 kc. overall to app. 1200 cps. at 40 db. Current-regulated high frequency oscillator and second converter heaters. Voltage-regulated high frequency oscillator and S-meter amplifier. Negligible drift after warmup. Micrometer dial for logging. Provision for crystal calibrator unit. Variable ant. trimmer. Lively S-meter. Min. tubes in front end and high freq. osc. Osc. circuits not disabled when receiver in send position. High-fidelity push-pull audio (±2 db 50-15,000 cps.) with phono jack. BFO switch separated from BFO freq. control. Illumination dimmer control. Accessory socket for Select-O-Ject.

CONTROLS: Bandswitch, Oscillator, Tone, Ant. Trimmer, Dimmer, AVC, Limiter, AF Gain, Calibration, CWO, Phasing, Selectivity, On-Off, RF gain, AM-NFM-PHONO.

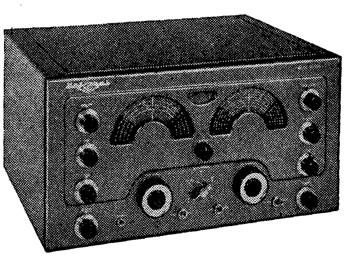
TUBE COMPLEMENT: 6BA6, 1st r.f.; 6BA6, 2nd r.f.; 6BE6; mixer; 6C4 h.f. oscillator; 6BE6, 2nd high-frequency conv.; 6SG7 1st i.f.; 6SG7, 2nd i.f.; 6SG7, 3rd i.f.; 6H6 det. & a.v.c. 6H6, a.n.l.; 6SJ7, 1st audio; 6SN7, phase splitter and S-meter amp.; 6V6GT (2) p.p. audio; 5V4G, rect.; 6SJ7, b.f.o.; OB2, volt reg. 4H4 Osc. Fil. Cur. Reg.

SIZE: Table 19$\frac{3}{4}$" wide x 10$\frac{1}{8}$" high x 16$\frac{1}{2}$" deep. Rack: 19" wide x 10$\frac{1}{2}$" high x 17$\frac{7}{16}$" from rear of front panel incl. 1$\frac{1}{8}$" handle.

ACCESSORIES: 50TS or RS (10" PM Speaker), $16.00; 50 SC-2 (Speaker Coil Compartment), $49.75; SOJ-3 (Select-O-Ject), $28.75; 650S (Vibrator Pack—6 V.), $75.00; MRR-2 (Table Relay Rack 29" High), $16.85; 50 X CU-2 (100/1000 kc xtal Calibrator), $24.50; NFM 83-50 (NBFM Adaptor), $17.95; E and F coils (900—2050 Kc and 480-960 Kc), $16.35 each. Other coils available covering 50 Kc to 430 Kc, 21.0 to 21.5 mc Bandspread, 27-30 mc Bandspread, 25 to 35 mc. And 50-54 mc.

$\$483^{50}$*
(Less Speaker)

*Slightly higher west of the Rockies.



NC-183D

COVERAGE: Continuous from 540 kcs. to 31 mcs. plus 48 to 56 mcs. for 6-meter reception.

FEATURES: Two tuned R.F. stages. 3 stages of I. F. Voltage regulated osc. and BFO. Main tuning dial covers range in five bands. Bandspread dial calibrated for amateur 80, 40, 20, 15, 11-10 and 6-meter bands. Bandspread usable over entire range. Six-position crystal filter. New-type noise limiter. High fidelity push-pull audio. Accessory socket for NFM adaptor or other unit, such as crystal calibrator.

CONTROLS: CWO Switch, CWO pitch, Tone, AF Gain, Main Tuning, Bandspread, Ant. Trimmer, Bandswitch, Send-Receive, Phono-Radio, Selectivity, Phasing, Limiter, RF Gain.

TUBE COMPLEMENT: Uses 2-6BA6 R.F.; 2-6BE6 First and second converter; 3-6BA6 I.F.; 1-6AL5 second det.—AVC; 1-6AH6 AVC amplifier; 1-6SJ7 C.W. OSC; 1-6AL5 Limiter; 1-6SJ7 First Audio; 1-6J5 Phase Inverter; 2-6V6GT Audio Output; 1-OB2 Voltage Reg.; 1-5U4G Rect.

ACCESSORIES: Matching 10" PM Speaker, $16.00; NFM 83-50 Narrow Band FM adaptor, $17.95.

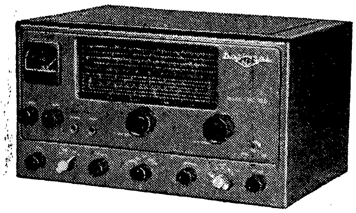
$\$369^{50}$*
(Less Speaker)

*Slightly higher west of the Rockies.

EST. 1916

WORLD FAMOUS National RECEIVERS

EST. 1914



NC-125

COVERAGE: 560 kcs. to 35 mc. in 4 bands. Voice or CW.

FEATURES: Edge-lighted direct-reading scale with amateur, police, foreign, ship frequencies clearly marked. Sensational National Select-O-Ject built-in. Exceptional sensitivity on all bands. Lively S-meter reads S9 to 50 mv. signal. AVC, ANL, jack for phono or NFM adaptor, volt. reg., stabilized osc., audio essentially flat to 10,000 c.p.s.

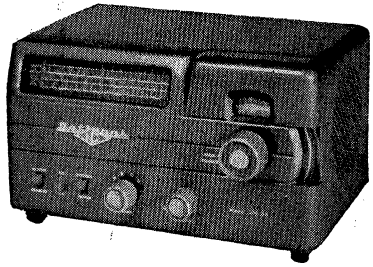
CONTROLS: Main Tuning, Bandspread, Freq. (SOJ), Boost (SOJ), Send-Receive, Pitch, CWO-MVC-AVC-ANL, AF Gain, Tone, Trimmer, Bandswitch, RF Gain.

TUBE COMPLEMENT: 6SG7 RF amp., 6SB7-Y osc.-mixer, 6SG7 1st IF, 6SG7 2nd IF, 6H6 2nd det-AVC-ANL, 6SL7GT phase shifter, 6SL7GT boost-reject aud. amp., 6SL7GT 1st aud.-CWO, 6V6GT aud. output, OD3/VR-150 volt. reg., 5Y3GT rect.

ACCESSORIES: NC-125TS Speaker, \$11.00; NFM-73 (Narrow Band FM adaptor), \$18.95.

$\$149^{50}$*
(Less Speaker)

*Slightly higher west of the Rockies.



SW-54

COVERAGE: Entire frequency range from 540 kc. to 30 mc. in 4 bands. Voice, music or code.

FEATURES: Sensitive and selective superhet circuit, using new miniature tubes. Slide rule general coverage dial with police, foreign, amateur and ship bands clearly marked. Unique plastic bandspread dial is adjustable to assure logging accuracy over entire range. Built-in speaker and power supply. Volume, Receive-Standby, Bandswitch, AM-CW, Speaker, Phones.

TUBE COMPLEMENT: 12BE6, converter; 12BA6, CW osc. — IF amp.; 12AV6, 2nd det.-1st aud. — A. V. C.; 50C5, audio output; 35Z5, rectifier.

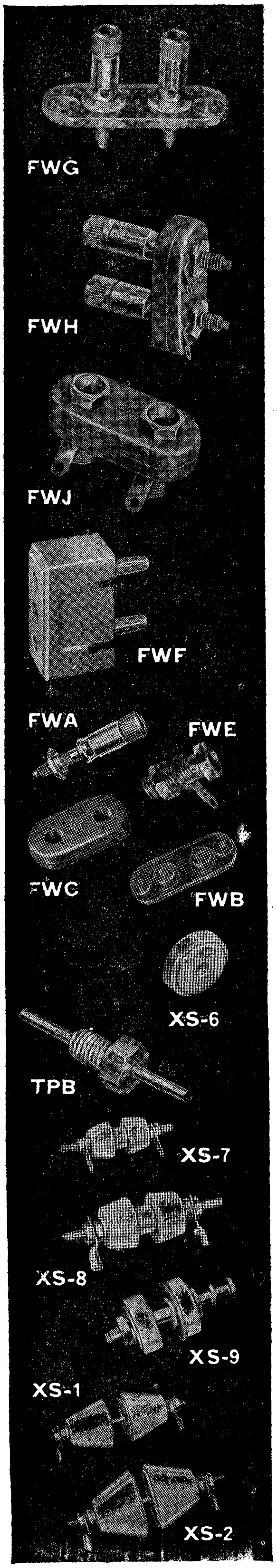
SIZE: 11″ wide, 7″ high, 7″ deep. **$\$49^{95}$***

SELECT-O-JECT

Set SELECT-O-JECT for REJECT, tune by ear and — presto! — an annoying heterodyne or other unwanted signal practically disappears without materially affecting the wanted signal! Set SELECT-O-JECT for BOOST, tune — and presto! — a selected c.w. signal rises above background noise and interfering signals! Can also be used as audio oscillator having over 100 to 1 frequency range with a single rotation of the tuning knob! Excellent as a code practice oscillator! Effective on any frequency from 80 c.p.s. to 9,000 c.p.s.! Easily connected to any receiver having 6.3v. and filtered B+ supply available. **$\$28^{75}$***

EST. 1916

POPULAR National COMPONENTS



FWG
A Victron terminal strip for high frequency use. The binding posts take banana plugs at the top, and grip wires through hole at the bottom, simultaneously, if desired.

FWH
The insulators of this terminal assembly are moulded R-39 and have serrated bosses that allow the thinnest panel to be gripped firmly, and yet have ample shoulders. Binding posts same as FWG above.

FWJ
This assembly uses the same insulators as the FWH above, but has jacks. When used with the FWF plug (below), there is no exposed metal when the plug is in place.

FWF
This moulded R-39 plug has two banana plugs on ¾" centers and fits FWG, FWH or FWJ above. Leads may be brought out through the top or side.

FWA, Post
Brass Nickel Plated

FWE, Jack
Brass Nickel Plated

FWC, Insulator
R-39 Insulation.

FWB, Insulator
Polystyrene insulation.

XS-6
A low-loss steatite bushing for ½" holes. Passes 6-32 screw.

TPB
A threaded polystyrene bushing with removable .093 conductor moulded in, ¼" diam., 28 thread.

XS-7, (⅜" Hole)
XS-8, (1½" Hole)
XS-1, (1" Hole)
XS-2, (1½" Hole)

XS-9
Feed-through insulator. Hole size 13/64". Insulators are adjustable on silver-plated terminal stud for different partition thicknesses. Ceramic insulators are of high grade materials designed for high frequency equipment.

AA-3
A low-loss steatite spreader for 6 inch line spacing. (600 ohms impedance with No. 12 wire.)

AA-5
A low-loss steatite aircraft-type strain insulator.

AA-6
A general purpose strain insulator of low-loss steatite.

GS-1, ½" x 1⅜"
GS-2, ½" x 2⅞"
GS-3, ¾" x 2⅞"
GS-4, ¾" x 4⅞"
GS-4A, ¾" x 6⅞"
Cylindrical low-loss steatite standoff insulators with nickel plated caps and bases.

GSJ, (not illustrated)
A special nickel plated jack top threaded to fit the ¾" diameter insulators GS-3, GS-4 & GS-4A.

GS-10, ¾" high

GS-10S (not illustrated) but same as GS-10 except includes threaded stud in top end.

GS-5, 1¼" high
GS-6, 2" high
GS-7, 3" high

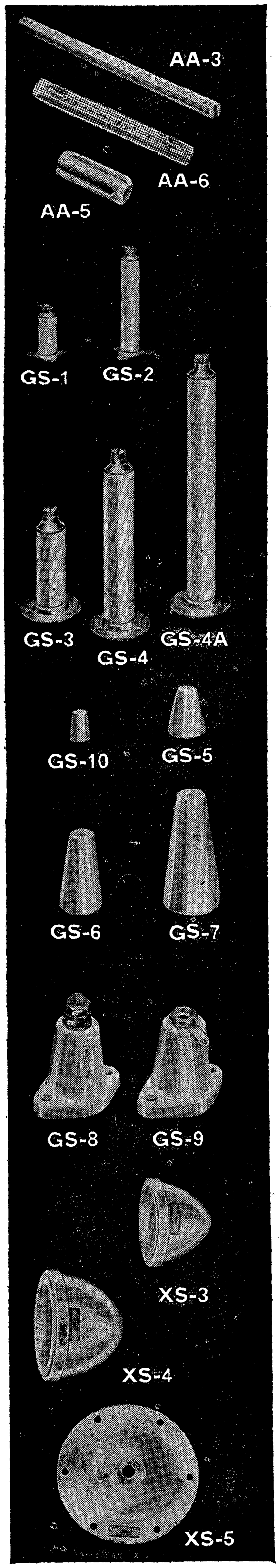
These cone type standoff insulators are of low loss steatite. They are moulded with a tapped hole in each end for mounting as follows:

GS-5, 8-32 tap 7/16" deep; GS-6 & GS-7, 10-24 tap 11/16" deep; GS-10, 6-32 tap ¼" deep and GS-10S as noted above.

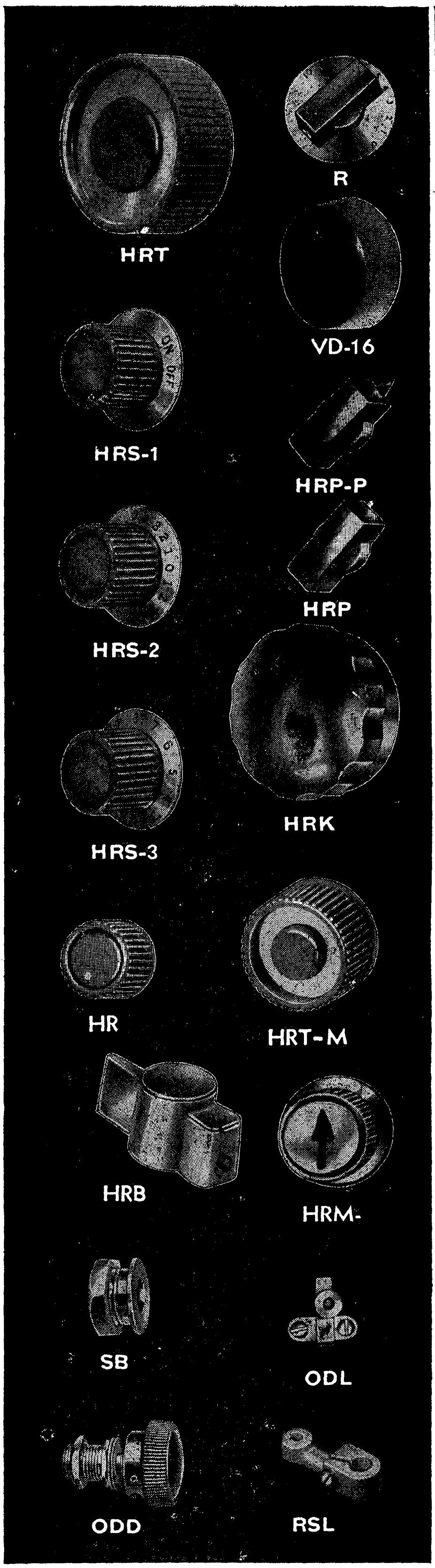
GS-8, with terminal
GS-9, with jack
These low-loss steatite standoff Insulators are also useful as lead-through bushings.

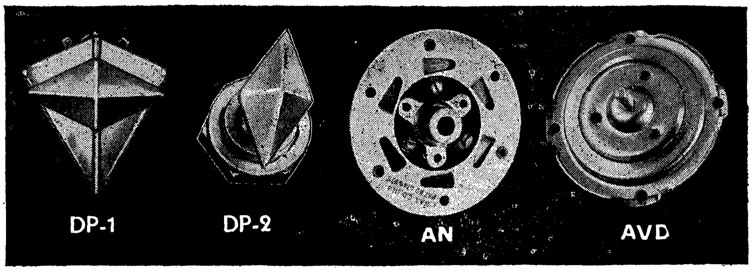
XS-3, (2¾" hole)
XS-4, (3¾" hole)
Prices are per pair and include nickel plated spindles, lugs and hardware. These low-loss steatite bowls are ideal for lead-in purposes at high voltages.

XS-5, Without Fittings
XS-5F, With Fittings
These big low-loss bowls have an extremely long leakage path and a 5¼" flange for bolting in place. Insulation steatite. Fittings include nickel plated brass spindles, lugs, nuts and washers.



POPULAR National COMPONENTS





HRT (gray or black)
The HRT knob is 2⅛" in dia. and fits ¼" shafts. This knob has a chrome appearance circle and combined with the HRS series shown below gives the new look to panel layouts.

HRS (gray or black)
The HRS series knobs are a popular easy to grip knob. They are molded of high quality plastic and have 1⅜" dia. chrome plated bevel skirts fit ¼" shafts available in the following scales:

HRS-1	ON-OFF	through 30°
HRS-2	5-0-5	through 180°
HRS-3	0-10	through 300°
HRS-4		Single etched line
HRS-5	0-10	through 180°

HRT and **HRS** knobs can be supplied in quantity in any color.

HR (gray or black)
An HRS type knob without the chrome plated skirt but with a white dot for spotting relative control settings.

HRB
Ideal for bandswitching or other applications where a switch is turned to several index positions, the new HRB lever knob has just the right feel — a bright zinc alloy die casting.

HRM
Small knurled brass knob, satin chrome finish, arrow head black filled. Two 4-40 Allen set screws used.

SB
A nickel plated brass bushing ½" dia. (Fits ¼" shaft).

ODL
A locking device which clamps the rim of O, K, L and M Dials. Brass, nickel plated.

ODD
Vernier pinch drive for O, L, or other plain dials.

RSL (fits ¼" shaft)
Rotor shaft lock for TMA, TMC and similar condensers.

DP-1
Chrome-plated dial pointer

DP-2
Diamond head dial pointer

AN Vernier Mechanism
A vernier mechanism ratio 5-1 has an insulated output shaft coupling for ¼" shafts. Drive Shaft fits 3/16" knob.

AVD Vernier Mechanism
Similar to AN-Output shaft coupling is non insulated.
For commercial uses many variations available. Write for further particulars.

R
This small dial has a 1⅝" dia. scale calibrated 0-10 in 180° for increased reading with clockwise rotation. Black bakelite knob. Fits ¼" shaft.

VD-16
National's popular dial knob. Same as used on type N knob. Fits ¼" shaft.

VD-16A
Same as above but fits 3/16" shaft.

HRP-F
Black bakelite knob 1¼" long and ½" wide. Equipped with pointer. Especially suitable for use on wafer and other rotary switches on laboratory equipment and the like. (Fits ¼" shaft).

HRP
The type HRP knob has no pointer but is otherwise the same as the knob above. Recommended for uncalibrated or hard-tuning controls. (Fits ¼" shaft).

HRK
Black bakelite knob 2⅜" [illegible] — extremely rugged. This is the knob used on National type O and type L dials.

HRT-M
This is a smaller version of the HRT. Available in choice of gray or black — is 1-7/16" in diameter.

POPULAR National COMPONENTS

N Dial

AD Dial

The four-inch N and AD Dials have engine divided and die stamped scales respectively. The N Dial has a decimal vernier; the AD Dial employs a pointer. The planetary drive has a ratio of 5 to 1, and is contained within the body of the dial. 2, 3, 4, 5 or blank scale. Fits ¼" shaft. **Specify scale.**

B Dial

"Velvet Vernier" Dial, Type B, has a compact variable ratio 6 to 1 min., 20 to 1 max. drive that is smooth and trouble free. The case is black bakelite. 1 or 5 scale. 4" dia. Fits ¼" shaft. **Specify scale.**

BM Dial

The BM Dial is a smaller version of the B for use where space is limited. The drive ratio is fixed. Although small in size, the BM Dial has the same smooth action as the larger units. 1 or 5 scale. 3" dia. Fits ¼" shaft. **Specify scale.**

AM Dial

The original "Velvet Vernier" mechanism in a metal skirted dial 3" in dia. ratio 5 to 1. It is available with 2, 3, 4, 5 or 6 scale and fits ¼" shaft.

P Dial

The new P dial is the same as the AM except direct drive.

Type O, 3½" dia., scale 2, with HRK knob, fits ¼" shafts.

HRT-O, same as type O dial but using gray HRT knob.

HRT-N, same as above, but using black HRT knob.

Type L, same as O except 5" dia., scale 2 only.

Type K, same as O except less knob, complete with ODD vernier drive, scale 2 only.

Type M, same as K except 5" dia., scale 2 only.

The dials at the right are for individual calibration: all four employ the noted 5:1 drive ratio Velvet Vernier mechanism and are of excellent quality.

MCN Dial

The MCN dial has been scaled down to lend itself ideally to mobile installations and small converters and tuners. It may also be mounted on the standard 3½" rack panel where such mounting may be desirable. The dial provides three calibrating scales and a 0-100 logging scale. On the rear side of the dial, the mechanism extends ¼" below the dial frame. 2¾" H. x 3⅞" W.

SCN Dial

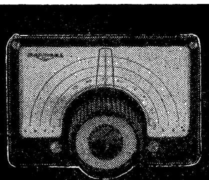
The SCN dial provides the same dial scales as the ACN dial but in a reduced size. It is used where economy of panel-mounting space is desirable and where a smaller dial would be out of proportion with the size of the panel. 4-7/16" H x 6¼" W.

ICN Dial

The ICN dial meets those hundreds of requests from amateurs the world over for an illuminated ACN dial. Two dial lights mounted on the top corners of the dial provide efficient and even illumination on all bands. The dial window has been blanked out in semi-circular shape to prevent shadow casting. Dial scales are the same as those used on the ACN dial. 5⅛" H. x 7¼" W.

ACN Dial

The ACN is the original of this type dial, a National design for the benefit of experimenters who "build their own" and desire direct calibration. 5" H x 7¼" W.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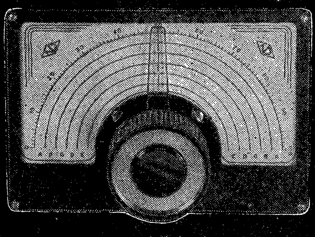
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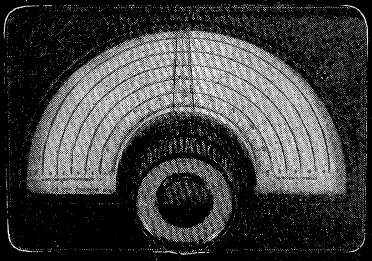
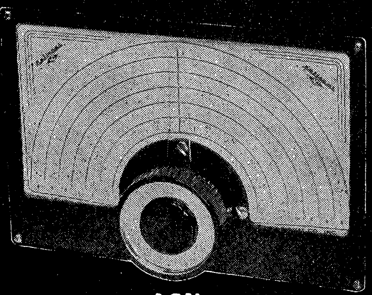
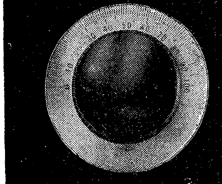
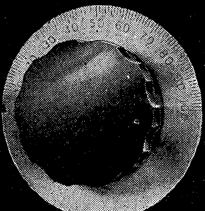

ICN


ACN

DIAL SCALES

Scale	Divisions	Rotation	Direction of Condenser Rotation for increase of dial reading
1	0–100–0	180°	Either
2	0–100	180°	Counter Clockwise
3	100–0	180°	Clockwise
4	150–0	270°	Clockwise
5	200–0	360°	Clockwise
6	0–150	270°	Counter Clockwise


AM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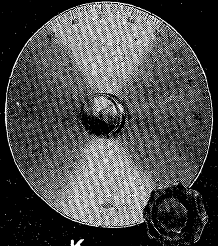
L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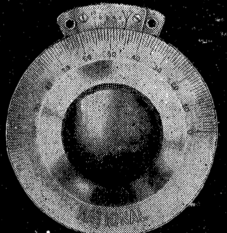
M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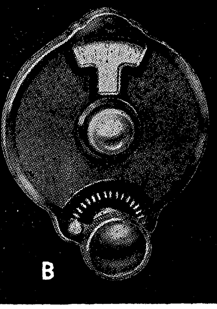
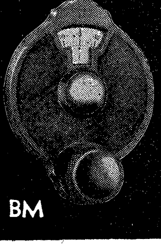
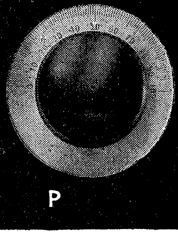
AD

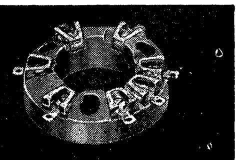

B

HRT-0

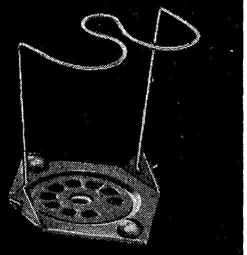

BM


P

POPULAR National COMPONENTS



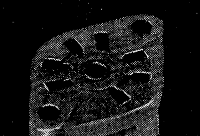
XLA



MINIATURE TUBE CLAMPS

TSA-1

TSA-2



XOA-7 (Axial)

XOR-7 (Radial)

XLA

A low-loss socket for the 6F4 and 950 series acorn tubes for frequencies as high as 600 Mc. Conventional by-pass condensers may be compactly mounted between the contact terminals and the chassis. Low contact resistance, short and direct leads and low and constant inductance are features.

TURRET SOCKET ASSEMBLIES

TSA-1..........7 pin Hollow Stud
TSA-2............7 pin Solid Stud
TSA-3..........9 pin Hollow Stud
TSA-4............9 pin Solid Stud

Designed for our 7-pin and 9-pin miniature tube sockets. Permits compact sub-assembly wiring at base of socket. Cadmium-plated brass center support has a standard length of two inches. Silver-plated brass terminal studs. Available either with holes through which leads can be drawn, or with solid studs. Center supports of varying lengths and other types of terminals can be supplied to manufacturers in quantity.

XOA-7 (mica-filled bakelite)

XOR-7 (mica-filled bakelite)

These high quality sockets for the 7 pin miniature tubes have silver plated beryllium copper contacts that correctly grip the tube pins close to the base of the tube to provide the short leads and low inductance so necessary in ultra-high frequency design.

A novel feature of these new sockets is the interchangeability of the contacts, which are easily removed for replacement. This permits the use of a mixture of axial (XOA) and radial (XOR) type contacts in the same socket to obtain the shortest possible leads, or minimum size in tight places. The above sockets all mount with two 4-40 screws on .875" centers. Chassis cutout should be ¾" dia. Shields for use with these sockets are available.

XOA-9 (mica-filled bakelite)

XOR-9 (mica-filled bakelite)

These sockets are for the new 9-pin miniature tubes. The XOR-9 (not illustrated) has radial contacts. Each has all of the features described above for the 7-pin types and they also mount with 4-40 screws. Mounting center dimension is 1⅛", the chassis cutout should be 13/16" dia.

TC SERIES MINIATURE TUBE CLAMPS

Easy to assemble — just two pieces — a spring clip and a base of stainless steel. Base mounts in same holes, using same screws or rivets, as sockets. Easy to remove tube, simply snap off spring clip. Made to government specifications. Types available for all standard miniature tubes.

Type No.	Tube Body Length	Type Socket
TC-1	1⅛"	7-pin
TC-2	1½"	7-pin
TC-3	2"	7-pin
TC-4	1⅛"	9-pin
TC-5	1½"	9-pin
TC-6	2"	9-pin

CIR SERIES SOCKETS

Always a popular National component, type CIR Sockets feature low-loss steatite insulation, a contact that grips the tube prong for its entire length, and a metal ring for six position mounting.

XC-4, 5, 6, 7S, 7L and CIR-4, 5, 6, 7S and 7L all have 1-27/32" mounting centers. CIR-8E has slotted holes in plate but will mount on 1-27/32" center. CIR-8 and XC-8 have 1½" mounting centers.

XC SERIES SOCKETS

XC-4, XC-5, XC-6, XC-7S, XC-7L, XC-8

National wafer sockets have exceptionally good contacts with high current capacity together with low loss steatite insulation. All types have a locating groove to make tube insertion easy.

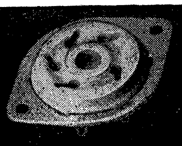
HX-29 A low-loss wafer socket with steatite insulation for the popular 829 and 832 tubes.

JX-51 A low loss steatite wafer socket for the 813 and other tubes having the Giant 7-pin base. (not illustrated)

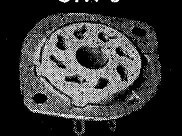
XM-10 A heavy duty metal shell socket for tubes having the XU 4-pin base.

XM-50 (see XM-10 for style) A heavy duty metal shell socket for tubes having the Jumbo 4-pin base ("fifty watters").

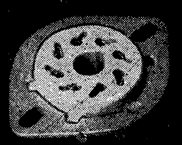
HX-100 A low loss wafer socket suitable for the type 4-125-A, 4-250-A and other tubes using the Giant 5-pin base. Shield grounding clips are supplied which mount on the chassis with the socket mounting screws to ground the tube shield at three points. Air holes are provided in the socket to permit forced air cooling.



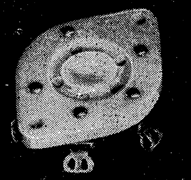
CIR-5



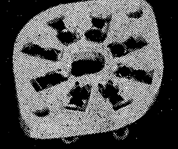
CIR-8



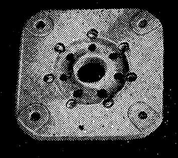
CIR-8E



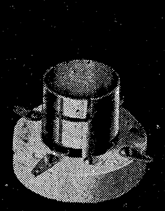
XC-5



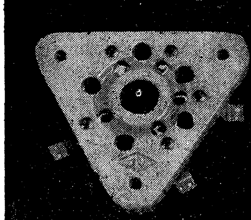
XC-8



HX-29

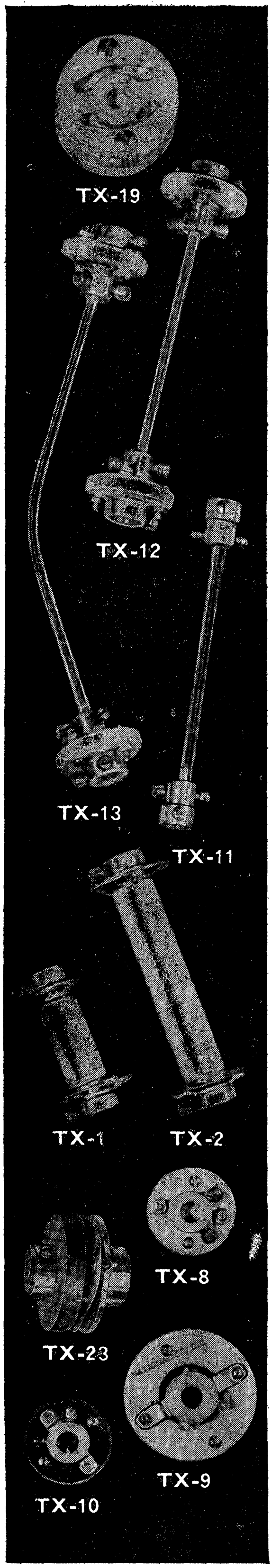


XM-10



HX-100

POPULAR National COMPONENTS



SHAFT COUPLINGS

TX-19

A steatite insulated flexible coupling for ¼" shafts. Conservatively rated at 5000 volts peak. Diameter 1⅜", length 1". Length and flashover voltage can be increased by turning collars outboard.

TX-11

The flexible shaft of this coupling connects shafts at angles up to 90 degrees, and eliminates misalignment problems. Fits ¼" shafts. Length 4¼".

TX-12, Length 4⅝"

TX-13, Length 7⅛"

These couplings use flexible shafting like the TX-11 above, but are also provided with steatite insulators at each end.

TX-1, Leakage path 1"

TX-2, Leakage path 2½"

Flexible couplings with glazed steatite insulation which fit ¼" shafts.

TX-23

A deluxe insulated flexible coupling designed for coupling ¼" shafts. Will handle a maximum radial misalignment of 1/16" also 2 degrees maximum angular misalignment.

TX-24

Same as TX-23, **shaft size** 5/32".

TX-25

Same as TX-23, non-insulated.

TX-8

A non-flexible rigid coupling with steatite insulation. 1" diam. Fits ¼" shaft.

TX-10

A very compact insulated coupling free from backlash. Insulation is canvas bakelite. 1-1/16" diam. Fits ¼" shaft.

TX-10F (Not illustrated)

A new version of the TX-10 which employs thin canvas bakelite strips for flexibility.

TX-22 (Not illustrated)

A non-insulated coupling identical to TX-10 except of all metal construction. Makes good electrical connection between coupled shafts.

TX-9

This small insulated flexible coupling provides high electrical efficiency when used to isolate circuits. Insulation is steatite. 1⅝" diam. Fits ¼" shaft.

TX-21 (Not illustrated)

Similar to TX-10 except 13/16" long and couples ¼" shaft to 5/32" shaft.

SAFETY GRID AND PLATE CAPS

SPP-9

Ceramic insulation. Fits 9/16" diameter.

SPP-3

Ceramic insulation. Fits ⅜" diameter. National Safety Grid and Plate Caps have a ceramic body which offers protection against accidental contact with high voltage caps on tubes.

GRID AND PLATE GRIPS

Type 12, for 9/16" Caps

Type 24, for ⅜" Caps

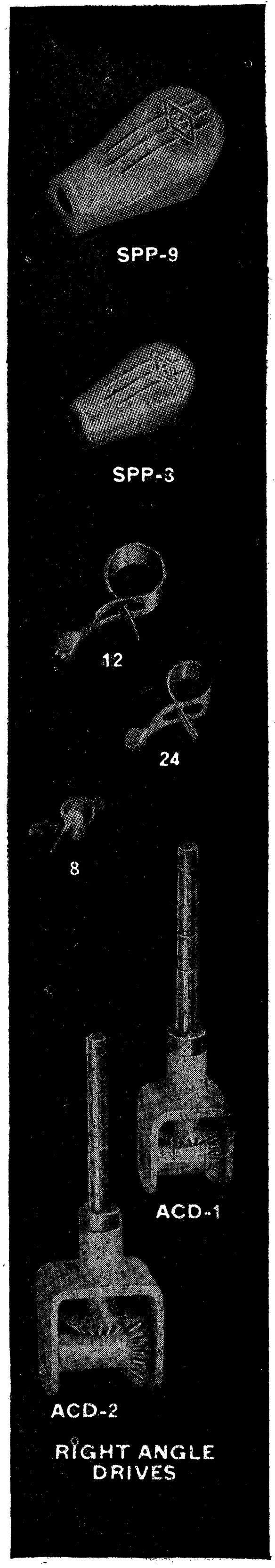
Type 8, for ¼" Caps

National Grid and Plate Grips provide a secure and positive contact with the tube cap and yet are released easily by a slight pressure on the ear.

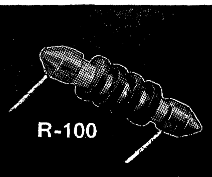
RIGHT ANGLE DRIVES

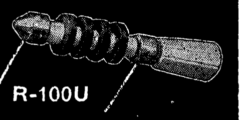
ACD-1, ACD-2, ACD-3

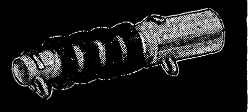
These sturdy drives were developed for use with the new National AMT condensers. They are as compact as the torque requirements will allow and have nickel plated cast frames and bronze gears which operate smoothly without chatter or binding. The ACD-1 has 32 pitch gears and a ¼" dia. dial shaft and drives ¼" shafts. ACD-2 has 24 pitch gears (for heavier service) and ¼" dia. shaft driving ¼" shafts. ACD-3 is the same as ACD-2 except that it drives ⅜" diameter shafts.



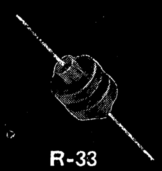
POPULAR National COMPONENTS

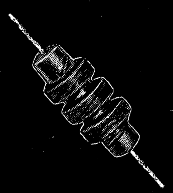

R-100


R-100U

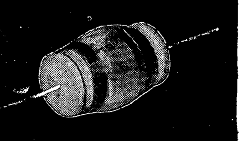

R-100S

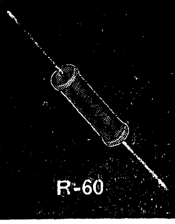
R-100ST


R-33



R-50


R-33G


R-60

R-100, R-100U, R-100S, R-100ST

These RF chokes are identical electrically, but differ in mounting provisions. The R-100 employs pigtail leads; the R-100U has pigtail leads and a removable stand-off insulator; the R-100S has cotter-pin lug terminals and a non-removable stand-off insulator; the R-100ST has a 6-32 threaded stud at each end. These chokes are available in 2.5, 5 and 10 millihenry sizes and are rated at 125 milliamperes.

R-33

The R-33 series chokes are 2-section RF chokes available in 10, 50, 100 and 750 microhenry sizes. Also available in this series is a single layer solenoid choke of 1 microhenry inductance. All are rated at 100 milliamperes. The chokes are wound on a 5/8" long form and range in diameter up to 5/16" maximum.

R-50

The R-50 series chokes are 3 and 4-section RF chokes available in 0.5, 1, and 2.5 millihenry sizes. They are rated at 100 milliamperes. The chokes are wound on a 1" long form and have a maximum diameter of 15/32".

R-50-1

A 10 millihenry choke wound on an iron core.

R-33G

The R-33G choke is a 2-section 750 microhenry RF choke hermetically sealed in glass with a current rating of 33 milliamperes. The choke body is 1" long by 5/8" diameter.

R-60

The R-60 choke is a high current RF choke (500 milliamperes) available in 2 and 4 microhenry sizes. The choke is 1 1/8" long by 5/16" diameter.

R-300, R-300U, R-300S, R-300ST

These RF chokes are similar in size to R-100 series but have higher current capacity. The R-300U is provided with a removable stand-off insulator at one end. The R-300S has a non-removable stand-off insulator and cotter-pin lug terminals. The R-300ST has a 6-32 threaded stud at each end. Inductance values of 0.5, 1.0, 2.5 and 5.0 millihenries are available with a current rating of 300 milliamperes. R-300, R-300U, R-300S and R-300ST are identical electrically.

R-152

For use in the range between 2 and 4 Mc. Ideal for high power transmitter stages operated in the 80 meter amateur band. Inductance 4 m.h., DC resistance 10 ohms, DC current 600 ma. Coils honeycomb wound on steatite core.

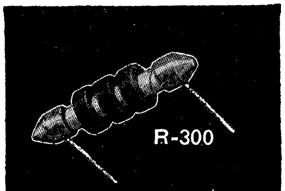
R-154, R-154U

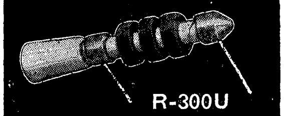
For the 20, 40 and 80 meter bands, Inductance 1 m.h., DC resistance 6 ohms, DC current 600 ma. Coils honeycomb wound on steatite core. The R-154U does not have the third mounting foot and the small insulator, but is otherwise the same as R-154. See illustration.

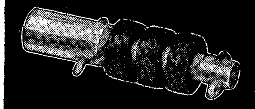
R-175

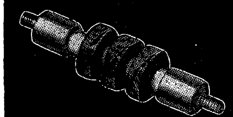
The R-175 Choke is suitable for parallel-feed as well as series-feed in transmitters with plate supply up to 3000 volts modulated or 4000 volts unmodulated. Unlike conventional chokes, the reactance of the R-175 is high throughout the 10 and 20 meter bands as well as the 40 and 80 meter bands. Inductance 225 μh, distributed capacity 0.6 mmf., DC resistance 6 ohms, DC current 800 ma., voltage breakdown to base 12,500 volts.

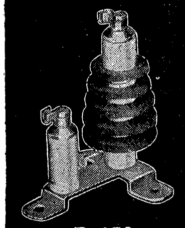
Manufacturers: We have facilities for quantity production of RF chokes of practically any type. Send us your specifications.

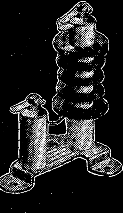

R-300

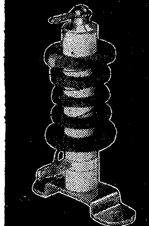

R-300U

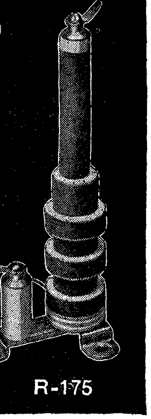

R-300S


R-300ST


R-152

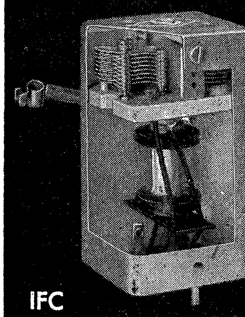

R-154


R-154U

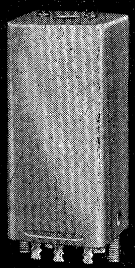

R-175

POPULAR National COMPONENTS

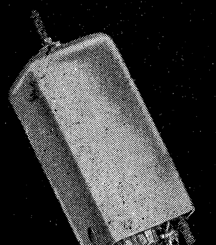
I. F. TRANSFORMERS



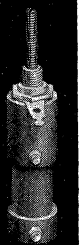
IFC
IFCO



IFL
IFM
IFN
IFO

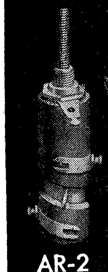


IFR



XR-50

AR-5



AR-2

IFC, Transformer,

IFCO, Oscillator,

Litz coils wound on a polystyrene form and ceramic insulated air-dielectric trimming condensers make these transformers inherently stable and exceptionally retentive of tuning. The 4½" x 2⅜" x 2" shield can has two 6-32 spade bolts for mounting. Available for either 175 KC or 450-550 KC. Specify frequency.

IFL FM Discriminator

IFM IF Transformer

IFN IF Transformer

IFO FM Ratio Discriminator

IFL, IFM, IFN and IFO transformers operate at 10.7 Mc. and are designed fpr use in FM Superheterodyne receivers. Coils are precision wound on grooved polystyrene forms and tuning is accomplished by movable iron cores. Bandwidth is not affected by tuning slug position. The transformer cans are 1⅜" square and stand 3⅛" above the chassis. Two 6-32 spade bolts are provided for mounting.

The IFL transformer is a 10.7 Mc. FM discriminator transformer suitable for use in conventional FM receiver discriminator circuit and is linear over a band of ± 100 Kc.

The IFM transformer is a 10.7 Mc. IF transformer with a 150 Kc. bandwidth at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFM Transformer and 6SG7 tube.

The IFN transformer is a 10.7 Mc. IF transformer with a 100 Kc. pass band at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFN transformer and 6SG7 tube.

The IFO transformer is a 10.7 Mc. FM discriminator transformer of the ratio type and is linear over a band of ± 100 Kc.

IFR. Low-priced quality IF transformer. 455 kc. 2⅜" high x 1⅛" square.

IFS. Same as IFR but 1720 kc.

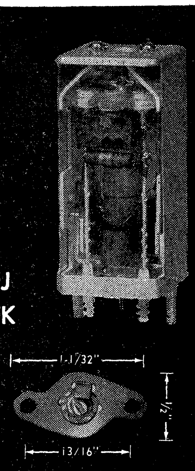
IFJ, with variable coupling

IFK, with fixed coupling

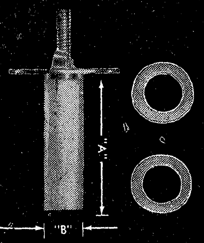
15 Mc. IF transformers suitable for ultra high frequency superheterodynes. They are made in two models with and without variable coupling. Approximate stage gain of 10 is obtained with IFJ or IFK Transformer and 6AB7 tube.

SA:4842

A 456 kc. discriminator transformer for narrow band frequency modulation. Two slug-tuned secondaries are employed and discrimination is accomplished by resonating one at approximately 10 kc. above, the other at approximately 10 kc. below the center frequency of the i.f. channel.



IFJ
IFK



XR-80—XR-90 Series

COILS AND COIL FORMS

AR-2 H.F. Coil

AR-5 H.F. Coil

The AR-2 and AR-5 coils are high Q permeability tuned RF coils on low loss mica-filled bakelite forms. The AR-2 coil tunes from 75 Mc. to 220 Mc. with capacities from 100 to 10 mmfd. The AR-5 coil tunes from 37 Mc. to 110 Mc. with capacities from 100 to 10 mmfd. The inductive windings supplied may be replaced by other windings as desired to modify the tuning range.

XR-50

These mica-filled bakelite coil forms may be wound as desired to provide a permeability tuned coil. The form winding length is 11/16" and the form winding diameter is ½ inch. The iron slug is ⅜" dia. by ½" long.

XR-51 same but with brass slug

CERAMIC SLUG-TUNED COIL FORMS

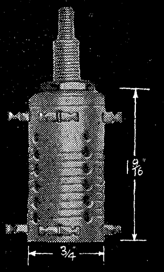
XR-70 (grooved for #19 wire, with iron slug)
XR-71 (same, brass slug)
XR-72 (not grooved, winding length 1", with iron slug)
XR-73 (same, brass slug)
XR-60 (grooved for #26 wire, with iron slug)
XR-61 (same, brass slug).
XR-62 (not grooved, winding length 1¼" with iron slug)
XR-63 (same, brass slug)

High-grade ceramic coil forms conforming to JAN specifications. May be wound as desired to provide a permeability-tuned **coil. Extra lugs provided.**

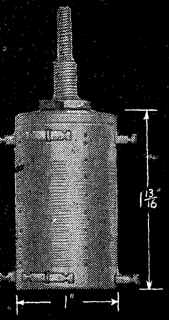
NEW PERMEABILITY TUNED CERAMIC COIL FORMS

Small ceramic coil forms designed primarily for high frequency applications and conforming to government specifications. Coil form is Grade L4 ceramic (JAN 1-10); base is silver-plated brass; core is brass or iron. Supplied with two nylon rings to separate coils if more than one is wound on same form. Small holes in rings can be used to secure leads.

TYPE	CORE	"A" DIM.	"B" DIM.
XR 80	BRASS	1¼"	17/64"
XR 81	IRON	1¼"	17/64"
XR 82	BRASS	1¾"	17/64"
XR 83	IRON	1¾"	17/64"
XR 90	BRASS	1¼"	⅜"
XR 91	IRON	1¼"	⅜"
XR 92	BRASS	1¾"	⅜"
XR 93	IRON	1¾"	⅜"

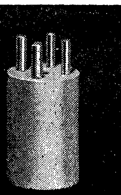


XR-70 XR-71
XR-72 XR-73

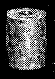


XR-60 XR-61
XR-62 XR-63

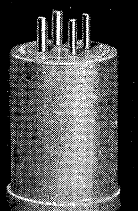
POPULAR National COMPONENTS



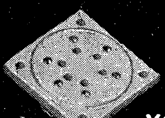
XR-1
XR-2



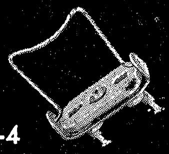
XR-3



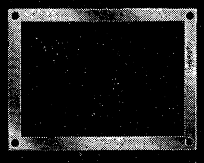
XR-4
XR-5
XR-6



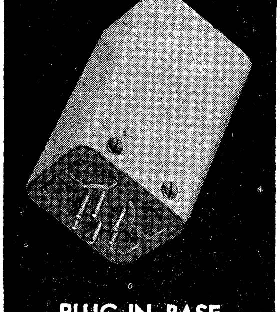
XC-6C



SC-4



CFA



PLUG-IN BASE
AND SHIELD

Coil Forms molded of R-39 mica-filled bakelite permitting them to be grooved and drilled. Coil Form diameter 1", length 1½"

XR-1, Four Prong

XR-2, Without Prongs

XR-3, molded of R-39 Diameter 9/16", length ¾" without prongs.

XR-4, Four Prong

XR-5, Five Prong

XR-6, Six Prong
Molded of R-39 permitting them to be grooved and drilled. Coil Form Diameter 1½", length 2¼". A special socket is required for the XR-6, National type **XC-6C**

SC, Crystal Sockets
The SC-1, SC-2, and SC-3 are crystal mounting sockets for crystal holders with mounting pins spaced 0.5000", 0.486", and .750" respectively and pin diameters of ⅛" and 3/32" and ⅛" respectively, steatite insulation. Single 4-36 or 4-40 screw mounting for SC-1 and SC-2, single 6-32 screw mounting for SC-3.

SC-4 Ceramic crystal socket with clamp. Pin spacing .500". Pin dia. 1/32".

CFA
The National chart frame is supplied with a celluloid sheet to cover the chart size 2¼" x 3¼" with sides ¼" wide. Durable finish.

PB-10-5
5 Prong base and shield

PB-10-6
6 Prong base and shield

PB-10-A-5
5 Prong base only

PB-10-A-6
6 Prong base only

RZ Coil Shield
1⅜" square x 4" high.

RS Coil Shield
1-7/16" x 1⅞" x 3½" high.

RO Coil Shield
2" x 2⅜" x 4⅛" high. National Coil Shields are formed from a single piece of pure aluminum. They are mechanically strong and have ample thickness to mount small parts on the walls, and include spade belts, for chassis mounting.

T-78 Tube Shield
National Tube Shield type T-78 is a three-piece pure aluminum shield suitable for shielding glass tubes with ST-12 bulb, such as the 6C6 and 6D6 tubes.

JS-1 Jack Shield
For shielding small standard jacks mounted behind a panel, or on the ends of extension coils. Indispensable for reducing hum pickup.

XOS Tube Shields
The XOS tube shield is a two-piece shield for the miniature Button 7 and 9 pin base tubes.

The shield contains a spring which centers tube in shield and holds tube and shield firmly in place.

SHIELDS 7-pin SOCKETS
XOS-1 fit 1⅛" tube body
XOS-2 fit 1½" tube body
XOS-3 fit 2" tube body

SHIELDS 9-pin SOCKETS
XOS-4 fit 1⅛" body
XOS-5 fit 1½" tube body
XOS-6 fit 2" tube body

FXT Fixed tuned exciter tank similar in general construction to National I.F. transformers, this unit has two 25 mmf., 2000 volt air condensers and an unwound XR-2 Coil form.

FXT (Without plug-in base)

FXTB-5 (With 5 prong base)

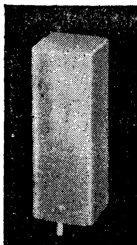
FXTB-6 (With 6 prong base)

Paint (not illustrated).

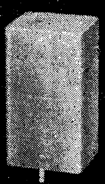
CP-1, dark gray

CP-2, black
A high quality air-drying paint that may be applied with a brush.

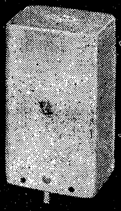
CP-3, light gray, for spraying and baking.



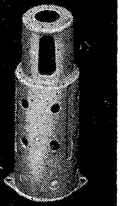
RZ



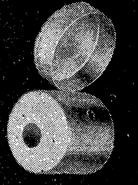
RS



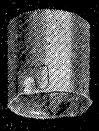
RO



T-78

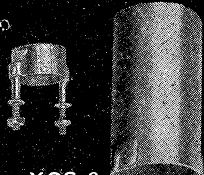


JS-1

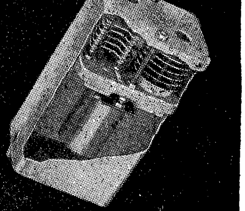


XOS-1

XOS-2



XOS-3

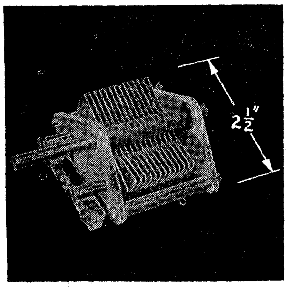


FIXED-TUNED
EXCITER TANK

POPULAR National COMPONENTS

TYPE TMS TRANSMITTING CONDENSERS

This is a condenser designed for transmitter use in low power stages. It is compact, rigid, and dependable. Provision has been made for mounting either on the panel, on the chassis, or on two stand-off insulators. Insulation is steatite. Voltage ratings listed are conservative.

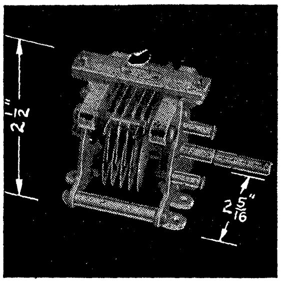


Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
100 Mmf.	9.5	3"	.026"	1000v.	9	TMS-100
150	11	3"	.026"	1000v.	14	TMS-150
250	13.5	3"	.026"	1000v.	22	TMS-250
300	15	3"	.026"	1000v.	27	TMS-300
35	8	3"	.065"	2000v.	7	TMSA-35
50	11	3"	.065"	2000v.	11	TMSA-50
DOUBLE STATOR MODELS						
50-50 Mmf.	6-6	3"	.026"	1000v.	5-5	TMS-50D
100-100	7-7	3"	.026"	1000v.	9-9	TMS-100D
125-125	8-8	3"	.026"	1000v.	11-11	TMS-125D
50-50	10.5-10.5	3"	.065"	2000v.	11-11	TMSA-50D

TYPE TMK TRANSMITTING CONDENSERS

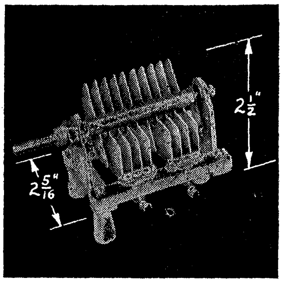
This is a new condenser for exciters and low power transmitters. Special provision has been made for mounting AR-16 coils in a swivel plug-in mount on either the top or rear of the condenser. For stand-off or panel mounting-steatite insulation.

Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
35 Mmf.	7.5	2 7/32"	.047"	1500v.	7	TMK-35
50	8	2⅜"	.047"	1500v.	9	TMK-50
75	9	2 11/16"	.047"	1500v.	13	TMK-75
100	10	3"	.047"	1500v.	17	TMK-100
150	10.5	3⅝"	.047"	1500v.	25	TMK-150
200	11	4¼"	.047"	1500v.	33	TMK-200
250	11.5	4⅞"	.047"	1500v.	41	TMK-250
DOUBLE STATOR MODELS						
35–35 Mmf.	7.5–7.5	3"	.047"	1500v.	7–7	TMK-35D
50–50	8–8	3⅝"	.047"	1500v.	9–9	TMK-50D
100–100	10–10	4¼"	.047"	1500v.	17–17	TMK-100D
Swivel Mounting Hardware for AR 16 Coils						SMH



TYPE TMH TRANSMITTING CONDENSERS

A condenser that features very compact construction. Excellent power factor, and aluminum plates .0400" thick with polished edges. It mounts on the panel or on removable stand-off insulators. Steatite insulators have long leakage path.

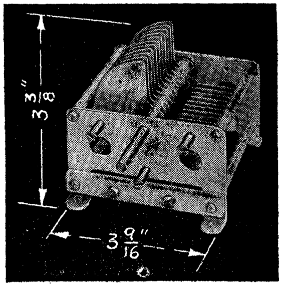


Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
50 Mmf.	9	3¾"	.085"	3500v.	15	TMH-50
75	11	3¾"	.085"	3500v.	19	TMH-75
100	12.5	5⅛"	.085"	3500v.	25	TMH-100
150	18	6½"	.085"	3500v.	37	TMH-150
35	11	5⅛"	.180"	6500v.	17	TMH-35A
DOUBLE STATOR MODELS						
35–35 Mmf.	6–6	3¾"	.085"	3500v.	9–9	TMH-35D
50–50	8–8	5⅛"	.085"	3500v.	13–13	TMH-50D
75–75	11–11	6½"	.085"	3500v.	19–19	TMH-75D

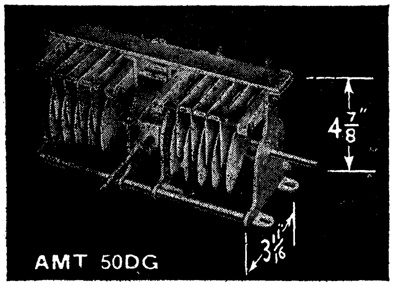
TYPE TMC TRANSMITTING CONDENSERS

A condenser designed for use in the power stages of transmitters where peak voltages do not exceed 3000 volts. The frame is extremely rigid and arranged for mounting on panel, chassis or stand-off insulators. The plates are aluminum with buffed edges. Insulation is steatite. The stator in the split stator models is supported at both ends.

Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
50 Mmf.	10	3"	.077"	3000v.	7	TMC-50
100	13	3½"	.077"	3000v.	13	TMC-100
150	17	4⅝"	.077"	3000v.	21	TMC-150
250	23	6"	.077"	3000v.	32	TMC-250
300	25	6¾"	.077"	3000v.	39	TMC-300
DOUBLE STATOR MODELS						
50–50 Mmf.	9–9	4⅝"	.077"	3000v.	7–7	TMC-50D
100–100	11–11	6¾"	.077"	3000v.	13–13	TMC-100D
200–200	18.5–18.5	9¼"	.077"	3000v.	25–25	TMC-200D



POPULAR National COMPONENTS

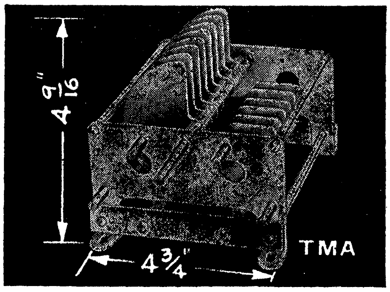


TYPE AMT

A larger and sturdier model of the TMK condenser. The frame is extremely rigid, with mounting feet a part of the end plates. Heavy steatite insulation.

The solid aluminum tie bar across the top of the condenser acts as a mounting for AR-18 series coils in the double stator models.

The double stator models are available in either standard end drive (D series) or center-drive (DG series) with ¼" dia. shaft extension.



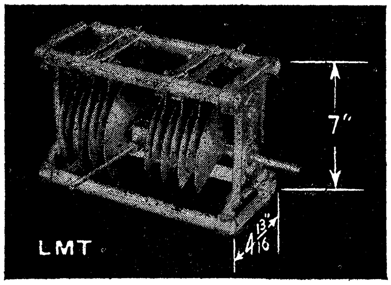
TYPE TMA

This is a larger model of the popular TMC. The frame is extremely rigid and arranged for mounting on panel, chassis or stand-off insulators. The plates are of heavy aluminum with rounded and buffed edges. Insulation is steatite located outside of the concentrated field.

Maximum Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
50 Mmf.	13	4¾"	.177"	6000 v.	9	**AMT-50**
100	20	6¾"	.177"	6000 v.	17	**AMT-100**
300	19.5	4 9/16"	.077"	3000 v.	23	**TMA-300**
50	15	4 9/16"	.171"	6000 v.	7	**TMA-50A**
100	19.5	6⅞"	.171"	6000 v.	15	**TMA-100A**
150	22.5	6⅞"	.171"	6000 v.	21	**TMA-150A**
230	33	9 5/16"	.171"	6000 v.	33	**TMA-230A**
100	30	9¼"	.265"	9000 v.	23	**TMA-100B**
150	40.5	12½"	.265"	9000 v.	33	**TMA-150B**
50	21	7⅛"	.359"	12,000 v.	13	**TMA-50C**
100	37.5	12⅞"	.359"	12,000 v.	25	**TMA-100C**
75	25	18 1/16"	.719"	20,000 v.	17	**TML-75E**
150	60	18 1/16"	.469"	15,000 v.	27	**TML-150D**
100	45	13⅝"	.469"	15,000 v.	19	**TML-100D**
50	22	8 5/16"	.469"	15,000 v.	9	**TML-50D**
245	54	18 1/16"	.344"	10,000 v.	35	**TML-245B**
150	45	13⅝"	.344"	10,000 v.	21	**TML-150B**
100	32	10 15/16"	.344"	10,000 v.	15	**TML-100B**
75	23.5	8 5/16"	.344"	10,000 v.	11	**TML-75B**
500	55	18 1/16"	.219"	7,500 v.	49	**TML-500A**
350	45	13⅝"	.219"	7,500 v.	33	**TML-350A**
250	35	10 15/16"	.219"	7,500 v.	25	**TML-250A**
DOUBLE STATOR MODELS **D—End drive** **DG—Center drive**						
50–50	13–13	9⅜"	.177"	6000 v.	18	**AMT-50D**
100–100	20–20	13⅜"	.177"	6000 v.	34	**AMT-100D**
50–50	13–13	9⅜"	.177"	6000 v.	18	**AMT-50DG**
100–100	20–20	13⅜"	.177"	6000 v.	34	**AMT-100DG**
200–200	15–15	6⅞"	.077"	3000 v.	16–16	**TMA-200D**
180–180	10–10	12¾"	.140"	4000 v.	24–24	**TMA-180D**
50–50	12.5–12.5	6⅞"	.155"	6000 v.	8–8	**TMA-50DA**
100–100	17–17	9 5/16"	.155"	6000 v.	14–14	**TMA-100DA**
60–60	19.5–19.5	12½"	.249"	9000 v.	15–15	**TMA-60DB**
40–40	18–18	12⅞"	.343"	12,000 v.	11–11	**TMA-40DC**
30–30	12–12	18 1/16"	.719"	20,000 v.	7–7	**TML-30DE**
60–60	26–26	18 1/16"	.469"	15,000 v.	11–11	**TML-60DD**
100–100	27–27	18 1/16"	.344"	10,000 v.	15–15	**TML-100DB**
60–60	20–20	13⅝"	.344"	10,000 v.	9–9	**TML-60DB**
200–200	30–30	18 1/16"	.219"	7,500 v.	21–21	**TML-200DA**
100–100	17–17	10 15/16"	.219"	7,500 v.	11–11	**TML-100DA**

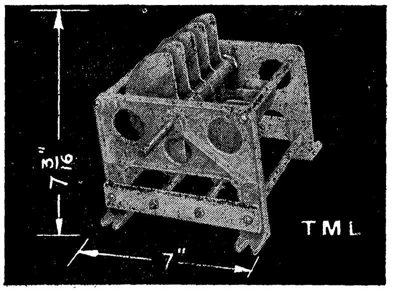
TYPE LMT

A heavy duty transmitting condenser that completely eliminates troublesome closed loops, vastly simplifying the problem of unwanted harmonics. The rotor shaft is completely insulated from the end plates. Long leakage path (higher safety factor). Plates and parts are extra heavy with highly polished rounded edges to prevent flash-over. Adjustable stator plate mounting and end bearings. Available in single-stator, double-stator, or double-stator right angle center drive models. Same capacities and prices as National TML Condenser.

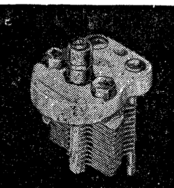


TYPE TML

is a heavy duty job throughout. The frame structure (rugged aluminum castings with dural tie bars) and precision bearings assure permanent rotor alignment. All plates are extra thick with rounded and polished edges. This, plus specially treated steatite insulators and a husky self-cleaning rotor contact, provides high flashover, current and voltage ratings.

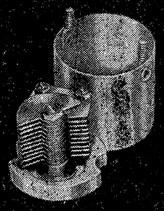


POPULAR National COMPONENTS

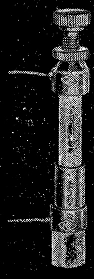


PSR

M30

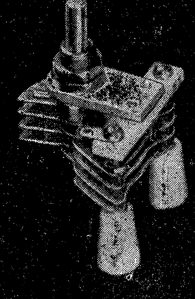


W100



NC-600U

TU BY



STN

MINIATURE CONDENSERS:

Type PS variable condensers are compact silver plated units of soldered construction for use as semi-fixed bandsets or padders. Base is steatite — bearing is "snug" but smooth. PSR models are screw-driver adjust type; PSE have 1/4" diameter shafts both ends; PSL are similar to PSR but include rotor shaft lock.

Type M-30

The M-30 is a tiny (13/16" x 9/16" x 1/2") mica trimmer — 30 mmf. max. — steatite base.

Type W-75, 75 mmf.

Type W-100, 100 mmf.

Small air-dielectric padding condensers having a very low temperature coefficient. They are mounted in 1 1/4" diameter aluminum shields and have 1/4" hex heads for socket-wrench adjustment.

The UM condensers are low-loss, aluminum plate staked construction miniature variables designed for UHF converters, VFOs and the like — minimum capacity is exceptionally low. The UMs can be mounted in PB-10 or RO shield cans and have 1/4" dia. shafts front and rear for ganging (see pages 21, 23 and 24 for shield cans and couplings). Plates: straight-line-cap., 180° rotation. Dimensions: Base 1" x 2 1/4", mtg. holes on 5/8" x 1-23/32" centers, 2-5/16" max. length.

The UMB-25 and UMB-50 are differential (balanced stator) models. UM-10D and UMA-25 are double-spaced and the latter is bolted construction for experimental capacity reduction. Hardware for panel or chassis mounting is supplied with all UM condensers.

Capacity	Catalog Symbol		
25 mmf.	PSR-25	PSE-25	PSL-25
50	PSR-50	PSE-50	PSL-50
75	PSR-75	PSE-75	PSL-75
100	PSR-100	PSE-100	PSL-100

Capacity	Minimum Capacity	No. of Plates	Air Gap	Catalog Symbol
15 mmf.	1.5	6	.017"	UM-15
35	2.5	12	.017"	UM-35
50	3	16	.017"	UM-50
75	3.5	22	.017"	UM-75
100	4.5	28	.017"	UM-100
10	1	8	.042"	UM-10D
25	3.4	14	.042"	UMA-25
BALANCED STATOR MODEL				
25	2	4-4-4	.017"	UMB-25
50	5	8-8-8	.017"	UMB-50

NEUTRALIZING CONDENSERS:

NC-600U

With standoff insulator

NC-600

Without insulator

For neutralizing low power beam tubes requiring from .5 to 4 mmf., and 1500 max. total volts such as the 6L6. The NC-600U is supplied with a GS-10 standoff insulator screwed on one end, which may be removed for pigtail mounting.

"TU BY" CONDENSERS

Tubular condensers providing short r.f. path between plate and cathode for tubes having the plate connection at the top. Design reduces harmonics and helps eliminate parasitics. 3,000 volts or 1,500 volts. 15 mmfd.

STN

The Type STN has a maximum capacity of 18 mmf. (3000 V), making it suitable for such tubes as the 809. It is supplied with two standoff insulators.

NC-800A

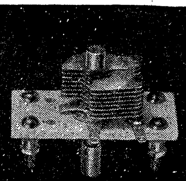
The NC-800A disk-type neutralizing condenser is suitable for the T40, 35TG, 808 and similar tubes. It is equipped with a clamp for locking. The chart below gives capacity and air gap for different settings.

NC-75

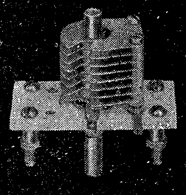
For 812, 75TH and similar tubes.

NC-150

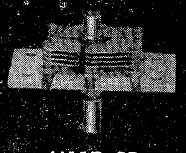
For RK36, 100TH, HK354, 250TH, etc.



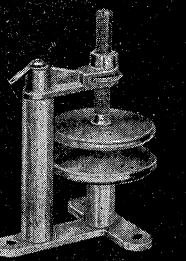
UM



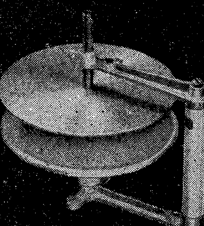
UMA-25



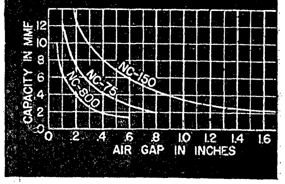
UMB-25



NC-800A



NC-75
NC-150



POPULAR National COMPONENTS

PRECISION CONDENSERS

Originally developed for the famous HRO and NC-100 receivers, National PW and NPW condensers and drive units are well known to professional and amateur radio men throughout the world. Sturdily constructed of the finest materials and carefully adjusted by skilled hands, they have become "standard specifications" for applications requiring smooth, precise control and high re-set accuracy.

The Micrometer Dial reads direct to one part in 500. Division lines are approximately ¼" apart. The drive, at the mid-point of the rotor, is through an enclosed preloaded worm gear with 20 to 1 ratio. Each rotor is individually insulated from the frame, and each has its own individual rotor contact. Stator insulation is steatite. Plate shape is straight-line frequency when the frequency range is 2:1.

PW Condensers are available in 1, 2, 3 or 4 sections, in either 160 or 225 mmf per section. Larger capacities cannot be supplied.

PW-1R	Single section right
PW-1L	Single section left
PW-2R	Double section right
PW-2L	Double section left
PW-2S	Single section each side
PW-3R	Double section right; single left
PW-3L	Double section left; single right
PW-4	Double section each side
NPW-3	Three sections, each 225 mmf.

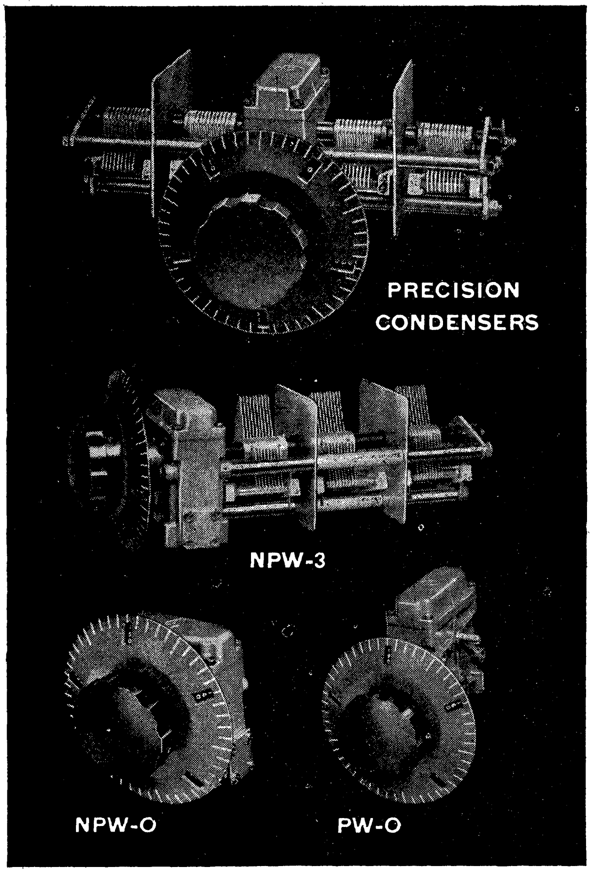
Similar to PW models, except that rotor shaft is perpendicular to panel.

NPW-O

Uses parts similar to the NPW condenser. Drive shaft perpendicular to panel. One TX-9 coupling supplied.

PW-O

Uses parts similar to the PW condenser. Drive shaft parallel to panel. Two TX-9 couplings supplied.



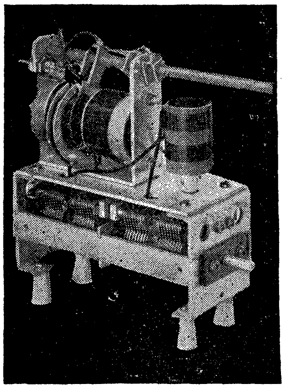
PW-D

The Micrometer Dial used on the condensers and drives above is available separately. It revolves ten times in covering the complete range and as there is no gear reduction unit furnished, the driven shaft will revolve ten times, also. The PW-D dial fits a shaft 5/16" in diameter.

MULTI-BAND TANK ASSEMBLIES

The unique MB-150 Multi-Band Tank tunes all amateur bands from 80 through 10 meters with 180° rotation of the shaft; the coils are never changed. The unit is built around a circuit which tunes to two harmonically unrelated frequencies at the same time. Thus, it becomes possible to cover a wide frequency range and yet maintain a reasonably constant L/C ratio. 3" wide x 8¼" high (including the GS-10 standoffs) x 9" long overall including the ¼" dia. shaft and output terminals.

MB-40SL



Features of the MB-150:

(1) For use as the all-band plate tank in push-pull or single-ended stages running up to 150-watts input (1500 volts peak). It is ideal for a pair of 807s or 809s or a single 829B.

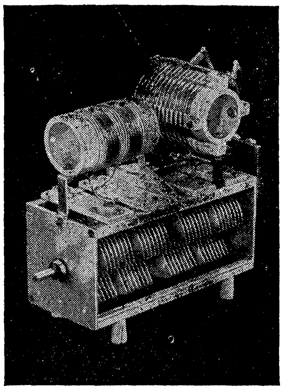
(2) Separate link coupling coil has special clips which adjust to match impedances up to 600 ohms directly. Output couples into a higher powered amplifier, an antenna or an antenna tuning network.

(3) Fast band changing is accomplished without handling coils, thus removing one of the danger points in the amateur station.

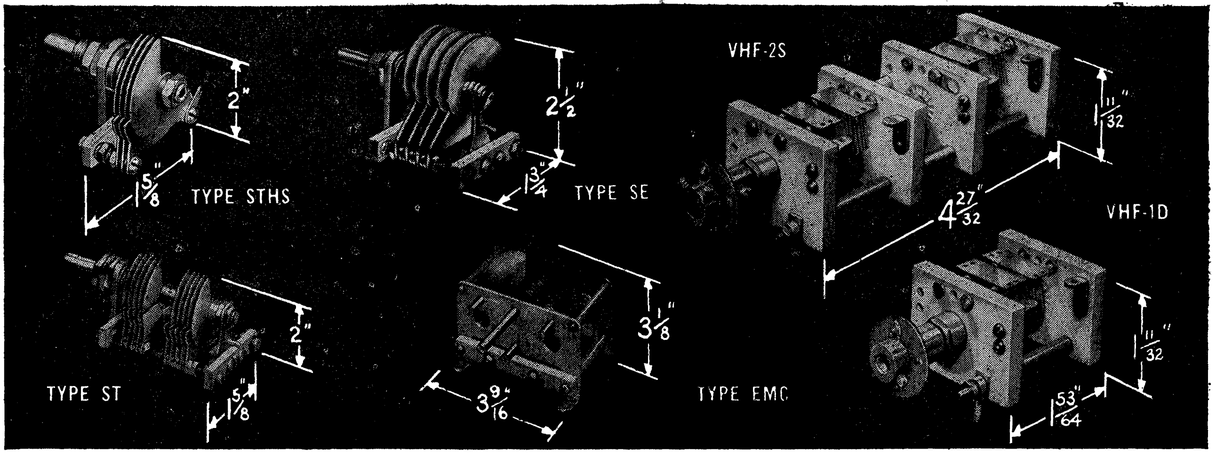
Features of the MB-40SL:

The MB-40SL can be used in grid circuits with approximately 20 watts input and in final plate circuits when input to the stage does not exceed 40 watts loaded. Now includes new swinging link for varying inductance. Output can be taken from the variable shielded link when coupling to antenna or next stage.

MB-150



POPULAR National COMPONENTS



TYPE ST (180° Rotation)
STRAIGHT-LINE WAVELENGTH

The ST Type condenser has Straight-Line Wavelength plates. All double-bearing models have the front bearing insulated to prevent noise. On special order a shaft extension at each end is available, for ganging. On double-bearing single shaft models, the rotor contact is through a constant impedance pigtail Steatite insulation.

NOTE — Type SS Condensers, having straight-line capacity plates but otherwise similar to the Type ST, are available. Capacities and Prices same as Type ST.

Capacity	Minimum Capacity	No. of Plates	Air Gap	Length	Catalog Symbol
SINGLE BEARING MODELS					
15 Mmf.	3 Mmf.	3	.018"	1 3/16"	**STHS- 15**
25	3.25	4	.018"	1 3/16"	**STHS- 25**
50	3.5	7	.018"	1 3/16"	**STHS- 50**
SPLIT STATOR DOUBLE BEARING MODELS					
50–50	5–5	11–11	.026"	2 3/4"	**STD- 50**
100–100	5.5–5.5	14–14	.018"	2 3/4"	**STHD-100**
DOUBLE BEARING MODELS					
35 Mmf.	6 Mmf.	8	.026"	2 1/4"	**ST- 35**
50	7	11	.026"	2 1/4"	**ST- 50**
75	8	15	.026"	2 1/4"	**ST- 75**
100	9	20	.026"	2 1/4"	**ST-100**
140	10	27	.026"	2 3/4"	**ST-140**
150	10.5	29	.026"	2 3/4"	**ST-150**
200	12.0	27	.018"	2 1/4"	**STH-200**
250	13.5	32	.018"	2 3/4"	**STH-250**
300	15.0	39	.018"	2 3/4"	**STH-300**
335	17.0	43	.018"	2 3/4"	**STH-335**

TYPE SE (270° Rotation)
STRAIGHT-LINE FREQUENCY

TYPE SE — All models have two rotor bearings, the front bearing being insulated to prevent noise. A shaft extension at each end, for ganging, is available on special order. On models with single shaft extension, the rotor contact is through a constant impedance pigtail. The SEU models (illustrated) are suitable for high voltages as their plates are thick polished aluminum with rounded edges. Other SE condensers do not have polished edges on the plates. Steatite insulation.

15 Mmf.	7 Mmf.	6	.055"	2 1/4"	**SEU- 15**
20	7.5	7	.055"	2 1/4"	**SEU- 20**
25	8	9	.055"	2 1/4"	**SEU- 25**
50	9	11	.026"	2 1/4"	**SE- 50**
75	10	15	.026"	2 1/4"	**SE- 75**
100	11.5	20	.026"	2 1/4"	**SE-100**
150	13	29	.026"	2 3/4"	**SE-150**
200	12	27	.018"	2 1/4"	**SEH-200**
250	14	32	.018"	2 3/4"	**SEH-250**
300	16	39	.018"	2 3/4"	**SEH-300**
335	17	43	.018"	2 3/4"	**SEH-335**

TYPE EMC (180° Rotation)
STRAIGHT-LINE WAVELENGTH

TYPE EMC — A general purpose condenser available in large sizes and having Straight-Line wavelength plates. They are similar in construction to the TMC Transmitting condenser, and have high efficiency and rugged frame Insulation is Steatite, and Peak Voltage Rating is 1000 volts. Same sizes available with straight line capacity plates, type DXC condenser.

Capacity	Minimum Capacity	No. of Plates	Length	Catalog Symbol
150 Mmf.	9 Mmf.	9	2 15/16"	**EMC- 150**
250	11	15	2 15/16"	**EMC- 250**
350	12	20	2 15/16"	**EMC- 350**
500	16	29	4 3/8"	**EMC- 500**
1000	22	56	6 3/4"	**EMC-1000**

VHF CONDENSERS

● **Shaft extension at rear for ganging purposes.** Dual condensers ideal for mixer-oscillator unit. ● Ball bearings front and back for smooth rotation and freedom from back-lash. ● Brackets for mounting 7-pin miniature tube sockets, i.e., National XOA for very short leads from tube to condenser essential for VHF efficiency, and rigid compact unit-assembly that produces better stability. ● Wide low-inductance stator strap connections raise frequency limit of condensers. Coil or strap tank can be connected directly to stator straps allowing maximum inductance in tank and a minimum of inductance between tank and stator. ● Stators, rotors and stator strap connections silver-plated for best efficiency. ● Rigid square construction, heavy isolantite end plates. ● Spade bolts allow solid connections to chassis for extreme rigidity. ● Flexible insulating coupling available to connect condenser shaft to 1/4" dial shaft. ● Flexible insulating coupling available to connect two or more condensers together as ganged units. ● High capacity single spaced units for general coverage. ● Low capacity double spaced units for bandspread, suitable for ham use, particularly in the VHF and UHF ham bands. ● Stators solder construction can be removed and replaced by strap tanks for special VHF and UHF application.

DOUBLE SPACED MODELS

Two section VHF-2D,

Maximum capacity per section stator to stator	6.75 mmf.
Minimum capacity per section stator to stator	3.0 mmf.
Net change	3.75 mmf.

Single section VHF-1D,

Maximum capacity stator to stator	6.75 mmf.
Minimum capacity stator to stator	3.0 mmf.
Net change	3.75 mmf.

SINGLE SPACED MODELS

Two section VHF-2S,

Maximum capacity per section stator to stator	22.5 mmf.
Minimum capacity per section stator to stator	3.0 mmf.
Net change	19.5 mmf.

Single section VHF-1S,

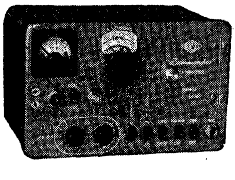
Maximum capacity stator to stator	22.5 mmf.
Minimum capacity stator to stator	3.0 mmf.
Net change	19.5 mmf.

COMMUNICATIONS EQUIPMENT

GONSET CO.

801 South Main St. - - Burbank, Calif.

"COMMANDER" 35-50W Multi-band Transmitter



FREQ. RANGE: 1.7-54 mcs continuous.

TUBES: RF-6AG7, 6146. AF-12AT7, two 6AQ5's.

POWER REQUIREMENTS: 300V @ 200-225 ma (phone) and 6.3V, AC or DC @ 3.15A. 35W inp. phone, 50W CW.

MODULATOR: Class AB2 tetrodes and integral hi-level speech clipping.

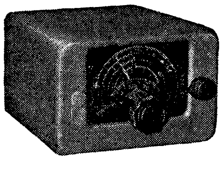
ANTENNA FEED: All conventional feed lines, Coax, ribbon or open line or direct to Marconi antenna.

MICROPHONE INPUT: Any standard carbon or PA type hi-impedance dynamic or crystal.

Complete with tubes, less power supply, xtl and microphone.

Model #3016..................
Net $124.50

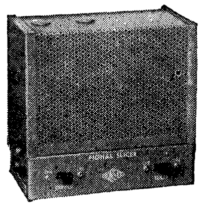
VFO FOR COMMANDER



A companion unit for use with the Commander. Unique circuit employs no tubes therefore affords good stability because no heat is generated in heavy aluminum box. Same size as Super Six. Covers 10, 15, 20, 40 and 75 phone bands. Merely plug into receptacle on Commander panel. Stable, with construction extremely sturdy for rugged mobile use.

Model #3020..................
Net $29.95

"SIGNAL SLICER"

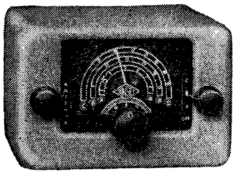


A highly selective I.F. amplifier for use with any car or home radio using standard I.F. Will increase selectivity to 3.5 kc for better reception on crowded bands. Has built-in noise clipper to greatly reduce ignition and similar noise. Broad-sharp switch. Is powered from car radio. Draws only 1.5 ma plus heaters. Size 6⅛" x 5⅞" x 3".

Model #3048 (262 kc)
Net $29.95

Model #3028 (455 kc)
Net $29.95

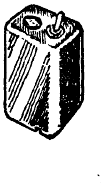
"3-30" SW CONVERTER



An excellent general coverage converter where extreme band-spread is not required. Covers 3 to 30 mcs in three ranges. Uses four tubes: 6BH6 RF, 6AV6 mixer, 6C4 oscillator and 6BH6 I.F. stage. Extremely compact and easy to install with any car radio.

Model #3002..................
Net $44.75

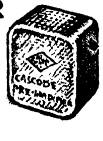
NOISE CLIPPER



A "must" for every mobile installation operating above 2 or 3 mc to reduce ignition interference. Works with all sets using conventional diode detectors. Easy to install. Complete instructions furnished.

Model #3001. .....net $9.25

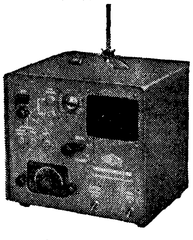
"CASCODE" PRE-AMPLIFIER



For 2 meter receivers to increase gain and signal-to-noise ratio. Gain is over 10 DB through entire 2 meter band. Also supplied for spot frequencies between 50-174 mcs. Compact, 3"x5½"x 3¼".

Model #3027.... .net $19.95

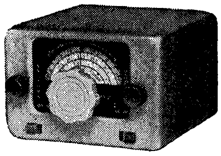
"COMMUNICATOR"
Two meter Transmitter-Receiver



A complete 2 meter station in portable form. Superhet receiver with 6BQ7 "Cascode" RF stage and 3 stages I.F. Has excellent noise clipper circuit. Transmitter uses 8 mc xtls. Power input 12 watts. Tuning range 144-148.3 mcs. Takes crystal or carbon mike. Modulator can be used for a PA system. Has husky, self-contained 6/110V power supply. Size 10¼" x 9¼" x 7". Weight approx. 16 pounds. Ideal for amateur, C-D or CAP. Commercial versions also available. (Write for price)

Model #3026.........
Net $199.50

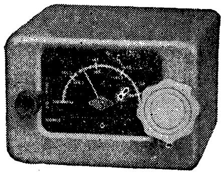
"SUPER SIX"
SIX BAND CONVERTER



The new six band de luxe converter covering 10-11, 15, 20, 40 and 75 meters. Improved sensitivity and added band spread. Also covers 19 and 49 meter SW broadcast bands. Built-in BC trap. Separate isolated antenna inputs for converter and BC set. Oscillator correction control on rear of chassis. Sturdy, drawn aluminum outer case.

Model #3030..........
Net $52.50

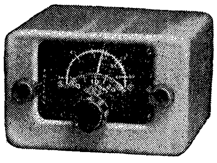
TWO METER CONVERTER



Covers 144-148.3 for amateur or CAP fixed or mobile service. Superimposition tuning and 1 mc output I.F. doubles band-spread and speeds tuning, avoids image. High stability, excellent sensitivity. Utilizes power supply of receiver to which connected. Standard Gonset drawn aluminum case. Tubes 6CB6, 12AT7 and OB2.

Model #3008..........
Net $44.50

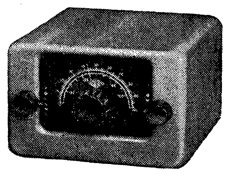
POLICE-MARINE CONVERTER



Overall performance and construction comparable to 3-30 model except covers 1.6 to 6 mcs in two bands and employs 1 mc output. Ideal for police, marine, CAP, Civil Defense, disaster communications as well as amateur 75 and 160 meter mobile work. Compact, efficient, ruggedly constructed.

Model #3003.........
Net $46.00

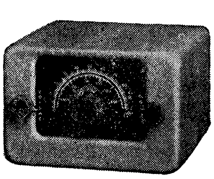
FM-AM TUNERS



Excellent for use with receiver covering lower frequency to extend range for FM or AM front-end coverage. Uses power supply, audio and speaker of fixed receiver. Seven models as follows: 30-40 mc FM, 30-40 mc AM, 40-50 mc FM, 40-50 mc AM, 88-108 mc FM, 152-162 mc FM, 162-174 mc FM. De luxe models have squelch tube. ($10.00 additional for de luxe models). Specify model. Other ranges also available.

Standard models....
Net $59.50

VHF AIRCRAFT ADAPTER



Used in conjunction with auto radio or LF aircraft receiver etc., to provide inexpensive, sensitive receiver covering 108-128 mcs. For 6 or 12 volt operation with 24 volt special. Includes series gate noise clipper. Installation does not effect operation of existant equipment. Rugged, stable and compact. Specify 6 or 12 volts. (Add $5.00 for 24 volts).

Model #3014..........
Net $69.50

Model #3015 (squelch)
Net $79.50

hallicrafters

model SX-62
all-wave high fidelity

The world's finest receiver for the All-Wave listener. Unequalled in coverage and performance on all wave bands—Standard Broadcast, Short-Wave or FM. Continuous coverage from 540 kc to 109 Mc. Having basically the same chassis as a fine communications receiver, the SX-62 provides communications-receiver performance in simplified form. A single tuning control covers the wide-vision dial. Only one band lights up at a time—you always know just where you are tuning. In addition a 500 kc crystal calibration oscillator is built in, enabling you to adjust the dial pointer to show the exact frequency being tuned at any time.

Performance: Continuous AM reception 540 kc to 109 Mc; FM band 27-109 Mc. Temperature compensated, voltage regulated. Two RF, three IF stages; dual IF channels (455 kc and 10.7 Mc). Audio flat 50-15,000 cycles; 10 watt push-pull output.

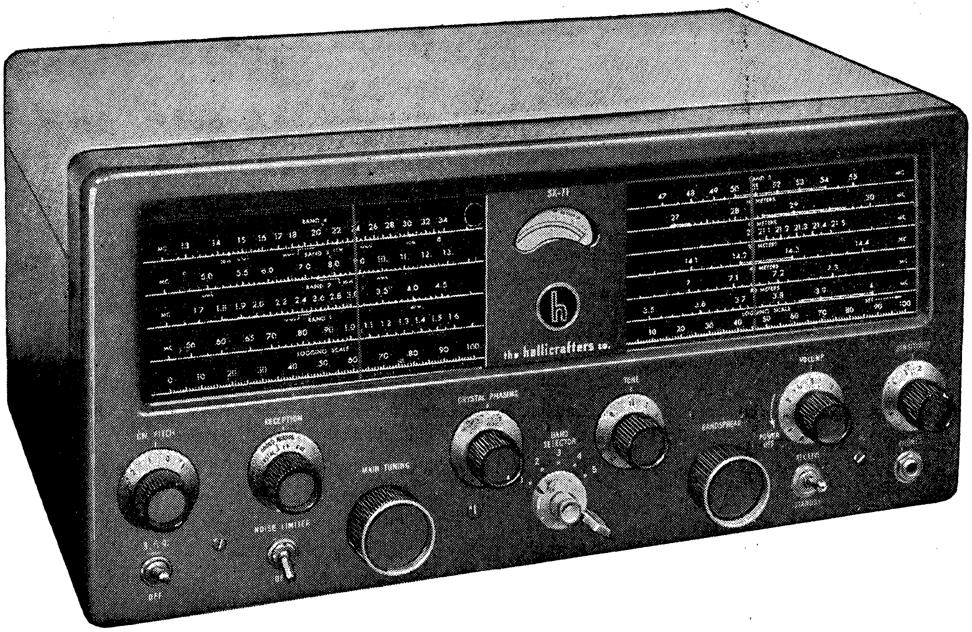
Controls: Band Selector 540-1620 kc. 1.62-4.9 Mc, 4.9-15 Mc, 15-32 Mc, 27-56 Mc, 54-109 Mc; Receive/Standby, Calibration Osc. On/Off, Noise Limiter, Tuning, AF Gain, Phono/FM/AM/CW, six-position Selectivity, four-position Tone, RF Gain, Calibration Reset.

Physical Data: Satin black steel cabinet with satin chrome trim. Top opens on piano hinge. Cabinet 20″ wide by 10¼″ high by 16″ deep.

External Connections: Doublet or single wire antenna. 500 and 5000-ohm outputs. Phone jack. Phonograph input jack. Socket for external power and Remote control connections. 105-125 V. 50/60 cycle AC line.

14 Tubes plus Voltage Regulator and Rectifier: Two 6AG5 RF Amps., 7F8 Conv., 6SK7 IF Amp., 6SG7 IF Amp., 6SG7 IF Amp., 6SG7 FM Limiter and AM Det., 6H6 FM Det., 6J5 BFO, 6H6 ANL, 6SL7 AF Amp., two 6V6 Push-Pull Output, 6C4 Calibration Osc., VR-150 Regulator, 5U4G Rectifier.

Model SX62 . . . . $299^50



hallicrafters

model SX-71
command performance

From the Hams at Hallicrafters to Hams everywhere comes this top-performing receiver in the medium price class. Extra sensitivity, selectivity, and stability, definitely superior image rejection with double superheterodyne circuit, plus built-in Narrow Band FM reception. Extra wide dials for main and bandspread tuning. Surpasses in ham performance many receivers priced considerably higher.

Performance: Continuous AM reception from 538 kc to 34 Mc, and 46 to 56 Mc. Built-in limiter and balanced detector stages for hiss-free NBFM reception. Double conversion (2075 and 455 kc i-f channels) gives image rejection of better than 150 to 1 at 28 Mc. Temperature compensated, voltage regulated. One r-f, two conversion, and 3 i-f stages yield high gain for sensitivity of .7 microvolts with 50 milliwatts output. Audio peaked for communications frequencies, with 3 watt output.

Controls: Band Selector 538-1650 Kc, 1600-4800 kc, 4.6-13.5 Mc, 12.5-34 Mc, 46-56 Mc. Separate main and Bandspread tuning controls; bandspread dial calibrated for 80, 40, 20, 15, 10, and 6 Meter Bands. BFO Pitch 3-position Selectivity, Crystal Phasing, Tone, a-f Gain, and r-f Gain controls. ANL, BFO, and Receive/Send switches. "S" Meter adjustment on rear.

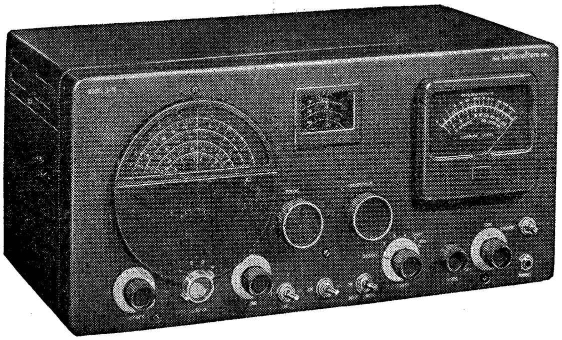
Physical Data: Satin black steel cabinet with chrome trim. Piano hinge top. Size 18½ in. wide by 8⅞ in. high by 12 in. deep. Ship. wt. 33 lbs.

External Connections: Use doublet or single wire antenna. 500 and 3.2 ohm outputs for separate speaker. Phone jack. Socket for external power supply. Connections for remote control. For 105-125 volts 50/60 cycle AC.

11 Tubes plus Voltage Regulator and Rectifier: 6BA6 r-f Amp., 6C4 Osc., 6AU6 Mixer, 6BE6 2nd Conv., three 6SK7 i-f Amps., 6H6 ANL and delayed AVC, 6SC7 BFO and a-f Amp., 6AL5 Det., 6K6GT Output, VR-150 Reg., and 5Y3GT Rect.

Model SX71 . . . . $224⁵⁰

Net



hallicrafters

model S-76
double super-het

Double conversion receiver, double superhet with 50 kc second i-f and 4-inch "S" Meter.

Performance: Continuous coverage 538-1580 kc and 1.72-32 Mc. Double conversion eliminates images. 50 kc second i-f gives excellent "skirt" selectivity with "nose" selectivity variable from 5.6 kc down to 500 cycles. Temperature compensated, voltage regulated. One r-f, two conversion, and two i-f stages. 2½ watts output.

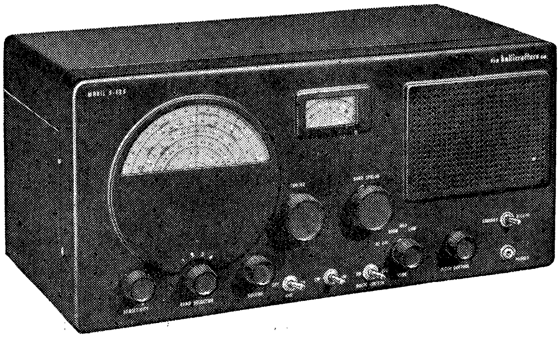
Controls: Band Selector 538-1580 kc, 1.72-49 Mc, 4.6-13 Mc, 12-32 Mc; Separate Main and Bandspread tuning; bandspread calibrated for 80, 40, 20, 15, 11, 10 meters; five-position Selectivity with phono switch built-in; BFO Pitch; full-range Tone; AVC, BFO, ANL, Rec./Standby switches. "S" Meter adjustment on rear.

Physical Data: Satin black steel cabinet with plastichrome skirts. Piano hinge top. Size 18½" wide, 8⅞" high, 9½" deep. Ship. wt. approx. 46 lbs.

External Connections: Use doublet or single wire antenna. 500 or 3-2 ohm outputs. Phone jack. Phono input jack. Connections for external power and remote control. Mounting holes provided for coax connector. For 105-125 volts 50/60 cycle AC.

9 Tubes plus Regulator and Rectifier: 6CB6 r-f Amp., 6AU6 1st Conv., 6C4 Osc., 6BA6 1st i-f, 6BE6 2nd Conv., 6BA6 2nd i-f, 6AL5 Det., ANL, 6SC7 BFO, 6K6GT Output, VR-150 Reg., 5Y3GT Rect.

Model S-76—AC	$179.50



hallicrafters

model S-40B
ham favorite

Superior performance. Complete with PM speaker.

Performance: AM reception 540 kc to 43 Mc. Temperature compensated oscillator. One RF and two IF stages. Audio response to 10,000 cycles.

Controls: Band Switch 540-1700 kc, 1700-5300 kc, 5.3-15.7 Mc, 15.7-43.0 Mc. Main tuning in Mc; band-spread dial has arbitrary scale. AF and RF Gain controls; AVC, BFO, and Noise Limiter switches; three-position Tone, BFO Pitch, and Receive/Standby controls.

Physical Data: Satin black steel cabinet. Size 18½" wide by 8⅞" high by 9½" deep. Ship. wt. 32 lbs.

External Connections: Doublet or single wire antenna. Phone jack. S-40 uses 105-125 V. 50/60 cycles AC only. S-77A uses 105-125 V. DC or 50/60 cycle AC.

7 Tubes plus Rectifier: (in S-40B) 6SG7 RF Amp., 6SA7 Conv., two 6SK7 IF Amps., 6H6 ANL and AVC, 6SL7 BFO and Det., 6F6G Output, 5Y3GT Rectifier.

Model S-77A: Same as above only for 105/125 volts, AC/DC.

Model S40B	$119.95
Model S-77A	$119.95

the hallicrafters co.
MODEL S-53-A

hallicrafters

model S-53A top performance —small size

Unquestionably the finest small communications receiver built. Several steps better than the S-38C but not as good as the S-40B. Complete in itself, with built-in PM speaker.

Performance: Coverage 540-1600 kc, 2.6-31 Mc plus 48-54.5 Mc. Two stages IF amplification.

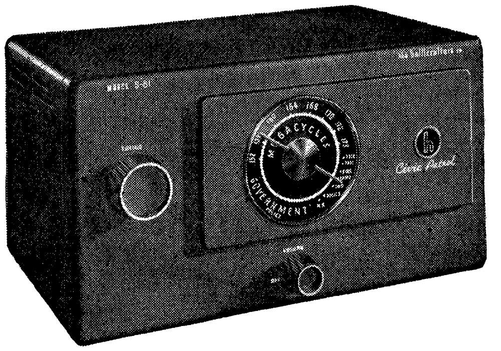
Controls: Main tuning in Mc; separate bandspread dial with logging scale plus Mc calibration for 48-54.5 Mc band; Receive/Standby switch; Band switch 540-1630 kc; 2.5-6.3 Mc, 6.3-16 Mc, 14-31 Mc, and 48-54.5 Mc; AM/CW; RF Gain, Noise Limiter, AF Gain, two-position Tone; Speaker/Phones switch on rear.

Physical Data: Satin black steel cabinet with chrome trim. Top opens on piano hinge. Size 12⅞″ wide by 7″ high by 7¾″ deep. Ship. wt. 19 lbs.

External Connections: Doublet or single wire antenna. Phone tip jacks. Phonograph input jack. 105-125 V. 50/60 cycle AC line.

7 Tubes plus Rectifier: 6C4 Osc., 6BA6 Mixer, two 6BA6 IF Amps., 6H6 Det., AVC and ANL, 6SC7 BFO and AF Amp., 6K6GT Output, 5Y3GT Rectifier.

Model S-53A . . . . $\$89^{95}$



hallicrafters

model S-81 and S-82 emergency frequency—FM

A compact, easy-to-operate new FM receiver covering police, fire, taxicab, truck, private telephone, railroad, and other industrial frequencies. Especially suited for civilian defense groups in metropolitan areas where a reliable, low cost receiver is required to hear industrial and emergency-service communications. Headphone tip jacks on rear. Built-in PM speaker.

Performance: Newly designed FM chassis provides low frequency drift and high signal-to-noise ratio. Regular model S-81 covers VHF FM frequencies 152 to 173 Mc; low-band model S-82 covers H/F FM frequencies 30 to 50 Mc. Two i-f stages for extra sensitivity to pull in weak stations.

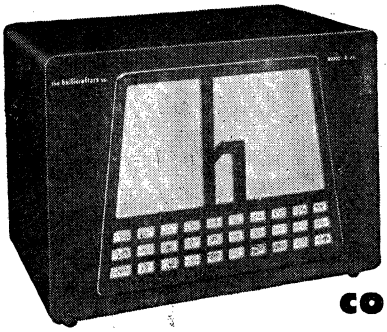
Physical Data: Steel cabinet in black wrinkle enamel finish. Size 12⅞″ wide, 7″ high, 7¼″ deep. Ship. wt. approximately 14 lbs.

External Connections: Use single wire or twin-lead antenna. Tip jack for headphones on rear. 105-125 V. DC or 50/60 cycle AC.

6 Tubes plus Rectifier: 12AT7 Osc. Mixer, two 12BA6 IF Amps., 12AL5 FM Det., 12SQ7 1st Audio, 50L6 Power Output. Selenium Rectifier.

Model S-81 Covers VHF FM 152-173 Mc $\$49^{50}$

Model S-82 Covers HF FM 30-50 Mc $\$49^{50}$



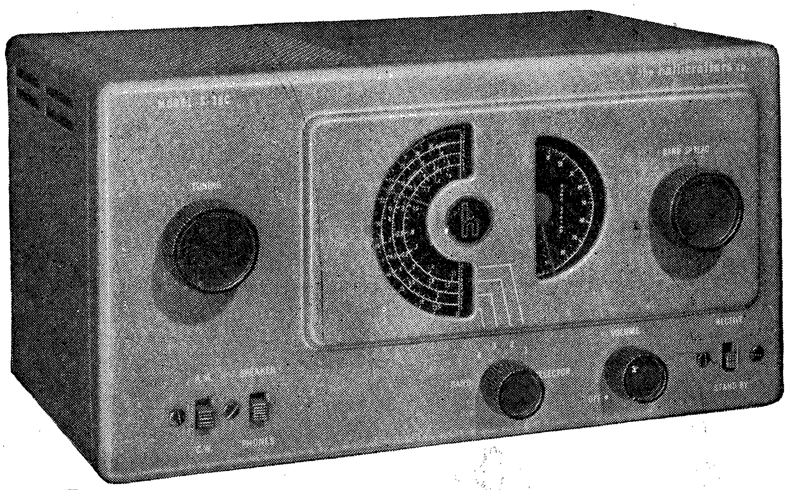
hallicrafters

model R-46 communications speaker

Matching 10" PM speaker for use with Hallicrafters Communications receiver SX-71, SX-73, SX-62, or S-76. 80 to 5,000 cycle range. Matching transformer with 500/600-ohm input. Speaker voice coil Impedance, 3.2 ohms.

Black steel cabinet matches SX-71 and other Hallicrafters cabinets. Cloth covered metal grill. 15" x 10⅞" x 10⅞" deep. Ship. wt. 17 pounds.

Model R-46 Speaker . . . . $\$19^{95}$



hallicrafters

famous S-38C— biggest buy in SW

The lowest priced communications receiver on the market . . . with many features found in much higher priced sets. Standard Broadcast plus three Short-Wave bands. Built-in PM speaker.

Performance: Continuous AM reception 540 kc to 32 Mc. Maximum sensitivity and selectivity from expertly engineered chassis.

Controls: Main Tuning in MC; separate electrical bandspread dial with arbitrary scale; Speaker/Phones, AM/CW switches; Band Switch 540-1650 kc, 1.65-5 Mc, 5-14.5 Mc, 13.5-32 Mc; AF Gain, Receive/Standby.

Physical Data: Steel cabinet in gray hammertone finish. Size 12⅞" wide by 7" high by 7¾" deep. Ship. wt. 14 lbs.

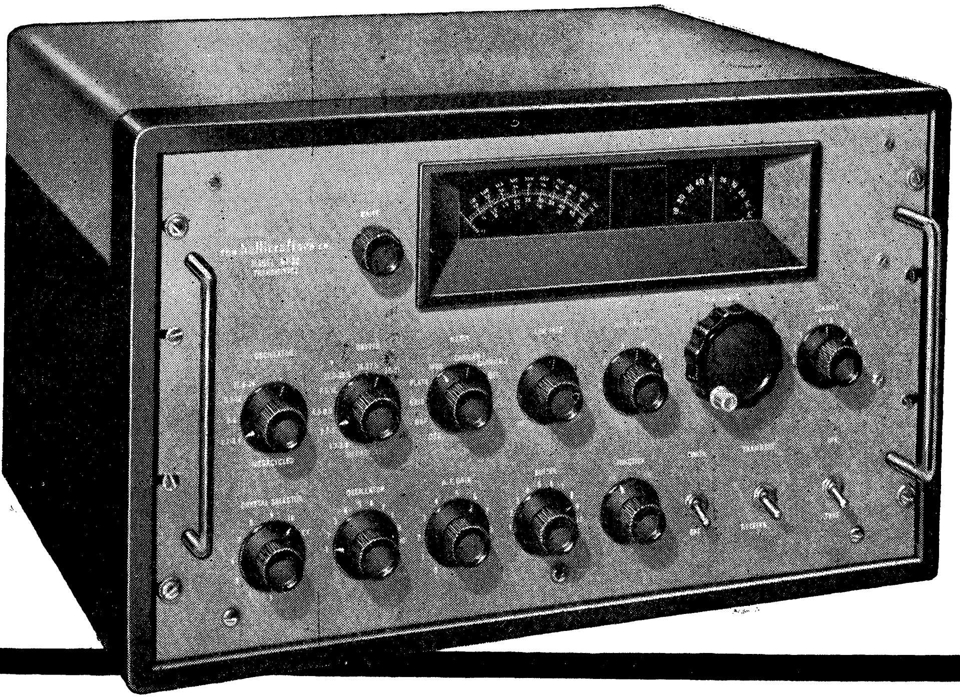
External Connections: Doublet or single wire antenna. Phone tip jacks. 105-125 V. DC or 50/60 cycle AC.

4 Tubes plus Rectifier: 12SA7, Conv., 12SK7 IF Amp. and BFO, 12SQ7 Det. and AVC, 50L6GT Output, 35Z5GT Rectifier.

220-Volt Line Cord: Available separately. Works for AC or DC.

Model S-38C . . . . $\$49^{50}$

Line Cord for 220 V. Operation . . . . $\$2^{00}$



hallicrafters

model HT-20
AM-CW transmitter

This new Hallicrafters 100 watt AM-CW Transmitter is the modern successor to the HT-9 known throughout the world for reliability, ruggedness, flexibility and lowest cost for maximum dependable watts per dollars.

Performance: T.V.I. proofed—completely shielded and filtered rf compartment plus built-in low-pass 52 ohm coaxial line output filter provides 90 db or greater suppression of all frequencies higher than 40 Mc. 100 watt AM phone output.

Components: Heavy duty commercial type power and modulation transformers. All parts rated for commercial service conditions.

Frequency Coverage: Continuous coverage from 1.79 to 31 Mc.

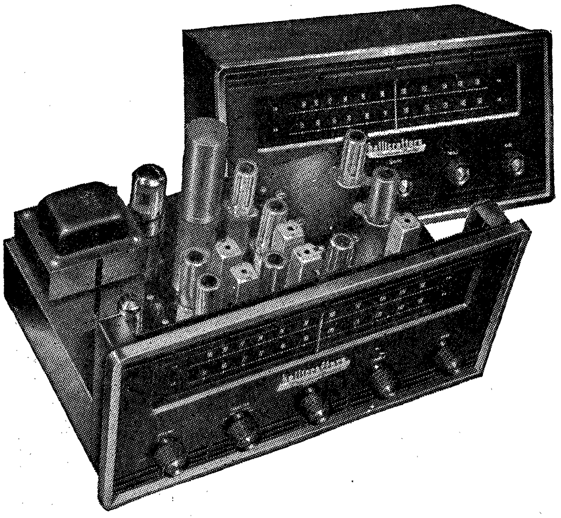
Controls: Full band switching. No plug-in coils—choice of 10 crystals—all controls on front panel.

Tubes: Seven rf and audio tubes plus 5 rectifiers.

Physical Data: Cabinet size—20 inches long, 12½ inches high, 17¼ inches deep—panel size for rack mounting—19x10½ inches. Shipping wt. 130 lbs. For 105-125 V. 60 cycle.

Model HT-20 Transmitter $449.50

Net



hallicrafters

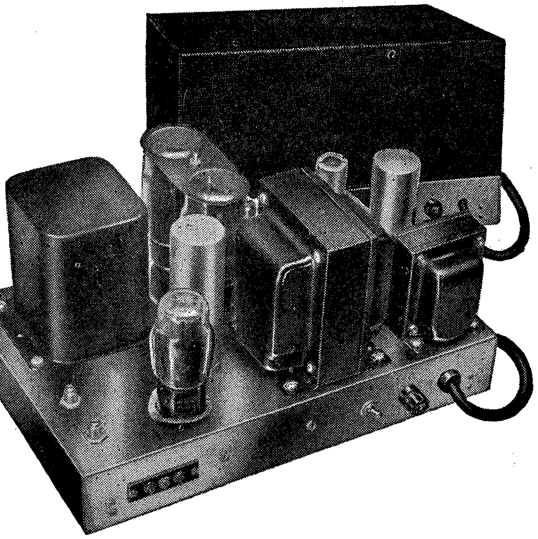
model ST-83 finest hi-fi FM/AM tuner

This AM/FM Super-Fidelity unit carries the UL seal of approval and meets the F.C.C. specifications on oscillator radiation. Phono inputs, built-in pre-amp., accessory inputs for TV, tape recorders, etc. Dual outputs; medium and low impedance, tone-controls; bass 12 db, treble 12 db.

Accessory power sockets dual at 200 watt 117 volts each. Tubes 6CB6 FM r-f amplifier, 12AT7 FM osc. converter, 6BD6 AM r-f amplifier, 6BE6 AM osc. converter, 6BA6 1st i-f amplifier 10.7 Mc, 6BA6 2nd i-f amplier 455 kc and 10.7 Mc, 6BA6 3rd i-f amplifier, 6AL5 FM detector, 6AV6 AM detector and phono pre-amplifier, 12AU7 cathode follower, 12AU7 audio tone control amplier, 6AX5 rectifier.

Black steel with silver finish trim and chrome lite base. 14" x 17½" x 9½" deep. Ship. wt. 18 lbs. Eleven tubes plus rectifier.

For 105/125 V. 50/60 cycle AC . . $129.95



hallicrafters

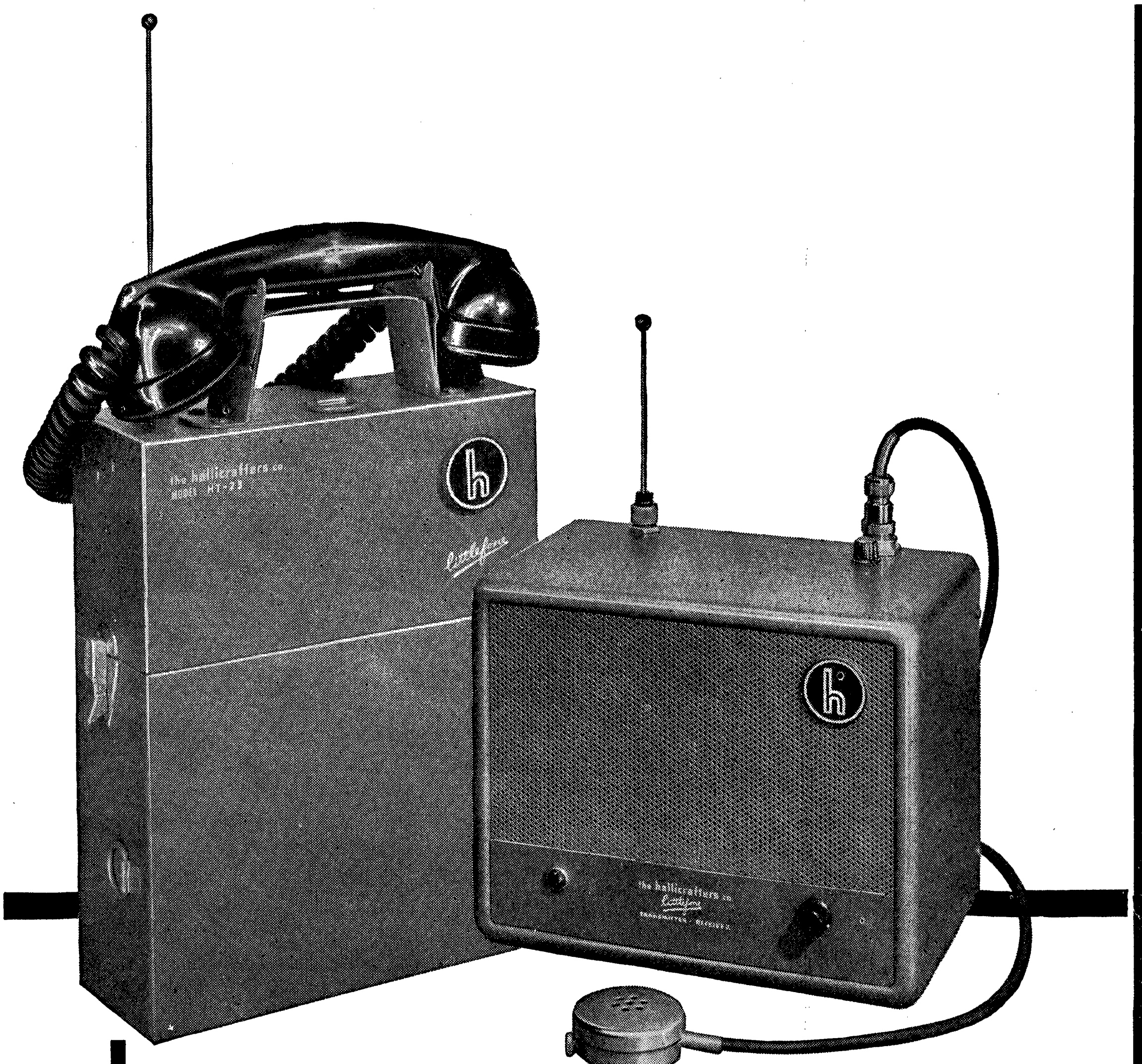
model A-84 widest range hi-fi amplifier

The perfect mate for any AM/FM tuner. Exclusive output transformer giving widest range ever produced. Frequency range, 10 to 100,000 cycles per second at 10 watts (with perfect uniformity) and harmonic distortion of less than 0.25% at 10 watt level. Power output of 15 watts maximum.

Mineral oil impregnated coupling condensers, power supply input condenser oil filled.

Chrome lite chassis base. 13½" x 7⅝" x 13½" deep. Ship. wt. 26 lbs. All tubes triodes.

For 105/125 V. 50/60 cycle AC . . . $99.50



hallicrafters

littlefone — portable radio-telephone

The Littlefone series of equipment are FM two-way radio telephone units operating at 25-50 Mc or 152-174 Mc. Both the receiver and transmitter are crystal controlled and a total of 22 sub-miniature tubes are used. The complete portable model with antenna and telephone hand-set weighs only fourteen pounds and will operate for more than eight hours on the self-contained rechargeable storage batteries. Models for AC power line and 6/12 volts DC operation employ the same rf chassis as the portable units but an audio power output stage is added to drive the loud speaker. Adjustable squelch controls are available on all models. Power outputs 2 watts on 25-50 Mc and 1 watt on 152-173 Mc. Lower powered dry battery models also available.

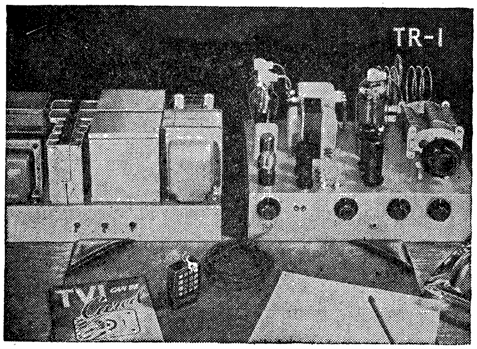
Hand Carry . from **\$324^{95} to \$399^{95}**

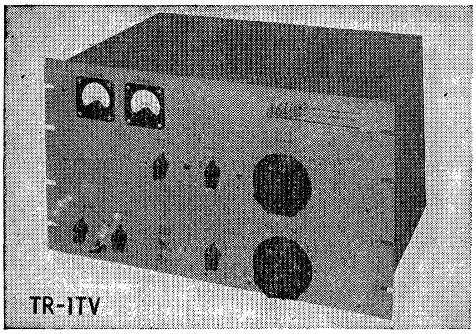
plus \$17.02 F. E. T. plus \$21.93 F. E. T.

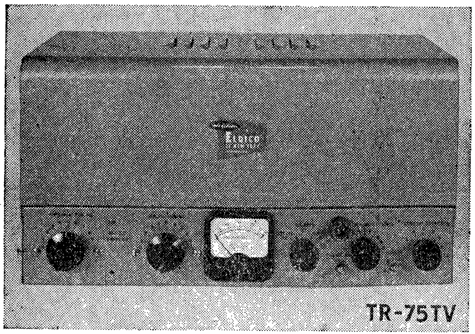
Central Station...Same performance and specifications as Hand Carry unit. Audio-amplifier, providing one watt of audio for loud speaker. AC operated with power consumption of 35 watts. Plugs in any AC outlet of 117 V. Hallicrafters S-81 receivers may be used as extra stationary stations.

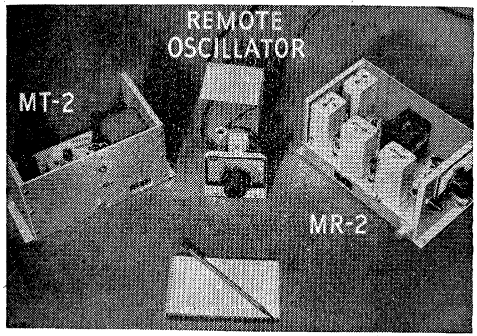
Central Station . . . . **\$485^{00}**

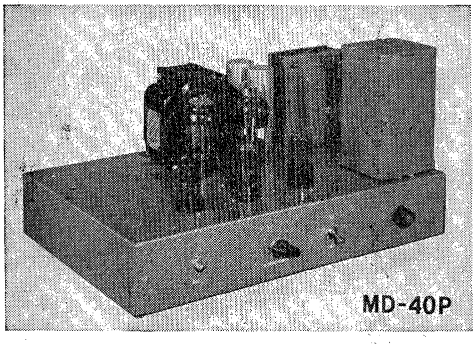
plus \$26.94 F. E. T.











TR-1 TRANSMITTER.

All band transmitter 300 watt C.W.-250 watt AM phone. Line-up consists of a 6V6 crystal oscillator; 6V6 frequency doubler; 6L6 buffer-amplifier; 813 power amplifier. A 6L6 keyer tube provides clean, clickless electronic keying. For phone a 6SL7GT high-gain input into a 6V6GT drives 811s. Features broadband r.f. circuits; band-switching in all stages except the power amplifier; metering of all important circuits.

TR-1 complete kit with Inst.	**$259.95**	**Factory W/T**	**$379.95**

TR-1TV TRANSMITTER.

TVI proofed all band transmitter. 300 watt AM phone or CW, band switching 80-40-20-15-10 meters. Completely shielded, pentode final, each circuit metered — Pi network output — built in low pass filter.

The TR-1TV Transmitter is available as a complete package or each unit individually. All units use standard 19″ panels to fit any standard relay rack or cabinet.

TR-1TV kit incl. cabinet	**$379.95**	**Factory W/T**	**$499.95**
TR-1TV Exciter/Final kit with Inst.	**189.95**	**Factory W/T**	**259.95**
TR-1TV speech Amplifier/Mod. with Inst.	**79.95**	**Factory W/T**	**99.95**
TR-1TV Power Supply kit with Inst.	**119.95**	**Factory W/T**	**159.95**

TR-75TV TRANSMITTER.

The improved version of the now famous Eldico TR-75. Simple enough for the beginner to assemble, sturdy enough for years of trouble-free operation. Circuit permits use of 80 meter or 40 meter crystals to cover all bands. Plug-in coils eliminate trick circuits. Built-in antenna tuner for matching all types of antennas. 60 watts input.

TR-75TV kit with Inst. (less crystal)	**$64.95**	**Factory W/T**	**$94.95**
TR-75TV Coil kit, per band	**4.50**		

SINGLE SIDEBAND TRANSMITTER-EXCITER.

The Eldico SBB Jr. patterned after the revolutionary unit developed by GE engineers. Eldico's SSB Jr. is a complete 6-tube 5-watt single sideband transmitter. Tube complement consists of 12AU7 combination speech amplifier-oscillator; 12AT7 twin-channel amplifier; 6AG7 final; 12AT7 speech preamplifier; 6H6 bias; 5Y3-GT rectifier. The audio phase-shift network is laboratory assembled and adjusted. The Eldico SSB Jr. may be used as a transmitter, as a driver for a high-power linear amplifier, or in conjunction with a V.F.O.

SSB Jr. kit with Inst.	**$79.95**	**Factory W/T**	**$129.95**

MT-2 — MR-2 2 METER EQUIPMENT.

Designed for mobile or fixed station operation. Complete 2-meter superhet receiver tuning 144-150 mc and the crystal controlled transmitter of the same frequency range is available with AC or DC power supply, non-directional antenna, carbon microphone, crystals, etc. MR-2 Receiver has a sensitivity of better than 1 uv for 6 db signal-to-noise ratio.

MT-2 Transmitter uses 8 mc crystal, 6AQ5 doublers; driving 2E26 final up to 22 watts input. 6C4 speech amplifier for carbon microphone input drives 6V6 modulators. A modified Pi network is provided for ease of coupling to any type 2-Meter antenna.

MR-2 Receiver kit with Inst.	**$69.95**	**MR-2 Receiver Factory W/T**	**$99.95**
MT-2 Transmitter kit with Inst.	**59.95**	**MT-2 Transmitter Factory W/T**	**79.95**
MRT-2 AC Power Supply for receiver and transmitter Kit	**29.95**	**Factory W/T**	**39.95**
ANT-2 Non-Directional antenna	**14.50**		

MD-100 MODULATOR.

Speech Amplifier and Modulator capable of delivering 100 to 120 watts of AM audio for 100% plate modulation of any CW transmitter up to 250 watt input (Class AB2 Modulators). Plate voltage to speech stages and screen voltage for the modulator is supplied from internal power supply.

MD-100 kit with Inst.	**$69.95**	**Factory W/T**	**$99.95**

MD-40P MODULATOR.

Modulator especially designed for Eldico TR-75TV CW transmitter for modulating any 75 to 100 watt transmitter, complete with integral power supply.

MD-40P kit with Inst.	**$59.95**	**Factory W/T**	**$79.95**

Signals of Distinction

ELDICO
OF NEW YORK
INCORPORATED

YOUR FREE
CATALOG
No. 53
ON REQUEST

GRID DIPPER.

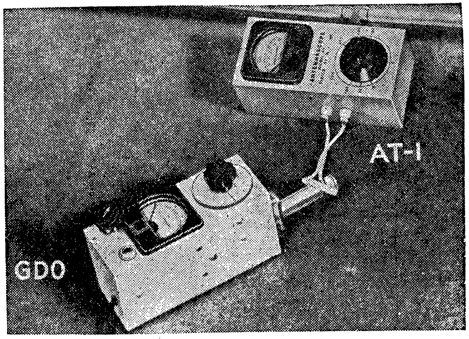
Based on the original grid-dip oscillator designed by W2AEF, the new model incorporates all the improvements to this basic instrument. High-sensitivity regeneration circuit is now standard part of kit. Large square 0-1 ma meter improves readability of instrument Assembly time reduced substantially. Grid Dipper kit includes everything required: special case designed to facilitate one hand operation, tube, internal power supply, meter and detailed Inst. Book covering assembly and operation. Range 3 mc to 250 mc, covered in six steps. Operation from 115 volts AC or DC.

GDO complete kit with Inst.................$34.95 Factory W/T.....................................$47.95

ANTENNASCOPE.

The instrument to give you positive antenna performance and efficiency! The Antennascope is an impedance measuring meter used in conjunction with the Grid Dipper. With the Antennascope you can measure radiation resistance of your antenna; resonant frequency of your antenna; impedance of your transmission line; input impedance of your receiver; standing-wave ratio of your feedline.

AT-1 kit with Inst..............................$29.95 Factory W/T.....................................$34.95



ELECTRONIC BUG.

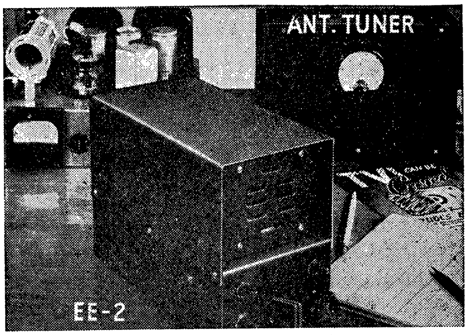
Self-completing type of automatic keying device incorporating all the latest improvements in automatic keying known to the art. Features self-completing characters that automatically insure perfectly formed sending; continuous variable speed control for any rate of sending from 8 to 50 w.p.m.; self contained with built-in power supply in attractive gray Hammertone portable case complete with key.

EE-1 kit with Inst..................................$29.95 Factory W/T.....................................$39.95
EE-2 kit, integral keying monitor
W/speaker.. 34.95 Factory W/T..................................... 49.95

ALL BAND ANTENNA TUNER.

300 watt Universal antenna coupling designed to couple any conventional antenna feedline, regardless of impedance, to any conventional tank circuit. Tuner kit includes split stator capacitor, 500 watt coils with swinging link, shielded case, R.F. ammeter, coax connector from transmitter, coax and open line connectors on output. Complete with coil for one amateur band. Additional coils available.

A-300 kit with Inst..............................$29.95 Factory W/T.....................................$39.95



HARMONIC CHASER.

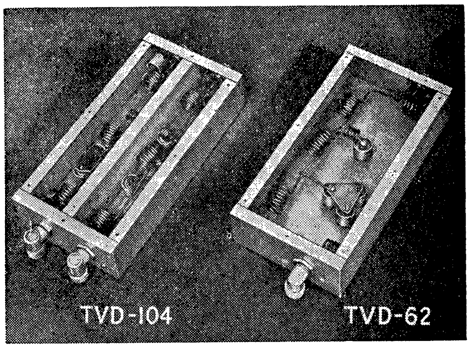
Modified absorption type wave-meter for locating, measuring and identifying transmitter harmonics falling into the television channels. Designed to eliminate swamping by the transmitter fundamental when the unit is tuned to the harmonic. Complete with all parts except indicating meter.

TVH kit with Inst..................................$10.95 Factroy W/T.....................................$16.95
TVH-500 Microampere meter in case to match Harmonic Chaser.......................... 10.95

LOW-PASS FILTERS.

Eldico's TVD-62 is a two section M-derived low-pass filter completely self-contained. Attenuation of harmonics radiated by the antenna, the source of most TVI, is in excess of 60 db. Cut-off frequency of 40 mc. Using parallel 52 ohm or 72 ohm coaxial feed-lines, the Diaxial Low-Pass filter is a modification of the TVD-62. Consists of two TVD-62 filters paralleled in a single case with a nominal impedance of 100 ohms.

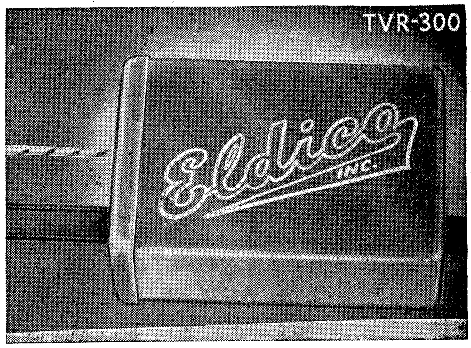
TVD-62 kit with Inst..........................$15.95 Factory W/T.....................................$18.95
TVD-104 kit with Inst......................... 22.95 Factory W/T..................................... 29.95



HIGH-PASS FILTERS.

For television interference reduction. Essential filters to be installed directly at the antenna coil of the television receiver. Negligible insertion loss. Available for coaxial or 300-ohm twin lead transmission line.

TVR-300 — 300 ohm TVR-62 — 62 ohm Either high-pass Model Kit..............$1.98
TVR-300 — 300 ohm TVR-62 — 62 ohm Either model W/T.............................. 3.98



BRUTE FORCE LINE FILTER.

R.F. feeding back through power lines is a serious source of TVI and BCI. Eldico's Brute Force Line Filter eliminates r.f. through the AC line. TVL-1KW supplied with heavy duty line cord, plug, and female AC outlet receptacle. TVL-2.5KW equipped with BX connectors.

TVL-1KW in kit form..........................$11.95 Factory W/T.....................................$15.95
TVL-2.5KW in kit form........................ 18.95 Factory W/T..................................... 24.95

"PRIVATE TUTOR" NOVICE COURSE.

All material has been carefully selected for your needs: 5 Columbia Long Playing Microgroove recordings for code instructions, 6 Novice theory lessons and examinations, an ARRL License Manual and supplementary aids. The unbreakable 12" records give the equivalent of 50 standard records! Any beginner can develop speed beyond FCC examination requirements and be ready easier and quicker for that coveted license.

Complete Course, Code and Theory....$25.00; Records only $17.00; Theory $10.00
Advanced Code Records (3 code speeds on record).......................................$3.95 ea.
No. 1—6, 9, 14WPM; No. 2—8, 13, 21WPM; No. 3—10, 15. 23WPM; No. 4—11, 16, 26 WPM; No. 5—13, 17, 30WPM.

COLUMBIA
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LICENSE MANUAL

ELDICO OF NEW YORK, INC., DOUGLASTON, NEW YORK

Harvey-WELLS ELECTRONICS, INC.
SOUTHBRIDGE, MASS.

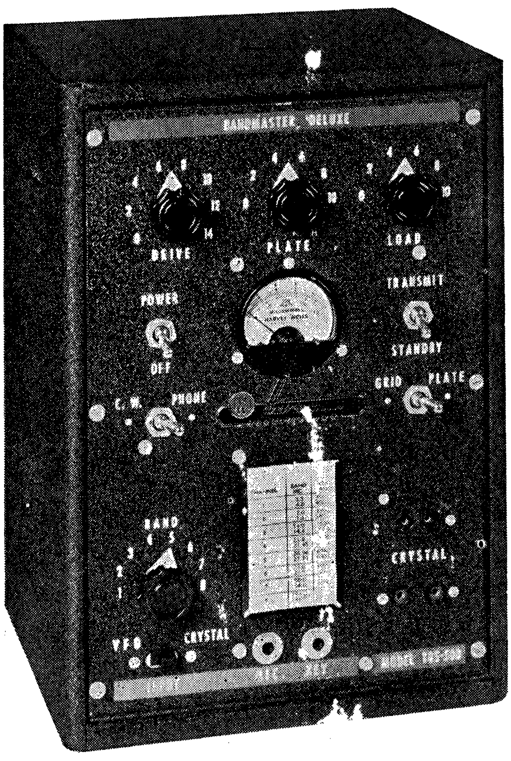
BANDMASTER TRANSMITTER

The World's Most Versatile Transmitter

40 to 50 Watts — 8 Bands — Phone or CW
NO PLUG-IN COILS

80, 40, 20, 15, 11, 10, 6 and 2 Meters
(completely wired and tested — not a kit)

100% BREAK-IN OPERATION



BUY THE XMTR— YOU WILL USE FOR YEARS

for MOBILE *or* FIXED OPERATION

FOR NOVICE OR EXPERT

BANDMASTER SR. 111^{50}

A complete ready to go transmitter including the new crystal-oscillator-vfo switching circuit. Phone or CW — Eight bands — 80, 40, 20, 15, 11, 10, 6 and 2 Meters. Ideal for either mobile or fixed station use. Will operate from A.C. power packs up to 450 volts at 275 ma., vibrator supply or dynamotor supply for portable mobile operation. Employs Pi antenna matching net work. Power input to final is 50 watts with 450 volt power supply on Bands 1 through 7, 30 watts on Band 8. No tuning adjustments are necessary except those required to resonate the final output to the antenna. May be mounted on rack panel with power supply. For use with carbon microphone. No plug in coils.

CONTROLS: Band Switch, Excitation Control, Antenna Loading, Amplifier Tuning, Power-on Switch, Carrier-on Switch, Meter Switch. Antenna network will match non-reactive feeder of approximately 50-500 ohms. Frequency calibration chart on front panel as well as two scale grid and plate D.C. milliammeter.

TUBES: 6AQ5 Crystal Oscillator, 6AQ5 Buffer-Multiplier, 807 Final Amplifier, 2—6L6G Class B Modulators. In sturdy steel cabinet, 8" wide by 12" high by 8" deep.

NO BANDMASTER EVER BECOMES OBSOLETE OR OUTMODED—

IT IS PROTECTED BY AN INSURANCE POLICY

YOUR BANDMASTER
REMAINS MODERN BECAUSE —

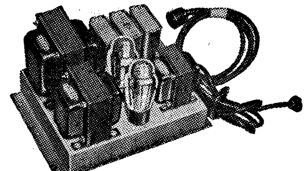
It is PROTECTED by a continuous Technical Bulletin Service mailed regularly to all registered owners:
AN INSURANCE POLICY
Which provides methods of adding new features to your present BANDMASTER as they are developed. In this way no BANDMASTER becomes obsolete or outmoded.

BANDMASTER DELUXE 137^{50}

The last word in a versatile small transmitter for ham or commercial use. Used extensively in foreign countries for important commercial applications. Has built-in three tube preamplifier for use with crystal mike, and ALL the features of the Bandmaster Sr.

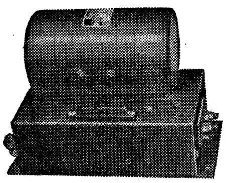
POWER SUPPLIES

APS-50 BANDMASTER POWER SUPPLY FOR 110v A.C.



Delivers 425 v. at 275. ma. and 6.3 v. at 4 amps. May be mounted on rack panel. For 110 Volt A.C. 50-60 cycles. **$39.50**

FOR PORTABLE OPERATION DPS-50



A dynamotor supply for portable operation. Delivers 300 Volts 250 ma.

For 6 Volt operation **$87.50**

For 12 Volt operation (400 Volts 250 ma) **$54.50**

Harvey-WELLS ELECTRONICS, INC.

SOUTHBRIDGE, MASS.

The NEW BANDMASTER VFO

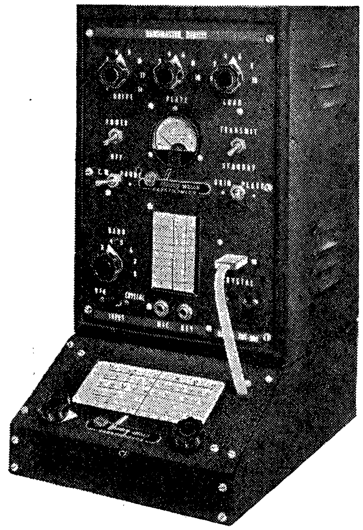
DESIGNED SPECIFICALLY FOR THE HARVEY-WELLS BANDMASTER, BUT MAY BE USED WITH ALL TYPES OF TRANSMITTERS.

EXTREMELY STABLE — BOTH ELECTRICALLY AND MECHANICALLY — RUGGED TESTS PRODUCE NO LOSS OF POWER OR FREQUENCY SHIFT EVEN ON 28 MC.

Slanted, illuminated dial face provides ease of operation and full visibility

300 ohm Output Plugs into Crystal Socket

Only $47.50



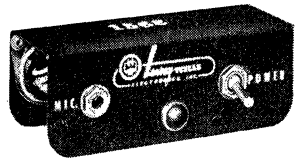
Cabinet styled specifically to save valuable space in the Shack. Your Bandmaster and VFO become an integral unit

The Bandmaster VFO has been designed to meet the flexible requirements of today's versatile amateur. Six bands — each directly calibrated on the oversize slide rule dial — provides 20-25 volts R.F. output over entire frequency range, measured across the 6AQ5 in the transmitter oscillator — Plate and heater voltages are obtained from the terminal strip on the transmitter. Power requirements are 6.3 v @ 0.65 amps. and 300 v @ 30 ma. Highly stable clapp type oscillator circuit uses 6AG7 and OB2 voltage regulator.

Cabinet size 9" x 11½" x 4" ....Weight 6 lbs.

ACCESSORIES

REMOTE CONTROL PANEL FOR MOBILE OPERATION

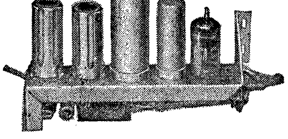


For dashboard mounting, complete with interconnecting and microphone cables.

Provides for a complete remotely controlled installation. $22.50

CRYSTAL MIKE PRE-AMPLIFIER

CMA-50



Crystal microphone pre-amplifier. The unit built into the Bandmaster DeLuxe which you may add to other Bandmaster models. Simple to install.

$22.00

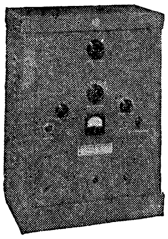
Net

THE ROBERT DOLLAR CO.

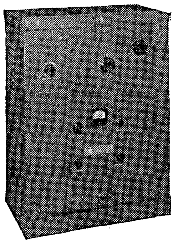
COMMUNICATIONS EQUIPMENT DIVISION

50 DRUMM ST. SAN FRANCISCO, CALIF.

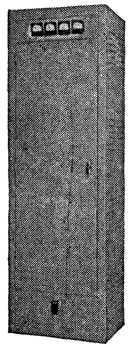
A COMPLETE LINE OF RADIO TELEPHONE-TELEGRAPH TRANSMITTERS FOR MEDIUM AND HIGH FREQUENCIES



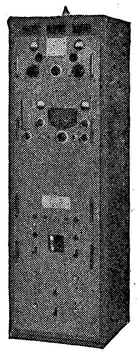
MODEL 212
30-50W OUTPUT



MODEL 213
150W OUTPUT



MODEL 237
250W OUTPUT



MODEL A4912
300W OUTPUT

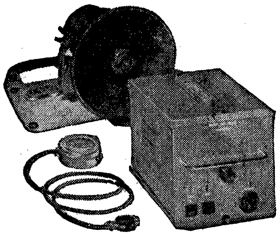
Models 212 and 213 are both radiotelephone transmitters designed for fixed service operation within the frequency range of 1.6 to 18 mcs. Both transmitters are crystal controlled with provisions for two adjacent-channel operating frequencies. Each has self-contained AC power supply.

Model 237 is a two-channel radiotelephone transmitter for two frequency operation within the 1.6-20 mc band. Has provision for remote frequency selection and control. Excellent for ground to air or other services where day and night frequencies are used.

Model A4912 is a general purpose transmitter covering 2-24 mcs and has provision for ten crystals.

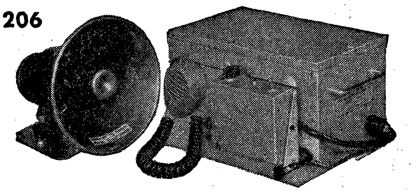
Models 212, 213 and 237 can be modified for radio telegraph and FSK operation at nominal cost.

MOBILE PUBLIC ADDRESS EQUIPMENT



MODEL 223

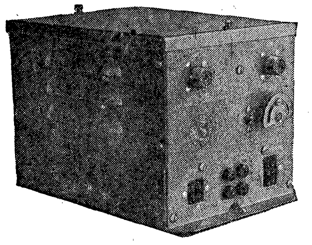
MODEL 206



Model 223 is an instant-heating push-to-talk amplifier with power output of 4 watts. Primary power is obtained from the 6 volt vehicle storage battery. Speaker has bracket to permit mounting on front window also handle for hand carrying. Amplifier unit is very compact and may be temporarily mounted on front seat of car for emergency operation. This is a well constructed, sturdy unit built to stand up under rough mobile service.

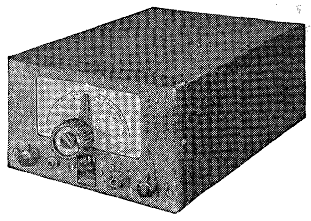
Model 206 is a heavy-duty, vehicular mobile amplifier with an audio power output of 12 watts. Primary power is obtained from the 6 volt vehicle storage battery. Design permits temporary front seat or permanent, rear trunk mounting. Control may remain on amplifier unit or be mounted on dashboard. Speaker has bracket for temporary front window mounting. This is a de luxe unit in every sense with conservative design and ratings throughout.

AMATEUR AND C-D TRANSMITTERS AND RECEIVERS



TRANSMITTER
MODEL 222
144-148 mcs.

RECEIVER
MODEL 226
144-148 mcs.



Model 222 is a crystal controlled transmitter covering the amateur 144-148 mc range and adjacent CAP frequencies. It is intended primarily for mobile operation where a transmitter with greater power output is required. Power output into 50 ohms is 6 watts. Modulation is high-level. Has antenna relay and tuned link output circuit. Highest quality components throughout.

Model 226 is a tunable superheterodyne receiver designed for mobile service and covers the amateur 144-148 mc band and adjacent CAP frequencies. Multiple tuned circuits and proper tube selection in RF and I.F. stages provide excellent sensitivity, selectivity and image rejection. High quality components for dependable mobile operation. Crystal controlled models are available on special order.

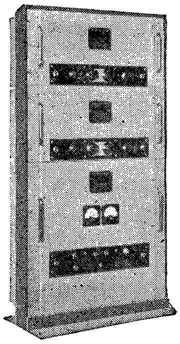
Write for technical data and price information

THE ROBERT DOLLAR CO.

COMMUNICATIONS EQUIPMENT DIVISION

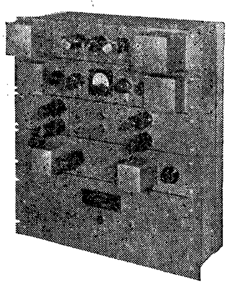
EXPORT AGENTS: M. SIMONS & SON 23 WARREN ST., N. Y. C.

FREQUENCY-SHIFT TRANSMITTING AND RECEIVING EQUIPMENT AND ACCESSORIES



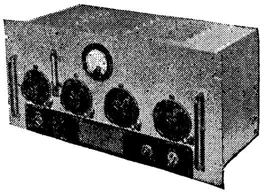
MODEL A4920

Model A4920 is a complete frequency shift terminal offering extremely high selectivity. Uses two separate crystal controlled receivers to permit dual diversity reception. Commercial type construction throughout. Highly conservative component ratings . . . trouble-free and proven performance.



MODEL 5123

Model 5123 is a low-cost FSK converter offering excellent selectivity and S-N-R. Provides DC output to operate teletype as well as tone output. Three, optional frequency, audio tones are available for operation directly into carrier telephone systems.



MODEL A4722

Model A4722 exciter is a standard FSK transmitting keyer with exceptional stability at moderate cost. Range 2 to 6 or 2.5 to 7 mcs. Separate power supply included.

OTHER FREQUENCY-SHIFT EQUIPMENT

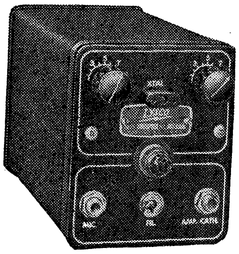
Fixed frequency receiver for use with Model 5123 converter . . . Crystal controlled oscillator for use with general purpose communications receivers . . . tone keyers . . . line amplifiers . . .

LYSCO *More Watts per Dollar..with*

COMMUNICATIONS EQUIPMENT

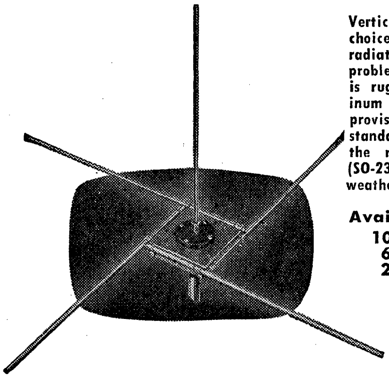
FOR PRICES REFER TO U.C.P. PRICING SERVICE

MOBILE TRANSMASTERS



LYSCO features a complete line of crystal controlled 25 watt mobile or fixed station transmitters covering NOVICE, AMATEUR, CAP and Commercial frequencies for CW or Phone. Phone models are clamp tube modulated. Housed in compact crackle-finished cabinet, the Transmasters are available for 6V (3-6AQ5) or 12V (3-12A6) operation. Plate supply required 300-500 V D.C. at 100 ma. 4"x4½"x6".

GROUND PLANE ANTENNAS



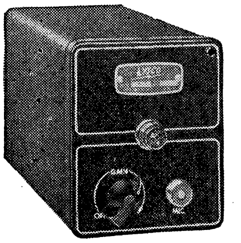
Vertical polarization, the DX'ers choice, with its low angle of radiation, and simple mounting problems the Lysco GP Antenna is ruggedly constructed of aluminum tubing (seamless) and has provision for mounting to ¾" standard pipe. The coax goes thru the mast pipe and the fitting (SO-239) is covered against the weather.

Available for:

10 mtrs.—model 310
6 mtrs.—model 306
2 mtrs.—model 302

CLAMPMASTER MODULATOR

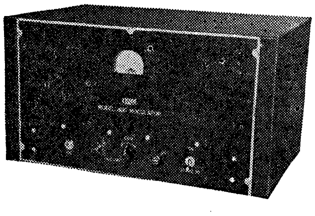
MODEL 401



The Lysco Clampmaster is designed to modulate any tetrode or pentode amplifier stage by "clamping" the screen grid of the amplifier. Here is the ideal modulator for economy — no expensive power supplies, modulator equipment or xfmrs — requires only 300-400 V D.C. at 30 ma. High impedance mike. When using a Lysco Clampmaster operate at full CW ratings. 4"x4½"x6".

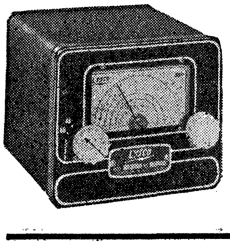
60 WATT MODULATOR

MODEL 400



Lysco offers this fine quality, completely self contained 60 watt modulator designed to handle any class "C" RF amplifier stage up to 150 watts input. Tube line up, 6SJ7 2-6SN7GT, transformer coupled 6L6 G in PP. Complete with 150 ma meter in the 6L6 stage. Uses any high impedance microphone. Model 400 — 4000 ohm out. Model 400L — 500 ohm out. 9"x17"x11".

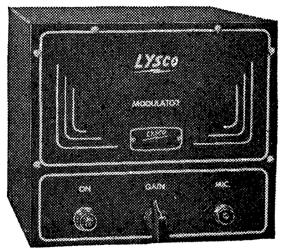
VFO—MOBILE OR FIXED



The Lysco VFO is a stable, compact unit using a series tuned "colpitts" oscillator circuit 80 meter fundamental with output on 40 and 80 meters and is Calibrated on 80, 40, 20, and 10 meters with ample band spread. Provision for CW. Illuminated clock type dial. Power requirements — 6.3 volts at 1.3 amp, 200 volts at 30 ma. Two models available — Model 381 with 14" 300 ohm twin lead output and Model 381R with 15 ft. coax output. 4½"x4¾"x4".

25 WATT MODULATOR

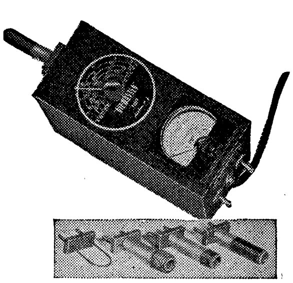
MODEL 403



The Lysco 403 is designed to deliver 25 watts of good quality audio Power to an impedance of 4000 ohms. Uses a high impedance mike to a 6AU6, 12AU7, and PP6L6G'S. The ideal for the medium powered Rig. Terminal connections for transmitter and power supply makes checking and hook-up simple. Compact size, good quality, attractive cabinet. 8"x7¼"x5".

"DIPMASTER"

MODEL D-11



The "must" in every shack, lab, and test bench. Check tuned circuits, antennas, harmonics, field strength, etc. Compact design. Can be used as a grid-dip meter, phone monitor, absorption wave meter, signal generator or field strength meter. 117 volts AC/DC or Battery model available. Frequencies from 3.4 mc to 170 mc. Harmonics up to 340 mc. Five plug in coils. Wired and tested ready to use. (Not a kit.) 3"x9"x3½".

40 WATT ALL-BAND TRANSMASTER

TVI SUPPRESSED

MODEL 600-S

A 35 watt VFO/crystal, phone/cw transmitter, designed for 160-80-40-20-15-10 meter operation. Straight through 807 final. Series tuned "colpitts" type 6AG7 osc. with 6AG7 Buff-doubler built in "Clampmaster" modulation. All circuits metered on front Panel. Clear, large, VFO direct reading dial. 9x"7"x11" shielded

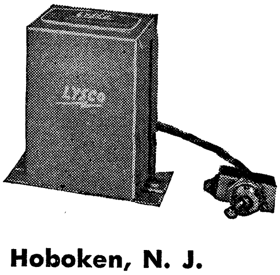
ANTENNA COUPLER

MODEL 50

Designed to work with any rig up to 75 watts into any antenna over 50 ft. in length against ground. If properly loaded to antenna or dummy load, it will handle 150 watts. 52 ohm coax feeder. RF indicator, easy to tune, simple controls. The Lysco 50 will get your RF into your antenna for better and more contacts. 4½"x4¾"x4".

NOISE LIMITER

MODEL 30



The real reason many hams are now on mobile today. The Lysco 30 is so well designed you can now hear those weak signals in your car and mobile operation is a pleasure. Many military receivers are in use by amateurs today. The Lysco 30 is the real answer to your noise limiting problem. Quick, simple installation. Complete instructions for any receiver.

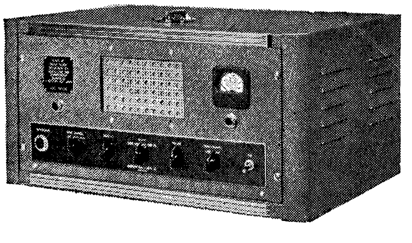
LYSCO MFG. CO., Hoboken, N. J.

WRITE FOR FREE COMPLETE CATALOG SHEETS ON THESE AND NEW PRODUCTS

TRANSMITTING EQUIPMENT

MORROW
RADIO MANUFACTURING CO.
SALEM, ORE.

CONVERTERS RECEIVERS



● **FC-20 BASE STATION**

The FC-20 AM Transmitter-Receiver is Xtal controlled on 2 channels in the 30-45 MC band. The channels may be separated by 160 KC. The carrier power is 15 watts into a 50-75 ohm load. Modulation is limited to 100% on negative peaks. Voice frequencies above 3500 cycles are suppressed.

Transmitting tube complement: 2E26 PA, 6AQ5 Dbl, 6C5 Xtal Osc, 2-6V6 Mod, 12AT7 Spch Amp Phase Inverter, 6AL5 Mod Limiter.

Transmitter and receiver metering is accomplished by panel meter and switch. Engraved plates mark all transmitter and receiver controls. The transmit-receive switch, housed in microphone case, operates relays for controlling the transceiver. A carbon microphone is supplied with a F1 unit.

The dual channel FC-20 receiver has many advanced features: More than 1/4 micro-volt sensitivity, a very effective noise silencer with automatic threshold adjustment, noise balanced squelch that opens on signals just above the prevailing noise level, very low internal noise level and excellent quieting action on weak signals. Either or both channel reception is provided, and a meter is used to indicate signal levels.

16 tubes are used in the receiver: 6CB6 RF Amp, 6BA6 RF Amp, 6AU6 Mixer, 2-6CB6 Xtal Osc, 6BA6 IF Amp, 6AS6 IF Amp & Gating, 6AL5 Det, 6AU6 Silencer Amp, 6T8 Silencer Rect & DC Amp, 12AU7 Noise Amp, 6AL6 Noise Rect, 12AT7 Squelch & Audio, 6AS5 Audio Output, 6C4 Tuning indicator and 0B2 VR.

Separate power supplies are used for the receiver and transmitter. The power source is 115 Volt, 60 Cycle, 175 Watts.

Case size: H- 11", W- 22", D- 15".

The FP-086 Pack Set is a small transceiver housed in a rugged, welded aluminum case. It can be supplied for use within the frequency range of 30-80 MC.

The single channel AM transmitter is Xtal controlled and has a power output of 200 mil watts. High level plate modulation is used. The tubes are: 3Q4 PA, 3Q4 Osc, 3Q4 Mod, 1U4 Spch Amp.

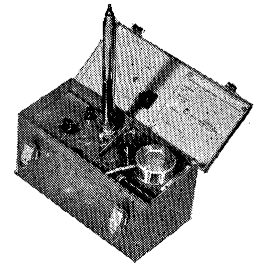
The receiver is fixed tuned and uses a 1U4 RF Amp, 1U4 Super-regenerative Det, 1U4 1st Audio and 3Q4 Output.

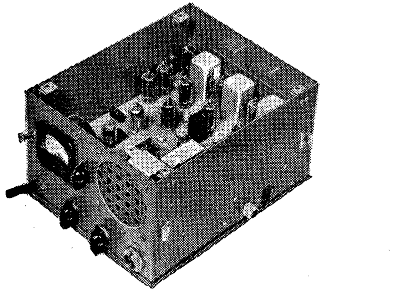
A hand held microphone-speaker is supplied with a permanently attached cord and two antennas, one a telescoping whip for field use and a 1/2 wave wire for use when longest range is desired. The usable range is up to 50 miles depending upon the terrain.

A canvas bag with shoulder straps is supplied for use when packing in the field. Many hundreds of FP-1086 sets are in use by various State Forestry Departments and have given remarkable service. When a small, very rugged, dependable, pack set is needed, the FP-1086 is ideally suited for the job.

The self-contained batteries are 2 Burgess XX45 and 1 Burgess 2F.

● **FP-1086 PACK SET**





● **FL - FIELD BASE STATION**
● **FLP - HEAVY DUTY PACK SET**

The FL AM Transmitter-Receiver is Xtal controlled on 2 channels in the 30-40 MC band. The channels may be separated by 160 KC. The carrier power is 2 1/2 watts, 100% modulated into a 50-75 ohm load.

Transmitter tube complement: 3A5 PA, ½-3A5 Dbl, ½ 3A5 Xtal Osc, 3A5 Class B Mod PP, 1T4 Speech Amp.

Transmitter and receiver metering is accomplished by panel meter and switch. All transmitter and receiver controls are plainly marked. The transmit-receive switch, housed in the microphone case, operates relays for controlling the transceiver.

The dual channel FL receiver uses 9 tubes in a sensitive, very low noise superhetrodyne circuit. A clipper type noise limiter and squelch may be supplied. The sensitivity is 1 micro-volt, image rejection is better than 5000 to 1. Either or both channel reception is provided. The speaker is self-contained.

The tubes are: 2- 1U4 RF Amp, 1U4 Mxr, 2- 1U4 Osc, 1U4 Dbl, 2- 1U4 IF Amp, 1N34 Det, 1U4 1st Audio, 3V4 Audio Output.

For fixed use 1 heavy duty 1½V A Battery and 3 heavy duty 45V B Batteries are required. Attached battery cord with plug supplied.

FLP is identical to the FL except a telescoping whip antenna with suitable mount and loading coil, and a battery compartment that clips to bottom of case is supplied.

The MB-5 Mobile Transmitter-Receiver is Xtal controlled on 2 channels in the 30-45 MC band. The channels may be separated by 160 KC. The carrier power is 5 watts, 100% modulated into a 50-75 ohm load. Modulation is limited to 100% of negative peaks. Voice frequencies above 3500 cycles are suppressed. Transmitter tube complement: 6AQ5 PA, 6AQ5 Osc, 6AQ5 Mod, 6AL5 Mod Limiter.

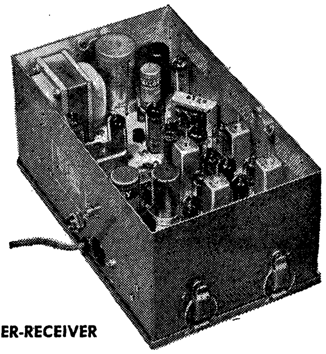
Transmitter and receiver metering is accomplished by tip jacks. All receiver and transmitter controls are mounted on control head and plainly marked as to function. The transmit-receive switch is housed in the microphone case. A carbon microphone is supplied with F1 unit. Relays are hermetically sealed. External speaker is supplied.

The dual channel MB-5 receiver has many advanced features: Better than ¼ micro-volt sensitivity, a very effective noise silencer with automatic threshold adjustment, a noise balanced squelch that opens on signals just above the prevailing noise level, very low internal noise level and excellent quieting action on weak signals. Either or both channel reception is provided by switch on control head.

Receiver tube complement, 13 tubes: 6AG5 RF Amp, 6AU6 RF Amp, 2- 6AG5 Xtal Oscs, 6AU6 Mixer, 6BA6 IF Amp, 6AS6 IF Amp & Gating, 6BC7 Det & Noise Rect, 6C4 Noise Amp, 6AU6 Silencer Amp, 6AL5 Silencer Rect, 12AX7 Squelch & Audio Amp, 6AQ5 Power Output.

Power supply: Either 6V DC or 12V DC, OZ4 Rect, OB2 VR.

Case size: H- 5⅜", W- 11½", D- 6¾".



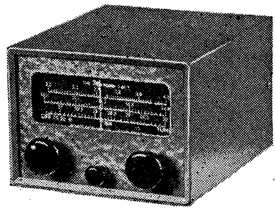
● **MB-5 MOBILE TRANSMITTER-RECEIVER**

5BR CONVERTER—5 Bands
10-15-20-40-75 Meters

2BR CONVERTER—Any 2 Bands of 5BR.
3BR CONVERTER—Any 3 Bands of 5BR.

Full width dial with 20 to 1 tuning ratio. Tuned preselector, mixer and oscillator. IF Amplifier with 4 tuned circuits, output frequency of 1525 Kc. Automatic noise limiter. AVC in preselector circuit assures no blocking of strong signals. Oscillator is pre-calibrated and drift-free. The 2BR and 3BR are easy to operate, having single point tuning and antenna trimmer on front panel. All calibrations highly accurate. 1 micro-volt sensitivity on all bands. Grey hammer tone finished case. Unit supplied with mounting hardware and instructions. Power requirements: 6v filament, 100v at 16 milliamperes. Furnished with 4 wire shielded cable and plug-socket assembly for easy installation.

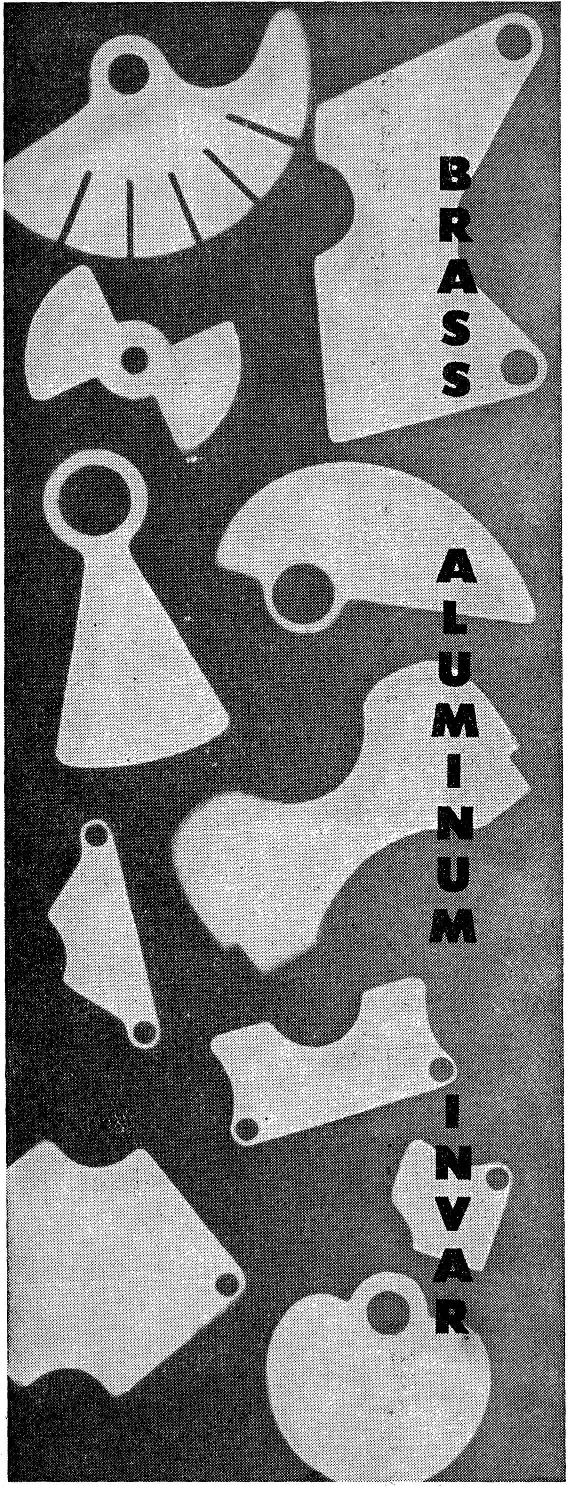
Net Price: 2BR 54.95, 3BR 64.95, 5BR 74.95, 5BRLN (less noise limiter) 69.95.



● **2BR**
● **3BR**
● **5BR**
CONVERTERS

For additional information and prices write: Morrow Radio Mfg. Co., Salem, Oregon

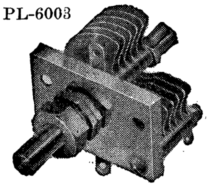
CARDWELL CAPACITORS

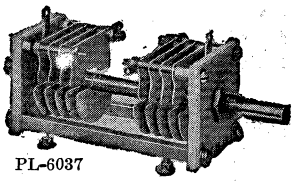


TRIM-AIR MIDGET CAPACITORS

Combine essential sturdiness with the flexibility obtained only in a spacer-built rotor and stator type assembly.

PL-6003





PL-6037

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: End Plates of $\frac{5}{32}$" thick Isolanite.

SHAFT: $\frac{1}{4}$" diameter, nickel plated brass.

PLATES: .020" thick aluminum, specially treated to remove burrs.

FINISH: Spacers, bushing nuts and screws nickel plated brass.

MOUNTING: Singles require one $\frac{3}{8}$" hole in panel; Duals provided with four No. 4-36 screws in square brass tie rods. Trim-Air mounting posts or brackets fit both single and dual types. Singles are fitted with tapered nuts acting on split bushing for locking rotor shaft for fixed tune. Duals have rear shaft extension for coupling to other units and have a removable intersection shield, on airgaps of .020 and .030.

NOTE: Single section Trim-Airs normally stacked with full length shaft for knob or dial. Stud shaft equivalents, with slot for screw driver adjustment only, available to order.

TRIM-AIR (SINGLE) (LONG SHAFT*)

Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-6016	75	2.7	15	.020	$1\frac{3}{8}$	
PL-6017	100	3	19	.020	$1\frac{1}{2}$	
PL-6018	140	5	27	.020	$1\frac{23}{32}$	
PL-6000	10	1.2	3	.030	$\frac{7}{8}$	
PL-6001	15	1.5	5	.030	$\frac{31}{32}$	
PL-6002	25	2	7	.030	$1\frac{1}{16}$	
PL-6003	35	2.5	11	.030	$1\frac{9}{32}$	
PL-6004	50	2.8	13	.030	$1\frac{3}{8}$	
PL-6055	108	6.6	29	.030	$2\frac{9}{64}$	
PL-6024**	5	1.5	3	.060	$\frac{7}{8}$	
PL-6044	5	2	3	.070	$\frac{31}{32}$	
PL-6010	11	3.6	6	.070	$1\frac{1}{16}$	
PL-6011	15	3	9	.070	$1\frac{1}{2}$	
PL-6012	30	4	17	.070	$2\frac{17}{64}$	
PL-6022	4	1.5	5	.140	$1\frac{1}{2}$	
PL-6023	7	4	7	.140	$1\frac{27}{32}$	

*Also available with stub shaft.
**Supplied with 2 segment stator for UHF circuits.
Extra plate also supplied, making 3 plates as listed.

TRIM-AIR (DUAL)

Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-6041	75	2.7	15	.020	$3\frac{1}{32}$	
PL-6042	100	3	19	.020	$3\frac{1}{32}$	
PL-6043	140	5	27	.020	$3\frac{11}{16}$	
PL-6028	10	1.2	3	.030	$2\frac{3}{16}$	
PL-6029	15	1.5	5	.030	$2\frac{3}{16}$	
PL-6030	25	2	7	.030	$2\frac{3}{16}$	
PL-6031	35	2.5	11	.030	$3\frac{1}{32}$	
PL-6032	50	2.8	13	.030	$3\frac{1}{32}$	
PL-6065	100	6.9	25	.030	$3\frac{11}{16}$	
PL-6037	15	3	9	.070	$3\frac{1}{32}$	
PL-6039	30	4	17	.070	$4\frac{15}{32}$	
PL-6033	4	1.5	5	.140	$3\frac{1}{32}$	
PL-6035	7	4	7	.140	$3\frac{11}{16}$	

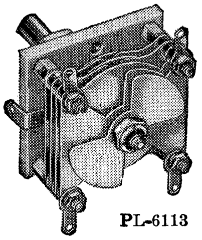
WRITE FOR OUR 1953 PRICE LIST

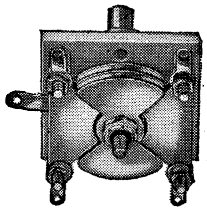
Comparative Standards since Radio's Conception

THE ALLEN D. CARDWELL Mfg. Corp., Plainville, Conn.

CARDWELL CAPACITORS

A NEW LINE OF CARDWELL MIDGETS FOR V.H.F.


PL-6113


PL-6076

Cardwell offers a new line of 90 degree capacitors with butterfly **rotor plates**, fulfilling a demand created by engineers and amateurs **alike. Features** of these 90 degree midget capacitors are as follows:

> Electrical Symmetry • Low Distributed Inductance • No moving Contacts • Plates easily removable to change capacity range • Isolantite Insulation • Single Hole Mounting • Small Size: $1\frac{7}{16}$″ x $1\frac{13}{32}$″ per general outline dimensions for differential "Trim-Airs" as shown on page 3 of Catalog No. 50.

These capacitors are made to fit all standard Cardwell "Trim-Air" hardware.

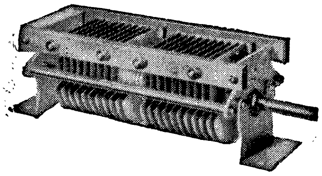
Note maximum and minimum capacity values shown are measured from stator-to-stator and are effective values as used when a coil is connected stator-to-stator, with rotor floating.

V. H. F. 90 DEGREE TRIM-AIR MIDGETS

Part Number	Max. Cap.	Min. Cap.	No. Plates Rotor	No. Plates Stator	Air Gap	Length Over-all	List Price
PL-6076	5	1.5	3	2	.030″	$1\frac{31}{32}$	
PL-6077	7	2.0	4	3	.030″	$1\frac{31}{32}$″	
PL-6078	13	3.0	7	6	.030″	$2\frac{3}{8}$″	
PL-6079	20.4	3.4	8	7	.020″	$2\frac{5}{32}$″	
PL-6080	27	4.0	10	9	.020″	$2\frac{3}{8}$″	
***PL-6081**	38	6.0	14	13	.020″	$2\frac{31}{32}$″	

*Iso. rear end plate—ball and strap rear bearing.

MIDWAY TRANSMITTING CAPACITORS


PL-7030 with PL-5051 Mtg. Brackets

The Midway is ideal for low and medium power transmitters for **portable** mobile and aircraft equipment, due to its light weight, compact size and extremely sturdy construction. Incorporates original patented features of the larger "X" type standard transmitting capacitor.

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTICS: S.L.C.

FRAME: All aluminum end plates and tie rods.

SHAFT: ¼″ C.R. steel, cadmium plated.

PLATES: .025″ aluminum. On sizes having airgap of .070″ or **over**, plates have rounded edges, buffed to minimize corona loss.

BEARINGS: Brass, nickel plated shoulder type front bearing with **ball** thrust rear bearing.

INSULATION: Mycalex.

MOUNTING: 3 point front panel mounting by means of 3 screws and hex. posts. Two aluminum mounting feet with screws. Cardwell Part List No. 5052 for regular chassis mounting, provided instead, if so ordered. Type "M" special brackets (Part List No. 5051) permit inverted mounting.

WRITE FOR OUR 1953 PRICE LIST

MIDWAY TRANSMITTING CAPACITORS (SINGLE)

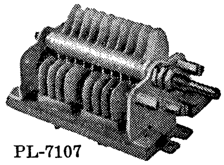
Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-7003	112	9	11	.030	$1\frac{3}{4}$	
PL-7004	150	10	15	.030	$1\frac{3}{4}$	
PL-7005	260	13	25	.030	$2\frac{3}{4}$	
PL-7006	365	16	35	.030	$2\frac{3}{4}$	
PL-7019	100	14	21	.070	$2\frac{3}{4}$	
PL-7020	150	18	31	.070	$3\frac{11}{16}$	

MIDWAY TRANSMITTING CAPACITORS (DUAL)

Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-7010	112	9	11	.030	$2\frac{3}{4}$	
PL-7011	150	10	15	.030	$2\frac{3}{4}$	
PL-7013	260	13	25	.030	$3\frac{11}{16}$	
PL-7030	100	13	21	.070	$5\frac{11}{32}$	
PL-7031	190	15	29	.050	$5\frac{11}{32}$	

"N" TYPE TRANSMITTING CAPACITORS

Designed for medium power high frequency transmitters and short wave therapy apparatus, the Cardwell "N" series maintains the customary high standard of Cardwell construction, yet eliminates closed circuit loops completely.


PL-7107

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: Improved aluminum end plates support heavy lateral **ceramic** insulating bars which carry the stators.

SHAFT: ¼″ diameter cadmium plated steel.

PLATES: Aluminum, .040″ thick, with rounded edges. PL-7105 **has** .025″ thick plates, buffed and polished edges.

BEARINGS: Cardwell shoulder type front bearing, with ball thrust rear bearings.

MOUNTING: Can be single hole mounted, or by three mounting posts and screws, to front panel. Chassis mounting on feet which form part of end plates, or use Cardwell "M" brackets, Cardwell part No. 301, for inverted mounting, for lowest stator-to-ground capacity.

"N" TYPE U. H. F. TRANSMITTING CAPACITORS (SINGLE)

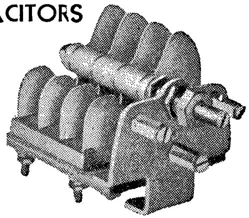
Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-7100	50	9	13	.084	$3\frac{3}{8}$	
PL-7101	75	11	19	.084	$4\frac{5}{32}$	
PL-7102	100	13	25	.084	$5\frac{7}{32}$	
PL-7103	150	19	39	.084	$6\frac{11}{16}$	
PL-7104	35	11	15	.171	$5\frac{7}{32}$	

"N" TYPE U. H. F. TRANSMITTING CAPACITORS (DUAL)

Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-7105	50	7	11	.070	$4\frac{5}{32}$	
PL-7106	35	5	9	.084	$4\frac{5}{32}$	
PL-7107	35	5	9	.084	$4\frac{5}{32}$	
PL-7108	50	9	13	.084	$5\frac{7}{32}$	
PL-7115	13	6	7	.218	$5\frac{15}{16}$	

Note: PL-7115 is dual neutralizer, rotor sections insulated from **each** other. Capacity and nr. plates shown is PER SECTION.

"NA" NEUTRALIZING CAPACITORS



The "NA" group offers 180° neutralizing capacitors of restricted range, for dial or screw driver adjustment. Shaft lock for permanent setting. Single rotor bearing with beryllium tension washer and special bushing for rigidity. Plates are .040″ thick aluminum, rounded and buffed edges. Three point panel mounting or foot mounting.

Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-7114	16	7	8	.218	$3\frac{3}{32}$	

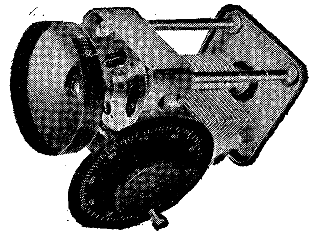
Comparative Standards since Radio's Conception

THE ALLEN D. CARDWELL Mfg. Corp., Plainville, Conn.

CARDWELL CAPACITORS

CARDWELL PRECISION CAPACITOR

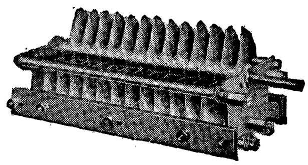
TYPE PL-24,050



Designed for frequency meters requiring maximum mechanical and electrical precision. Type No. 4.080 gear and worm driven capacitor incorporates special design features representing years of research and usage. This component is used in special measurement equipment which has successfully withstood most rigorous usage our armed forces could give it.

CAP. RANGE: Max. Cap. 220 mmfd., Min. Cap. 21 mmfd.
PLATE SHAPE: S.L.F.
DI-ELECTRIC SUPPORTS: Steatite.
BACKLASH: Negligible.
RESETTABILITY: To 10 parts in one million.
GEAR DRIVE: Precision split worm gear, equipped with precision ball bearings. Ratio—100: 1 over 360°.
DIALS: 3″ DRUM: 50 divisions over 180° capacitor rotation. **3″ FAST RUNNING DIAL:** Graduated 100 divisions, makes 1 revolution for each drum division. **VERNIER RING:** Divides each division on fast running dial into 10 parts.
DIMENSIONS: 5⅝″ lg. (over drum dial) x 3⅛″ deep x 3⅛″ high.
WEIGHT: 1¾ lbs. (with cast aluminum frame).
ROTOR CONTACT: Silver plated phosphor bronze spring, with 2 silver contacts bearing on silver plated disc.
MOUNTING: 3 point, to bottom of main casting.
Part No. Capacitor 4.080, Drum Dial A4.089, Fast Running Dial A4.198 and A4.199, Vernier Ring 3.004.
PL-24,050, includes Capacitor, Drum Dial, Fast Running Dial and Vernier Ring.

"X" TYPE STANDARD TRANSMITTING CAPACITOR



The Original grounded rotor, metal frame variable air capacitor.
Frames, tie rods, bearing bushings, spacers and stator blocks, nickeled brass. Cadmium plated ¼″ steel shaft supports securely locked rotor assembly. Mycalex insulation. Panel spaces 4⅛″x 3⅜″. Panel mounting. N.P. brass mounting feet provided on special order, for chassis mounting. See Accessories.

"X" TYPE STANDARD TRANSMITTING CAPACITORS (SINGLE)

Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-8004	375	16	17	.030	2 1/16	
PL-8005	475	18	21	.030	2 1/16	
PL-8007	950	30	41	.030	3 3/16	
PL-8013	1500	50	65	.030	5	
PL-8048	220	20	21	.070	3 3/16	
PL-8050	440	40	43	.070	5	
PL-8040	90	16	11	.084	2 1/16	
PL-8041	165	22	19	.084	3 3/16	
PL-8043	290	35	33	.084	5	
PL-8044	330	37	37	.084	5⅝	
PL-8029	120	19	17	.100	3 3/16	
PL-8031	240	30	33	.100	5⅝	

"X" TYPE STANDARD TRANSMITTING CAPACITORS (DUAL)

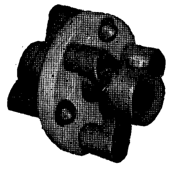
Part Number	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL-8018	500	18	21	.030	3 3/16	
PL-8070	210	22	21	.070	5	
PL-8066	165	23	19	.084	5⅝	
PL-8067	325	38	37	.084	10 3/16	
PL-8063	50	14	11	.171	5⅝	
PL-8064	110	27	21	.171	10 3/16	
PL-8056	40	14	11	.200	6⅝	
PL-8057	75	21	19	.200	10 3/16	

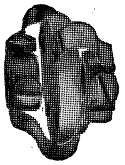
INSULATED COUPLINGS

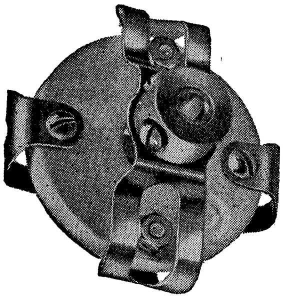
For isolating R.F. controls. Ceramic insulation (Alsimag No. 196). All flexible types have N.P. phosphor bronze springs, and heavy N.P. brass hubs, permanently swaged or spun riveted into the springs. Two fillister head, cup point, case hardened, steel set screws in each hub insure positive lock to shaft.

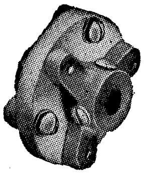
All rigid types have improved three-point-spider construction, carefully machined solid brass castings, and are absolutely rigid.

Flexible types C, D, E and F fit both ¼″ diameter shaft or a ⅜″ shaft by removing bushing supplied.









INSULATED COUPLINGS—Flexible

Parts List No.	Type	Dimensions "A" (Width)	Dimensions "B" (Length)	Peak Flash-over	To Fit Shaft Diameter	List Price
PL-5000	A	1 9/32″	¾″	3,700 V.	¼″	
PL-5002	B	1 9/32″	1 3/32″	7,000 V.	¼″	
PL-5004	C	2⅝″	2 3/32″	13,500 V.	¼ & ⅜″	
PL-5006	D	2⅝″	1⅜″	9,000 V.	¼ & ⅜″	
PL-5008	E	2 1/16″	1¾″	10,000 V.	¼ & ⅜″	
PL-5010	F	2 1/16″	1 1/16″	5,000 V.	¼ & ⅜″	

INSULATED COUPLINGS—Rigid

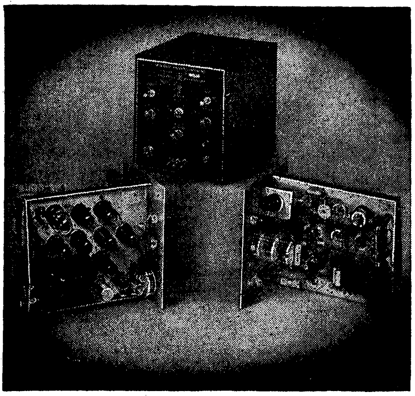
Parts List No.	Type	Dimensions "A" (Width)	Dimensions "B" (Length)	Peak Flash-over	To Fit Shaft Diameter	List Price
PL-5014	CNF	2¼″	2 1/16″	12,000 V.	⅜″	
PL-5201	ENF	1⅜″	1 13/16″	10,000 V.	¼″	
PL-5013	FNF	1⅜″	15/16″	7,500 V.	¼″	

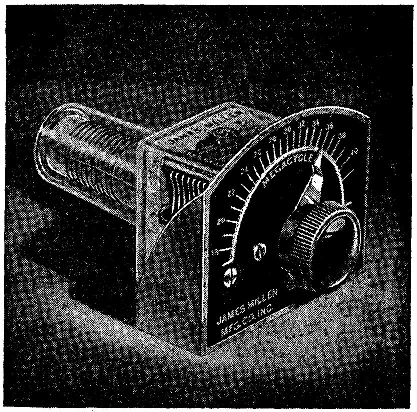
WRITE FOR OUR 1953 PRICE LIST

Comparative Standards since Radio's Conception

THE ALLEN D. CARDWELL Mfg. Corp., Plainville, Conn.

JAMES MILLEN
MALDEN · MASSACHUSETTS





SECONDARY FREQUENCY STANDARD

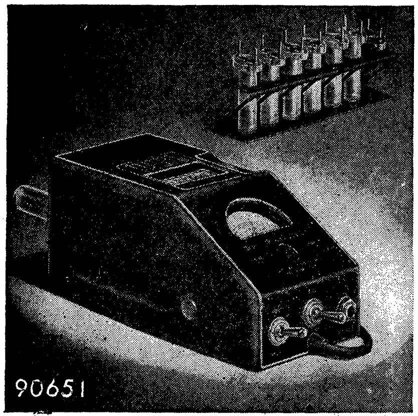
A precision frequency standard for both laboratory and production uses, adjustable output, provided at intervals of 10, 25, 100 and 1000 kc, with magnitude useful to 50 mc. Harmonic amplifier with tuned plate circuit and panel range switch. 800 cycle modulator with panel control switch. In addition to oscillators, multivibrators, modulators and amplifiers, a built-in detector with phone jack and gain control is incorporated. Self-contained power supply.

Model 90505, with tubes............ $

ABSORPTION WAVEMETERS

The 90600 series of absorption wavemeters are available in several styles and many different ranges. Most popular is kit of four units, covering range of 3.0 to 140 mc.

Model 90600...................... $



90651

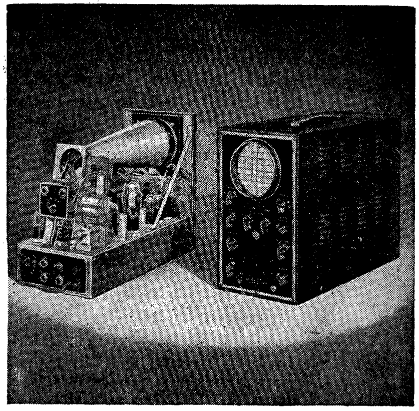
GRID DIP METER

The No. 90651 MILLEN GRID DIP METER is compact and completely self contained. The AC power supply is of the "transformer" type. The drum dial has seven calibrated uniform length scales from 1.5 MC to 300 MC with generous over laps plus an arbitrary scale for use with special application inductors. Internal terminal strip permits battery operation for antenna measurement.

No. 90651, with tube............... $

Additional Inductors for Lower Frequencies

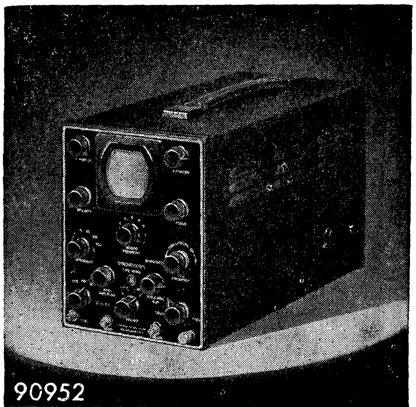
No. 46702—925 to 2000 KC......... $
No. 46703—500 to 1050 KC.........
No. 46704—325 to 600 KC.........
No. 46705—220 to 350 KC.........



LABORATORY SYNCHROSCOPES

The 5" laboratory synchroscopes are available with and without detector-video strips.

Model P-4-2, with tubes............. $
Model P-4E-2, with tubes............

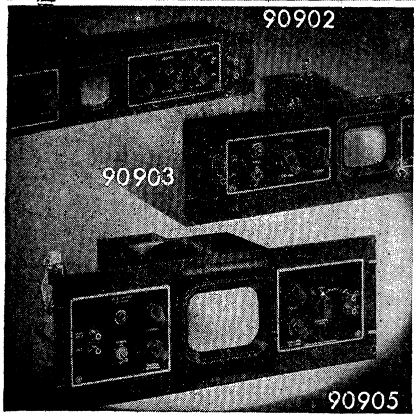


90952

MINIATURE SYNCHROSCOPE

The compact design of the No. 90952, measuring only 7½" x 5⅝" x 13", and weighing only 17 lbs., makes available for the first time a truly DESIGNED FOR APPLICATION "field service" Synchroscope.

No. 90952, with tubes.............. $



90902

90903

90905

CATHODE RAY OSCILLOSCOPES

The No. 90902, No. 90903 and No. 90905 Rack Panel Oscilloscopes, for two, three and five inch tubes, respectively, are inexpensive *basic units* comprising power supply, brilliancy and centering controls, safety features, magnetic shielding, switches, etc. As a transmitter monitor, no additional equipment or accessories are required. The well-known trapezoidal monitoring patterns are secured by feeding modulated carrier voltage from a pickup loop directly to vertical plates of the cathode ray tube and audio modulating voltage to horizontal plates. By the addition of such units as sweeps, pulse generators, amplifiers, servo sweeps, etc., all of which can be conveniently and neatly constructed on companion rack panels, the original basic 'scope unit may be expanded to serve any conceivable industrial or laboratory application.

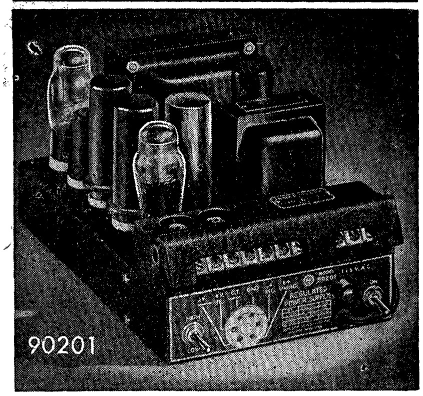
No. 90902, less tubes............... $
No. 90903, less tubes...............
No. 90905, less tubes...............

90921

'SCOPE AMPLIFIER—SWEEP UNIT

Vertical and horizontal amplifiers along with hard-tube, saw tooth sweep generator. Complete with power supply mounted on a standard 5¼" rack panel.

No. 90921, with tubes............... $



90201

REGULATED POWER SUPPLIES

A compact, uncased, regulated power supply, either for table use in the laboratory or for incorporation as an integral part of larger equipments. 50 watts, with regulated voltage from 0 to 200 volts.

Model 90201, less tubes............. $

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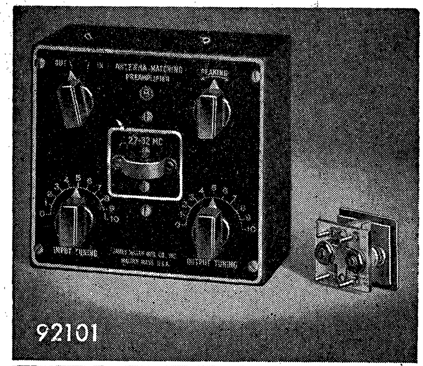

92101

R9'er MATCHING PREAMPLIFIER

The Millen 92101 is an electronic impedance matching device and a broad-band preamplifier combined into a single unit, designed primarily for operation on 6 and 10 meters. Coils for 20 meter band also available.

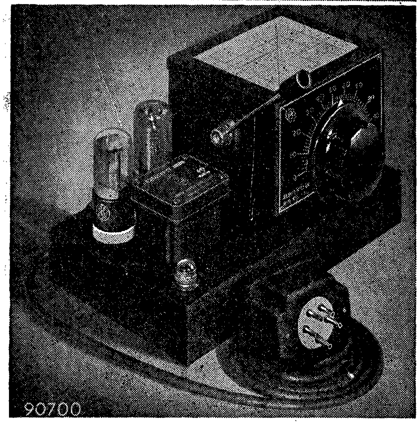
No. 92101, less tubes................ $

90671

STANDING WAVE RATIO BRIDGE

The Millen S.W.R. bridge provides easy and inexpensive measurement of standing wave ratio on antennas using co-ax cable. As assembled the bridge is set up for 52 ohm line. A calibrated 75 ohm resistor is mounted inside the case for substitution in the circuit when 75 ohm line is used.

No. 90671........................ $


90700

FREQUENCY SHIFTER

A favorite frequency shifter, plugs in, in place of crystal, for instant finger-tip control of carrier frequency. Low drift, chirpless keying, vibration immune, big band spread, accurate calibration.

Model 90700, with tubes............ $

90711

VARIABLE FREQUENCY OSCILLATOR

The No. 90711 is a complete transmitter control unit with 6SK7 temperature-compensated, electron coupled oscillator of exceptional stability and low drift, a 6SK7 broad-band buffer or frequency doubler, a 6A67 tuned amplifier which tracks with the oscillator tuning, and a regulated power supply. Output sufficient to drive an 807 is available on 160, 80 and 40 meters and reduced output is available on 20 meters. Close frequency setting is obtained by means of the vernier control arm at the right of the dial. Since the output is isolated from the oscillator by two stages, zero frequency shift occurs when the output load is varied from open circuit to short circuit. The entire unit is unusually solidly built so that no frequency shift occurs due to vibration. The keying is clean and free from all annoying chirp, quick drift, jump, and similar difficulties often encountered in keying variable frequency oscillators.

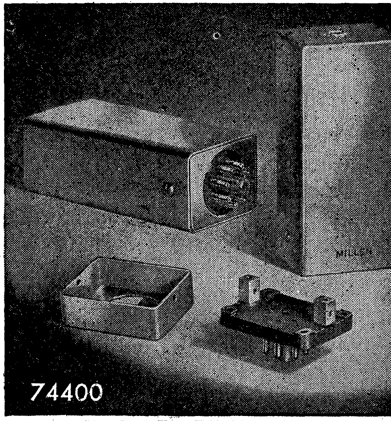
No. 90711, with tubes................ $

90800

50 WATT TRANSMITTER

Based on an original Handbook design, this flexible unit is ideal for either low power amateur band transmitter use or as an exciter for high power PA stages.

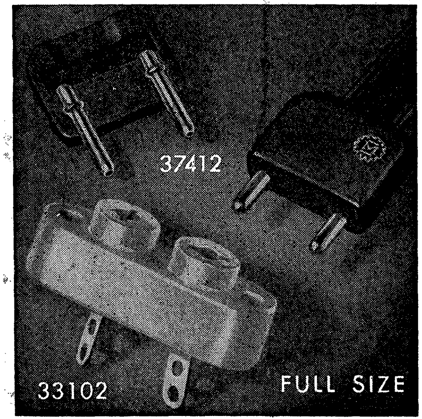
Model 90800, less tubes............. $


74400

OCTAL BASE AND SHIELD

Low loss phenolic base with octal socket plug and aluminum shield can $1\frac{7}{16}$ x $1\frac{7}{8}$ x $3\frac{15}{16}$.

No. 74400.......................... $


37412

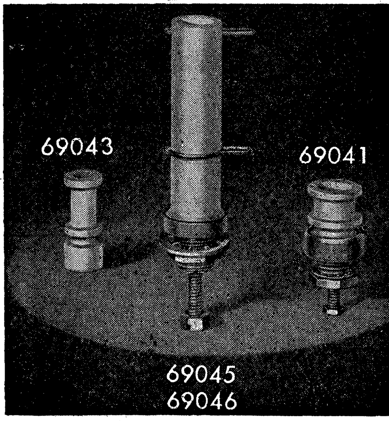
33102

FULL SIZE

TRANSMISSION LINE PLUG

An inexpensive, compact, and efficient polyethylene unit for use with the 300 ohm ribbon type polyethylene transmission lines. Fits into standard Millen No. 33102 (crystal) socket. Pin spacing ½", diameter .095".

No. 37412.......................... $


69043

69041

69045

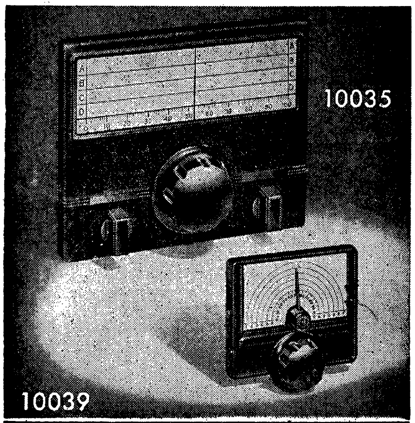
69046

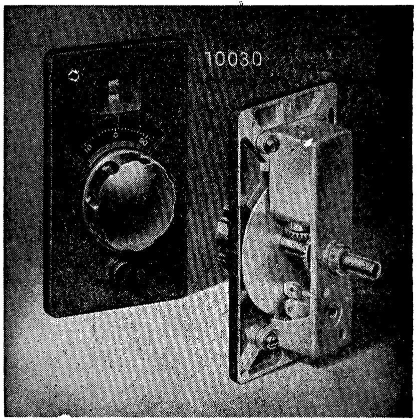
PERMEABILITY TUNED CERAMIC FORMS

In addition to the popular shielded plug-in permeability tuned forms, 74000 series, the 69040 series of ceramic permeability tuned unshielded forms are available as standard stock items. Winding diameters and lengths of winding space are $\frac{13}{32}$ x $\frac{7}{32}$ for 69041–2; ¼ x ⅜ for 69043–7–8; ½ x $1\frac{1}{16}$ for 69045–6; $\frac{9}{16}$ x $\frac{3}{16}$ for 69044.

No. 69041—(Copper Slug)............. $
No. 69042—(Iron Core)...............
No. 69043—(Iron Core)...............
No. 69044—(Copper Slug).............
No. 69045—(Copper Slug).............
No. 69046—(Iron Core)...............
No. 69047—(Copper Slug).............
No. 69048—(Iron Core)...............

JAMES MILLEN
MALDEN • MASSACHUSETTS



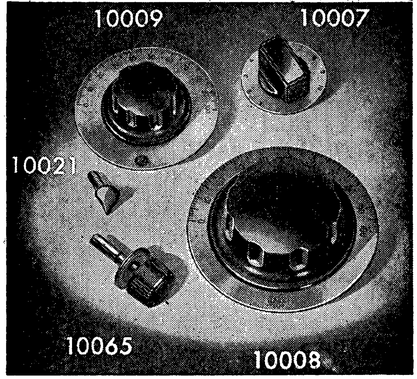


INSTRUMENT DIALS

The No. 10030 is an extremely sturdy instrument type indicator. Control shaft has 1 to 1 ratio. Veeder type counter is direct reading in 99 revolutions and vernier scale permits readings to 1 part in 100 of a single revolution. Has built-in dial lock and ¼" drive shaft coupling. May be used with multi-revolution transmitter controls, etc., or through gear reduction mechanism for control of fractional revolution capacitors, etc., in receivers or laboratory instruments.

The No. 10035 illuminated panel dial has 12 to 1 ratio; size, 8½" x 6½". Small No. 10039 has 8 to 1 ratio; size, 4" x 3¼". Both are of compact mechanical design, easy to mount and have totally self-contained mechanism, thus eliminating back of panel interference. Provision for mounting and marking auxiliary controls, such as switches, potentiometers, etc., provided on the No. 10035. Standard finish, either size, flat black art metal.

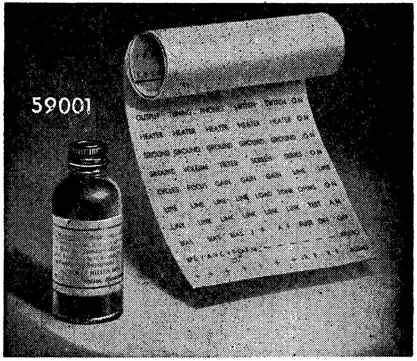
No. 10039........................ $
No. 10035........................
No. 10030........................



DIALS AND KNOBS

Just a few of the many stock types of small dials and knobs are illustrated herewith. 10007 is 1⅝" diameter, 10009 is 2½" and 10008 is 3½".

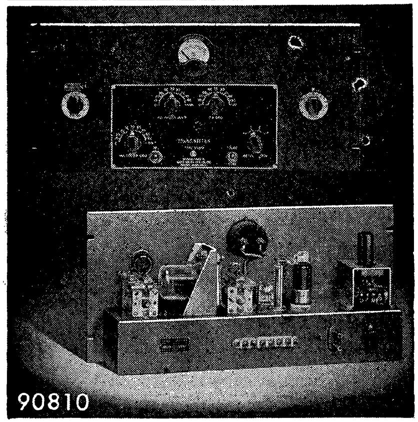
No. 10007........................ $
No. 10008........................
No. 10009........................
No. 10021........................
No. 10065........................



PANEL MARKING TRANSFERS

The panel marking transfers have ⅛" block letters. Special solution furnished. Must not be used with water. Equally satisfactory on smooth or wrinkle finished panels or chassis. Ample supply of every popular word or marking required for amateur or commercial equipment.

No. 59001, white letters.............. $



HIGH FREQUENCY TRANSMITTER

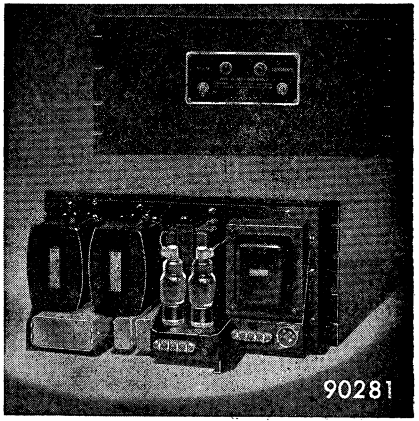
The No. 90810 crystal control transmitter provides 75 watt output (higher output may be obtained by the use of forced cooling) on the 20, 10–11, 6 and 2 meter amateur bands. Provisions are made for quick band shift by means of the new 48000 series high frequency plug-in coils.

No. 90810, less tubes and crystals...... $

HIGH FREQUENCY RF AMPLIFIER

A physically small unit capable of a power output of 70 to 85 watts on 'phone or 87 to 110 watts on C-W on 20, 15, 11, 10, 6 or 2 meter amateur bands. Provision is made for quick band shift by means of the new No. 48000 series VHF plug-in coils. The No. 90811 unit uses either an 829-B or 3E29.

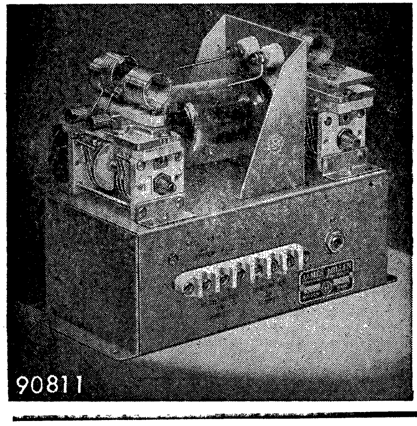
No. 90811 with 10 meter band coils, less tube............................ $



HIGH VOLTAGE POWER SUPPLY

The No. 90281 high voltage power supply has a d.c. output of 700 volts, with maximum current of 250 ma. In addition, a.c. filament power of 6.3 volts at 4 amperes is also available so that this power supply is an ideal unit for use with transmitters, such as the Millen No. 90800, as well as general laboratory purposes. The power supply uses two No. 816 rectifiers and has a two section pi filter with 10 henry General Electric chokes and a 2-2-10 mfd. bank of 1000 volt General Electric Pyranol capacitors. The panel is standard 8¾" x 19" rack mounting.

No. 90281, less tubes................. $



RF POWER AMPLIFIER

This 500 watt amplifier may be used as the basis of a high power amateur transmitter or as a means for increasing the power output of an existing transmitter. As shipped from the factory, the No. 90881 RF power amplifier is wired for use with the popular RCA or G.E. "812" type tubes, but adequate instructions are furnished for readjusting for operation with such other popular amateur style transmitting tubes as Taylor TZ40, Eimac 35T, etc. The amplifier is of unusually sturdy mechanical construction, on a 10½" relay rack panel. Plug-in inductors are furnished for operation on 10, 20, 40 or 80 meter amateur bands. The standard Millen No. 90800 exciter unit is an ideal driver for the new No. 90881 RF power amplifier.

No. 90881, with one set of coils, but less tubes............................ $

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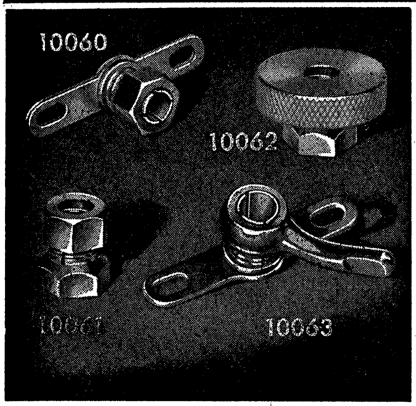
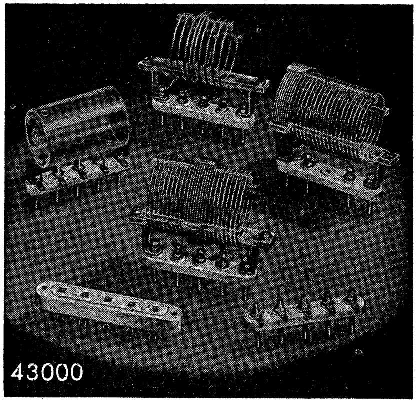


SHAFT LOCKS

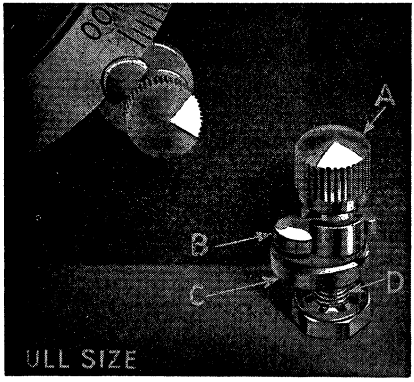
In addition to the original No. 10060 and No. 10061 "DESIGNED FOR APPLICATION" shaft locks, we can also furnish such variations as the No. 10062 and No. 10063 for easy thumb operation as illustrated above. The No. 10061 instantly converts any plain "¼ shaft" volume control, condenser, etc. from "plain" to "shaft locked" type. Each to mount in place of regular mounting nut.

No. 10060.......................... $
No. 10061..........................
No. 10062..........................
No. 10063..........................



TRANSMITTING TANK COILS

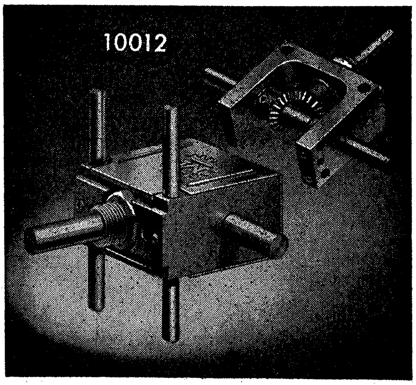
A full line—all popular wattages for all bands. Send for special catalog.



DIAL LOCK

Compact, easy to mount, positive in action, does not alter dial setting in operation! Rotation of knob "A" depresses finger "B" and "C" without imparting any rotary motion to Dial. Single hole mounted.

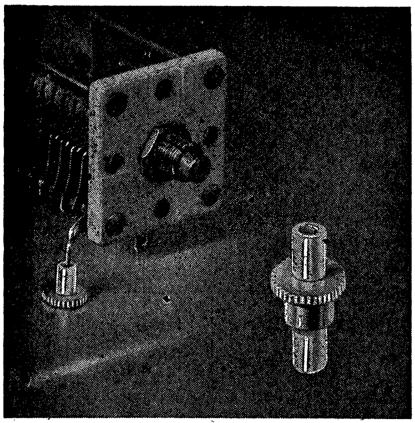
No. 10050.......................... $



RIGHT ANGLE DRIVE

Extremely compact, with provisions for many methods of mounting. Ideal for operating potentiometers, switches, etc., that must be located, for short leads, in remote parts of chassis.

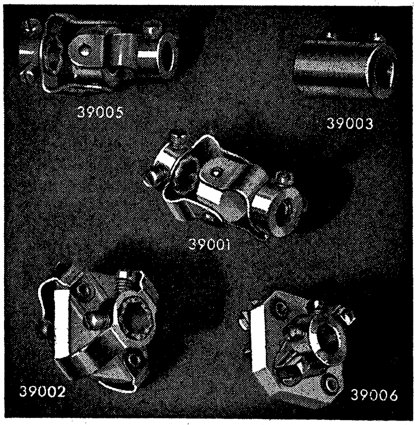
No. 10012.......................... $



THRU-BUSHING

Efficient, compact, easy to use and neat appearing. Fits ¼" hole in chassis. Held in place with a drop of solder or a "nick" from a crimping tool.

No. 32150.......................... $



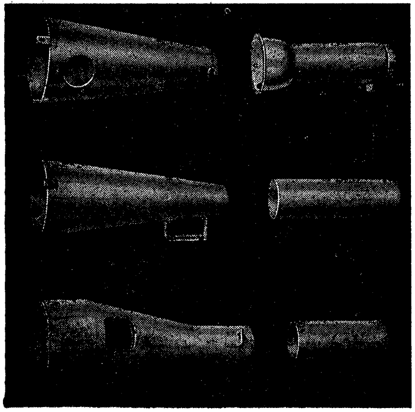
FLEXIBLE COUPLINGS

The No. 39000 series of Millen "Designed for Application" flexible coupling units include, in addition to improved versions of the conventional types, also such exclusive original designs as the No. 39001 insulated universal joint and the No. 39006 "slide-action" coupling (in both steatite and bakelite insulation).

The No. 39006 "slide-action" coupling permits longitudinal shaft motion, eccentric shaft motion and out-of-line operation, as well as angular drive without backlash.

The No. 39005 is similar to the No. 39001, but is not insulated and is designed for applications where relatively high torque is required. The steatite insulated No. 39001 has a special anti-backlash pivot and socket grip feature. All of the above illustrated units are for ¼" shaft and are standard production type units.

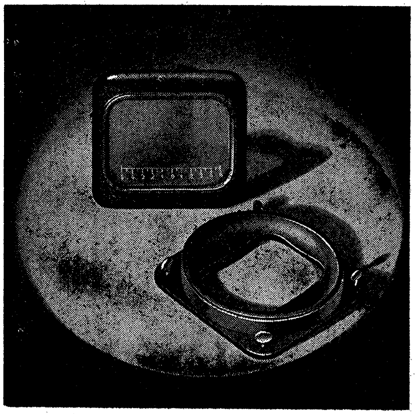
No. 39001.......................... $
No. 39002..........................
No. 39003..........................
No. 39005..........................
No. 39006..........................



CATHODE RAY TUBE SHIELDS

For many years we have specialized in the design and manufacture of magnetic metal shields of nicoloi and mumetal for cathode ray tubes in our own complete equipment, as well as for applications of all other principal complete equipment manufacturers. Stock types as well as special designs to customers' specifications promptly available.

No. 80045—Nicoloi for 5" tube....... $
No. 80043—Nicoloi for 3" tube.......
No. 80042—Nicoloi for 2" tube.......



BEZELS FOR CATHODE RAY TUBES

Five inch bezel is of cast aluminum with black wrinkle finish. Complete with neoprene cushion, green lucite filter scale and four screws for quick detachment from panel when inserting tube.

No. 80075—5"...................... $
No. 80073—3"......................
No. 80072—2"......................

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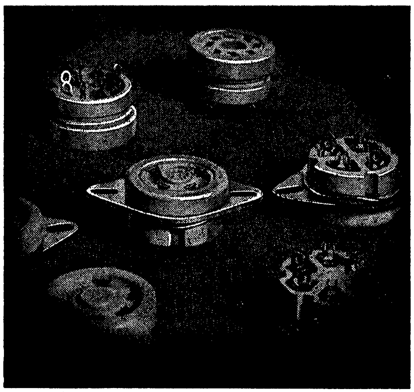
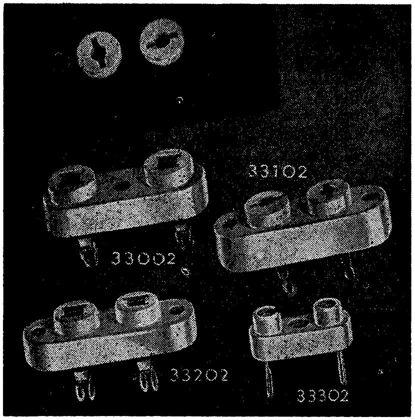
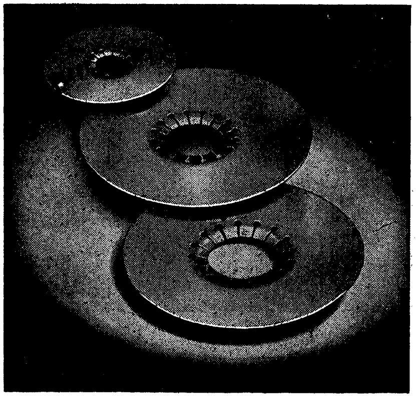
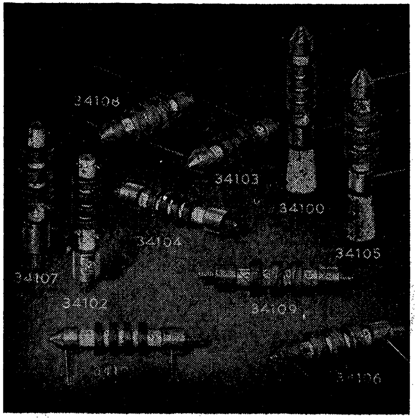








TUBE SOCKETS DESIGNED FOR APPLICATION

MODERN SOCKETS for MODERN TUBES! Long Flashover path to chassis permits use with transmitting tubes, 866 rectifiers, etc. Long leakage path between contacts. Contacts are type proven by hundreds of millions already in government, commercial and broadcast service, to be extremely dependable. Sockets may be mounted either with or without metal flange. Mounts in standard size chassis hole. All types have barrier between contacts and chassis. All but octal and crystal sockets also have barriers between individual contacts in addition.

The No. 33888 shield is for use with the 33008 octal socket. By its use, the electrostatic isolation of the grid and plate circuits of single-ended metal tubes can be increased to secure greater stability and gain.

The 33087 tube clamp is easy to use, easy to install, effective in function. Available in special sizes for all types of tubes. Single hole mounting. Spring steel, cadmium plated.

Cavity Socket Contact Discs, 33446 are for use with the "Lighthouse" ultra high frequency tube. This set consists of three different size unhardened beryllium copper multi-finger contact discs. Heat treating instructions forwarded with each kit for hardening after spinning or forming to frequency requirements.

Voltage regulator dual contact bayonet socket, 33991 black Bakelite insulation and 33992 with low loss high leakage mica filled Bakelite insulation.

No. 33004....................	$
No. 33005....................	
No. 33006....................	
No. 33007....................	
No. 33008....................	
No. 33888....................	
No. 33087....................	
No. 33002....................	
No. 33102....................	
No. 33202....................	
No. 33302....................	
No. 33446*...................	
No. 33991....................	
No. 33992....................	

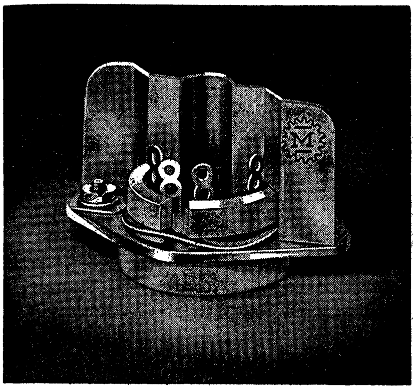
* For set of 3. Single discs $2.00 each.

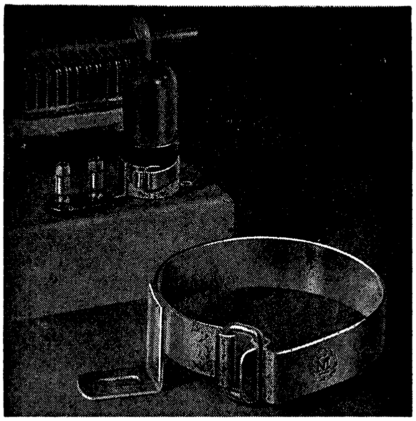
RF CHOKES

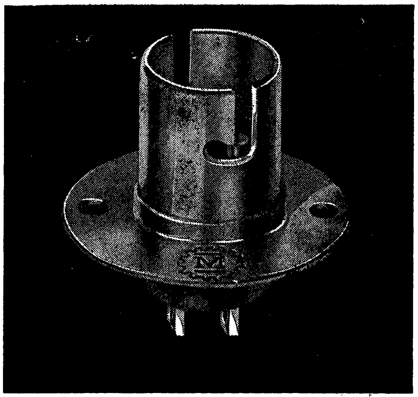
Many have copied, few have equalled, and none have surpassed the genuine original design Millen Designed for Application series of midget RF Chokes. The more popular styles now in constant production are illustrated herewith. Special styles and variations to meet unusual requirements quickly furnished.

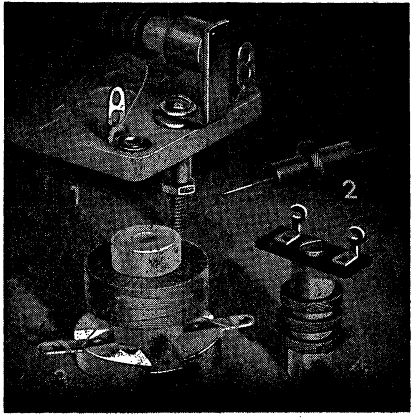
General Specifications: 2.5 mH, 250 mA for types 34100, 34101, 34102, 34103, 34104, and 1 mH, 300 mA for types 34105, 34106, 34107, 34108, 34109.

No. 34100....................	$
No. 34101....................	
No. 34102....................	
No. 34103....................	
No. 34104....................	









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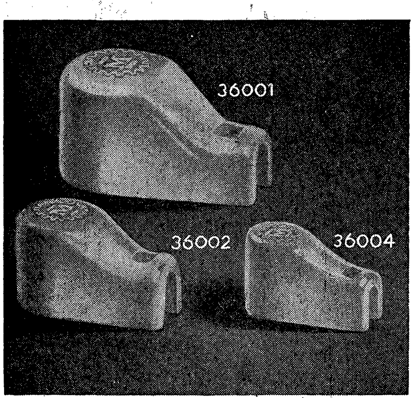
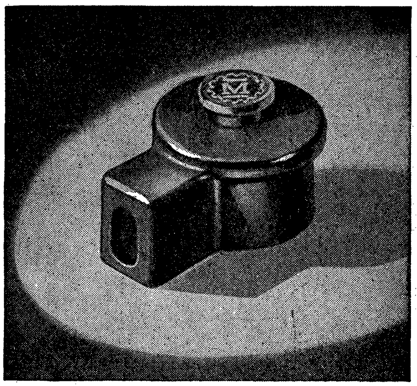




CERAMIC PLATE OR GRID CAPS

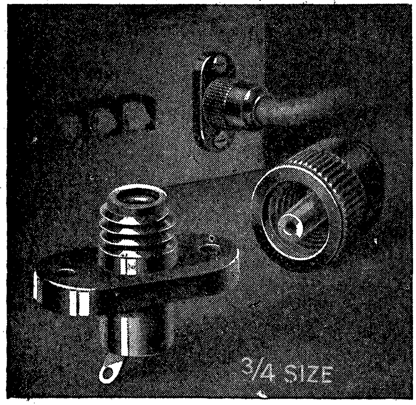
Soldering lug and contact one-piece. Lug ears annealed and solder dipped to facilitate easy combination "mechanical plus soldered" connection of cable.

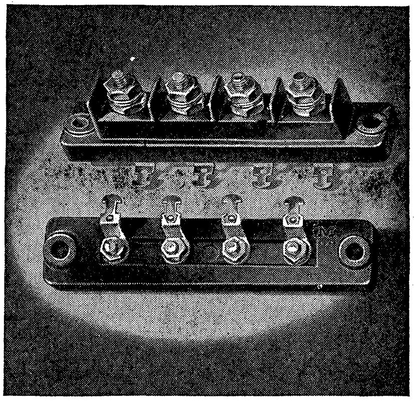
No. 36001—9/16″.............
No. 36002—⅜″................
No. 36004—¼″................

SNAP LOCK PLATE CAP

For Mobile, Industrial and other applications where tighter than normal grip with multiple finger 360° low resistance contact is required. Contact self-locking when cap is pressed into position. Insulated snap button at top releases contact grip for easy removal without damage to tube.

No. 36011—9/16″............. $
No. 36012—⅜″................





SAFETY TERMINAL

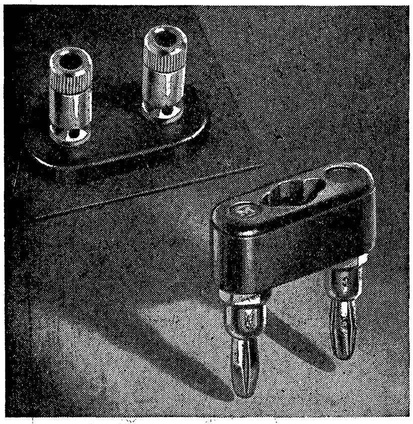
Combination high voltage terminal and thru-bushing. Tapered contact pin fits firmly into conical socket providing large area, low resistance connection. Pin is swivel mounted in cap to prevent twisting of lead wire.

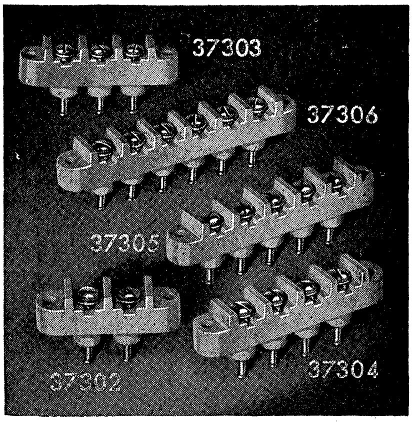
No. 37001, Black or Red......... $
No. 37501, Low loss.............

TERMINAL STRIP

A sturdy four-terminal strip of molded black Textolite. Barriers between contacts. "Non turning" studs, threaded 8/32 each end.

No. 37104.................... $





POSTS, PLATES and PLUGS

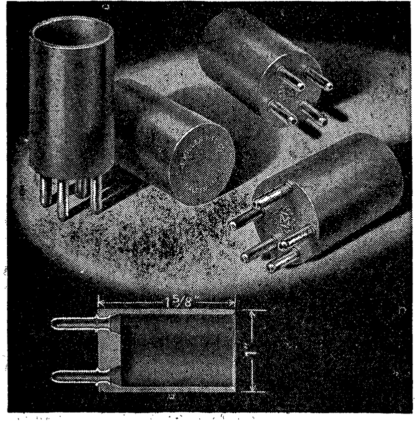
Designed for Application! Compact, easy to use. Made in black and red regular bakelite as well as low loss brown mica filled bakelite or steatite for R.F. uses. Posts have captive head.

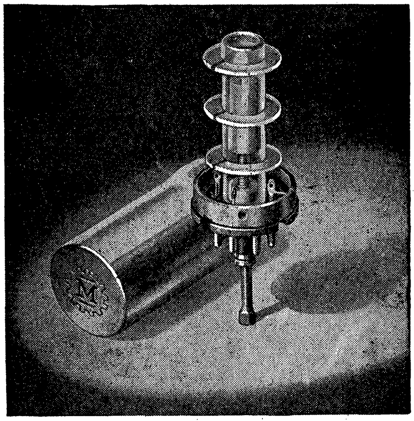
No. 37202 Plates (pr.)........... $
No. 37212 Plugs................
No. 37222 Posts (pr.)............

STEATITE TERMINAL STRIPS

Terminal and lug are one piece. Lugs are Navy turret type and are free floating so as not to strain steatite during wide temperature variations. Easy to mount with series of round holes for integral chassis bushings.

No. 37302.................... $
No. 37303....................
No. 37304....................
No. 37305....................
No. 37306....................





MIDGET COIL FORMS

Made of low loss mica filled brown bakelite. Guide funnel makes for easy threading of leads through pins.

No. 45000.................... $
No. 45004....................
No. 45005....................

TUNABLE COIL FORM

Standard octal base of low loss mica-filled bakelite, polystyrene ½″ diameter coil form, heavy aluminum shield, iron tuning slug of high frequency type, suitable for use up to 35 mc. Adjusting screw protrudes through center hole of standard octal socket.

No. 74001, with iron core........ $
No. 74002, less iron core.........

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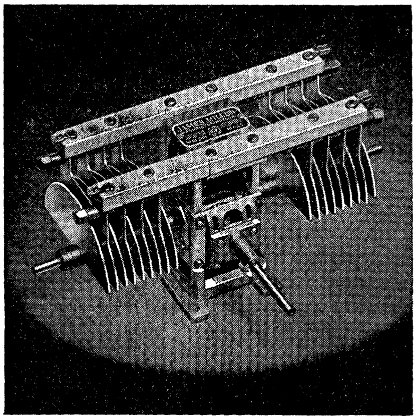
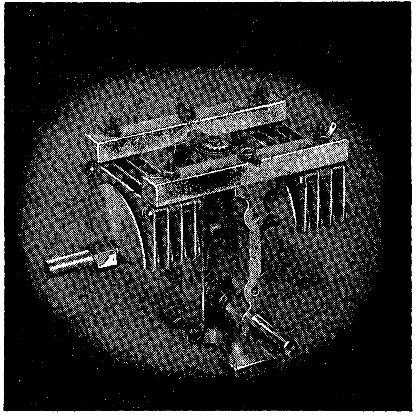


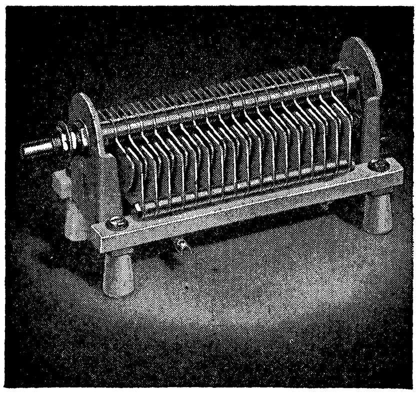


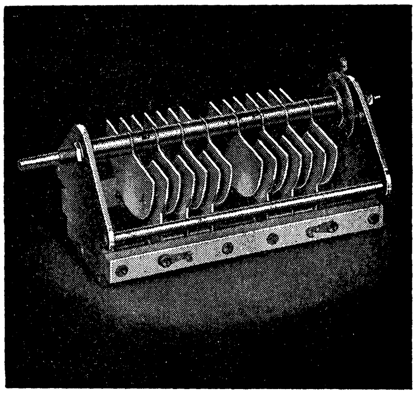
04000 and 11000 SERIES TRANSMITTING CONDENSERS

A new member of the "Designed for Application" series of transmitting variable air capacitors is the 04000 series with peak voltage ratings of 3000, 6000, and 9000 volts. Right angle drive, 1–1 ratio. Adjustable drive shaft angle for either vertical or sloping panels. Sturdy construction, thick, round-edged, polished aluminum plates with 1¾" radius. Constant impedance, heavy current, multiple finger rotor contactor of new design. Available in all normal capacities.

The 11000 series has 16/1 ratio center drive and fixed angle drive shaft.

Code	*Volts*	*Capacity*	*Price*
11035	3000	35	$
11050	3000	50	
11070	3000	70	
04050	6000	50	
04060	9000	60	
04100	6000	90	
04200	3000	205	

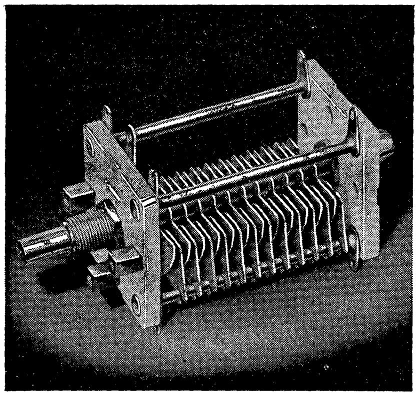


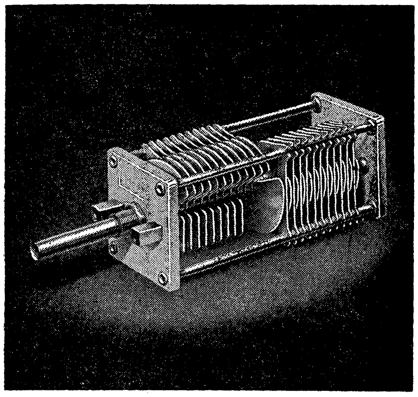


12000 and 16000 SERIES TRANSMITTING CONDENSERS

Rigid heavy channeled aluminum end plates. Isolantite insulation, polished or plain edges. One piece rotor contact spring and connection lug. Compact, easy to mount with connector lugs in convenient locations. Same plate sizes as 11000 series above.

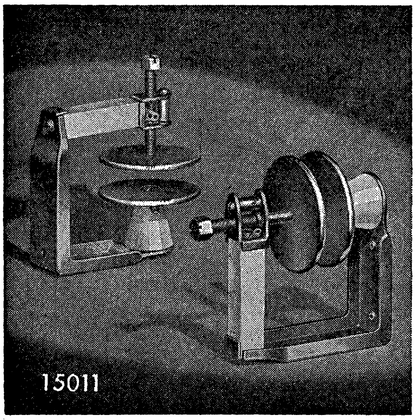
The 16000 series has same plate sizes as 04000 series. Also has constant impedance, heavy current, multiple finger rotor contactor of new design. Both 12000 and 16000 series available in single and double sections and many capacities and plate spacing.





THE 28000–29000 SERIES VARIABLE AIR CAPACITORS

"Designed for Application," double bearings, steatite end plates, cadmium or silver plated brass plates. Single or double section .022" or .066" air gap. End plate size: 19/16" x 11/16". Rotor plate radius: ¾". Shaft lock, rear shaft extension, special mounting brackets, etc., to meet your requirements. The 28000 series has semi-circular rotor plate shape. The 29000 series has approximately straight frequency line rotor plate shape. Prices quoted on request. Many stock sizes.

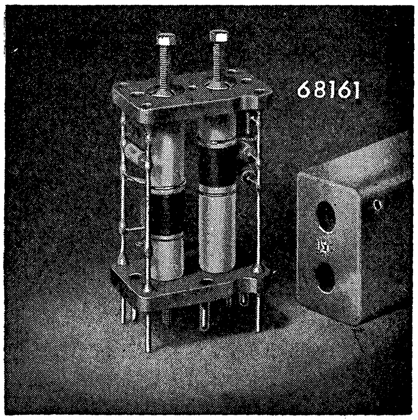


15011

NEUTRALIZING CAPACITOR

Designed originally for use in our own No. 90881 Power Amplifier, the No. 15011 disc neutralizing capacitor has such unique features as rigid channel frame, horizontal or vertical mounting, fine thread over-size lead screw with stop to prevent shorting and rotor lock. Heavy rounded-edged polished aluminum plates are 2" diameter. Glazed Steatite insulation.

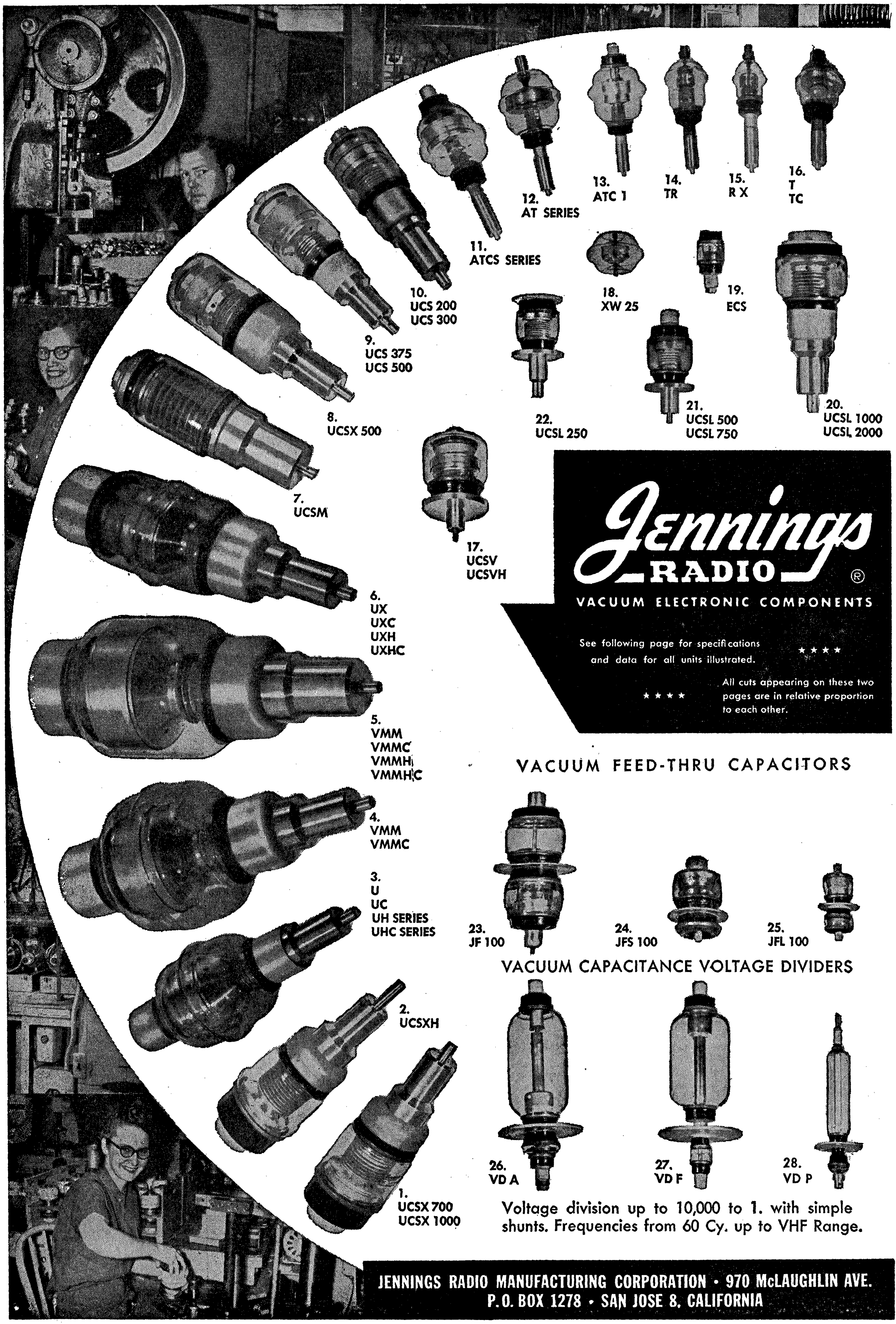
No. 15011 .... $



68161

I.F. TRANSFORMERS

The Millen "Designed for Application" line of I.F. transformers includes air condenser tuned, and permeability tuned types for all applications. Standard stock units are for 456, 1600 and 5000 kc. B.F.O. also available.


1. UCSX 700 UCSX 1000
2. UCSXH
3. U UC UH SERIES UHC SERIES
4. VMM VMMC
5. VMM VMMC VMMH VMMHC
6. UX UXC UXH UXHC
7. UCSM
8. UCSX 500
9. UCS 375 UCS 500
10. UCS 200 UCS 300
11. ATCS SERIES
12. AT SERIES
13. ATC 1
14. TR
15. R X
16. T TC
17. UCSV UCSVH
18. XW 25
19. ECS
20. UCSL 1000 UCSL 2000
21. UCSL 500 UCSL 750
22. UCSL 250
23. JF 100
24. JFS 100
25. JFL 100
26. VD A
27. VD F
28. VD P

Jennings RADIO ®

VACUUM ELECTRONIC COMPONENTS

See following page for specifications and data for all units illustrated.

★ ★ ★ ★

★ ★ ★ ★

All cuts appearing on these two pages are in relative proportion to each other.

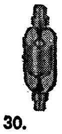
VACUUM FEED-THRU CAPACITORS

VACUUM CAPACITANCE VOLTAGE DIVIDERS

Voltage division up to 10,000 to 1. with simple shunts. Frequencies from 60 Cy. up to VHF Range.

JENNINGS RADIO MANUFACTURING CORPORATION • 970 McLAUGHLIN AVE.
P.O. BOX 1278 • SAN JOSE 8, CALIFORNIA

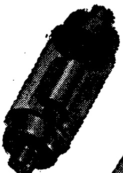
29.
Y SERIES


30.
X SERIES

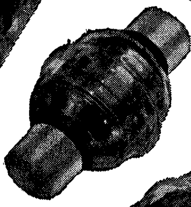
31.
W SERIES

32.
JC-2 SERIES

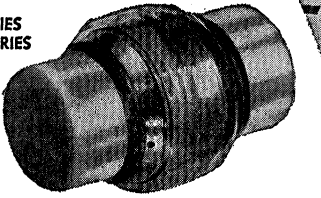
33.
VCC SERIES

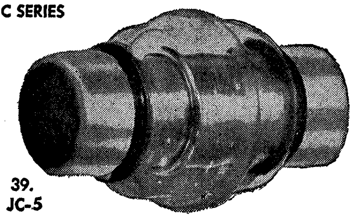

34.
VC SERIES

35.
K SERIES


36.
M
MC
MH
MHC SERIES

37.
ML SERIES
MLC SERIES


38.
MM
MMC
MMH
MMHC SERIES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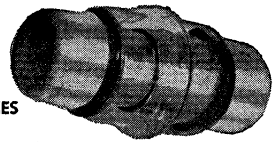
JC-5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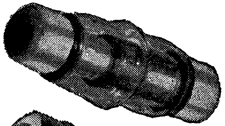
JC-4 SERIES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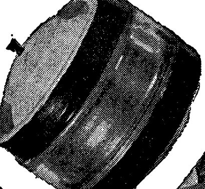
JC-3
SERIES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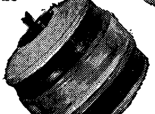
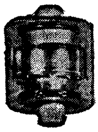
MMC-1


43.
MC-1
SERIES

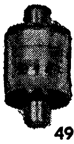
44.
JCSL 100

45.
JCSL 250

46.
JCSL 500
JCSL 750


47.
JCSL 1000
JCSL 1500
JCSL 2000

48.
JCS-2 SERIES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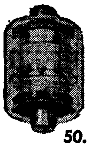
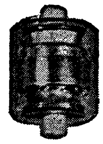
JCS-1 SERIES


50.
JCS-250

FIXED AND VARIABLE HIGH VOLTAGE VACUUM CAPACITORS AND VACUUM SWITCHES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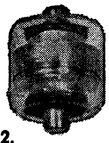
JCSH 75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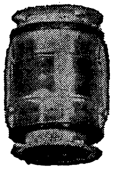
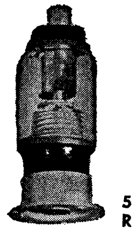
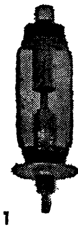
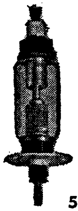
JCS 500


53.
JCS 1000

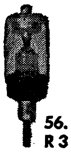
VACUUM SWITCHES AND RELAYS


59.
RH 1


57.
R 1


58.
R 7

54.
R 5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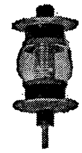
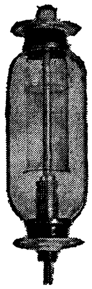
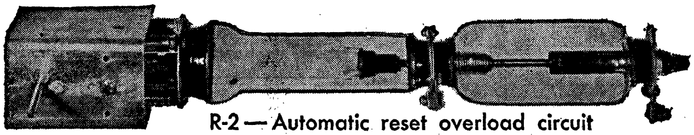
R 3


55.
R 4


60.
R2G

Switches available either mounted or unmounted.
If mounted as relays, may have either Bakelite insulation or all-glass 100 KV. insulation.
•Actuated by either 110-220 Volt A.C. or 6-110 Volt D.C. Solenoids.

Relays Available as:		*Overload Circuit Breakers*
Normally open	S P D T	Single phase
Normally closed	D P D T	Three phase
Impulse lock	4 P D T	Manual reset
		Automatic reset


R-2 — Automatic reset overload circuit breaker using R-2 switch with all-glass 100 KV insulation.

**JENNINGS RADIO MANUFACTURING CORPORATION • 970 McLAUGHLIN AVE.
P.O. BOX 1278 • SAN JOSE 8, CALIFORNIA**

Jennings RADIO ®
VACUUM ELECTRONIC COMPONENTS

VACUUM CAPACITORS & SWITCHES

SPECIFICATIONS

See preceding pages for all units.

	FIGURES	NICKEL TYPES	COPPER TYPES	CAPACITY MMFD.	PEAK VOLTAGE KILOVOLTS	RMS AMPS		OVERALL LENGTH	MAXIMUM O. D.	CONTACT DIAMETER	MOUNTING CENTERS
						NICKEL	COPPER				
VACUUM FIXED CAPACITORS	34, 33	VC	VCC	6, 12, 25, 50, 75, 100, 150	20, 30	14	60	6½	2⅝	13/16	5 13/16
	34, 33	VC	VCC	200, 250	20, 30	14	60	6½	2 11/16	13/16	5⅞
	31	W		6, 12, 25, 50, 100	20	10.5		4 3/16	2¼	⅜	3⅞
	30	X		5, 10, 15, 20, 25	17	7		3¼	1 1/16	23/64	2⅞
	18	XW		25	35	14		2 9/32	3	¼	1 15/16
	29	Y		1, 2, 3, 4, 5	17	7		3¼	11/16	11/32	2⅞
	35	K		12, 25, 50	40, 50	14		8½	3	13/16	7¾
	49		JCS-1	25, 50, 75, 100, 150	7.5, 10, 15		42	3¾	2⅛	⅞	3¼
	48		JCS-2	10, 20, 25, 50	7.5, 10, 15		20	2 11/16	1½	11/32	2¼
	50		JCS	250	7.5, 10, 15		42	3¾	2⅝	⅞	3⅛
	52		JCS	500	7.5, 10, 15		42	4	3 1/16	55/64	3½
	53		JCS	1000	7.5, 10, 12		42	4⅝	3⅝	2	3⅞
	51		JCSH	75	35, 45		42	4	2 13/16	⅞	3⅜
	44		JCSL	100	3, 5		20	2½	1⅛	11/32	2 1/16
	45		JCSL	250	3, 5		20	2 9/16	1 13/16	11/32	2⅛
	46		JCSL	500, 750	3, 5		42	3⅞	2⅛	⅞	3⅛
	47		JCSL	1000, 1500	3		42	3¾	2⅞	⅞	3¼
	47		JCSL	2000	2		42	4	2⅞	⅞	3½
	32		JC-2	25, 50, 75, 100	20, 30		42	3 13/16	3¼	13/16	3¼
	41		JC-3	20, 40, 50, 60	35, 45, 55, 60		140	8¼	3½	2 1/32	6¼
	40		JC-4	75, 100, 125	35, 45, 55, 60		175	9¼	5	3 9/64	7
	39		JC-5	200	35, 45, 55, 60		225	11¼	7	4⅛	8¾
	36	M	MC	500, 750, 1000	10, 15, 20	21	60	8⅜	5	2 1/32	6¼
	37	ML	MLC	500, 750, 1000	25, 30	21	60	9¼	5	2 1/32	7¼
	36	MH	MHC	200 or less	35, 40, 50	21	60	8½	5	2 1/32	6⅜
	38	MM	MMC	1500, 2000	10, 15	21	125	9¼	6⅛	4⅛	6¾
	38	MMH	MMHC	450	35, 40, 45	21	125	9¼	6⅛	4⅛	6¾
	43		MC-1	500, 750, 1000	10, 15		150	3¼	4⅛	2	2 15/16
	42		MMC-1	2000	10, 15		225	4	6 1/16	3⅛	4
VACUUM VARIABLE CAPACITORS	16	T		5-25	20	10.5		6⅜	2¼	½x19/32	4⅛
	16		TC	5-25	20		20	6⅝	2⅛	19/32	4 5/16
	15	RX		2-8	10, 15, 20	10.5		5½	1¾	11/32x⅝	3
	14	TR		2-8	17	10.5		6⅛	2¼	⅜x5/16	3⅞
	19		ECS	2-8 (Adjustable)	10, 15		20	2 7/16	1¼	1	2⅛
	12	AT		10-50, 15-75	20, 25, 30	10.5		6½	3	½x⅝	4 3/16
	13		ATC	20-35, 10-50	20, 30		20	6 15/16	3⅛	19/32	4 9/16
	11		ATCS	10-110, 20-200	7.5, 10, 15		20	6 15/16	3⅛	⅜x19/32	4 7/16
	10		UCS	5-200	7.5, 10, 15		42	8⅜	2⅝	⅞x2 1/32	4¼
	10		UCS	10-300	7.5, 10, 15		42	8¾	2 9/16	⅞x2 1/32	4⅝
	9		UCS	10-375	7.5, 10, 15		42	8¾	3⅛	⅞x2 1/32	4⅝
	9		UCS	25-500	7.5, 10, 15		42	9	3 1/16	⅞x2 1/32	4 13/16
	—		UCSL	4-100	3, 5		20	4¾	1⅛	11/32x⅝	2 17/32
	22		UCSL	4-250	3, 5		20	4	2 3/16	—	2½
	21		UCSL	5-500, 10-750	3, 5		42	5⅜	2 3/16	⅞	3⅜
	20		UCSL	7-1000	2, 3		42	4 13/16	3 1/16	2 1/32	3½
	20		UCSL	50-2000	2, 3		42	5⅛	3 1/16	2 1/32	3 13/16
	17		UCSV	8-110	7.5, 10, 15		60	4¾	3	⅞	3 3/16
	17		UCSVH	10-35	25, 35		60	4 11/16	3	⅞	3 3/16
	7		UCSM	4-500	7.5, 10, 15		80	10⅝	3⅝	2x⅜	5⅞
	8		UCSX	10-500	7.5, 10, 15		60	10 5/16	3½	⅞x3⅛	5 3/16
	1		UCSX	25-700	7.5, 10, 12		60	9⅝	3¾	2x3⅛	3 5/16
	1		UCSX	25-1000	7.5, 10, 12		60	9 13/16	3¾	2x3⅛	5
	2		UCSXH	10-200	35, 45		60	10¾	4½	2	5½
	3	U	UC	50-250	10, 15, 20	21	60	11 7/16	5	2	6½
	3	UH	UHC	10-75	35, 45, 55, 60	21	60	11 7/16	5	2	6½
	3	UH	UHC	75-150	35, 45, 55, 60	21	60	12	5	2	7 1/16
	6	UX	UXC	25-500	10, 15, 20	21	60	14	5	3 9/64	7 11/16
	6	UXH	UXHC	25-150	35, 45, 55	21	60	14⅝	5	3 9/64	8¼
	4	VMM	VMMC	50-1000	10, 15	21	100	14⅞	6⅛	4⅛	7¾
	5	VMM	VMMC	100-2000	10, 15	21	125	15⅞	6⅛	4⅛	8⅝
	5	VMMH	VMMHC	25-450	35, 45, 55	21	125	16	6⅛	4⅛	8¾
VACUUM SWITCHES	57		R-1	Vacuum Switch	50, 60		65	6⅝	2	19/32	4 9/16
	60		R-2	Vacuum Switch	50, 60, 70		60	8½	2 9/16	19/32	6½
	56		R-3	Vacuum Switch	35		50	4½	1⅞	11/32x19/32	2⅞
	55		R-4	Vacuum Switch	20		65	4½	1⅞	19/32	2¾
	54		R-5	Vacuum Switch	20		50	3½	1 7/16	11/32x19/32	2 1/16
	58		R-7	Vacuum Switch	40		65	5⅞	1 7/16	19/32	4
	59		RH-1	Vacuum Switch	40, 50		200	6¼	2⅝	13/16x2	4¼
	—		RH-2	Vacuum Switch	50, 60		200	9⅞	3	13/16x2	8
MISC.	23	JF	Feed-thru	100 mmfd.	15		42	6½	2⅝	17/32	5 15/16
	24	JFS	Feed-thru	100 mmfd.	7.5		42	3 13/16	2	⅞x11/32	3⅛
	25	JFL	Feed-thru	100 mmfd.	3		20	3 5/16	1¼	11/32	2⅞
	28		VD—Probe Capacitance Volt. Divider—1.1 mmfd input		20, 30			7½	1 1/16	⅜	4¾
	27		VD—Fixed Capacitance Volt. Divider—1.8 or 3.6 mmfd		50, 60			8½	2 9/16	9/16x19/32	5¾
	26		VD—Adjustable Capac. Volt. Divider		50, 60			8⅝	2 9/16	19/32	6

Current ratings based on 50°C. temp. rise above ambient
Switch current ratings approximately 50% at 10 megacycles

Correspondence invited for other capacities, voltages, and ratings.

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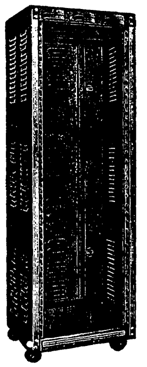
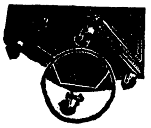
BUD DE LUXE RELAY RACKS



These relay racks are made of 16 gauge steel with ⅛″ panel supports. The panel mounting supports are recessed so that no edges of the panel will be exposed.

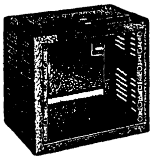
The front and back of the top, the two sides and the door are well louvered to provide adequate ventilation. Snap catches are positioned on the door. A stream-lined appearance is achieved by the use of rounded corners and red-lined chrome trim. The relay rack is shipped knocked-down and complete with all necessary hardware for assembly. All standard 19″ panels will fit these racks.

A SPECIAL FEATURE IS THE USE OF FOUR STURDY SUPPORTS ON THE BOTTOM SO THAT CASTERS CAN BE FASTENED DIRECTLY TO THE BASE, THEREBY ACHIEVING READY MOBILITY. Bud RC-7756 casters will fit this unit. Casters are not included in price of cabinet. THESE RELAY RACKS ARE SUPPLIED IN EITHER BLACK OR GREY WRINKLE FINISH AND LIGHT GREY HAMMERTONE FINISH AT NO EXTRA CHARGE. The overall width is 22″ and the depth is 17¼″ on all sizes listed.



Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1774	42-1/16″	36¾″	90 lbs.	**$32.70**
CR-1771	47-5/16″	42″	100 lbs.	**37.45**
CR-1772	66-9/16″	61¼″	135 lbs.	**48.60**
CR-1773	82-5/16″	77″	155 lbs.	**58.50**

BUD DE LUXE CABINET RACKS



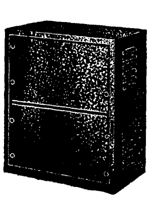
These cabinet racks have rounded corners and attractive red-lined chrome trim. There is a recessed hinged door on the top with a snap catch. These cabinet racks are made of heavy gauge steel and are of sturdy construction. The five large sizes have a hinged rear door, while the small sizes have a welded panel in the rear.

Adequate ventilation is assured by means of louvered sides and a two inch opening in the bottom of the back extends the entire width.

"NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM TO MINIMIZE MARRING OF A TABLE TOP. THESE RELAY RACKS ARE FURNISHED IN EITHER BLACK OR GREY WRINKLE FINISH AND LIGHT GREY HAMMERTONE FINISH AT NO EXTRA CHARGE. Depth 14¾″. width 22″. Will fit standard 19″ panels.

Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1741	10-9/16″	8¾″	29 lbs.	**$12.00**
CR-1740	12-5/16″	10½″	31 lbs.	**13.70**
CR-1742	14-1/16″	12¼″	32 lbs.	**14.55**
CR-1739	15-13/16″	14″	36 lbs.	**16.20**
CR-1743	19-5/16″	17½″	40 lbs.	**19.20**
CR-1727	22-13/16″	21″	45 lbs.	**20.83**
CR-1744	28-3/16″	26¼″	50 lbs.	**22.50**
CR-1728	33-9/16″	31½″	55 lbs.	**24.00**
CR-1745	36-13/16″	35″	60 lbs.	**24.90**

BUD JUNIOR CABINET RACKS

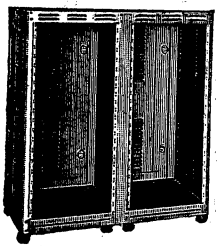


This cabinet rack is a multi-purpose unit that is inexpensive. The cabinet is constructed to accommodate two panels, one is 10½″ by 18-5/16″, the other 8¾″ by 18-5/16″, these panels are supplied with the cabinet. The BUD Junior Cabinet Rack is spacious enough to accommodate a chassis up to 10½″ x 17″.

The rear of the cabinet is covered by a hinged door with a locking device. The cabinet is furnished in black wrinkle finish only.

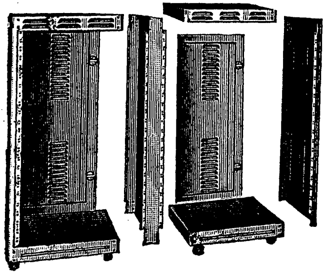
Catalog No.	Overall Height	Depth	Width	Shipping Wt.	Dealer Cost
RC-1749A	21-1/16″	10½″	19⅞″	25 lbs.	**$15.95**

NEW BUD ADD-a-RACK SERIES



It has always been necessary to buy special racks without louvers on one side to obtain a maximum of panel space with a minimum of floor space. Now, you no longer need to buy a whole new cabinet when you want additional panel space. Through our new and exclusive Add-a-Rack series, BUD not only offers additional racks at a lower cost, but provides you with a sturdier, better looking assembly.

The illustration at top shows two Add-a-Rack cabinets assembled together. The illustration below shows the unique and ingenious method of adding a unit to your present equipment. Instead of buying an entire new outfit, you purchase only four parts: (1) a door (2) a top (3) a bottom and (4) an Add-a-Rack coupling-unit. The right (or left) hand side of your present relay rack is removed and replaced by the Add-a-Rack coupling-unit; next, a top and bottom is fastened into place, and the side taken from the first rack is fastened onto the second rack which has been added. Place the additional door into position and you have two racks properly and efficiently coupled together. In the same simple way, more racks can be added at any time and every one will be in a CONTINUOUS ONE-PIECE assembly.



This series is available in two ways. (1) a double unit consisting of two racks and the Add-a-Rack coupling unit, (2) Add-a-Rack unit, consisting of a door, a top, a bottom and an Add-a-Rack coupling-unit. These units are furnished with all necessary assembling and panel mounting hardware.

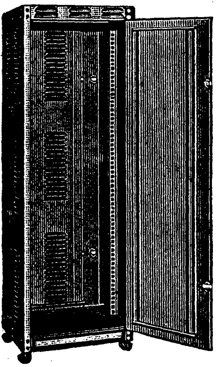
Add-a-Rack Unit	Used to Add-a-Rack to	Shipping Weight	Dealer Cost
AR-1778	**CR-1774**	**70 lbs.**	**$31.00**
AR-1775	**CR-1771**	**75 lbs.**	**36.00**
AR-1776	**CR-1772**	**100 lbs.**	**45.00**
AR-1777	**CR-1773**	**127 lbs.**	**55.00**

Complete unit consisting of the knocked-down parts necessary for two relay racks coupled together.

CR-1779	two coupled relay racks same size as **CR-1774**	**$ 63.70**
CR-1780	two coupled relay racks same size as **CR-1771**	**73.45**
CR-1786	two coupled relay racks same size as **CR-1772**	**93.60**
CR-1799	two coupled relay racks same size as **CR-1773**	**113.50**

Bud RC-7756 Casters will fit this unit. Casters are not included in price of cabinet.

BUD SUPER DE LUXE RACKS (2 door)



This new Relay Rack is made of 16 gauge steel with ⅛″ panel supports. The construction is similiar to the series of Bud de luxe Relay Racks shown above. The panel mounting supports are recessed, so that no edges of the panel will be exposed, and they are also adjustable from front to back at various stopping points. This enables you to utilize the space in front and behind the panel to any degree. When placed as far back as the knockouts provide, the panel is 6″ from the front of the Rack.

These Racks have both front and rear doors; the rear door to cover any of the equipment behind the panel, providing easy access. The front door provides a means of concealing dials, knobs, etc., that may be in the front of the panel.

These relay racks also have the exclusive Bud feature of supports on the bottom, so that the casters may be fixed directly to the base. AVAILABLE IN BLACK OR GREY WRINKLE OR LIGHT GREY HAMMERTONE FINISH AT NO EXTRA CHARGE.

Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-2174	43-1/16″	36¾″	110 lbs.	**$44.50**
CR-2171	47-5/16″	42″	122 lbs.	**51.00**
CR-2172	66-9/16″	61¼″	165 lbs.	**65.10**
CR-2173	82-5/16″	77″	190 lbs.	**78.95**

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

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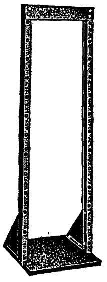
Net

BUD TELEPHONE TYPE RELAY RACKS

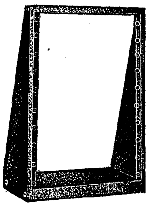


Nos. **RR-1263** and **RR-1264** are made of ⅛" steel channels, three inches deep and are held together by angle cross pieces of the same material. The design of the base has been improved to incorporate a chassis type bottom, together with the usual side angles, making the rack stronger and more stable.

RR-1265 is heavy duty and is made of heavy channel iron supported by two ⅜" thick iron angles that are bolted to the channels to provide additional support to the unit. Black wrinkle finish only. All racks accommodate standard 19" panels in accordance with standards set by RMA.

Catalog No.	Height	Depth	Panel Space	Shipping Wt.	Dealer Cost
RR-1263	35½"	22"	31½"	38 lbs.	**$17.60**
RR-1264	70½"	22"	66½"	48 lbs.	**20.06**
RR-1265	72½"	15"	66½"	97 lbs.	**38.10**

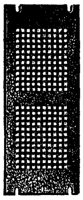
BUD DESK TYPE RELAY RACKS



Perfect for table mounting of low and medium power transmitters, public address systems, and other electronic instruments. Rack has strong chassis for mounting heavy components. Shipped knocked-down, with necessary hardware, easy to assemble. Standard notched 19" wide panels can be used, panels set in recess so that no edges are exposed. Furnished in black wrinkle finish only. Depth. 12".

Catalog No.	Height	Panel Space	Shipping Wt.	Dealer Cost
RR-1248	24"	21"	15 lbs.	**$6.71**
RR-1249	31"	28"	17 lbs.	**8.38**

BUD VENTILATING GRILLE PANELS

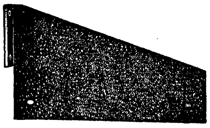


Made of ⅛" thick steel. The grille is stamped into the panel itself, and is recommended for use where additional ventilation is desirable. All panels are 19" long, furnished in either black or grey wrinkle finish.

Catalog No.	Height	Grille Size	Dealer Size
PS-808	5¼"	3⅜" x 14⅜"	**$2.64**
PS-809	7"	4⅞" x 14⅜"	**2.85**
PS-810	8¾"	*3⅞" x 14⅜"	**3.45**
PS-811	10½"	*5⅞" x 14⅜"	**3.65**
PS-812	12¼"	*7⅜" x 14⅜"	**3.90**

* Allows 3½" space for chassis mounting.

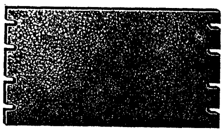
BUD CHASSIS MOUNTING BRACKETS



Mounting brackets are essential to insure proper support of the chassis. Formed of heavy gauge steel, cut away at the bottom to provide chassis clearance so that chassis can be mounted flush against panel. Finished in Black. Numbers MB-450 and MB-451 designed for chassis height of 4". Sold in pairs only.

Catalog No.	Height	Depth	Per Pair
MB-458	6½"	8"	**$0.85**
MB-448	6½"	10"	**1.10**
MB-459	6½"	11"	**1.20**
MB-449	6½"	12"	**1.45**
MB-460	6½"	13"	**1.35**
MB-450	8½"	10"	**1.60**
MB-451	8½"	13"	**1.70**

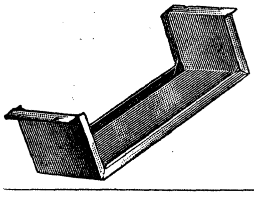
BUD STANDARD RELAY RACK PANELS



Made of Steel or Aluminum. Steel Panels are made of high grade steel ⅛" thick. Aluminum Panels are made of ⅛" thick Aluminum. All Panels are 19" wide. Furnished in eitther Black or Grey Wrinkle, or light grey hammertone finish at no extra charge. Aluminum panels 3/16" thick may be had if desired at 60% increase in cost over ⅛".

STEEL			ALUMINUM		
Catalog No.	Height	Dealer Cost	Catalog No.	Height	Dealer Cost
PS-1250	1¾"	**$ .66**	**PA-1101**	1¾"	**$ .75**
PS-1251	3½"	**.75**	**PA-1102**	3½"	**1.08**
PS-1252	5¼"	**.93**	**PA-1103**	5¼"	**1.38**
PS-1253	7"	**1.08**	**PA-1104**	7"	**1.80**
PS-1254	8¾"	**1.30**	**PA-1105**	8¾"	**2.10**
PS-1255	10½"	**1.55**	**PA-1106**	10½"	**2.49**
PS-1256	12¼"	**1.85**	**PA-1107**	12¼"	**2.85**
PS-1257	14"	**2.15**	**PA-1108**	14"	**3.18**
PS-1258	15¾"	**2.45**	**PA-1109**	15¾"	**3.60**
PS-1259	17½"	**2.70**	**PA-1110**	17½"	**3.99**
PS-1260	19¼"	**3.00**	**PA-1111**	19¼"	**4.35**
PS-1261	21"	**3.30**	**PA-1112**	21"	**4.65**

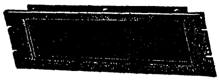
NEW BUD PANEL CHASSIS



This new series of Panel Mounting Chassis is for professional type installations primarily. These units are constructed from .062 aluminum with an etched finish. The holes on the front flange are suitable for mounting to a Rack, and are dimensioned to fit standard panel notchings.

Catalog No.	Width	Depth	Height	Dealer Cost
CB-1370	19"	5-9/32"	1¾"	**$1.90**
CB-1371	19"	5-9/32"	3½"	**2.15**
CB-1372	19"	5-9/32"	5¼"	**2.25**
CB-1373	19"	5-9/32"	7"	**2.60**
CB-1374	19"	5-9/32"	8¾"	**3.05**
CB-1375	19"	5-9/32"	10½"	**3.30**
CB-1376	19"	5-9/32"	12¼"	**3.70**
CB-1377	19"	5-9/32"	14-1"	**4.00**

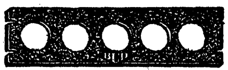
BUD ENCLOSED METER PANEL



PS-439 Meter Panel is designed to give maximum protection to meters. The steel panel has a large cut-out, behind which is mounted a blank Masonite sub-panel. This sub-panel has a meter mounting area of 4⅛" x 15⅛"—sufficient space to mount four 3" meters. The meters are protected by a glass insert that mounts in slides. Due to danger from breakage during shipment, this glass is not supplied with the panel. The glass insert should be cut 16" long x 4⅝" wide. Finished in either Black or Grey Wrinkle.

Cat. No.	Length	Width	Dealer Cost
PS-439	19"	5¼"	**$5.85**

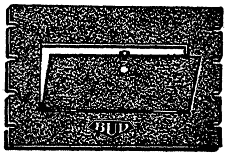
BUD STEEL METER PANELS



All meter panels are 5¼" high, 19" wide, available in either black or grey wrinkle finish. Small holes fit either 2" square or round meters, large holes fit either 3" square or round meters.

Cat. No.	No. of Holes	Diameter	Type Material	Dealer Cost
PS-440	3	2.334"	Steel	**$1.30**
PS-441	5	2.334"	Steel	**1.85**
PS-442	3	2.835"	Steel	**1.30**
PS-443	5	2.835"	Steel	**1.85**

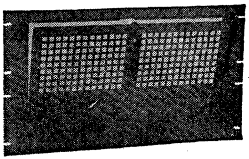
BUD METAL DOOR RACK PANELS



If it is desirable to have accessibility to component parts on the chassis, this panel is ideal. Door opening on No. 615—15⅜" x 6"; door opening on No. 616—15⅜" x 7½". Available in either Grey or Black Wrinkle finish. Made of ⅛" high grade sheet steel.

Cat. No.	Length	Width	Dealer Cost
PS-615	19"	10½"	**$4.50**
PS-616	19"	12¼"	**4.95**

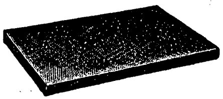
BUD VENTILATED DOOR RACK PANEL



These panels have a generous perforated area in the door, providing adequate ventilation for adjacent units. The panels are 19" long and available in either Black or Grey Wrinkle finish. Door opening on PS-814 15⅜" x 6". Opening on PS-815 15⅜" x 7½".

Cat. No.	Height	Door Height	Dealer Cost
PS-814	10½"	6"	**$5.85**
PS-815	12¼"	7½"	**6.45**

BUD RACK SHELVES



Heavy power supplies, modulator units etc., can be mounted on these rack shelves which are supported in the cabinet by the chassis-supporting angles listed on this page. They are designed to slide in from the rear of the cabinet. Made of heavy gauge steel, finished in Black Wrinkle Enamel only.

Cat. No.	Width	Height	Depth	Dealer Cost
CB-1976	19"	1"	15"	**$3.10**
CB-1977	19"	1"	12"	**2.35**

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

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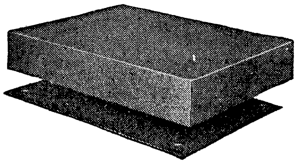
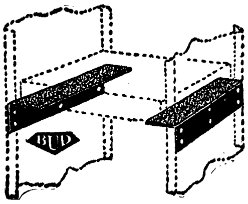


BUD HEAVY DUTY CHASSIS

(Furn. with Bottom Plates)

These chassis, made of heavy gauge steel, are intended for applications requiring unusual sturdiness and where large weights are involved. Available in either Black Wrinkle finish or Electro-Zinc Plate.

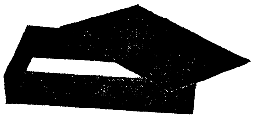
Black Wrinkle Cat. No.	Zinc Plated Cat No.	Depth	Width	Height	Dealer Cost
CB-1757	**CB-1764**	8″	17″	2″	**$2.90**
CB-1758	**CB-1765**	8″	17″	3″	**3.15**
CB-1759	**CB-1766**	11″	17″	2″	**3.30**
CB-1760	**CB-1767**	11″	17″	3″	**3.65**
CB-1761	**CB-1768**	13″	17″	2″	**4.00**
CB-1762	**CB-1769**	13″	17″	3″	**4.40**
CB-1763	**CB-1770**	13″	17″	4″	**4.84**



BUD CHASSIS SUPPORTING ANGLES

When heavy weights are encountered in chassis construction, Bud Chassis Supporting Angles will distribute the weight on the sides of the rack and relieve the panel. Made in two sizes from Black Painted Steel, ⅛″ thick. Sold in pairs only.

Cat. No.	Length	Width	Dealer Cost Per Pair
SA-1349	14½″	3″	**$1.75**
SA-1350	12″	3″	**1.65**



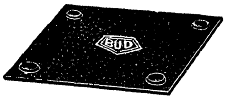
BUD REMOVABLE TOP CHASSIS

Amateurs and experimenters who make periodic changes can do so with a minimum of waste by just discarding the top that has been drilled and replacing it with a new top. Supplied in Black Wrinkle finish or Electro-Zinc plated.

Black Wrinkle Cat. No.	Zinc Plated Cat No.	Depth	Width	Height	Dealer Cost
CB-196	**CB-193**	10″	17″	3″	**$3.30**
CB-197	**CB-194**	10″	17″	4″	**3.65**
CB-251	**CB-210**	13″	17″	3″	**3.45**
CB-252	**CB-211**	13″	17″	4″	**4.25**

REPLACEMENT CHASSIS TOPS

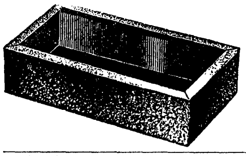
RT-198	**RT-195**	10″	17″	1/16″	**$1.25**
RT-253	**RT-212**	13″	17″	1/16″	**1.55**



BUD CHASSIS BOTTOM PLATES

These bottom plates make excellent dust covers and protect all wiring and component parts under the chassis. Each plate has four formed bosses that prevent sharp edges from scratching the table top. Supplied in Black Wrinkle finish or Electro-Zinc Plated finish.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Width	Length	Dealer Cost
BP-705	**BP-706**	5″	7″	**$ .46**
BP-680	**BP-667**	5″	9½″	**.43**
BP-536	**BP-538**	5″	10″	**.46**
BP-681	**BP-668**	7″	7″	**.60**
BP-682	**BP-669**	7″	9″	**.62**
BP-683	**BP-670**	7″	11″	**.71**
BP-537	**BP-539**	7″	12″	**.68**
BP-684	**BP-671**	7″	13″	**.75**
BP-685	**BP-672**	5″	13½″	**.60**
BP-516	**BP-513**	7″	15″	**.75**
BP-541	**BP-540**	8½″	15″	**.76**
BP-1069	**BP-1067**	4″	17″	**.60**
BP-686	**BP-673**	7″	17″	**.86**
BP-707	**BP-708**	8″	10″	**.75**
BP-709	**BP-710**	8″	12″	**.86**
BP-687	**BP-674**	8″	17″	**.90**
BP-688	**BP-675**	10″	12″	**.90**
BP-517	**BP-514**	10″	14″	**.85**
BP-689	**BP-676**	10″	17″	**1.10**
BP-690	**BP-677**	11″	17″	**1.10**
BP-691	**BP-678**	12″	17″	**1.20**
BP-692	**BP-679**	13″	17″	**1.40**
BP-518	**BP-515**	10″	23″	**1.40**

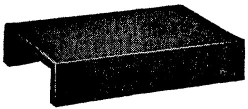


BUD STEEL CHASSIS BASES

These chassis are made from one piece of steel, all corners are reinforced and spot welded. The four sides are folded on bottom for additional strength—this also permits a bottom plate to be attached if desired. Furnished in either Black Wrinkle or Electro-Zinc plated.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Gauge	Dealer Cost
CB-628	**CB-629**	5″	7″	2″	22	**$ .85**
CB-644	**CB-645**	5″	9½″	2½″	22	**.90**
CB-788	**CB-776**	5″	9½″	1½″	22	**.80**
CB-604	**CB-605**	5″	10″	3″	22	**1.05**
CB-789	**CB-1191**	7″	7″	2″	22	**.90**
CB-790	**CB-1192**	7″	9″	2″	22	**1.05**
CB-791	**CB-1193**	7″	11″	2″	20	**1.10**
CB-792	**CB-793**	7″	12″	3″	20	**1.25**
CB-646	**CB-1194**	7″	13″	2″	20	**1.20**
CB-647	**CB-1198**	5″	13½″	2½″	20	**1.30**
CB-649	**CB-1189**	7″	15″	3″	20	**1.45**
CB-665	**CB-666**	8½″	15″	3″	20	**1.65**
CB-1068	**CB-1066**	4″	17″	3″	20	**1.30**
CB-648	**CB-1199**	7″	17″	2½″	20	**1.55**
CB-701	**CB-702**	8″	10″	2½″	20	**1.42**
CB-703	**CB-704**	8″	12″	2½″	20	**1.50**
CB-650	**CB-774**	8″	17″	2″	20	**1.45**
CB-651*	**CB-775**	8″	17″	3″	20	**1.55**
CB-652	**CB-1195**	10″	12″	3″	20	**1.50**
CB-653	**CB-779**	10″	14″	3″	20	**1.60**
CB-654*	**CB-769**	10″	17″	2″	20	**1.60**
CB-636*	**CB-637**	10″	17″	3″	20	**1.60**
CB-655*	**CB-1196**	10″	17″	3″	18	**1.85**
CB-656	**CB-1197**	10″	23″	3″	18	**2.44**
CB-657*	**CB-770**	11″	17″	2″	18	**2.00**
CB-658*	**CB-771**	11″	17″	3″	18	**2.20**
CB-663*	**CB-661**	12″	17″	2″	18	**1.70**
CB-664*	**CB-662**	12″	17″	3″	18	**2.00**
CB-659*	**CB-772**	13″	17″	2″	18	**2.35**
CB-660*	**CB-773**	13″	17″	3″	18	**2.55**
CB-640*	**CB-641**	10″	17″	4″	18	**2.04**
CB-642*	**CB-643**	13″	17″	4″	18	**3.00**
CB-623	**CB-624**	10″	17″	5″	18	**3.65**
CB-625	**CB-626**	13″	17″	5″	18	**4.00**

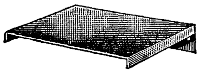
* Indicates chassis which are punched to accommodate Chassis Mounting Brackets.



BUD OPEN-END CHASSIS

Used with the various sizes and styles of Bud metal cabinets, these chassis are ideal for any type of small built-up unit such as a record amplifier, code oscillator, etc. U-shaped construction is used. Ends folded over ⅜″ for more strength. Finish is Electro-Zinc Plating.

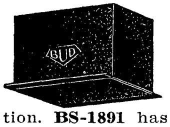
Cat. No.	Depth	Width	Height	Fits Cab. No.	Dealer Cost
CB-38	7″	6″	2″	**C-1584**	**$ .66**
CB-30	5″	7″	1½″		**.30**
CB-41	7″	7″	1½″	**C-973**	**.75**
CB-39	7″	8″	2″	**C-1585**	**.84**
CB-996	5½″	9″	1½″	**C-993**	**.70**
CB-976	7½″	9″	1½″	**C-999, C-1746**	**.95**
CB-40	7″	10″	2″	**C-1586**	**.90**
CB-997	7″	11″	1½″	**C-994, C-1747**	**1.00**
CB-998	7″	13″	1½″	**C-995, C-1748**	**1.16**
CB-34	10¾″	14″	2″	**C-975A**	**1.44**
CB-35	7¾″	15″	2″	**C-1190A**	**1.38**



BUD CHASSIS DECKS

Chassis are suitable for use in carrying cases and utility cabinets. Each unit is folded over 1½″ on the front, ½″ on the side. Made from Zinc Plated steel. Useful for interstage shielding and supports in regular panel and chassis layouts.

Cat. No.	Width	Depth	Fits Cab. No.	Dealer Cost
CB-522	4¾″	5½″	**CU-1098**	**$ .52**
CB-523	4¾″	4½″	**CU-1099**	**.50**
CB-524	6¾″	6½″	**CU-879**	**.65**
CB-525	5¾″	5½″	**CU-1124, CC-1096**	**.60**
CB-526	8¾″	7½″	**CU-880**	**.92**
CB-527	9¾″	7½″	**CU-881**	**.95**
CB-528	7¾″	6½″	**CU-882**	**.75**
CB-36	6½″	6½″	**CC-1097**	**.66**
CB-37	8¾″	6½″	**CC-1100**	**.82**



BUD BOX SHIELDS

For shielding power transformers and chokes, for covering and protecting various components in other electronic units. Top and sides are one-piece steel. No. **BS-1244** has perforated steel ends for ventilation. **BS-1891** has solid ends. Flanges at bottom provide for mounting. Finished in Black Wrinkle Enamel only.

Cat. No.	Ends	Length	Depth	Height	Dlr. Cost
BS-1244	Ventilated	7½″	4½″	5″	**$1.60**
BS-1891	Solid	7½″	4½″	5″	**1.65**

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

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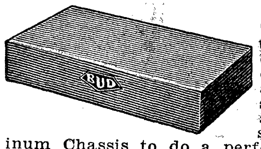
write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

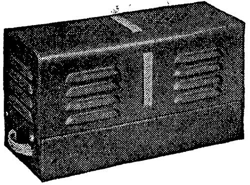


BUD ALUMINUM CHASSIS

The construction and design of these chassis is exactly the same as our steel chassis. The aluminum chassis are welded on government approved spot welders that are the same as used in the welding of aluminum airplane parts. As a result, you can depend on Bud Aluminum Chassis to do a perfect job. Etched Aluminum finish. The gauges in table below are aluminum gauges.

Catalog Number	Depth	Width	Height	Gauge	Dealer Cost
AC-430	4″	6″	3″	18	**$1.02**
AC-431	4″	6″	2″	18	**1.02**
AC-432	4″	17″	3″	16	**1.83**
AC-402	5″	7″	2″	18	**.84**
AC-429	5″	7″	3″	18	**1.05**
AC-403	5″	9½″	2″	18	**.99**
AC-421	5″	9½″	3″	18	**1.17**
AC-404	5″	10″	3″	18	**1.20**
AC-422	5″	13″	3″	18	**1.26**
AC-433	6″	17″	3″	16	**1.89**
AC-405	7″	7″	2″	18	**.99**
AC-406	7″	9″	2″	18	**1.08**
AC-407	7″	11″	2″	18	**1.20**
AC-408	7″	12″	3″	18	**1.41**
AC-409	7″	13″	2″	18	**1.26**
AC-411	7″	15″	2″	16	**2.04**
AC-423	7″	17″	3″	16	**1.83**
AC-424	8″	12″	3″	16	**1.71**
AC-425	8″	17″	2″	16	**1.89**
AC-412	8″	17″	3″	16	**2.22**
AC-413	10″	12″	3″	16	**1.89**
AC-414	10″	14″	3″	16	**2.40**
AC-415	10″	17″	2″	16	**2.28**
AC-416	10″	17″	3″	16	**2.58**
AC-426	11″	17″	2″	14	**2.37**
AC-417	11″	17″	3″	14	**3.00**
AC-418	12″	17″	3″	14	**3.18**
AC-419	13″	17″	2″	14	**2.82**
AC-420	13″	17″	3″	14	**3.36**
AC-427	10″	17″	4″	14	**2.97**
AC-428	13″	17″	4″	14	**3.84**

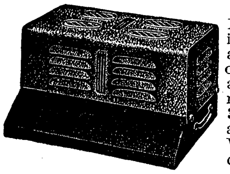
BUD STREAMLINED AMPLIFIER FOUNDATIONS



Use this unit to obtain beauty in an amplifier and similar apparatus. Each foundation consists of a standard chassis on which is mounted a removable top cover. Chromium trim is used to add additional attractiveness to the equipment. All chassis are 3″ high and complete units are 9″ high. Sturdy Easy Grip handles are attached to chassis. Black or Grey Wrinkled Finish.

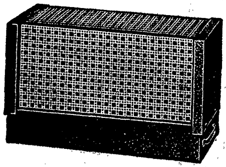
Cat. No.	Width	Depth	Dealer Cost
CA-1750	10-1/16″	5″	**$3.90**
CA-1751	12-1/16″	7″	**5.06**
CA-1752	17-1/16″	7″	**5.50**
CA-1753	17-1/16″	10″	**6.33**

BUD SLOPING PANEL AMPLIFIER FOUNDATIONS



Each foundation consists of a 4″ sloping front chassis on which is mounted a removable top cover. The top cover contains grilled cutouts and louvers for adequate ventilation. All have handles mounted on chassis. All chassis are 3½″ high and all units are 9½″ overall height. Cover is finished in Grey Wrinkle with chrome trim and the chassis is finished in Black Wrinkle.

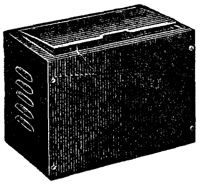
Cat. No.	Top Depth	Chassis Length	Chassis Depth	Dealer Cost
CA-1980	5″	10″	8″	**$5.10**
CA-1981	7″	12″	10″	**5.94**
CA-1982	7″	17″	10″	**6.85**
CA-1983	10″	17″	13″	**7.50**



BUD AMPLIFIER FOUNDATIONS

Each unit consists of a regular chassis on which is attached a perforated metal cover which provides a lot of ventilation. Chassis have easy grip handles attached to same. Finished in Black Wrinkle only.

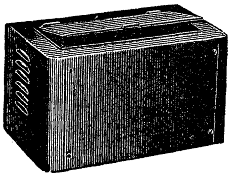
Cat. No.	Height	Width	Depth	Chassis Height	Dealer Cost
CA-699	8-5/16″	9⅝″	5⅛″	2½″	**$3.85**
CA-1125	8-5/16″	13⅝″	5⅛″	2½″	**4.25**
CA-1126	8-5/16″	17⅛″	7⅛″	2½″	**5.50**
CA-1127	8-13/16″	17⅛″	10⅛″	3″	**7.15**
CA-1128	8-13/16″	12⅛″	10⅛″	3″	**6.05**



BUD INSTRUMENT & RECEIVER CABINETS

Each cabinet has an evenly recessed hinged cover with convenient finger lift. The panel on front of cabinet is readily attached with self-tapping screws. Louvers provide ample ventilation. These Cabinets are finished in Black Wrinkle only. For chassis to fit these cabinets see Open End Chassis listed on other page.

Cat. No.	Height	Width	Depth	Dealer Cost
C-973	7″	8″	8″	**$3.20**
C-993	7″	10″	8″	**3.48**
C-994	7″	12″	8″	**4.00**
C-995	7″	14″	8″	**4.20**
C-1190	8″	16″	8″	**6.00**
C-975	9″	15″	11″	**6.00**



BUD STREAMLINED CABINETS

Distinctive features of these cabinets are the rounded front corners and recessed hinged top. All parts built into this cabinet are easily accessible. Overall height, 8″. Depth, 8¼″. Finished in Black Wrinkle only. Suitable chassis may be found under listing of Open End Chassis on other page.

Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1789	8″ x 8″	10½″	8″	**$3.25**
C-1746	8″ x 10″	12½″	8″	**4.00**
C-1747	8″ x 12″	14½″	8″	**4.50**
C-1748	8″ x 14″	16½″	8″	**5.15**
C-1790	8″ x 16″	18½″	8″	**5.75**

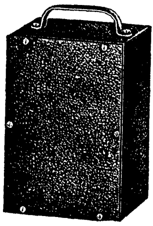
BUD DELUXE STREAMLINED CABINETS

These cabinets are identical with those listed above, except that they have a ½″ vertical chrome strip at each side of the panel, and are supplied in Gray Wrinkle Enamel only.

Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1791	8″ x 8″	10½″	8″	**$4.15**
C-1781	8″ x 10″	12½″	8″	**4.62**
C-1782	8″ x 12″	14½″	8″	**4.95**
C-1783	8″ x 14″	16½″	8″	**6.18**
C-1792	8″ x 16″	18½″	8″	**6.50**

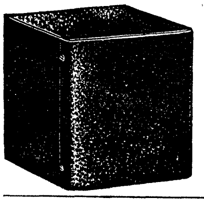
BUD METAL CARRYING CASES

These carrying cases have many uses. An easy grip handle is fastened to the top. Front and back panels are removable. Steel welded construction assures maximum strength with minimum weight, an important requirement for portable work. Finish is Black Wrinkle only. For chassis to fit these cabinets see Chassis Decks on other page.



Cat. No.	Depth	Width	Height	Dealer Cost
CC-1095	5″	6″	9″	**$2.48**
CC-1091	5″	9″	6″	**2.48**
CC-1096	6″	7″	12″	**2.90**
CC-1092	6″	12″	7″	**3.42**
CC-1097	7″	7¾″	15″	**3.60**
CC-1100	8″	10″	10″	**3.42**
CC-1093	7″	15″	9″	**5.00**

BUD STREAMLINED SCOPE AND UTILITY CABINETS



These are attractive cabinets that are adaptable to a variety of uses. All cabinets are supplied with chassis. Prices shown below include chassis. The chassis height on all except **CU-1991** and **CU-1992** is 1½″. **CU-1991** is designed for 3″ cathode ray tube and has a hinged cover to provide easy access to tube or other components. Chassis height is 2″. **CU-1992** is designed for a 5″ cathode ray tube and also has a hinged cover. Chassis height, 3″.

Catalog Number	Width	Depth	Height	Dealer Cost
CU-1990	5½″	8¼″	8″	**$3.50**
CU-1984	7½″	8¼″	8″	**3.52**
CU-1985	9½″	8¼″	8″	**3.92**
CU-1986	11½″	8¼″	8″	**4.30**
CU-1987	13½″	8¼″	8″	**5.00**
CU-1988	15⅛″	8¼″	8″	**5.50**
CU-1989	17⅛″	8¼″	8″	**6.25**
CU-1991	7½″	13″	8″	**6.00**
CU-1992	9½″	19″	12″	**8.00**

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

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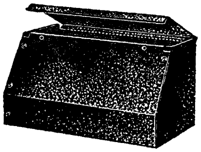
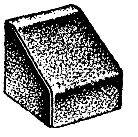


BUD SLOPING PANEL CABINETS

The entire front panel is removable if desired. This cabinet is also provided with a hinged top for easy accessibility to tubes or other parts that are mounted on chassis. All cabinets are finished in Black Wrinkle only.

Catalog Number	Height	Width	Depth	Fits Chassis	Dealer Cost
C-1584	6½″	7-1/16″	7¼″	7″ x 6″ x 2″	**$3.15**
C-1585	6½″	9-1/16″	7¼″	7″ x 8″ x 2″	**3.58**
C-1586	6½″	11-1/16″	7¼″	7″ x 10″ x 2″	**3.96**
C-1892	8″	13-1/16″	8½″	8″ x 12″ x 2½″	**4.75**
C-1893	10″	18-1/16″	10½″	10″ x 17″ x 3″	**6.66**



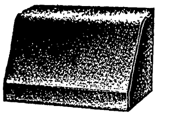
BUD SLOPING PANEL UTILITY BOX

A compact, sloping panel cabinet, providing a streamlined appearance and enough space to house conveniently a 2 or 3 miniature tube amplifier or gadget. A ⅜″ flange around the rear opening of the cabinet provides a convenient back cover mounting. Accommodates a Bud miniature chassis. Finished in black wrinkle.

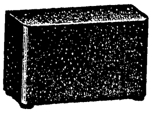
Cat. No.	Height	Width	Depth	Use Chassis No.	Dealer Cost
C-1602	4″	4″	4¼″	**CB-1617**	**$1.20**
C-1603	4″	5″	4¼″	**CB-1618**	**1.30**
C-1604	4″	6″	4¼″	**CB-1619**	**1.40**
C-1605	4″	7″	4¼″	**CB-1620**	**1.50**

BUD SLOPING PANEL UTILITY CABINET

A metal box that can be used for numerous purposes. Finished in Black Wrinkle Enamel only.



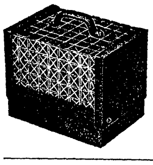
Cat. No.	Height	Width	Depth	Dealer Cost
C-1578	4¼″	4″	4″	**$1.00**
C-1579	4¼″	5″	4″	**1.15**
C-1580	4¼″	6″	4″	**1.32**
C-1581	4¼″	7″	4″	**1.59**



BUD STREAMLINED MULTI-PURPOSE CABINETS

Handsome streamlined metal cabinet, finished in grey wrinkle. Back of Cabinet open for ventilation.

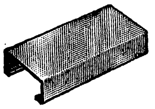
Cat No.	Height	Width	Depth	Use Chassis No.	Dealer Cost
C-1784	4½″	3⅝″	3⅛″	**CB-1623**	**$1.65**
C-1785	4½″	7⅛″	3⅛″	**CB-1628**	**1.93**
C-1787	4½″	5½″	3½″	**CB-1625**	**1.70**
C-1788	6½″	5½″	3½″	**CB-1625**	**1.75**



BUD MINIATURE AMPLIFIER FOUNDATION

With the increased use of miniature tubes, smaller cabinets can be used when designing a compact amplifier. This amplifier foundation was designed expressly for this purpose. The chassis is a 5″ x 7″ x 2″. The cover is made of perforated metal. A streamlined handle makes this cabinet portable. Finished in black wrinkle.

Cat. No.	Height	Width	Depth	Chassis Height	Dealer Cost
CA-1754	6″	7-3/16″	5-3/32″	2″	**$3.50**

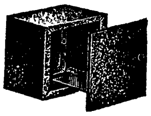


BUD ALUMINUM MINIATURE CHASSIS

These small, open end aluminum chassis are just the thing for miniature tube applications or sub-assemblies. Made of hard aluminum with ¼″ flange on bottom, allowing the chassis to be fastened down or a bottom plate to be attached. Extremely useful for small receivers, outboard uses, such as narrow band FM adapters or any use where space is limited. Finish is etched aluminum.

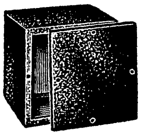
Cat. No.	Depth	Width	Height	Fits Cabinet No.	Dealer Cost
CB-1623	2⅝″	2¾″	1¼″	**C-1784**	**$ .30**
CB-1624	1¾″	3⅛″	1″	**CU-883**	**.33**
CB-1625	3¼″	4½″	2″	**C-1788**	**.36**
CB-1626	2¾″	4⅛″	1″	**CU-728**	**.36**
CB-1627	3¾″	4⅛″	1½″	**CU-729**	**.36**
CB-1628	3″	6⅛″	1¼″	**C-1785**	**.42**
CB-1629	5¾″	4⅞″	1½″	**CU-1098**	**.45**
CB-1617	4″	3⅛″	1″	**C-1602**	**.36**
CB-1618	4″	4⅛″	1″	**C-1603**	**.39**
CB-1619	4″	5⅛″	1″	**C-1604**	**.42**
CB-1620	4″	6⅛″	1″	**C-1605**	**.45**

BUD MINIATURE UTILITY CABINETS with Attached Chassis



Filling a long wanted need for a small cabinet with a chassis attached to the front panel, these cabinets are indispensable when building electronic devices using miniature tubes. Front and rear panels are removable and fastened with self-tapping screws, permitting easy accessibility. Especially useful for HF converters, television amplifiers and power supplies. Finished in black wrinkle.

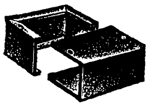
Cat. No.	Height	Width	Depth	CHASSIS SIZE			Dealer Cost
C-1793	4″	4″	2″	1″	3⅛″	1⅞″	**$1.05**
C-1794	4″	5″	3″	1″	4⅛″	2⅞″	**1.15**
C-1795	5″	4″	3″	1¼″	3⅛″	2⅞″	**1.15**
C-1796	6″	5″	4″	1¾″	4⅛″	3⅞″	**1.43**
C-1797	5″	6″	4″	1¼″	5⅛″	3⅞″	**1.43**
C-1798	6″	6″	6″	1¾″	4⅞″	5⅞″	**1.48**



BUD METAL UTILITY CABINETS

The large number of sizes available makes this line useful for all sorts of electronic equipment, monitors, frequency meters, etc. These cabinets have two removable sides for easy accessibility. Finished in Black Wrinkle.

Cat. No.	Depth	Width	Height	Dealer Cost
CU-883	2″	4″	4″	**$ .85**
CU-728	3″	5″	4″	**.95**
CU-729	4″	5″	6″	**1.20**
CU-1098	6″	6″	6″	**1.30**
CU-1099	5″	6″	9″	**1.86**
CU-879	7″	8″	10″	**2.30**
CU-1124	6″	7″	12″	**2.46**
CU-880	8″	10″	10″	**2.90**
CU-881	8″	11″	12″	**3.60**
CU-882	7″	9″	15″	**4.10**

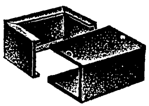


BUD HANDY BOXES

Something new in box design permits a large number of small components to be easily wired or serviced. The cover is held by 4 self-tapping screws. Black wrinkle finished steel.

Cat. No.	Height	Width	Depth	Dlr. Cost
HB-1621	2¼″	4¼″	1½″	**$ .90**
HB-1622	2″	4″	2¾″	**1.00**

BUD MINIBOXES

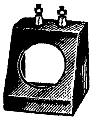


There are thousands of uses in the fields of radio and electronics for these new boxes. They are made from heavy gauge aluminum. The design of the box permits installation of more components than would be possible in the conventionally designed box of the same size. It is of two piece construction, each half forming three sides. The flange type construction assures adequate shielding. Available in etched aluminum finish and gray hammerloid finish.

Gray Cat. No.	Etched Cat. No.	Length	Width	Height	Dealer Cost
CU-2100	**CU-3000**	2¾″	2⅛″	1⅝″	**$ .63**
CU-2101	**CU-3001**	3¼″	2⅛″	1⅝″	**.63**
CU-2102	**CU-3002**	4″	2⅛″	1⅝″	**.66**
CU-2103	**CU-3003**	4″	2¼″	2¼″	**.87**
CU-2104	**CU-3004**	5″	2¼″	2¼″	**.90**
CU-2105	**CU-3005**	5″	4″	3″	**.99**
CU-2106	**CU-3006**	5¼″	3″	2⅛″	**.96**
CU-2107	**CU-3007**	6″	5″	4″	**1.23**
CU-2108	**CU-3008**	7″	5″	3″	**1.38**
CU-2109	**CU-3009**	8″	6″	3½″	**2.01**
CU-2110	**CU-3010**	10″	6″	3½″	**2.49**
CU-2111	**CU-3011**	12″	7″	4″	**2.94**
CU-2112	**CU-3012**	17″	5″	4″	**3.45**
CU-2113	**CU-3013**	10″	2″	1⅝″	**.99**
CU-2114	**CU-3014**	12″	2½″	2¼″	**1.35**
CU-2115	**CU-3015**	4″	2″	2¾″	**.84**
CU-2116	**CU-3016**	4¼″	2¼″	1½″	**.87**

BUD STREAMLINED METER CASES

Designed for all applications requiring a modern meter case. All cases have a sloping front with top corner rounded. Meter cases CM-1241 and CM-1242 have insulators on top for leads to meter. CM-1965 and CM-1966 are furnished without insulators. Finished in Black Wrinkle.



Catalog Number	Hole Diameter	Fits Meter Size	Dealer Cost
CM-1241	2.334″	2″	**$1.25**
CM-1242	2.835″	3″	**1.25**
CM-1965	2.334″	2″	**.95**
CM-1966	2.835″	3″	**.95**

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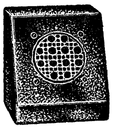
Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

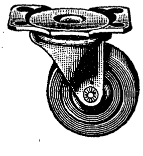
BUD MIDGET SPEAKER CASES



A safe, convenient housing for midget 2" and 3" speakers. Size 4" wide, 4" deep, 4¼" high. Furnished in Black Wrinkle Finish only.

Catalog Number	Hole Diameter	Speaker Size	Dealer Cost
CS-1685	2-3/16"	2"	**$1.50**
CS-1686	2-13/16"	3"	**1.50**

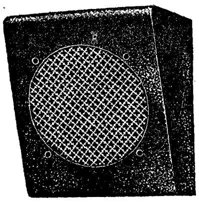
TRUCK CASTERS



No. RC-7756—Heavy Duty type casters, for weights of 400 lbs. or less. No. RC-7757 Casters are Light Duty for lighter weights. Wheels, hard rubber composition and ball bearing.

Catalog No.	Height	Type	Dealer Cost
RC-7756	2⅝"	Heavy Duty	**$ .90**
RC-7757	2"	Light Duty	**.40**

BUD WALL OR TABLE TYPE SPEAKER CASE



A distinctive line of new metal speaker cabinets with reproduction capabilities equal to wood cabinets. All troubles with wood warping and splitting are eliminated.

Keyway holes are provided for wall mounting and four embossed feet on the bottom prevent damaging table surfaces. Finished in Brown Wrinkle only.

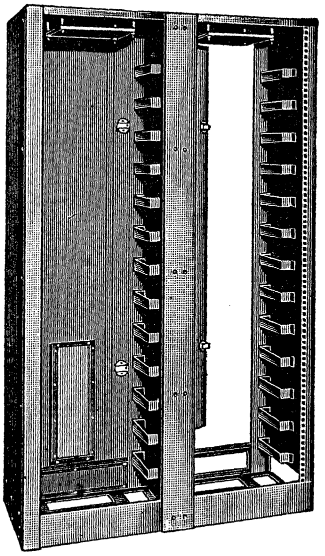
Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-1948	3½"	4"	7½"	6½"	4¼"	**$2.85**
CS-1939	4"	5"	7½"	6½"	4¼"	**3.00**
CS-1940	4¾"	6"	9½"	8"	5⅝"	**3.40**
CS-1941	6½"	8"	11½"	9½"	7"	**3.90**
CS-1942	8½"	10"	13½"	11½"	8¼"	**4.50**
CS-1943	10½"	12"	15½"	13½"	9¾"	**5.00**

BUD IMPROVED UTILITY HANDLES

These handles are designed to provide sufficient strength and comfortable hand-grip. They are made from aluminum tubing and are given an etched aluminum finish. Made in two sizes and furnished complete with screws, washers and nuts.

Catalog Number	Overall Length	Overall Width	Mtg. Hole Center	Dealer Cost
UH-70A	5⅝"	11/16"	4⅝"	**$ .33**
UH-71A	3¾"	½"	3¼"	**.27**

Special Sheet Metal Fabrication Facilities

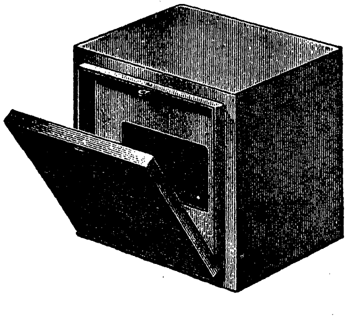


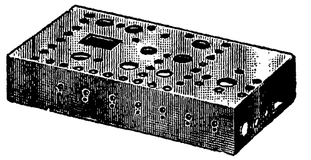
NOW, BUD RADIO, through its Metal Products Division, offers greatly increased facilities for the production of special sheet metal items. New machinery has been added, departments have been modernized and streamlined and new methods have been developed.

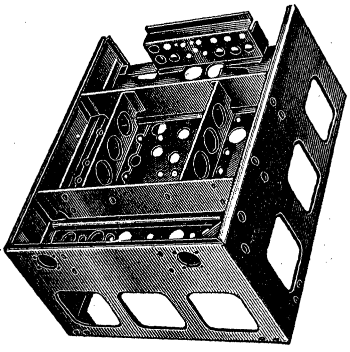
We make over 400 different sheet metal products as stock items. Often a slight change in one of our standard models will eliminate the necessity of special tools and dies, thereby reducing costs. Since we produce thousands of sheet metal products every month for ourselves and for leading firms throughout the country we are able to effect economies in production which mean lower prices and faster delivery.

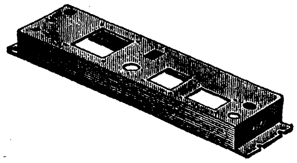
Our expanded facilities, expert workmanship, years of experience and manufacturing "know-how" assure high quality products. In addition, our engineering staff is always available for consultation and advice. Send us your blue prints for estimates.

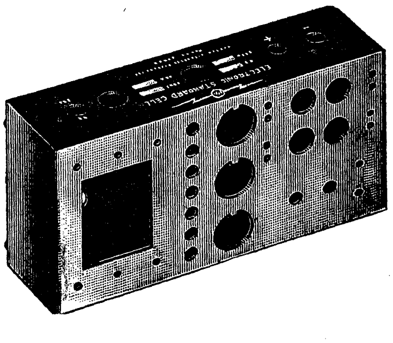
Illustrated are a few examples of specially fabricated sheet metal products.









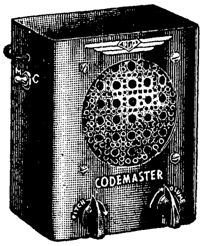


Where materials are specified Black Wrinkle Finish, and Gray is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

BUD CODE PRACTICE OSCILLATOR AND MONITOR CPO-128



The BUD CODEMASTER is a real money-saver. No longer do you have to consider your code practice oscillator useless after you have learned the code. A flip of the switch and you have a good CW monitor. This is a really versatile instrument.

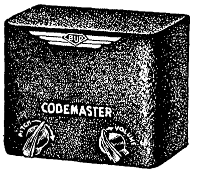
It has a 4" built-in permanent magnetic dynamic speaker and will operate up to twenty earphones.

A volume control, and pitch control permit adjustments to suit individual requirements. Any number of keys can be connected in parallel to the oscillator for group practice.

This unit will operate on 110 volts A.C. or D.C. An external speaker may be plugged in without the use of an output transformer. All controls are placed on the front of the unit and all jacks are in the rear. The units is 6½" high, 5½" wide and 3½" deep. It is finished in Grey Hammertone enamel with red lettering.

Catalog No.	Dealer Cost
CPO-128	**$14.48**

BUD CODE PRACTICE OSCILLATOR AND MONITOR EARPHONE MODEL CPO-130

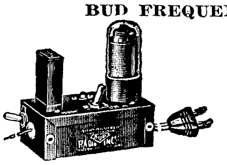


This unit is similar to the CPO-128. The difference is that the 4" speaker is not included. The monitor feature, however, is included. A phone jack is provided for the output and as many as 20 pairs of phones and keys can be operated at one time for classroom operation. This model will also operate a permanent magnetic dynamic speaker.

Plug the voice coil leads into the phone jack—no output transformer is needed. Size of case is 5½" wide, 4½" high and 3½" deep.

Catalog No.	Dealer Cost
CPO-130	**$13.20**

BUD FREQUENCY CALIBRATOR FCC-90

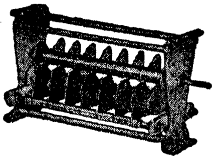


To comply with federal regulations, some means of accurately checking transmitter frequency must be available at every "ham" station. The BUD FCC-90 consists of a 100 kc. crystal oscillator that is **Completely Self-Powered.** It will give 100 kc. check points on all bands up to 30 megacycles. This enables the operator to determine exact band edges.

No extra wiring is required to install this unit. Plug the FCC-90 into a 110 volt receptacle, connect the pick-up lead to the antenna binding post of the receiver and the unit is ready for operation. An ON-OFF switch and a STANDBY switch are provided.

Catalog No.	Dealer Cost
FCC-90	**$15.69**

BUD GIANT TRANSMITTER CONDENSER—Single Section



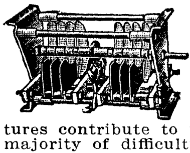
BUD GIANT TRANSMITTER CONDENSERS are built with a sturdy frame consisting of 3/16" thick aluminum end plates, connected by ⅝" diameter duraluminum rods. Formed brackets at top and bottom of end plates provide for mounting these units, and permit placing of associated inductances directly on the condenser.

Rotor and stator plates are accurately stamped from 0.064" thick highly polished aluminum with all edges rounded to minimize corona loss and danger of peak-voltage flash-over. The plates are separated by accurately machined duraluminum spacers that insure a constant air-gap throughout the entire length of the condenser.

The large two-finger rotor-contact spring, made from plated spring brass, assures positive contact with noise-free operation. Steatite bars insulate the stator, and are placed well outside the electrostatic field to keep dielectric losses at a minimum.

Catalog Number	Max. Cap. MMFD.	Min Cap. MMFD.	No. of Plates	Air Gap	Mtg. Hole Spcg.	Over-All Length	Dealer Cost
GC-1800	195	24	15	.250"	8½"	12⅜"	**$26.13**
GC-1801	345	32	27	.250"	12¼"	16⅛"	**37.02**
GC-1802	530	48	41	.250"	16⅝"	20½"	**49.68**
GC-1803	55	19	7	.500"	7½"	11⅜"	**20.85**
GC-1804	95	25	15	.500"	12"	15⅞"	**29.19**
GC-1805	150	33	21	.500"	15⅝"	19¼"	**34.98**
GC-1806	255	52	35	.500"	23¼"	27⅛"	**49.02**
GC-1807	50	22	9	.750"	10"⅝	14½"	**24.21**
GC-1808	75	27	13	.750"	13⅞"	17¾"	**29.34**
GC-1809	110	40	19	.750"	18¾"	22⅝"	**32.67**
GC-1810	160	50	29	.750"	26⅞"	30¾"	**46.86**
GC-1811	55	30	11	1.000"	14¾"	18⅝"	**28.11**
GC-1812	85	40	17	1.000"	21⅛"	25"	**36.03**
GC-1813	105	45	23	1.000"	27½"	31⅜"	**44.43**

BUD MASTER TRANSMITTING CONDENSERS—Dual Section

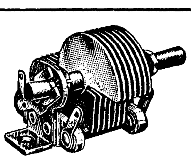


All tie-rods in this series are insulated by glazed Steatite pillars, thus completely eliminating all closed metallic loops in the condenser frame. A special outstanding feature, developed by BUD engineers, is that of placing the positive double wiping rotor contact between the two sections at the center of the rotor. These features contribute to perfect circuit balance and eliminate the majority of difficulties encountered in high frequency equipment due to parasitics, circulating currents and poor neutralization. Use BUD condensers throughout and be trouble free.

Catalog Number	Cap. Per Sec. Max.	Cap. Per Sec. Min.	No. Plates Per Sec.	Air Gap.	Mtg. Hole Spcg.	Over-all Length	Dealer Cost
BC-1635A	25	9	5	.200"	6-13/32"	8-1/32"	**$13.91**
BC-1636A	35	12	7	.200"	7-13/32"	9-1/32"	**14.70**
BC-1637A	50	13	11	.200"	9-13/32"	11-1/32"	**15.96**
BC-1638A	75	16	15	.200"	11-13/32"	13-1/32"	**17.28**
BC-1633A	100	20	21	.300"	14-13/32"	16-1/32"	**19.35**
BC-1634A	50	15	13	.300"	12-13/16"	14-7/16"	**17.43**

Panel space to mount Master Condensers 3¾" wide by 4⅞" high

BUD MIDGET CONDENSERS



Small size, sturdy construction and high mechanical and electrical efficiency are the outstanding features. Insulation used is Steatite. Rotor and Stator plates are brass and are electro-soldered to their respective rods. All metal parts are cadmium plated. These condensers have both front and rear bearings and are furnished in either mid-line type plates (straight line wave length), or semi-circular plates (straight line capacity).

SEMI-CIRCULAR TYPE — DOUBLE BEARING

Catalog Number	Cap. in MMFD. Max.	Cap. in MMFD. Min.	Air Gap	Number Plates	Dealer Cost
MC-1850	15	3	.024"	3	**$1.53**
MC-1852	33	4	.024"	5	**1.65**
MC-1853	50	5	.024"	7	**1.92**
MC-1855	100	7	.024"	14	**2.10**
MC-1856	140	7	.024"	19	**2.43**
MC-1858	190	9	.024"	27	**2.58**
MC-1859	235	10	.024"	33	**2.91**
MC-1860	300	12	.024"	43	**3.18**
MC-1861	15	4	.060"	5	**1.65**
MC-1862	35	5	.060"	11	**2.10**
MC-1863	50	7	.060"	15	**2.31**
MC-1864	75	9	.060"	23	**2.70**
MC-1865	100	12	.060"	31	**2.94**
MC-1866	35	8	.095"	15	**2.43**
MC-1867	50	10	.095"	23	**2.76**
MC-1868	75	13	.095"	33	**3.18**

MID-LINE TYPE — DOUBLE BEARING

Catalog Number	Cap. in MMFD. Max.	Cap. in MMFD. Min.	Air Gap	Number Plates	Dealer Cost
MC-900	25	4	.024"	4	**$1.71**
MC-902	35	5	.024"	6	**1.74**
MC-903	50	6	.024"	8	**2.01**
MC-904	75	7	.024"	11	**2.10**
MC-905	100	7	.024"	15	**2.28**
MC-906	140	7	.024"	20	**2.61**
MC-908	190	9	.024"	27	**2.73**
MC-909	250	11	.024"	36	**2.97**
MC-910	300	13	.024"	43	**3.33**
MC-565	15	4	.060"	5	**2.01**
MC-897	35	6	.060"	11	**2.10**
MC-898	50	7	.060"	16	**2.40**
MC-899	75	8	.060"	23	**2.76**
MC-941	100	11	.060"	31	**3.00**
MC-965	35	8	.095"	15	**2.49**
MC-966	50	12	.095"	23	**2.70**
MC-967	75	14	.095"	33	**3.18**

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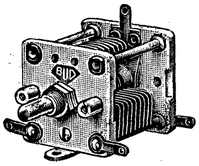
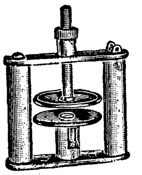


BUD "CE" MIDGET CONDENSERS SINGLE SECTION DOUBLE BEARING

These Midget Condensers were designed to meet the rigid requirements in design of efficient high frequency electronic devices and precision laboratory equipment. Brass rotor and stator plate stacks are assembled into permanent units by means of electro-soldering, which assures long life and accurate plate spacing. End-plates of Steatite insulate the mounting bushings and angles from the rotor and stator assemblies. A large front sleeve bearing provides for smooth rotation. Special wiper contact provides noise-free tuning. All metal parts are cadmium plated. Rotor plates are semi-circular shaped. Provision for either panel or base mounting.

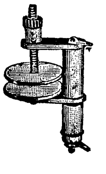
Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Over-all Length	Dealer Cost
CE-2000	15	4	.030″	3	2½″	**$1.98**
CE-2001	35	6	.030″	7	2-23/32″	**2.22**
CE-2002	50	7	.030″	9	2-27/32″	**2.49**
CE-2003	75	8	.030″	14	3-5/32″	**2.76**
CE-2004	100	9	.030″	18	3-11/32″	**3.00**
CE-2005	150	10	.030″	27	3-13/16″	**3.21**
CE-2006	200	11	.030″	35	4¼″	**3.81**
CE-2007	250	12	.030″	44	4¾″	**4.05**
CE-2008	300	15	.030″	52	5-3/16″	**4.29**
CE-2011	15	5	.060″	5	2¾″	**2.07**
CE-2012	35	7	.060″	11	3¼″	**2.31**
CE-2013	50	8	.060″	15	3-9/16″	**2.70**
CE-2014	75	10	.060″	23	3¼″	**3.12**
CE-2015	100	13	.060″	31	4-9/16″	**3.63**
CE-2016	35	9	.095″	15	4-1/16″	**2.82**
CE-2017	50	10	.095″	23	5-1/32″	**3.12**
CE-2018	75	14	.095″	33	6-7/32″	**3.66**



BUD NEUTRALIZING AND HIGH FREQUENCY TUNING CONDENSERS

This line of condensers will fill every neutralizing and high frequency tuning requirement that modern circuits pose. The two-pillar construction makes this unit unusually sturdy and eliminates any possibility of capacity variation due to vibration. The movable plate is adjusted by means of the threaded shaft to which it is attached, and it is permanently locked in any position by the lock-nut provided. Any loose thread is taken up by a special nut and locked to give smooth operation. Plates have rounded edges. Steatite insulation is used.

Catalog Number	Plate Diameter	MMFD. Capacity Max.	MMFD. Capacity Min.	Dealer Cost
NC-1000	1-27/32″	11	1	**$2.58**
NC-1001	2-13/16″	24	2	**3.75**
NC-1002	4¾″	27	6	**5.25**

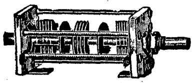


BUD FEED-THROUGH AND BASE MOUNTED NEUTRALIZING CONDENSERS

In circuits utilizing tubes with the grid lead terminated in the base a feed-through type of neutralizing condenser is particularly suited. One hole is required for mounting of feed-through condensers. Neutralizing condenser illustrated is feed-through type. Plates are made of aluminum rounded at edges to cut down losses. After proper tuning is attained, movable plate can be locked with the knurled nut.

No. 890 and No. 852 are ideal neutralizers for popular low power beam tubes. No. 890 condenser is based mounted only.

Catalog Number	Plate Diameter	Size Hole for Mtg.	MMFD. Capacity Max.	MMFD. Capacity Min.	Dealer Cost
NC-852	1″	5/16″	6	.5	**$1.26**
NC-853	1-27/32″	13/32″	11	1	**2.73**
NC-890	1″		6	.5	**1.23**

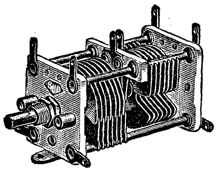


NEW BUD THREE-GANG TINY MITE CONDENSERS

Hams, Radio Constructors and Experimenters can find many uses for these compact. three-gang condensers. Designed particularly for high frequency use, they are adaptable for use in converters, preselectors and receivers covering the Amateur, Television and F.M. bands. Well constructed with soldered brass plates and ceramic brackets. Rotor shaft extended ¼″ at rear. Height 1-5/16″. Width 1-3/16″. Length behind panel 3⅜″. Mounting holes 2-3/16″ apart.

Catalog Number	Cap. Per Section Max.	Cap. Per Section Min.	No. of Plates Per Section	Dealer Cost
LC-1845	11	5	3	**$3.81**
LC-1846	17	5	4	**4.32**
LC-1847	25	6	5	**4.71**

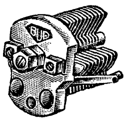
BUD "CE" TYPE DUAL MIDGET CONDENSERS



These well constructed dual condensers are similar in design to the double-bearing "CE" types. They feature a rotor wiping contact placed at center of the rotor assembly to assure maximum efficiency at high frequency Opposed rotor construction assures perfect counterbalance and provides even torque at any position of rotation. Steatite insulation eliminates closed induction in frame.

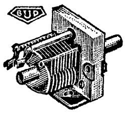
Catalog Number	PER SECTION Max. Cap.	PER SECTION Min. Cap.	PER SECTION No. of Plates	Air Gap	Distance Behind Panel	Dealer Cost
CE-2032	35	6	7	.030″	3-1/32″	**$2.97**
CE-2033	50	7	9	.030″	3¼″	**3.27**
CE-2034	75	8	14	.030″	3-21/32″	**3.63**
CE-2035	100	9	18	.030″	4-3/32″	**4.14**
CE-2036	150	10	27	.030″	5-3/16″	**4.80**
CE-2039	15	5	5	.060″	3-1/32″	**3.45**
CE-2040	35	7	11	.060″	4-1/32″	**3.96**
CE-2041	50	8	15	.060″	4-23/32″	**4.35**

BUD TINY MITE PADDERS



For applications requiring a constant padder capacity under all temperature and humidity conditions, these units are ideal. They lend themselves readily to I. F. transformer applications, fixed tuned circuits for exciters, ganged condenser air trimers, and plug-in-coil padding as they fit inside of standard 1½″ diameter coil forms. Rotor and stator assemblies are made up of brass plates (0.015″ thick) and rods electrically soldered into a solid unit and then are bright cadmium plated. Insulation is Steatite. Each unit may be adjusted in capacity by either a screw-driver or a ¼″ hex. wrench.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-2076	15	2	.017″	5	**$1.32**
LC-2077	25	2.5	.017″	7	**1.56**
LC-2078	35	3	.017″	10	**1.74**
LC-2079	50	3.9	.017″	14	**1.92**
LC-2080	75	4.5	.017″	20	**2.28**
LC-2081	100	5.5	.017″	27	**2.64**
LC-2082	140	6.5	.017″	37	**3.21**

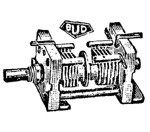


BUD TINY MITE TUNING CONDENSER SINGLE SECTION

This series of condensers has been designed for applications where space or weight are limiting factors and for tuning of high frequency circuits. Rigid construction, close fitting bearing, positive rotor contact and Steatite insulation are the outstanding features. Cadmium plated, soldered, brass plates and rods insure high frequency efficiency.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-1640	8	2.5	.017″	3	**$1.35**
LC-1641	15	3	.017″	5	**1.47**
LC-1642	25	4	.017″	9	**1.53**
LC-1643	35	5	.017″	13	**1.77**
LC-1644	50	6	.017″	19	**1.86**
LC-1645	75	7	.017″	29	**2.01**
LC-1646	100	9	.017″	37	**2.19**
LC-1648	10	4	.037″	7	**1.50**
LC-1649	15	5	.037″	11	**1.62**
LC-1650	25	5.5	.037″	17	**1.92**
LC-1651	35	6	.037″	21	**2.10**
LC-1652*	50	8	.037″	35	**2.64**
LC-1653	6	3.5	.073″	5	**1.59**
LC-1654	15	5.5	.073″	15	**1.92**
LC-1655*	25	9	.073″	27	**2.61**

*Denotes double bearing.



BUD TINY MITE DUAL CONDENSERS

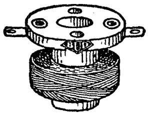
The construction of these units is similar to the regular Tiny Mite Tuning Condensers. The two end pieces are held together firmly with two tie-rods.

A separate round plate is soldered on rotor rod to shield the two stator sections. Large surface front and rear sleeve bearings, provide smooth rotation.

Catalog Number	CAP. PER SECTION Max. MMFD.	CAP. PER SECTION Min. MMFD.	Air Gap	No. Plates Per Section	Over all Length	Dealer Cost
LC-1659	8	2.5	.017″	3	1 15/16″	**$2.64**
LC-1660	15	3	.017″	5	2 1/16″	**2.94**
LC-1661	25	4	.017″	9	2 11/32″	**3.24**
LC-1662	50	6	.017″	19	2 1/32″	**3.30**
LC-1663	100	9	.017″	37	4¼″	**3.66**
LC-1664	10	4	.037″	7	2 15/32″	**2.94**
LC-1665	15	5	.037″	11	2 15/16″	**3.24**
LC-1666	25	5.5	.037″	17	3⅞″	**3.57**
LC-1667	35	6	.037″	21	4″	**3.93**

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

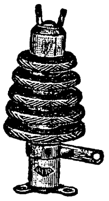
LATTICE WOUND R. F. CHOKES



For all general purpose applications requiring a high quality choke at a reasonable price, this line finds wide acceptance. Each choke is wound from silk-covered enameled copper wire on a white ceramic bobbin. Leads are terminated with two convenient soldering lugs. Chokes can be mounted with a 6-32 screw the center of the form, and each winding is thoroughly impregnated against moisture. The wide range of sizes fills practically every choke requirement in standard radio circuits. Choke base diam. 1-1/16". distance between ends of leads 1⅝"

Catalog Number	Inductance mh.	D.C. Res. Ohms	Current M.A.	Height	Dealer Cost
CH-1212	2.5	28	125	11/16"	$ .44
CH-1213	3.4	36	125	11/16"	.55
CH-1214	5.5	46	125	11/16"	.55
CH-1215	8.	60	125	11/16"	.66
CH-1216	10.	65	125	11/16"	.72
CH-1217	16.	84	125	11/16"	.75
CH-1218	30.	190	100	15/16"	.85
CH-1219	60.	279	90	15/16"	.96
CH-1220	80.	332	80	15/16"	1.00

TRANSMITTING CHOKES

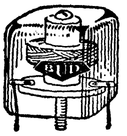


Here are two heavy duty R. F. Chokes that can really take it in high powered transmitter plate circuits. Each choke is wound on 9/16" dia. Steatite rod, has connection lugs and a mounting foot. **All chokes have a heavy ceramic coating which prevents moisture absorption and enables them to withstand momentary overloads without collapsing the individual pies.**

Consists of five graduated pies wound in continuous winding. Care has been taken to prevent any of the pies from being resonant on an amateur band and to keep the distributed capacity at a minimum. Overall height 3¼".

Catalog Number	Inductance	Current Capacity	D. C. Resistance	Dealer Cost
CH-568	2.2 mh.	1 amp.	5 ohms	$1.98
CH-569	4.3 mh.	.6 amp.	12 ohms	1.80

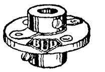
IRON CORE R. F. CHOKES



The efficiency of any circuit requiring an R. F. choke will be definitely improved by utilizing one of these chokes with a finely divided molded metallic core. The improved "Q" possible with this construction results from the D. C. resistance of these chokes being from 40 to 50% less for a given inductance than for regular air-core types. Thus, the D. C. voltage drop through the choke is considerably less, yet the choking action is equally as good. Windings are made with silk-covered enameled wire terminated on convenient soldering lugs, and the chokes are mounted in small square shield cans measuring 1⅜" x 1⅜" x 1-7/16".

Catalog Number	Inductance mh.	D. C. Resis. Ohms	Current ma.	Dealer Cost
CH-1277	1.5	11.5	125	$ .93
CH-1278	2.5	16.	125	.96
CH-1279	3.4	19.5	125	1.05
CH-1280	5.5	27.5	125	1.05
CH-1281	8.	36.	125	1.11
CH-1282	10.	42.5	125	1.11
CH-1283	16.	53.	125	1.23
CH-1284	30.	82.	100	1.29
CH-1285	60.	131.	100	1.44
CH-1286	80.	163.	90	1.53
CH-1287	125.	221.	90	1.80
CH-294	Shield Can Only		....	.21

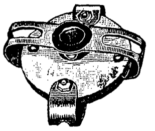
BUD INSULATED FLEXIBLE COUPLINGS



Tandem operation of two or more units is readily accomplished through the use of these couplers. Direct shaft alignment is not essential, and all couplers are made to fit ¼" shafts.

Cat. No.	Diameter	Height	Insulation	Dlr. Cost
FC-795	1-1/16"	11/16"	Ceramic	$ .48
FC-845	1-1/16"	⅝"	Bakelite	.33
FC-855	1½"	11/16"	Bakelite	.39

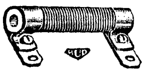
BUD HIGH VOLTAGE FLEXIBLE COUPLINGS



A new type spring construction in these couplings permits a wide gap between shaft connections, freedom from back-lash, and unusual flexibility. The springs are attached to glazed Steatite discs 1½" in diameter and 3/16" thick, and the overall diameter of the finished coupling is 1-15/16". Coupling accommodates standard ¼" shaft. Springs are also attached to Bakelite discs 1½" in diam.

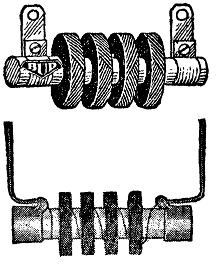
Catalog No.	Insulation	Dealer Cost
FC-614	Steatite	$ .65
FC-619	Bakelite	.50

ULTRA HIGH FREQUENCY R. F. CHOKES



These chokes were designed to meet the requirements of builders of high frequency receivers and transmitters. Consists of ceramic rod with a single layer winding terminated with strap leads at each end. Particularly suitable for use on 2 or 6 meters. CH-570 is supplied with a mounting foot and is sometimes used as a filament choke in certain types of high frequency oscillator and amplifier circuits.

Catalog Number	Inductance mh.	Max. Current	D. C. Resistance	Lengths	Dealer Cost
CH-925	5.7 uh.	750 ma	1.4 ohms	1½"	$ .30
CH-570	1.5 uh.	1.7 a	0.2 ohms	2¾"	1.20



PIE WOUND R. F. CHOKES

Each choke has a continuous winding of silk covered enameled copper wire and the pies constituting this winding are wound on a ¼" diameter ceramic core. Chokes are made with both strap and wire leads. The CH-876 is a heavy duty choke intended for circuits, such as transmitter plate circuits, where high currents are present. All chokes in this series have an overall length of 1½".

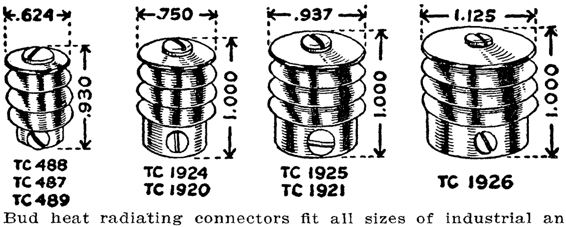
WITH STRAP LEADS

Catalog Number	Inductance mh.	D. C. Resistance	Current Rating	Dealer Cost
CH-920S	2.5	45 ohms	125 ma	$ .48
CH-922S	5.5	60 ohms	125 ma	.57
CH-923S	8.0	72 ohms	100 ma	.69
CH-924S	10.0	78 ohms	100 ma	.81
CH-876S	2.5	16 ohms	250 ma	.30

WITH WIRE LEADS

Catalog Number	Inductance mh.	D. C. Resistance	Current Rating	Dealer Cost
CH-920W	2.5	45 ohms	125 ma	.48
CH-922W	5.5	60 ohms	125 ma	.57
CH-923W	8.0	72 ohms	100 ma	.69
CH-924W	10.0	78 ohms	100 ma	.81
CH-876W	2.5	16 ohms	250 ma	.30

HEAT RADIATING PLATE AND GRIDE TUBE CONNECTORS



Bud heat radiating connectors fit all sizes of industrial and transmitting vacuum tubes. These connectors serve a dual purpose, not only are they useful to make connections to plate or grid terminals, but they provide a large heat radiating surface that will dissipate heat from the glass seal and tube element. Eight sizes fit all grid and plate leads and also provide sufficient heat radiation for any tube operating in the range of 50 to 2000 watts. All radiators are machined from special aluminum rod. Edges are rounded to minimize corona loss.

Table below lists Connectors to fit various Tubes

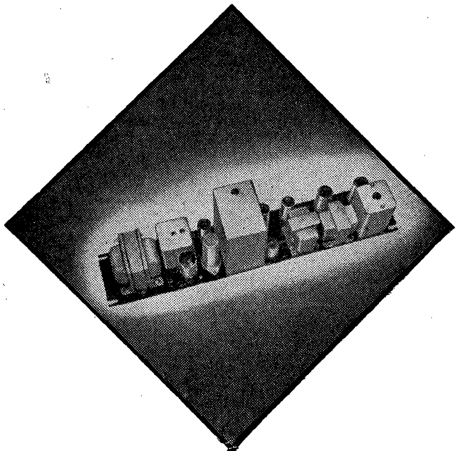
Cat. No.	Hole Size for Lead	Head Radiating Connectors to Fit the Following Tubes	Dealer Cost
TC-488	.052	3C24, 24, 24G, 25T, 27	$ .36
TC-487	.062	UH50, HK24, 304B, 829B, 832A, 834	.36
TC-489	.072	35T, 35TG, 75TH, HK254, HK257B, 484, 8001	.36
TC-1924	.125	HK57, 152TH	.50
TC-1920	.375	4-125A, 150TH, 2-150D, 250R, 250TH, 250TL, 420A, 802, 803, 804, 807, 808 Grid, 814, 815, 828	.50
TC-1925	.125	304TH, 304TL	.60
TC-1921	.570	ZB60, HF60, HF100, 111H, 211H, 203H, HF175, HF300 Grid, 100R, HK357C, 450TH, 454, 750TH, 805, 806, 808, 809, 810, 811, 812, 813, 828, 833, 866, 854, 1500T, 2000T, 1054, 5331, 5332, 8000, 8003, 8005	.60
TC-1926	.810	WL468, WL463, WL460, HF200, HF201, HF300	.80

NOTE: TC-1923 Heat Radiating Connector with hole size of .110" is still in our line and can be furnished..Dlr. Cost **$ .50**

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

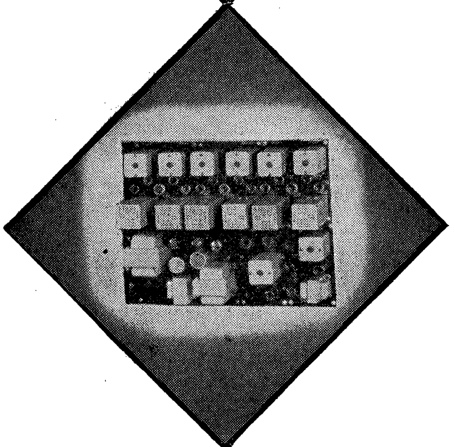
HAMMARLUND

DATA TRANSMISSION • SELECTIVE CALLING AND SUPERVISORY CONTROL EQUIPMENT



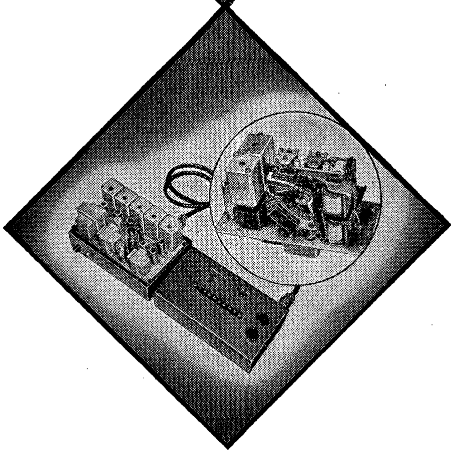
POINT TO POINT SIGNALING

The Hammarlund Standard Duplex Signaling Unit consists of a tone generator and receiver designed to operate over wire lines, telephone or power line carrier, and radio or microwave communications circuits for signaling, dialing, slow speed telemetering, supervisory controls or other information. Transmitters and receivers are available for 36 frequency channels between 2000 and 6475 cps. This equipment is being used by military and governmental agencies, pipeline and power companies, railroads and other groups requiring remote on-off switching, continuous indication of operating conditions, and automatic detection of wire line or power source failures along their systems.



PROTECTION THROUGH SUPERVISORY CONTROL

The Hammarlund "Multi-Gate" Remote Supervisory and Control System is engineered to provide highly efficient, fully reliable operational controls of important remote equipment such as used by refineries, pipelines, utilities, railroads, civil defense and other commercial, as well as military, groups. Because of a unique design by which a single tone activates a receiver, which in turn will then accept a second tone to operate a relay, this equipment can be used where disturbances on connecting wire or radio circuits make ordinary tone-operated remote controls impractical. Up to 21 individual on-off functions can be handled over a single circuit employing only 7 audio signaling tones.



SELECTIVE CALLING OR SIGNALING

Hammarlund Selective Calling equipment, added to 2-way radio systems used to control large fleets of vehicles, or distant fixed stations, adds privacy, speed, safety, quietness and convenience to day-in-day-out operations. By the push of a button the dispatcher within 0.8 of a second selects the station which he wants to contact. Only the selected operator or group of operators can receive the call. If the operator of the car or station being called doesn't answer, an indicator lamp remains lighted to show he was called. This simple equipment can be added to any present installation, or incorporated in any type of installation now projected.

THE HAMMARLUND MANUFACTURING COMPANY, INC.

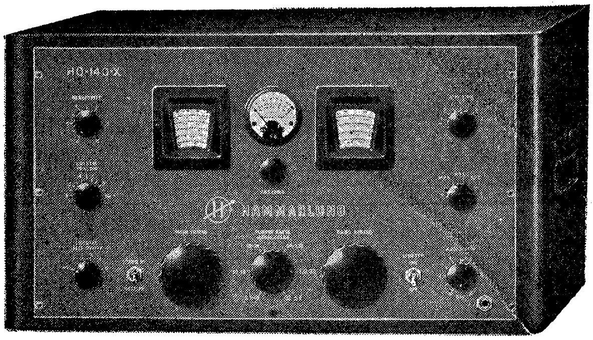
HAMMARLUND

COMMUNICATIONS RECEIVERS

The New "HQ-140-X"

The "HQ-140-X" is a new superheterodyne type receiver that provides amateurs and other short wave listeners with all the advantages of modern professional design and circuitry. In addition, it incorporates those outstanding features that have made Hammarlund "HQ's" famous for quality and performance. This receiver retains the high degree of sensitivity and selectivity of the "HQ-129-X," and in addition features notably improved frequency stability and image ratio. It covers a continuous range of frequencies from 540 kc to 31 mc, or from 555 meters to 9.7 meters, in six bands.

Band spread tuning is supplied on the four higher frequency bands, with actual calibration in the 80, 40, 20, 15, and 10 meter amateur bands. Many types of noise and other interference have been substantially reduced by the outstanding noise limiter and the special Hammarlund patented crystal filter.



FEATURES

TUNING RANGES: .54—1.32 mc, 1.32—3.2 mc, 3.2—5.7 mc, 5.7—10 mc, 10—18 mc, and 18—31 mc.

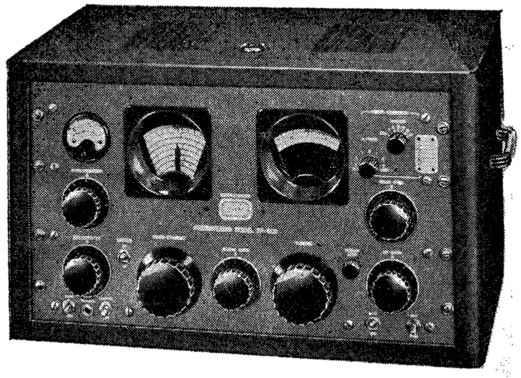
CALIBRATED BAND SPREAD: 3.5—4 mc, 7—7.3 mc, 14—14.4 mc, 20.9—21.6 mc, and 28—30 mc.

TUBE LINE-UP: 6C4 Oscillator, 6BA6 RF Amplifier, 6BE6 Mixer, 6BA6 1st IF Amplifier, 6BA6 2nd IF Amplifier, 6BA6 3rd IF Amplifier, 6AL5 combination detector, AVC and noise limiter, 12AU7 1st AF Amplifier and BFO, 6V6GT/G Audio Power Output, OC3/VR105 Voltage Regulator and 5U4G Full Wave Rectifier.

The "SP-600-JX"

The "SP-600-JX" communications receiver, now also available to hams, is a masterpiece of receiver design and already is world-known for its outstanding construction and performance. This professional receiver, with its six bands covering the frequency spectrum from 540 kc to 54 mc, is being used in large quantities by the military and governmental agencies, as well as by commercial services, for both single and diversity reception.

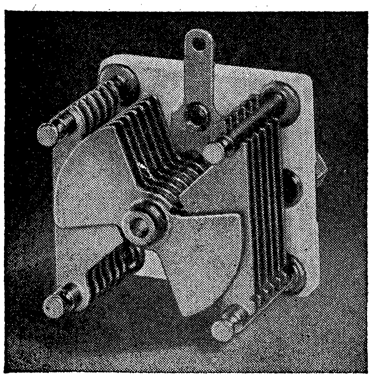
This magnificent receiver is a 20 tube dual conversion superheterodyne. The power supply is an integral part of the receiver chassis. Operation on any of six crystal controlled fixed frequency channels within the range of the receiver is immediately available. This designates it as the perfect receiver for point-to-point and network operations. Pre-arranged day and night fixed frequencies. With crystal control you can select your desired channels immediately.



Stability is .001 to .01 percent depending on frequency to which receiver is tuned, image rejection is 80 db to 120 db down, and spurious responses are at least 100 db down. Sensitivity is 1 microvolt CW and 2 microvolts AM, while selectivity for the three calibrated crystal and three non-crystal ranges is from 200 cycles to 13 kc. Radiation is negligible with no cross-talk in multi-receiver installations.

Write HAMMARLUND for detailed information

HAMMARLUND



"BFC" CAPACITORS

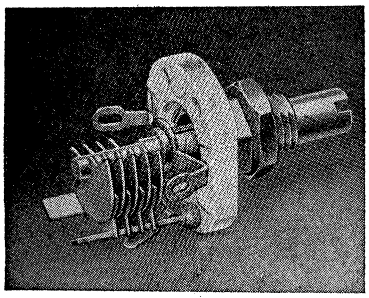
FEATURES—The "BFC" "butterfly" type capacitor has very low minimum capacity, low inductance and isolated rotor for use in VHF applications as a series capacitor with no rotor contact. Mechanical and electrical symmetry and stator terminal locations minimize circuit inductance.

CONSTRUCTION—Brass rotors and stators are soldered and nickel-plated. The contact wiper is heavily silver-plated beryllium-copper. Tapped studs on the silicone treated steatite front panel permit mounting the capacitor without grounding the rotor. The sleeve type bearing is nickel-plated brass.

SPECIFICATIONS—Straight line capacity. 90° rotation from minimum to maximum capacity position. Air gap is 0.030" nominal. Tested at 1200 V. R.M.S., 60 cycles between rotor and each stator.

High Speed Ball-Bearing Models Also Are Available

CODE	CAPACITY/SECTION		SERIES CAPACITY		PLATES	
	Max.	Min.	Max.	Min.	Rotor	Ea. Stator
BFC-12	14.5	3.4	7.6	2.2	4	3
BFC-25	27.3	4.8	14.1	2.9	7	6
BFC-38	40.1	6.2	20.6	3.6	10	9



"MAC" CAPACITORS

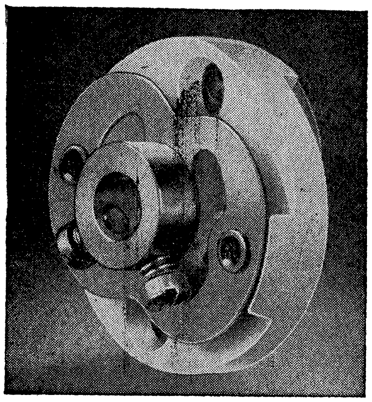
FEATURES—The "MAC" provides the low minimum capacity essential for use as a trimmer in the VHF range. It was engineered to achieve the smallest dimensions practical to meet the requirements of a miniaturized component.

CONSTRUCTION—Its silicone treated steatite base is only ¾" x ⅝". Rotor and stator are soldered assemblies and are of brass, silver-plated. Rotor and stator terminals are positioned to permit single hole mounting.

SPECIFICATIONS—Straight line capacity. Screwdriver adjustment. Air gap is 0.017" nominal. Tested at 750 V. R.M.S., 60 cycles.

CODE	CAPACITY		PLATES	CODE	CAPACITY		PLATES
	Max.	Min.			Max.	Min.	
MAC-5	5.0	1.4	5	MAC-15	14.2	2.2	15
MAC-10	8.7	1.7	9	MAC-20	19.6	2.7	21

"FC" and "FNC" COUPLINGS



FEATURES—The "FC-46-S" is an insulated flexible coupling designed to provide for mechanical ganging of shafts even though angularly misaligned. The smallest dimensions have been incorporated consistent with the rugged construction necessary for general service. A high degree of electrical isolation is achieved through the use of silicone treated steatite insulation. Flash-over voltage is approximately 5000 V. R.M.S. Brass hubs and spring temper phosphor bronze flexible arms are nickel plated. An exclusive and important feature of this coupling is its characteristic of uniform side-thrust through 360° of rotation. This eliminates tendency to vibrate at high speeds, minimizes bearing wear and assures accurate tracking.

The "FNC-46-S" is a non-insulated coupling for use where electrical continuity between shafts is required. The flexible arms are held securely to a nickel plated brass ring instead of an insulator.

STANDARD STOCK TYPES

CODE FC-46-S	Insulated flexible coupling
CODE FNC-46-S	Non-insulated flexible coupling

THE HAMMARLUND MANUFACTURING COMPANY, INC.

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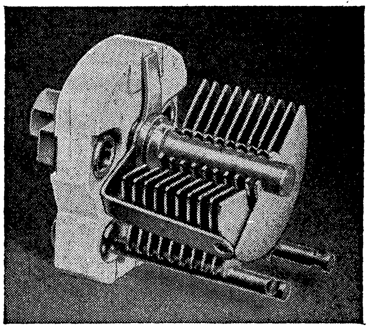
"APC" CAPACITORS



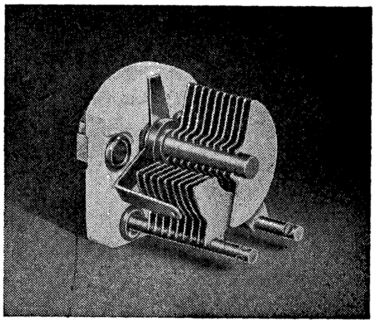
FEATURES—The "APC" trimmer capacitor originated by Hammarlund over twenty years ago is still widely recognized as the standard capacitor of its type. Its use is indicated in all classes of equipment where a compact, high quality air dielectric trimmer is required. It was designed to resist effects of temperature, moisture and vibration. Silicone treated steatite insulation is used to insure high leakage resistance.

CONSTRUCTION—Brass rotor and stator plates are soldered to brass supports. Nickel-plated phosphor bronze wiper assures positive rotor contact. All metal parts are nickel-plated. Terminals are hot-tin dipped. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding the rotor.

CODE	CAPACITY		PLATES
	Max.	Min.	
APC-25	25.	3.0	7
APC-50	50.	3.9	14
APC-75	75.	4.6	20
APC-100	100.	5.5	27
APC-140	140.	6.7	37

SPECIFICATIONS—Straight line capacity characteristic. Hexagonal collar on slotted shaft permits rotor adjustments to be made with wrench or screwdriver. Air Gap is 0.015" nominal. Tested at 600 V. R.M.S., 60 cycles.

"MAPC" CAPACITORS



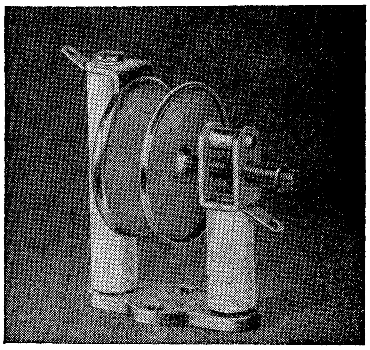
FEATURES—The "MAPC" capacitor is representative of Hammarlund's efforts to meet the demand for smaller dependable components. It is a scaled-down version of the popular "APC" with everything reduced except the quality and performance characteristics. For example, an "MAPC" is about half the size and weight of an "APC." Lower minimum capacities and low inductance make the "MAPC" suitable for VHF use.

CONSTRUCTION—The standard "APC" construction is used in this capacitor. Rotors and stators are fabricated by soldering brass plates to supporting members and nickel-plating the assemblies. Nickel-plated phosphor bronze wiper assures positive rotor contact. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding rotor.

CODE	CAPACITY		PLATES
	Max.	Min.	
MAPC-15	15.	2.3	6
MAPC-25	25.	2.6	10
MAPC-35	35.	2.9	14
MAPC-50	50.	3.2	19
MAPC-75	75.	3.9	29
MAPC-100	100.	4.5	38

SPECIFICATIONS—Straight line capacity. Screwdriver or socket wrench adjustment. Air gap is 0.0135" nominal. Tested at 600 V. R.M.S., 60 cycles.

"NZ-10" CAPACITORS



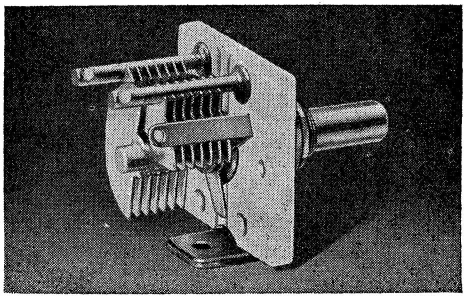
FEATURES—The "NZ-10" is a compact transmitter neutralizing capacitor designed for easy and accurate adjustment. The rotor is attached to a fine-thread lead screw which may be adjusted with smooth and precise action by a screwdriver and locked securely by a readily accessible clamping screw. A stop prevents shorting of plates at maximum capacity. Long leakage paths to ground from both rotor and stator are provided. Glazed steatite insulators and smoothly rounded aluminum plates minimize flashover.

SPECIFICATIONS—Capacity is adjustable from 2.3 to 10 mmf. Peak voltage rating is 3000 V. at maximum capacity (minimum gap) position.

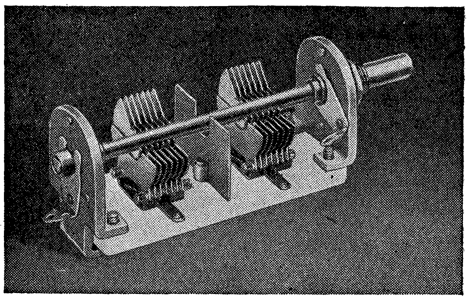
Write for the new HAMMARLUND Capacitor Catalog

HAMMARLUND

"HF" and "HFD" CAPACITORS



SPECIFICATIONS—Straight line capacity. Single spaced types (HF and HFD) have 0.015" air gap and are tested at 600 V. R.M.S., 60 cycles. Wide spaced types (HF-X and HFD-X) have 0.045" air gap and are tested at 1400 V. R.M.S., 60 cycles.



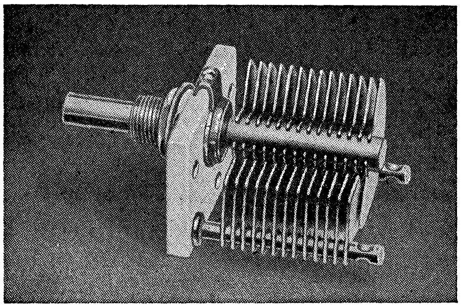
SINGLE SECTION CAPACITOR—The "HF" is a single section tuning capacitor employing "APC" rotor and stator design. Extra long sleeve bearing and positive contact nickel-plated phosphor-bronze wiper make this unit ideally suited to high frequency applications. Silicone treated steatite insulation. Single hole or base mounting.

DOUBLE SECTION CAPACITOR—The "HFD" dual capacitor, like the "HF" singles, incorporate advanced features providing for maximum efficiency at high frequency. Aluminum front and rear end panels are mounted on a heavy silicone treated steatite base. Wide front and rear bearings with individual silver-plated beryllium-copper wipers for each section assure long life and maximum contact efficiency. Single hole panel mount or base mounting.

CODE	CAPACITY		PLATES/ SECTION
	Max.	Min.	
HF-15	17.5	2.8	5
HF-35	36.	3.2	10
HF-50	52.	3.7	14
HF-100	102.	5.3	27
HF-140	142.	6.3	37
HF-15-X	15.	3.6	10
HF-30-X	30.	5.2	20
HFD-50	52.	3.6	14
HFD-100	102.	5.0	27
HFD-140	142.	6.0	37
HFD-15-X	16.	3.8	11
HFD-30-X	28.5	5.0	19

D—Split stator X—Wide-Spaced

"HFA" and "HFBD" CAPACITORS



SPECIFICATIONS—Straight line capacity. Air gaps and test voltages are as indicated in table. However, "HFBD" breakdown voltages are doubled and capacitance values approximately halved when stator sections are connected in series.

SINGLE SECTION CAPACITOR—The "HFA" is a single section tuning capacitor similar to "HF" except that larger plates permit wider air-gaps for the same capacitance values. Resultant higher break-down ratings extend the use of the capacitor into the high frequency low-power transmitter field. A threaded sleeve bearing permits single hole mounting and the bracket supplied may be used for base mounting. A lug type terminal soldered to the bearing provides an efficient rotor connection.

DOUBLE SECTION CAPACITOR—The "HFBD" is a dual, balanced rotor transmitting capacitor employing front and rear panels plus a ball-thrust rear bearing, but otherwise incorporating constructional features identical to the smaller "HFA." An insulated shaft extension safeguards operating personnel from the high voltages which may be applied to the rotor. The small size, rugged construction, balanced rotor and range of capacitance values and breakdown voltages make this capacitor ideally suited to many applications.

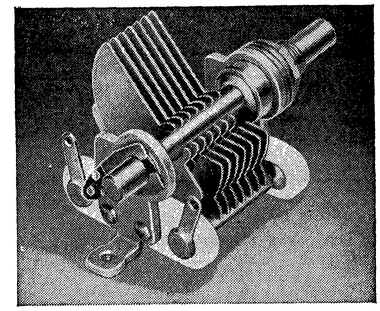
CODE	CAPACITY		SPACING	PLATES/ SECTION
	Max.	Min.		
HFA-100-A	102.	4.5	0.020	19
HFA-140-A	145.	6.0	0.020	27
HFA-10-B	9.	2.3	0.030	3
HFA-15-B	16.	2.8	0.030	5
HFA-25-B	25.	3.0	0.030	7
HFA-50-B	50.	4.3	0.030	14
HFA-100-B†	100.	7.5	0.030	27
HFA-15-E	16.	4.0	0.070	9
HFBD-50-C	50.	9.0	0.050	11
HFBD-100-C	105.	14.0	0.050	23
HFBD-35-E*	37.	9.5	0.070	11
HFBD-65-E*	63.	12.5	0.070	19

60 Cycle Test Voltage:
"HFA" — "A" 800 V. R.M.S. "B" 1200 V. R.M.S. "E" 1750 V. R.M.S.
"HFBD" — "C" 1500 V. R.M.S. "E*" 3000 V. R.M.S.; plates have rounded edges. †Has front and rear supporting panels.

THE HAMMARLUND MANUFACTURING COMPANY, INC.

HAMMARLUND

"MC" and "MCD" CAPACITORS



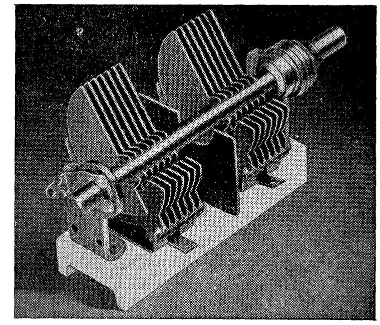
FEATURES—The "MC" is a versatile single section tuning capacitor designed to give a choice of mountings, connections and capacity characteristics. "MC-S" capacitors have a straight line capacity characteristic. "MC-M" units have offset plates resulting in a "Midline" characteristic which more equally spaces frequencies. "MC-X" units are wide-spaced for high voltages. The "MCD" is a split-stator panel-mounted capacitor.

SPECIFICATIONS—Straight line or "Midline" capacity characteristic. Single-spaced types have 0.0245" nominal air gap and are tested at 1000 V. R.M.S., 60 cycles. Wide-spaced ("X") types have 0.0715" nominal air gap and are tested at 1750 V. R.M.S., 60 cycles.

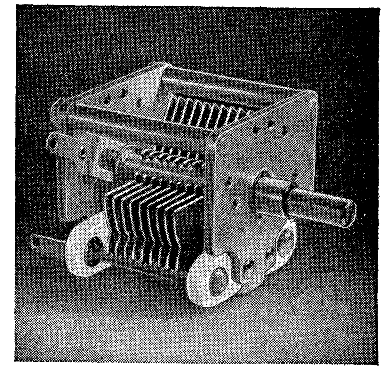
CODE	CAPACITY		PLATES/ SECTION
	Max.	Min.	
MC-20-S	20.	5.5	3
MC-35-S	35.	6.0	5
MC-50-M	50.	6.3	7
MC-50-S	50.	6.5	7
MC-75-M	80.	7.3	11
MC-75-S	80.	8.0	11
MC-100-M	100.	7.7	14
MC-100-S	100.	8.3	14
MC-140-M	140.	9.0	19
MC-140-S	140.	10.0	19
MC-200-M	200.	10.3	27
MC-250-M	250.	12.0	34
MC-325-M	320.	13.5	43

CODE	CAPACITY		PLATES/ SECTION
	Max.	Min.	
MC-20-SX	20.	6.8	7
MC-35-MX	32.	7.8	11
MC-35-SX	32.	8.5	11
MC-50-MX	53.	10.5	19
MC-50-SX	53.	11.5	19
MC-100-SX	100.	16.5	35
MCD-50-M	50.	5.5	7
MCD-100-M	100.	6.3	14
MCD-100-S	100.	7.0	14
MCD-140-M	140.	7.8	19
MCD-35-MX	31.	6.0	11
MCD-35-SX	31.	6.8	11

M—Midline plates
X—Wide-Spaced
S—Straightline plates



"RMC" CAPACITORS

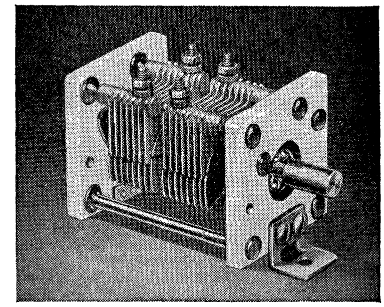


FEATURES—The "RMC" was designed specifically for applications requiring an "MC" type tuning capacitor with very rigid construction. Its sturdy frame consists of heavy gauge aluminum end panels held together by three aluminum tie rods. It has a brass sleeve front bearing and a single ball thrust rear bearing for smooth tuning and a high degree of resetability. The rotor contact is a forked silver-plated beryllium-copper spring wiping against a wide disc on the rotor.

SPECIFICATIONS—Straight line capacity. Air gap is 0.0245" nominal.

CODE	CAPACITY		PLATES
	Max.	Min.	
RMC-50-S	50.	7.3	7
RMC-100-S	105.	9.5	14
RMC-140-S	143.5	11.0	19
RMC-325-S	327.	17.5	43

"VU" CAPACITORS



FEATURES—The "VU" is a uniquely designed UHF tuning capacitor using completely original concepts. With it, conventional "lumped constant" circuits, rather than tuned cavity techniques, can be efficiently used up to 500 megacycles. In addition to employing the capacitor sections in series to eliminate the rotor wiper, the design also utilizes Pyrex balls to form precision bearings and to completely isolate the rotor. Thus, noise generated by rubbing metal-to-metal contacts and variable resistance paths in the bearings have been totally eliminated. Circuit connections are made to threaded studs on each stator. This permits vacuum tube and inductor to be mounted adjacent to and on opposite sides of the capacitor to minimize circuit inductance.

SPECIFICATIONS—The capacity characteristic approaches a straight line frequency curve as indicated by nominal values in table at left. Air gap is .0168" nominal. Tested at 700 V. R.M.S., 60 cycles, between rotor and each stator.

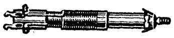
CODE	SERIES CAPACITY		PLATES/ SECTION
	Eff.	Min.	
VU-20	22.5	3.35	11
VU-30	31.5	3.5	15
VU-45	45.0	3.8	21

Special Capacitors Built to Your Specifications

Miller

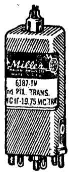
Television Components

Horizontal Linearity & Width Controls



Dimensions: 3/8" dia., approximately 2¼" long.

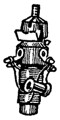
Cat. No.	Description	List Price
6195	Linearity Control—55° Tubes	$1.25
6196	Width Control—55° Tubes	1.10
6197	Linearity Control—65° Tubes	1.25
6198	Width Control—65° Tubes	1.10
6199-A	Linearity Control—70° Tubes	1.30
6199-B	Width Control—70° Tubes	1.25



Converter and Picture I.F. Transformers

Dimensions: 7/8" x 7/8" x 2¼" high.

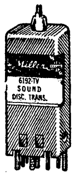
Cat. No.	Description	Trap	List Pr.
6185	21.8 MC Conv. I.F. Trans.	21.25 MC	$2.75
6186	25.3 MC 1st Pix I.F. Trans.	27.25 MC	2.75
6187	22.3 MC 2nd Pix I.F. Trans.	19.75 MC	2.10



Picture I.F. Inductors

Dimensions: ½" max. o.d. x 1½" long.

Cat. No.	Description	Freq.	List Pr.
6188	3rd Pix I.F. Trans.	25.2 MC	$1.00
6189	Video Detector I.F. Trans.	23.4 MC	1.00
6193	Cathode Sound Trap	21.25 MC	2.00
6171	Tunable Choke	21-25 MC	1.20
6171A	Tunable Choke	25-29 MC	1.20

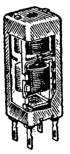


21.25 MC Television Sound I.F. Transformers

Dimensions:

6190 and 6191 7/8"x7/8"x2¼" high.
6184 and 6192 1⅛"x1⅛"x2½" high.

Cat. No.	Item	Freq.	List Pr.
6190	1st Sound I.F. Trans.	21.25 MC	$2.40
6191	2nd Sound I.F. Trans.	21.25 MC	2.40
6192	Sound Disc. Trans.	21.25 MC	2.75
6184	Sound Ratio Det. Trans.	21.25 MC	3.30

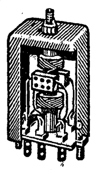


4.5 MC Miniature I.F. Transformers

Dimensions: ¾" square by 2" high.
Shell Core Permeability tuned

Manufactured under patents of
Automatic Manufacturing Corp.

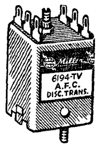
Cat. No.	Item	List Price
6203	4.5 MC Input or Interstage	$2.75
6204	4.5 MC Discriminator	3.30
6205	4.5 MC Ratio Detector	3.30



4.5 MC Intercarrier Sound I.F. Components

Dimensions: 1⅛"x1⅛"x2⅛" high.

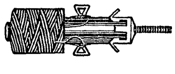
Cat. No.	Item	Freq.	List Pr.
1466	Input or Inter. I.F. Trans.	4.5 MC	$2.40
1467	Sound Discriminator Trans.	4.5 MC	3.00
1468	Sound Ratio Detector Trans.	4.5 MC	3.30
1469	Sound Pick Off Coil	4.5 MC	1.25
1470	Sound Trap Unshielded	4.5 MC	1.25
1470A	Sound Trap Shielded ¾" sq. x 2" high.	4.5 MC	1.65


Miller
6194-TV
A.F.C.
DISC. TRANS.

Horizontal Oscillator & Sync. Control Coils

Dimensions: 1 7/16"x1 7/16"x2½" high.

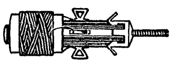
Cat. No.	Item	List Price
6194	Osc. & A.F.C. Discrim. Trans.	$2.75
6182	Osc. and Sync. Control Coil	2.25
6183	Osc. and Sync. Stabilizer Coil	2.75



Sync. Stabilizer Coil (Ringing Coil)

Overall dimensions: ¾" x 2¼".

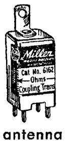
Cat. No.	Item	List Price
6210	Sync. Stabilizer Coil	$2.00



Adjustable Inductors & Width Controls

Dimensions: ½" O.D. x 2¼" long.

Cat. No.	Inductance Range	List Price
6313	0.5-5 millihenries	$1.30
6314	2-18 millihenries	1.40
6315	5-40 millihenries	1.50
6316	5-40 millihenries with A.G.C. winding	2.25

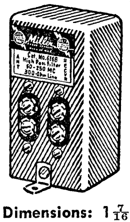


TV Antenna Coupling Transformers

Matches antenna impedance to line or line to T.V. receiver. Signal input may be improved as much as four times. Designed to couple low impedance antenna to standard 300 ohm line; or 300 ohm antenna to 72 ohm twin lead or low loss coaxial cable. At receiver, low impedance line matched to standard 300 ohm input. Housed in impregnated, weather-tight aluminum shield.

Dimensions: ¾"x¾"x1⅜" high.

Cat. No.	Impedance Ratio	List Price
6161	52/300 or 300/52 ohms	$2.75
6162	72/300 or 300/72 ohms	2.75
6201	450/300 or 300/450 ohms	2.75



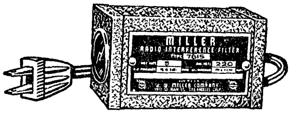
TV High-Pass Filter

Improves picture clarity by rejecting interference from short wave stations, amateur transmitters, X-ray and diathermy equipment, electric appliances, etc. Attenuates all signals from zero to 40 MC. Passes all television channels with minimum loss. Installed easily in antenna lead-in at receiver. No tuning required.

Dimensions: 1 7/16" x 1⅞" x 3½" high.

Cat. No.	Use	List Pr.
6167	TV High-Pass Filter— 72-ohm line	$5.50
6168	TV High-Pass Filter—300-ohm line	5.50

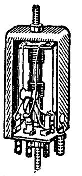
TV Appliance Filter



These filters are designed to eliminate radio interference caused by horizontal oscillators in T.V. receivers and small electrical appliances such as sewing machines, vacuum cleaners, food mixers, and other similar devices requiring less than 550 watts. Inductive capacitive circuit assures maximum attenuation of interference.

Dimensions: 2¼" square x 4" long.

Cat. No.	Volts	Watts	List Price
7815	115	550	$7.70



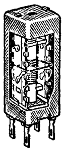
"40 MC" TV Picture I.F. Transformers

Converter transformer and 1st pix I.F. grid transformer have 75-ohm link winding.

Used in R.C.A. current models.

Dimensions: 7/8"x7/8"x2¼" high.

Cat. No.	Description	Trap	List Pr.
6215	Converter I.F. Trans.		$2.50
6216	1st Pix I.F. Grid Trans.	39.25 MC	3.00
6217	1st Pix I.F. Plate Trans.	41.25 MC	3.00
6218	2nd Pix I.F. Grid Trans.	47.25 MC	2.75
6219	3rd-4th & 5th I.F. Unshielded ½" O.D. x 1¼" long.	41.75-45.75 MC	1.25



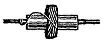
Miniature 40 MC Picture Transformers Permeability Tuned

Converter transformer and 1st pix I.F. Grid transformer have 75 ohm link winding.

Dimensions: ¾" Square x 2" high.
Manufactured under patents of
Automatic Manufacturing Corp.

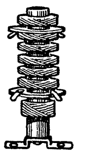
Cat. No.	Description	Trap	List Pr.
6230	Converter I.F.		$2.15
6231	44 MC First I.F.		2.15
6232	42.5 MC Second I.F.	41.25 MC	1.65
6233	45.5 MC Third I.F.	47.25 MC	2.15
6234	44 MC Fourth I.F.		1.50

Video Peaking Coils, Filament Choke



No. 6175 Filament Choke—9/32" dia. x 7/8" long; Video Peaking Coils—3/16" dia. x ½" long.

Cat. No.	Use	Inductance —uhy	Shunt Resistor	List Price
6175	Filament	0.8	None	$.50
6152	Peaking	20	None	.50
6176	Peaking	36	None	.50
6172	Peaking	73	None	.60
6177	Peaking	93	None	.60
6178	Peaking	120	22K	.60
6153	Peaking	120	None	.60
6179	Peaking	180	39K	.60
6180	Peaking	180	None	.60
6154	Peaking	200	None	.60
6173	Peaking	250	22K	.60
6181	Peaking	250	None	.60
6155	Peaking	300	None	.60
6174	Peaking	500	None	.60



R.F. Transformer for HV Power Supply

These R.F. power supply transformers for use with television receivers and cathode ray oscilloscope make possible construction of an inexpensive source of high voltage. Two types are available, the 4525 for voltages to 5000 DC and the 4526 for voltages to 10,000 DC (or 30,000 DC in a voltage rectifier tripler circuit). Type 1B3-GT tubes are used as rectifiers and the R.F. oscillator circuit uses one or more type 6V6 or 6Y6 tubes connected in parallel. The high frequency AC source permits use of simple and inexpensive resistive capacitive filters with low ripple content in the output. Typical circuit diagrams are supplied with each coil.

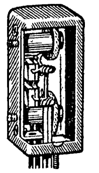
Cat. No.	Item	List Price
4525	H.V. R.F. Trans. (to 5 KV) Dimensions: 1¼" dia. x 3¾" high.	$8.25 (Illus.)
4526	H.V. R.F. Trans. (to 30 KV) Dimensions: 2¼" dia. x 6" high.	$13.75

Components listed here are cross referenced in Sams Photofact.

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

Miller

Intermediate Frequency Transformers

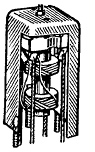


Permeability Tuned Transformers

Miller permeability tuned intermediate frequency transformers are recommended for all applications where a high degree of frequency stability and operation under humid conditions will be encountered.

Dimensions: 1⅜″ square x 3¼″ high. #6/32 spade bolt mounting.

Cat. No.	Freq.	KC Range	Use	List Price
912-H1	262	250-275	Input	$4.00
912-H2	262	250-275	Interstage	4.00
912-H3	262	250-275	Full-Wave	4.00
912-H4	262	250-275	Half-Wave	4.00
912-C1	455	450-475	Input	4.00
912-C2	455	450-475	Interstage	4.00
912-C3	455	450-475	Full-Wave	4.00
912-C4	455	450-475	Half-Wave	4.00
912-W1	1500	1400-1600	Input	4.00
912-W2	1500	1400-1600	Interstage	4.00
912-W3	1500	1400-1600	Full-Wave	4.00
912-W4	1500	1400-1600	Half-Wave	4.00



Midget I.F. Transformers

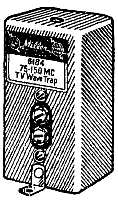
Dimensions:
1⅛″ square x 2″ high.
#6/32 spade bolt mounting.

Air Core Transformers

Cat. No.	Freq.	KC Range	Use	List Price
112-H1	262	250-275	Input	$2.40
112-H2	262	250-275	Interstage	2.40
112-H3	262	250-275	Full-Wave	2.40
112-H4	262	250-275	Half-Wave	2.40
112-C1	455	450-475	Input	2.40
112-C2	455	450-475	Interstage	2.40
112-C3	455	450-475	Full-Wave	2.40
112-C4	455	450-475	Half-Wave	2.40
112-W1	1500	1400-1600	Input	2.40
112-W2	1500	1400-1600	Interstage	2.40
112-W3	1500	1400-1600	Full-Wave	2.40
112-W4	1500	1400-1600	Half-Wave	2.40

Iron Core Transformers

Cat. No.	Freq.	KC Range	Use	List Price
012-K1	175	165-185	Input	$2.75
012-K2	175	165-185	Interstage	2.75
012-K3	175	165-185	Full-Wave	2.75
012-K4	175	165-185	Half-Wave	2.75
012-H1	262	250-275	Input	2.65
012-H2	262	250-275	Interstage	2.65
012-H3	262	250-275	Full-Wave	2.65
012-H4	262	250-275	Half-Wave	2.65
012-C1	455	450-475	Input	2.65
012-C2	455	450-475	Interstage	2.65
012-C3	455	450-475	Full-Wave	2.65
012-C4	455	450-475	Half-Wave	2.65

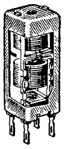


TV and FM Wave Traps

These new high-Q series- resonant traps may completely eliminate interference and undesirable images in television and FM receivers. Assembled in aluminum shields designed for connection direct to antenna twin-lead. Convenient screwdriver tuning adjustment at top. Four traps will cover frequency ranges from 20 to 250 megacycles.

Dimensions: 1 7/16″x1⅞″x3½″ high.

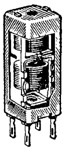
Cat. No.	Freq. Range	List Price
6163	150-250 mc	$4.40
6164	75-150 mc	4.40
6165	40- 80 mc	4.40
6166	20- 40 mc	4.40



Miniature I.F. Transformers

Supplied with a snap spring mounting clip which may be installed through suitable holes in the chassis. Also furnished is an adapter plate for use over a standard tube socket hole.
Dimensions: only ¾″ square x 2″high.
Manufactured under patents of Automatic Manufacturing Corp.

Cat. No.	Item	List Price
12-H1	262 KC Input I.F. Trans	$2.50
12-H2	262 KC Output I.F. Trans.	2.50
12-H6	262 KC Output I.F. Trans. with diode filter capacitors	2.65
12-C1	455 KC Input I.F. Trans.	2.20
12-C2	455 KC Output I.F. Trans.	2.20
12-C6	455 KC Output I.F. Trans. with diode filter capacitors	2.35

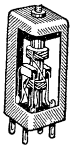


FM Miniature I.F. Transformers

Dimensions: only ¾″x¾″x2″ high.

Manufactured under patents of Automatic Manufacturing Corp.

Cat. No.	Item	List Price
1463	10.7 MC Input or Interstage	$2.75
1464	10.7 MC Discriminator	3.30
1465	10.7 MC Ratio Detector	3.30

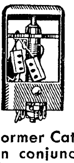


Miniature 1500 KC I.F. Transformers

Designed for experimental and custom receivers as well as replacement for 'personal' radios, these transformers are permeability tuned and comparable in performance to standard size components. Expressly designed for use wtih the new miniature tubes. Supplied with spring clip for mounting to the chassis.
Dimensions: ¾″ x ¾″ x 2″ high.

Cat. No.	Description	Range	List Pr.
12-W1	Input or Interstage	1400-1600 KC	$2.50
12-W2	Half-wave output	1400-1600 KC	2.50

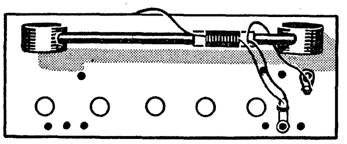
FM I.F. Trans. (10.7 MC)



These permeability tuned 10.7 MC intermediate frequency transformers are assembled in aluminum shields 1⅛″ square x 2⅛″ high. Mounting is by two #6-32 spade bolts on 1-1/16″ centers. Three interstage transformers Cat. No. 1451 are usually required when followed by a discriminator transformer Cat. No. 1452, while two may be sufficient in conjunction with a ratio detector transformer

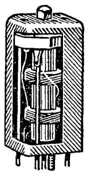
Cat. No.	Item	List Price
1451	10-7 MC Interstage Trans.	$2.40
1452	10.7 MC Discriminator Trans.	3.30
1453	10.7 MC Ratio Detector Trans.	3.30

Ferrite Rod Loop Antenna



The electrical characteristics of this newly developed type Ferrite Rod Loop Antenna make possible a general replacement loop that offers outstanding performance. Reception of distant stations will be improved to the extent that no antenna or ground will be required, and on local stations much better reception will be insured. The Loop Rod Antenna has an adjustable inductance which makes it possible to peak the antenna stage by merely sliding the coil along the ferrite rod; this also enables it to be used with a variety of tuning condensers.

Cat. No.	Dimensions	List Price
705-A	3¼″ x 9½″	$2.75



Replacement I.F. Transformers

These transformers are an essential part of the stock of every serviceman and dealer. In many cases they will give better performance than the original transformer. These transformers may be used as replacements in most makes of receivers using transformers of the same physical size.

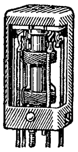
Dimensions: 1⅜″ square x 2⅝″ high. #6/32 spade bolt mounting.

Cat. No.	Freq.	KC Range	Use	List Price
512-H1	262	250-275	Input	$2.40
512-H2	262	250-275	Interstage	2.40
512-H3	262	250-275	Full-Wave	2.40
512-H4	262	250-275	Half-Wave	2.40
512-C1	455	450-475	Input	2.40
512-C2	455	450-475	Interstage	2.40
512-C3	455	450-475	Full-Wave	2.40
512-C4	455	450-475	Half-Wave	2.40
512-W1	1500	1400-1600	Input	2.40
512-W2	1500	1400-1600	Interstage	2.40
512-W3	1500	1400-1600	Full-Wave	2.40
512-W4	1500	1400-1600	Half-Wave	2.40

Iron Core Transformers

Dimensions: 1⅜″ square x 3¼″ high. #6/32 spade bolt mounting.

Cat. No.	Freq.	KC Range	Use	List Price
612-K1	175	165-185	Input	3.50
612-K2	175	165-185	Interstage	3.50
612-K3	175	165-185	Full-Wave	3.50
612-K4	175	165-185	Half-Wave	3.50
612-H1	262	250-275	Input	2.90
612-H2	262	250-275	Interstage	2.90
612-H3	262	250-275	Full-Wave	2.90
612-H4	262	250-275	Half-Wave	2.90
612-C1	455	450-475	Input	2.90
612-C2	455	450-475	Interstage	2.90
612-C3	455	450-475	Full-Wave	2.90
612-C4	455	450-475	Half-Wave	2.90



Universal I.F. Transformers

For general replacement purposes in auto receivers and many types of household and portable receivers.

Type No. 312 Air Core Transformers

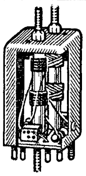
Dimensions: 1¼″ square x 2½″ high.

Cat. No.	Freq.	KC Range	Use	List Price
312-H1	262	250-275	Input	$1.75
312-H2	262	250-275	Interstage	1.75
312-H4	262	250-275	Output	1.75
312-H6	262	250-275	Output & Filter	2.65
312-C1	455	440-470	Input	1.75
312-C2	455	440-470	Interstage	1.75
312-C4	455	440-475	Output	1.75
312-C6	455	440-470	Output & Filter	2.65

Type No. 412 Iron Core Transformers

Dimensions: 1¼″ square x 2½″ high.

Cat. No.	Freq.	KC Range	Use	List Price
412-H1	262	250-275	Input	$2.40
412-H2	262	250-275	Interstage	2.40
412-H4	262	250-275	Output	2.40
412-C1	455	440-470	Input	2.40
412-C2	455	440-470	Interstage	2.40
412-C4	455	440-470	Output	2.40



FM-AM Composite I.F. Transformer, 10.7MC & 455KC

Dimensions: 1⅜″x1⅜″x2½″ high.

Cat. No.	Item	List Price
1462	10.7 MC/455 KC I.F. Trans.	$4.75

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

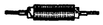
Miller

Radio Frequency Chokes

R.F. Chokes with Axial Leads

Dimensions: Phenolic form 3/16" dia. x 3/4" long.
Iron core form 7/32" dia. x 7/8" long.

Leads are 1½" long. Inductance tolerance: ±5%.

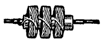


Phenolic Form
Single Layer Windings

Cat. No.	uH.	Ohms	MA	List Price
4602	1	0.05	300	$ .50
4604	1.5	0.08	300	.50
4606	2.4	0.16	300	.55
4608	3.9	0.5	300	.55
4610	6.2	0.75	300	.60
4612	10	1.5	200	.60

Iron Core Form
Single Layer Windings

Cat. No.	uH.	Ohms	MA	List Price
4622	10	0.06	300	$ .65
4624	15	0.12	300	.65
4626	24	0.28	300	.70
4628	39	0.65	300	.70
4630	62	1.0	300	.75
4632	100	2.0	200	.75

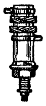


Phenolic Form
3-Section Windings

Cat. No.	Mh.	Ohms	MA	List Price
4642	0.1	4.1	125	$ .75
4644	0.15	5	125	.75
4646	0.24	6.6	125	.75
4648	0.39	8.7	125	.80
4650	0.62	11	125	.80
4652	1.0	15	125	.80

Iron Core Form
3-Section Windings

Cat. No.	Mh.	Ohms	MA	List Price
4662	1	7	125	$ .85
4664	1.5	9	125	.90
4666	2.4	12	125	1.00
4668	3.9	17	125	1.10
4670	6.2	33	75	1.25
4672	10	47	50	1.50



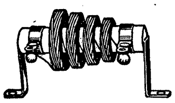
Adjustable Ceramic Form and R.F. Coils

Dimensions (form): 1/4" dia.x7/8" long.

Cat. No.	Microhenries	List Price
4500	Form Only	$1.50
4502	1.0- 1.6	2.00
4503	1.6- 2.8	2.10
4504	2.8- 5	2.20
4505	5 - 9	2.30
4506	9 - 16	2.40
4507	16 - 24	2.50
4508	24 - 35	2.50
4509	35 - 60	2.50
4511	60 -120	2.50
4512	110 -200	2.60
4513	190 -330	2.60
4514	320 -500	2.60

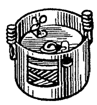
(#4500 has hardware & core.)

Transmitter Chokes



For use in transmitter circuits of either medium or high power installations. Low distributed capacity. **Dimensions:** Form 1/2" x 2½" long.

Cat. No.	MH	Ohms	MA	List Price
4550	2.0	6.5	400	$1.75
4551	4.0	10.0	400	2.00
Dimensions: (form) 1/2" diameter x 3½" long.				
4534	1.0	2.5	1000	2.20
4535	1.5	3.6	1000	2.50
4533	2.5	4.5	750	2.75
4536	4.0	5.5	750	3.05
2881	7.0	7.2	750	4.95



Shielded Chokes

Single section wound R.F. Chokes assembled in round alumihum shield with two spade bolts for mounting. Solder lug terminals.

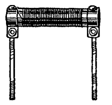
Dimensions: 1¼" dia. x 1" high (No. 758 is 1⅝" dia.)

Cat. No.	MH	Ohms	MA	List Price
751	.5	10	125	$ .90
752	1.0	17	125	.90
753	2.5	30	125	1.00
754	5.0	49	125	1.00
755	7.5	61	125	1.00
756	10.0	75	125	1.10
757	25.0	125	125	1.25
758	50.0	186	100	1.60

Iron Core Type

Similar to the No. 700 series except wound on powdered iron cores for lower circuit loss.
Dimensions: 1¼" dia. x 1" high.

Cat. No.	MH	Ohms	MA	List Price
851	.5	8.6	125	$1.40
852	1.0	11.5	125	1.50
853	1.0	22.0	125	1.55
854	5.0	31.0	125	1.70
855	7.5	42.0	125	1.75
856	10.0	47.0	125	1.80
857	25.0	100.0	125	2.15
Dimensions: 1⅝" dia. x 1" high.				
858	50.0	160.0	100	2.30
859	75.0	222.0	100	2.60
860	100.0	348.0	100	2.85
861	150.0	520.0	100	3.15



Ceramic Core R.F. Chokes

Dimensions: (form) 1/4" diameter x 1½" long.

All chokes are impregnated with a moisture- and fungus resistant varnish. Inductance tolerance: ±5%.

Single Layer Chokes

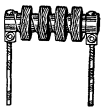
The following R.F. chokes are solenoid wound. They have a distributed capacity of 0.7 mmf and may be used in ultra-high-frequency receivers and low-power transmitters.

Cat. No.	uH.	Ohms	MA	List Price
4528-1	1	.03	300	$ .70
4528	2.5	.09	300	.70
4529	5	.25	300	.70
4529-10	10	.95	300	.70

Progressive Wound Chokes

These chokes, with a distributed capacity of 1 mmf., fill the gap between layer and pi-wound coils. The distributed capacity is lower than that obtainable in sectional wound coils.

Cat. No.	uH.	Ohms	MA	List Price
4515	25	1.6	300	$ .80
4517	50	2.1	300	.80
4519	100	3	300	.80



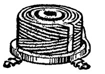
Multiple Pi Chokes

These Multiple Pi duo-lateral chokes have a low distributed capacity of 1.2-1.3 mmf. The current carrying capacity is comparatively high for this type of choke.

Cat. No.	Mh.	Ohms	MA	List Price
4531-0	.25	8	200	$.90
4531	.5	12	200	.90
4531-1	1	17	200	.90
4532	1.5	21	200	.90
4537	2.5	28	200	.90
4538	5	42	125	1.10
4539	7.5	82	125	1.40
4540	10	95	125	1.65
4541	25	160	125	1.95

#4537 Bulk packed per 100 — List Price $75.00

R.F. Chokes wound to closer tolerances if required in lots of 100 pieces or more at slightly higher prices.



Unshielded Chokes

These single section R.F. Chokes are ideally suited for general purpose applications in receiver and filter circuit. Solder lug terminals and single hole mounting. Inductance tol. ±5%.

Air Core Type

Dimensions: 1⅛" diameter x 5/8".

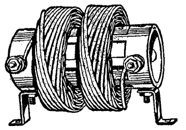
Cat. No.	MH	Ohms	MA	List Price
610	.25	8	125	$ .60
620	.75	17	125	.65
630	1.50	21	125	.65
640	2.50	28	125	.75
650	5.0	41	125	.75
660	7.5	53	125	.80
670	10.0	64	125	.85
680	12.5	74	125	.85
690	15.0	83	125	.90
691	20.0	97	125	1.00
692	30.0	120	100	1.05
693	60.0	175	100	1.20
694	80.0	230	100	1.45

Iron Core Type

These chokes are similar in construction to the No. 600 series except that they are wound on powdered iron cores.

Cat. No.	MH	Ohms	MA	List Price
951	.5	6.8	125	$1.00
952	1.0	10.9	125	1.10
953	2.5	19.5	125	1.15
954	5.0	23.0	125	1.30
955	7.5	37.0	125	1.40
956	10.0	45.0	125	1.45
957	25.0	78.0	100	1.75
958	50.0	130.0	100	1.95
959	75.0	200.0	100	2.20
960	100.0	210.0	100	2.50
961	150.0	268.0	100	2.75

Line Filter Chokes



All Miller line filter chokes are duo-lateral wound on ceramic forms (except #7825 & D-7825 are on bakelite). They are for installation in noise producing equipment such as flasher signs, farm lighting plants, motor generators, etc Also used with radio transmitters to prevent r.f. energy feed-back into the power circuits. Typical circuit diagrams are supplied with each choke. Always select chokes having a current rating at least as high as the maximum current load of the circuit to be filtered.

Single Line Filter Chokes

For use in filtering individual and branch circuits.

Dimensions: #7825 1⅞" x 1¾".
Others: 2½" x 4".

Cat. No.	Amps.	Ohms.	MH	List Price
7825	2	.75	.60	$1.65
7826	5	.28	.57	4.40
7827	10	.15	.37	4.95
7828	20	.08	.20	5.50
7829	30	.05	.13	6.05

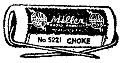
Dual Line Filter Chokes

For use in filtering both sides of single phase circuits.

Dimensions: #D-7825 3¼" x 2⅛".
Others: 4½" x 4".

Cat. No.	Amps.	Ohms.	MH	List Price
D-7825	2	.75	.60	$3.30
D-7826	5	.28	.57	6.60
D-7827	10	.15	.37	7.70
D-7828	20	.08	.20	8.80
D-7829	30	.05	.13	9.90

Specifications are for each winding.



Filament Choke

Enclosed solenoid wound chokes for use in the filament and vibrator circuits of battery operated receiver, transmitters, etc.

Dimensions: 3/4" dia.x1⅞" long, plus 3" leads.

Cat. No.	uH	Ohms	Amps	List Price
5221	4	.02	6	$ .75

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Miller

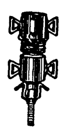
Radio Frequency Coils

Miniature Adjustable R.F. Coils

These high Q adjustable iron core coils are for general replacement use.

Dimensions: ½″ dia. x 1½″ long (Nos. 70-A and 70-RF).
½″ dia. x 1⅛″ long (No. 70-OSC).

Cat. No.	Use	Freq. Range	List Pr.
70-A	Antenna Stage	540-1600 KC	$1.50
70-RF	R.F. Stage	540-1600 KC	1.50
70-OSC	Oscillator Stage Has primary and tapped secondary (I.F. 100-550 KC)	540-1600 KC	1.50

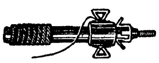


Universal Adjustable Oscillator Coil

These adjustable iron core oscillator coils are for general replacement use.

Dimensions: ⅝″ x 1½″ high.

Cat. No.	Use	Freq. Range	List Pr.
71-OSC	Oscillator Stage R.F.	500-1800 KC (I.F. 100-550 KC)	$2.00



High-Q Ferrite Antenna Coil

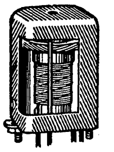
Dimensions: ⅜″ diameter x 2¼″ long.

Cat. No.	Use	Freq. Range	List Pr.
6300	Antenna Stage	540-1700 KC	$1.25

FM Adjustable R.F. Coils

Dimensions: ½″ O.D. x 1⅝″ long.

Cat No.	Item	List Price
1474	88-108 MC Antenna Coil	$1.50
1475	88-108 MC R.F. Coil	1.50
1476	88-108 MC Osc. Coil (10.7 MC I.F.)	1.50



Standard Bank Wound Coils

High gain general purpose coils featuring high impedance coupled antenna and R.F. units with progressive wound litz wire secondaries (except oscillator coils). For use with standard 365 mmfd tuning condenser. All windings are thoroughly impregnated with tropicalized R.F. lacquer.

Shielded

Dimensions: 1⅜″ square x 2½″ high.

Cat. No.	Use	Freq. Range	List Pr.
44-A	Antenna Stage	540-1700 KC	$1.35
44-RF	R.F. Stage	540-1700 KC	1.35
44-BP	Band-Pass Stage	540-1700 KC	1.35

Cat. No.	I.F. Freq.	Series Pad	List Price
44-K	175 KC	.001 mfd.	$1.35
44-H	262 KC	.0006 "	1.35
44-C	455 KC	.0004 "	1.35

Tapped osc. coils (for 6SA7 and similar tubes)

Cat. No.	I.F. Freq.	Series Pad	List Price
41-K	175 KC	.001 mfd.	$1.35
41-H	262 KC	.0006 "	1.35
41-C	455 KC	.0004 "	1.35

Unshielded

Dimensions: ⅝″ diameter (form) x 2⅛″ high.

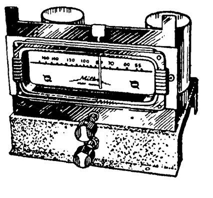
Cat. No.	Use	Freq. Range	List Pr.
43-A	Antenna Stage	540-1700 KC	$1.10
43-RF	R.F. Stage	540-1700 KC	1.10
43-BP	Band-Pass Stage	540-1700 KC	1.10

Cat. No.	I.F. Freq.	Series Pad	List Price
43-K	175 KC	.001 mfd.	$1.10
43-H	262 KC	.0006 "	1.10
43-C	455 KC	.0004 "	1.10

Tapped osc. coils (for 6SA7 and similar tubes)

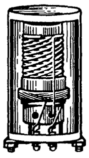
Cat. No.	I.F. Freq.	Series Pad	List Price
45-K	175 KC	.001 mfd.	$1.10
45-H	262 KC	.0006 "	1.10
45-C	455 KC	.0004 "	1.10

Germanium Crystal Diode Band-Pass TRF Tuner Kit



High fidelity! Uses germanium diode detector! No tubes! No power supply! No hum! A simple 2-tuned circuit negative mutual-coupled band-pass tuner. Easy to assemble and wire. Full 22 kc. pass-band assures all brilliance of treble tones. Yet selective enough to separate local stations. With good antenna, AM stations in 20-25 mile range give output .05V to .5V. Use with your amplifier and speaker system for extra high quality reception. The Miller #585 TRF Tuner Kit contains coupling and TRF coils, 2-gang condenser, slide rule dial, chassis and hardware. (Resistors, condensers, germanium crystal and volume control not included.)

#585 TRF Tuner Kit **List $19.50**



Deluxe Broadcast Coils

These coils are used in the finest quality receivers for lasting performance and stability. The secondaries are Litz wire wound (except oscillator coils) for maximum "Q" and are designed to be used with a standard 365 mmfd tuning condenser.

Shielded

Dimensions: 1⅞″ diameter x 3″ high.

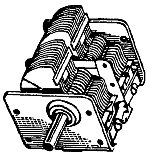
Cat. No.	Use	Freq. Range	List Pr.
242-A	Antenna Stage	540-1750 KC	$1.75
242-BP	Band-Pass Stage	540-1750 KC	1.50
242-RF	R.F. Stage	540-1750 KC	1.75

Standard Oscillator Coils

Cat. No.	I.F. Freq.	Series Pad	List Price
277-M	132 KC	.0016 mfd.	$1.50
277-K	175 KC	.001 "	1.50
277-H	262 KC	.0006 "	1.50
277-C	455 KC	.0004 "	1.50

Cathode Tapped Oscillator Coils

Cat. No.	I.F. Freq.	Series Pad	List Price
279-K	175 KC	.001 mfd.	1.50
279-H	262 KC	.0006 "	1.50
279-C	455 KC	.0004 "	1.50

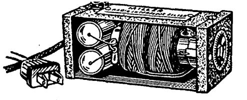


Midget Variable Condensers

Split outer plates on the rotors permit accurate alignment. High frequency trimmers are provided on the short side of the condenser. Mounting is provided by tapped holes in the frame of the condenser. Counter-clock rotation for capacity increase. Shaft dia. is ⅜″x1″ long. Capacity range—10 to 365 mmf.

Cat. No.	Sections	Dimensions	List Price
2112	2	$2\frac{3}{16}$″ x $1\frac{13}{16}$″ x 1⅝′	$3.50
2113	3	$3\frac{3}{16}$″ x $1\frac{13}{16}$″ x 1⅝″	5.00

General Purpose Filter



This filter is recommended for use with marine and D.C. appliances and radios. It is also for use with extremely noisy A.C. appliances. A good, permanent connection to ground should be used with this filter.

Dimensions: 2¼″ square x 5″ long.

Cat. No.	Volts	Watts	List Price
7813	115	200	$8.25

Universal Replacement Coils

(Permeability Tuned)

This series of variable inductance iron core coils are well suited for general replacement. Adjusted to cover the standard broadcast band with a tuning condenser having a maximum capacity of between 250 and 450 mmfd. The oscillator coils may be used with any I.F. amplifier operating in the 100 to 550 KC range.

Unshielded

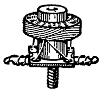
Dimensions: ⅞″ diameter x 2″ high. "L" mtg. bracket.

Cat. No.	Use	Freq. Range	List Pr.
72-A	Antenna Stage	500-1800 KC	$2.20
72-RF	R.F. Stage	500-1800 KC	2.20
72-OSC	Oscillator Stage	(see text above)	2.20

Shielded

Dimensions: 1⅜″ square x 2½″ high.

Cat. No.	Use	Freq. Range	List Pr.
73-A	Antenna Stage	500-1800 KC	$2.75
73-RF	R.F. Stage	500-1800 KC	2.75
73-OSC	Oscillator Stage	(see text above)	2.75



Dowel Type Coils

Single section Litz wound secondary coils wound on ½″ Dia. lo-loss ceramic dowels, with #6/32 threaded stud for single hole chassis mounting. For use with standard 365 mmfd tuning condenser.

Dimensions: 1″ diameter x 1″ high.

Cat. No.	Use	Freq. Range	List Pr.
5480-A	Antenna Stage	540-1600 KC	$1.25
5480-RF	R.F. Stage	540-1600 KC	1.50
5480-ABP	Ant.-B-P Stage	540-1600 KC	1.75

Standard Oscillator Coils

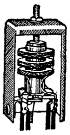
Cat. No.	I.F. Freq.	Series Pad	List Price
5480-K	175 KC	.001 mfd.	$1.15
5480-H	262 KC	.006 "	1.15
5480-C	455 KC	.0004 "	1.15

Cathode Tapped Oscillator Coils

Cat. No.	I.F. Freq.	Series Pad	List Price
5481-K	175 KC	.001 mfd.	$1.15
5481-H	262 KC	.0006 "	1.15
5481-C	455 KC	.0004 "	1.15

Midget R. F. Coils

(Adjustable Inductance)



Adjustable powdered iron core permitting approximately plus or minus 30% secondary inductance deviation from nominal values. Particularly recommended for aircraft, marine and mobile equipment and general custom receiver construction. Coils are designed for use with standard 365 mmfd. tuning condenser.

Dimensions: 1⅛″ square x 2″ high.

Broadcast Band 540-1700 KC

Cat. No.	Use	I.F. Freq.	List Pr.
A-320-A	Antenna		$1.95
A-320-RF	Interstage		1.95
A-320-M	2-coil Osc.	132 KC	1.95
A 320-C	2-coil Osc.	455 KC	1.95
A-321-M	Tapped Osc.	132 KC	1.95
A-321-C	Tapped Osc.	455 KC	1.95

Marine & Aircraft Band 2100-6300 KC

Cat. No.	Use	I.F. Freq.	List Pr.
B-320-A	Antenna		$1.95
B-320-RF	Interstage		1.95
B-320-M	2-coil Osc.	132 KC	1.95
B-320-C	2-coil Osc.	455 KC	1.95
B-321-M	Tapped Osc.	132 KC	1.95
B-321-C	Tapped Osc.	455 KC	1.95

Short Wave Band 6.0-18 MC

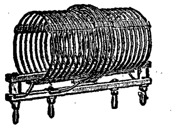
Cat. No.	Use	I.F. Freq.	List Pr.
C-320-A	Antenna		$1.95
C-320-RF	Interstage		1.95
C-320-C	2-coil Osc.	455 KC	1.95
C-321-C	Tapped Osc.	455 KC	1.95

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

COMPONENTS for amateurs and experimenters

B&W BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.

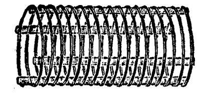


ANTENNA INDUCTORS TYPES TA AND HDA

Wound with tinned copper wire for ease in tapping feeders to coils. Equipped with fixed center links for coupling to either fixed or variable linked final tank circuits through a low impedance line. Two tinned clips come with each coil. TYPE TA COILS for power input up to 500 watts. TYPE HDA COILS for power inputs of one kilowatt.

SPECIFICATIONS

Band	Stock No.	Type	Capacity to Res. L.F. End of Band mmfd.	Net Price
		TA TYPES		
10	3601	10TA	20	$3.45
15	3602	15TA	23	3.57
20	3603	20TA	23	3.57
40	3604	40TA	34	3.96
80	3605	80TA	50	4.38
160	3606	160TA	100	4.71
Stock No. 3321 Jack Bar Assembly for TA Inductors.				1.25
		HDA TYPES		
10	3607	10HDA	20	7.02
15	3608	15HDA	20	7.83
20	3609	20HDA	20	7.83
40	3610	40HDA	20	8.25
80	3611	80HDA	34	9.06
160	3612	160HDA	100	10.32
Stock No. 3721 Jack Bar Assembly for HDA Inductors				1.75

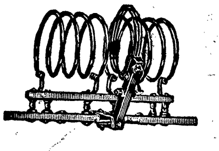


B & W MINIDUCTORS

For use in limited space—can be cut to size. Amazingly high Q characteristic. Useful for tank circuit coils, R-F chokes, high-frequency I-F transformers, loading coils, etc.

SPECIFICATIONS

Catalog No.	Diameter	Turns per Inch	Length	Net Price
3001	½″	4	2″	$0.36
3002	½″	8	2″	.36
3003	½″	16	2″	.36
3004	½″	32	2″	.36
3005	⅝″	4	2″	.45
3006	⅝″	8	2″	.45
3007	⅝″	16	2″	.45
3008	⅝″	32	2″	.45
3009	¾″	4	3″	.54
3010	¾″	8	3″	.54
3011	¾″	16	3″	.54
3012	¾″	32	3″	.54
3013	1″	4	3″	.60
3014	1″	8	3″	.60
3015	1″	16	3″	.60
3016	1″	32	3″	.60



TYPE TVH INDUCTORS

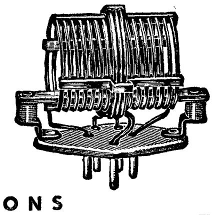
For Powers up to 500 Watts Input

A special group of units with eight contact plug bars which gives greater flexibility than otherwise possible.

SPECIFICATIONS

Band	Stock No.	Type	*Capacity to Res. L.F. End of Band mmfd.	Net Price
10	3501	10TVH	11	$4.71
15	3502	15TVH	23	4.71
20	3503	20TVH	23	4.71
40	3504	40TVH	28	4.71
80	3505	80TVH	49	4.71
160	3506	160TVH	100	4.71
Stock No. 3566 Jack Bar Assembly for Type TVH Inductors				5.16

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.



JUNIOR INDUCTORS

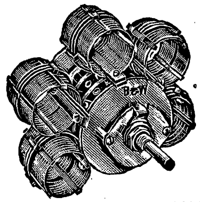
For Powers Up to 75 Watts Input

Fitted with standard five-prong steatite base. Small size for compact construction. May be used in the oscillator, buffer or final amplifier stage with input powers up to 75 watts and plate voltages up to 850. Three different assemblies provided, any of which may be used in capacity-coupled circuits by omitting connection to the links.

SPECIFICATIONS

Band	Stock No.	Type	*Cap. to Res. L.F. End of Band mmfd.	Net Price
		End Linked Models		
6	3100	6JEL	15	$1.65
10	3101	10JEL	22	1.65
15	3102	15JEL	22	1.65
20	3103	20JEL	34	1.65
40	3104	40JEL	47	1.65
80	3105	80JEL	60	1.65
160	3106	160JEL	100	1.65
		Center Linked Models		
6	3107	6JCL	15	1.65
10	3108	10JCL	16	1.65
15	3109	15JCL	16	1.65
20	3110	20JCL	16	1.65
40	3111	40JCL	33	1.65
80	3112	80JCL	53	1.65
160	3113	160JCL	100	1.65
		Variable Link Models		
6	3114	6JVL	15	1.65
10	3115	10JVL	22	1.65
15	3116	15JVL	27	1.65
20	3117	20JVL	21	1.65
40	3118	40JVL	31	1.65
80	3119	80JVL	46	1.65
160	3120	160JVL	100	1.65

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.



B & W TURRET ASSEMBLIES

Unique switching assembly makes possible fast, positive band switching without absoption effects. All units cover 80, 40, 20, 15 and 10 meter bands. Also available with 160 meter coil substituted for 15 meter coil.

B & W 75 WATT 2A "BAND HOPPERS" Uses same coil design as B & W Juniors. Unusually compact panel controlled unit. It may be used for interstage coupling between two beam power tubes or between beam power tubes and triodes.

Stock No. 3121 ....Amateur Net $5.76

B & W 75-WATT TURRETS—provide a means for link coupling single ended or push-pull low power stages. Complete assembly is mounted on a positive action switch arranged for panel mounting through a single ⅜″ hole. Turrets may be used with tubes operating at voltages up to 850.

Stock No. 3810—Type JTCL—Center linked, center tapped coils. Amateur Net $11.25

Stock No. 3811—Type JTEL—End linked, untapped coils. $11.25

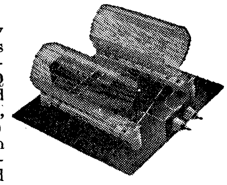
B & W 150-WATT TURRETS—Supplied in both center and end link models for both single- and double-ended circuits. Operation is by a positive action switch arranged for panel mounting through a single ⅜″ hole. Turrets may be used with tubes operating at voltages up to 1000 volts.

Stock No. 3812—Type BCL—Center linked, center tapped coils. Amateur Net $14.01

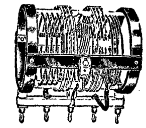
Stock No. 3813—Type BEL—End linked, untapped coils. $14.01

BALUN INDUCTORS

These bifilar balun inductors are specially designed for use with Collins 32-V series and similar transmitters—see "The Impedance Matcher" as described in CQ Magazine for May 1951. Two coils mounted on an 8″ square plate serve as a compact, highly efficient all-band (80-10 meters) unit for matching feed line systems to both transmitters and receivers. Can be connected to match 75 ohm unbalanced transmitter outputs to 75 and 300 ohm balanced antenna feed lines. Full instructions included.



Type 3975
$3.75 New Price



3400 SERIES INDUCTORS

FOR POWERS UP TO 500 WATTS

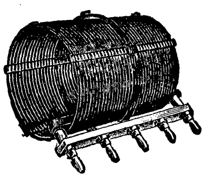
Each coil has an individual internal center coupling adjustable over 360°, permitting impedance matching up to 600 ohms. 10, 15, 20, 40, 80 and 160 meter band types. Write for details.

Net

PRICE INDICATIONS ARE REVISIONS MADE JANUARY 15, 1953

B&W COMPONENTS for amateurs and experimenters

BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.



TYPE HD1
(Fixed Link)

- MINIMUM DIELECTRIC IN THE FIELD OF THE COIL
- EXTREMELY LOW LOSSES
- RUGGED CONSTRUCTION
- EXCELLENT APPEARANCE
- LOW COST

Each AIR INDUCTOR is a **completely** finished unit. All coils are equipped with banana type plugs . . . Type "B" is for use in oscillator and buffer—doubler stages developing up to 100 Watts power. Type "T" is especially suited for high powered neutralized buffer and final tank stages where powers of 500 Watts are developed. Type "HD" is for maximum power — handles a Kilowatt with ease.

SPECIFICATIONS

Band	Stock No.	Type	Net Price
TYPE B			
MODELS WITHOUT LINK—CENTER TAPPED			
6	3200	6B	$1.65
10	3201	10B	1.65
15	3202	15B	1.74
20	3203	20B	1.74
40	3204	40B	2.16
80	3205	80B	2.58
160	3206	160B	2.88
END LINK MODELS—WITHOUT TAP			
6	3207	6BEL	2.91
10	3208	10BEL	2.91
15	3209	15BEL	2.97
20	3210	20BEL	2.97
40	3211	40BEL	3.39
80	3212	80BEL	3.81
160	3213	160BEL	4.11
CENTER LINK MODELS—CENTER TAPPED			
6	3214	6BCL	2.91
10	3215	10BCL	2.91
15	3216	15BCL	2.97
20	3217	20BCL	2.97
40	3218	40BCL	3.39
80	3219	80BCL	3.81
160	3220	160BCL	4.11
VARIABLE LINK MODELS—CENTER TAPPED			
6	3221	6BVL	2.31
10	3222	10BVL	2.31
15	3223	15BVL	2.40
20	3224	20BVL	2.40
40	3225	40BVL	2.73
80	3226	80BVL	3.12
160	3227	160BVL	3.45

Stock No. 3228—Steatite Jack Bar Assembly for end or center link type B Inductors, old Type A56. **Stock No. 3266**—Jack Bar and Swinging Link for BVL Inductors.

Band	Stock No.	Type	Net Price
TYPE T			
10	3301	10T	1.80
15	3302	15T	1.92
20	3303	20T	1.92
40	3304	40T	2.31
80	3305	80T	2.73
160	3306	160T	3.06

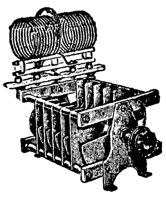
Band	Stock No.	Type	Net Price
CENTER LINKED MODELS—CENTER TAPPED			
10	3308	10TCL	$3.45
15	3309	15TCL	3.57
20	3310	20TCL	3.57
40	3311	40TCL	3.96
80	3312	80TCL	4.38
160	3313	160TCL	4.71
VARIABLE LINKED—CENTER TAPPED			
10	3315	10TVL	2.64
15	3316	15TVL	2.73
20	3317	20TVL	2.73
40	3318	40TVL	3.12
80	3319	80TVL	3.57
160	3320	160TVL	3.72

Stock No. 3321—Steatite Jack Bar Assembly for end or center link Type T Inductors, old Type A54. **Stock No. 3366**—Base Assy. and Swinging Link for TVL Inductors.

Band	Stock No.	Type	Net Price
TYPE HD			
MODELS WITHOUT LINK—CENTER TAPPED			
10	3701	10HD	3.72
15	3702	15HD	4.50
20	3703	20HD	4.50
40	3704	40HD	4.95
80	3705	80HD	5.76
160	3706	160HD	7.02
CENTER LINKED MODELS—CENTER TAPPED			
10	3708	10HDCL	7.02
15	3709	15HDCL	7.83
20	3710	20HDCL	7.83
40	3711	40HDCL	8.25
80	3712	80HDCL	9.06
160	3713	160HDCL	10.32
VARIABLE LINKED MODELS—CENTER TAPPED			
10	3715	10HDVL	5.37
15	3716	15HDVL	6.21
20	3717	20HDVL	6.21
40	3718	40HDVL	6.60
80	3719	80HDVL	7.41
160	3720	160HDVL	8.67

Stock No. 3721—Jack Bar Assembly for HD and HDCL Inductors. **Stock No. 3766**—Base Assembly and SL for HDVL Inductors.

TYPE CX CONDENSER



Superior design! Only half the length of conventional units. Perfect electrical and mechanical symmetry. Designed for built-in neutralization. Integral mounting of B & W coils reduces lead lengths and resulting lead inductance to an absolute minimum.

Stock No. 3767—Type HD Jack Bar and SL assembly mounted on any type of condenser.
Stock No. 3721-1—Type HD or HDL Jack Bar mounted on condenser.
Stock No. 3567—Type TVH Jack Bar and SL mounted on condenser.
Stock No. 3930-1—Single Vacuum Condenser mount.
Stock No. 3930-2—Twin Vacuum Condenser mount.

NEUTRALIZING PLATES AVAILABLE IN FOUR TYPES, DESIGNATED N1, N2, N3, and N4.

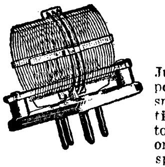
N1—will neutralize the HY114, HK24, RK31, HK54, TW75, and similar tubes.
N2—will neutralize the 75T, 35T, 808, RK35, 852, and similar tubes.
N3—will neutralize the 801, T-TZ20, T-TZ40, RK18, HK154, 811, 812, T55, 100TH, 250TH, 806, 810, and similar tubes.
N4—will neutralize the 833, T200, 805, GL152, 838, 203A, RK52, and similar tubes

Type	Capacity Per Section Max.	Capacity Per Section Min.	Capacity Sections in Series Max.	Capacity Sections in Series Min.	Net Price
"A" TYPE—.500" AIRGAP					
CX11A	11	8	8	6	$15.03
CX20A	20	11	13	8	18.39
CX30A	30	14	18	10	21.12
CX40A	40	18	23	12	23.76
CX49A	49	21	28	14	27.36
CX59A	59	24	33	16	29.13
CX68A	68	27	38	18	31.80
CX77A	77	30	43	20	34.53
CX87A	87	34	48	22	37.17
CX96A	96	37	53	24	39.84
CX105A	105	40	58	26	42.57
CX115A	115	43	62	29	45.21
CX124A	124	46	68	30	47.94
"B" TYPE—.375" AIRGAP					
CX11B	11	8	9	6	14.61
CX22B	22	11	15	8	17.88
CX34B	34	14	21	10	20.61
CX45B	45	17	28	12	23.22
CX58B	58	20	33	13	25.80
CX70B	70	23	38	15	28.47
CX82B	82	26	45	17	30.96
CX94B	94	29	50	19	33.69
CX106B	106	32	56	20	36.21
CX118B	118	36	62	22	38.79
CX130B	130	39	68	24	41.52
CX141B	141	42	74	26	44.10
CX153B	153	45	80	27	46.68
"C" TYPE—.250" AIRGAP					
CX13C	13	8	10	6	14.25
CX30C	30	11	18	8	17.46
CX45C	45	13	26	9	20.07
CX62C	62	16	34	11	22.56
CX78C	78	19	42	12	25.17
CX95C	95	22	50	14	27.75
CX111C	111	25	59	15	30.18
CX127C	127	28	67	17	32.79
CX143C	143	31	75	18	35.31
CX159C	159	33	83	20	37.74
CX175C	175	36	91	21	40.47
CX192C	192	39	100	23	42.99
CX208C	208	42	110	24	45.42

Standard plate thickness in all models, 1/16". • Available on special order, 3/32" plates at 10% additional. • Special features. • Explanation: The type of each condenser designates its capacity and plate spacing as follows: CX100 indicates 100 mmfd. per section. • Letters A, B, C, or D denotes plate spacing: A—.500", B—.375", C—.250", D—.187". Following N# denotes Neutralizing plates.

"BABY" AIR INDUCTORS

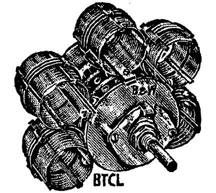
(25 WATT RATING)



Just the thing for crowded layouts, portables, field transmitters! The smallest, most efficient, most practical 25-Watt coils ever available to amateurs. "BABIES" measure only 1½" x 1¼", are made by a special B&W process which insures perfect air-spacing, maximum strength, fine appearance and ultra-high efficiency with an absolute minimum of insulating material. Available in five types, from 10 to 160 meters. **Conservatively** rated. Universal 5-prong Alsimag 196 bases ....**Net Any Type $1.26**

Straight Coil	Center Tapped	End Linked	Center Linked	Inductance	*Capacity
160M	MC	MEL	MCL	...	100
80M	MC	MEL	MCL	40	50
40M	MC	MEL	MCL	14	35
20M	MC	MEL	MCL	3.5	35
15M	MC	MEL	MCL	2.7	35
10M	MC	MEL	MCL	1.1	30

*Total effective capacity required to effect resonance on low frequency end of specified band.

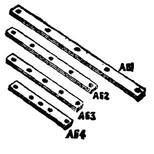


"BABY" TURRETS

35-WATT RATING

These compact 5-band switching units cover amateur bands from 10 to 80 meters with any 50 mmf. midget condenser. Also available with 160 meter coil substituted for the 15 meter coil. (100 mmf. required on 160 meters.) Sturdy construction and unique design assure permanent coil alignment and maximum efficiency with a minimum number of tubes. Four types—BTM, straight untapped; BTCT, center tapped; BTEL, end linked; and BTCL, center linked—provide vastly improved band-switching in low-power transmitters and exciters.
Net Any Type....................$10.14

B & W PLUG AND JACK BARS



Made of high quality steatite. Ample size to insure excellent strength. They provide experimenter with the same units that are used in B & W inductors. Can also be used as spreaders for feeders and other parts of the antenna system.

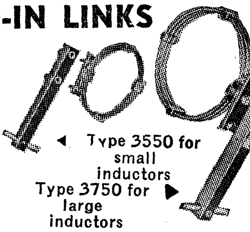
SPECIFICATIONS

Stock No.	Type	Length	Width	Thickness	Mounting Dimension	Used on Series	Net Price
3914	Plug	3½"	½"	⅜"		B	$0.20
3915	Jack	4½"	⅝"	⅜"	4⅛"	B	.60
3916	Plug	5½"	½"	⅜"		T	.45
3917	Jack	7"	¾"	⅜"	6½"	T	1.00
3918	Plug	6½"	$\frac{9}{16}$"	⅜"		TVH	.60
3919	Jack	8¼"	$\frac{11}{16}$"	⅜"	7¾"	TVH	1.10
3920	Plug	8¼"	¾"	⅜"		HD	1.10
3921	Jack	10¾"	1"	½"	9⅝"	HD	1.25
3922	Jack	6⅛"	⅝"	¼"	5½"	BX	.90
3923	Plug	4½"	½"	¼"		BX	.40

COMPONENTS for amateurs and experimenters

B&W BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.

B & W NEW PLUG-IN LINKS


◄ Type 3550 for small inductors
Type 3750 for ► large inductors

FOR IMPEDANCE MATCHING

Adaptable to all B & W Swinging Link assemblies, these B & W plug-in links solve the quick change problem. Just pull out one coil and plug in another with the required number of turns. Old link arm easily replaced with new plug-in type.

ORDERING NUMBERS FOR B & W PLUG-IN LINKS

For Types TVH, TVL, BVL Swinging Link Assemblies	Ordering No.	Price	For Type HDV Swinging Link Assemblies	Ordering No.	Price
Arm Only	3550	$ .70	Arm Only	3750	$1.40
Arm and Hinge	3565	1.00	Arm and Hinge	3765	1.80

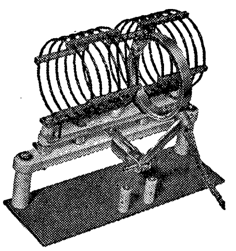
PLUG-IN LINK COILS

	Ordering No.	Price		Ordering No.	Price
1 turn	3551	$ .60	1 turn	3751	$1.25
3 turns	3553	.60	3 turns	3753	1.25
6 turns	3556	.60	6 turns	3756	1.25
10 turns	3560	.95	10 turns	3760	1.75

Above are standard. Other turns available on request.

B & W FARADAY SHIELDED LINKS

...fit all B & W variable link air inductors

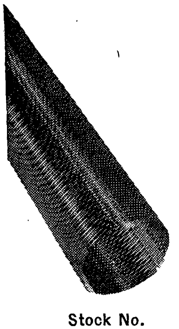


These shielded links effectively reduce harmonic or spurious signal radiations normally transferred by capacity coupling. Adaptable to all conventional link coupled circuits, the B & W Faraday Shielded Links materially aid in the reduction of TV and BC interference. They may be used with external antenna tuning units or, in conjunction with harmonic reduction filters of the low-pass or band-pass types.

It is impossible to specify the exact number of link turns required because loading is affected greatly by the antenna input impedance and this is not generally known with any degree of accuracy.

On 10 and 20 meters, a one turn link is normally satisfactory for 50 ohm lines, two turns for 75 ohm lines and three turns for lines having higher impedances. For average conditions our two turn link should suffice.

Cat. No.	No. Turns	Wattage	Price
FOR B & W TVL, TVH, AND BVL SERIES COILS			
3581	1 turn	500 watts	5.10
3582	2 turns	500 watts	5.10
3583	3 turns	500 watts	5.10
3588	Link arm assembly		2.40
3589	Link arm and hinge		2.70
FOR B & W HDVL SERIES COILS			
3781	1 turn	1000 watts	5.40
3782	2 turns	1000 watts	5.40
3783	3 turns	1000 watts	5.40
3788	Link arm assembly		2.70
3789	Link arm and hinge		3.00



B & W COIL MATERIALS

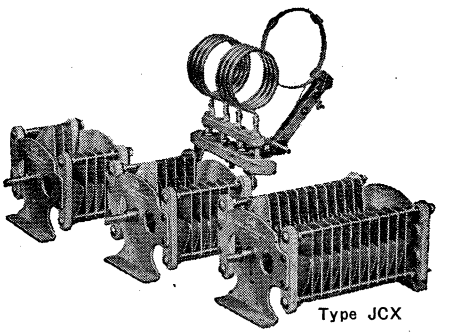
Stock lengths for cutting to size

Often an amateur or experimenter wants to make a special coil or to assemble his own coils. For such purposes, we offer seven popular coils in standard lengths which can readily be cut and mounted to meet your individual requirements.

All coils are 10″ long Net Price each $1.50

Stock No. Enameled	Stock No. Tinned	Wire Size	Diameter	Turns per Inch
....	3900	#14	2″	8
3905	3905-1	#12	2½″	6
3906	3906-1	#14	2½″	8
3907	3907-1	#16	2″	10

B & W NEW, SMALL BUTTERFLY VARIABLE CAPACITORS



Type JCX

These new JCX Variable Capacitors use the popular B&W split stator, butterfly type construction but with just 25% of the frontal area of CX types.

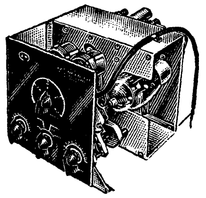
Featuring stainless steel shafts, heavy rounded aluminum plates and high quality insulating materials, the B&W Midget Butterfly will be a welcome addition for the amateur who is looking for peak efficiency in low and medium power transmitter stages.

Stock No. 3238—Type B Jack Bar for JCX Capacitors ....**$1.25 Net**
Stock No. 3239—Type BX Jack Bar for JCX Capacitors ..... **1.55 Net**

"E" TYPE .125" AIRGAP

Type	Catalog Stock No.	Capacity Section in Series Max.	Capacity Section in Series Min.	Capacity Per Section Max.	Capacity Per Section Min.	Mounting Length	Net Price
JCX100E	100	80	15	99	23	5½	$10.80
JCX50E	101	25	10	42	13	3⅜	8.10
JCX25E	102	16	8	25	10	2¾	6.60

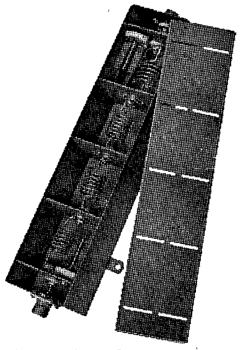
B & W FREQUENCY MULTIPLIER



Price: $85.00 Amateur Net. Complete with tubes. Dimensions: 6½″ x 7″ x 9¾″.

This B & W all-band frequency multiplier solves the difficult problem of developing frequency step-up stages. Packaged unit covers 80-40-20-15-11 and 10 meter bands. Just flip a switch on the attractive reverse etched aluminum panel plate, to get the required band. Operates on either VFO or Crystal input and not less than 30 watt output.

B & W TVI LOW-PASS FILTERS



- Provide extreme attenuation to all harmonics above 30 mc
- Eliminate individual filters for each band
- Handle 1 kilowatt with ease
- Insertion loss less than .25 db

Three years of intensive study of TVI problems made possible the B & W Faraday Shielded Link. Its natural companion, the **B & W Low Pass Filter**, was developed concurrently and is now available. Properly installed in accordance with our recommendations, this filter enables you to attenuate all frequencies above 50 megacycles, approximately 75 db or more, throughout the entire television band.

The B & W Low Pass Filter consists of two "m" derived end sections and three mid-sections of constant K type. Each section is contained in a completely sealed copper compartment to prevent inductive transfer of unwanted frequencies from section to section. Complete installation instructions and recommendations to aid you in eliminating TVI are given in "Filter-Facts," packed in each unit. Individual copies of "Filter-Facts" are also available for 15 cents. Filters are supplied in hammered gray metal cabinets 2½″ x 2½″ x 12″ and weigh 2¼ lbs.

The proper filter for the more common types of feed line systems are:

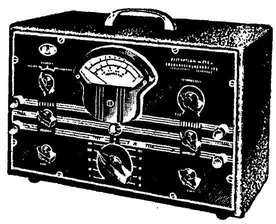
For single 52-ohm coax ....**Net Price $27.00**
Model 52, B & W Cat. No. 415
For single 75-ohm coax ....**Net Price $27.00**
Model 75, B & W Cat. No. 416

PRICE INDICATIONS ARE REVISIONS MADE SEPTEMBER 1, 1951

PRICE INDICATIONS ARE REVISIONS MADE JANUARY 15, 1953

B&W TEST EQUIPMENT and SPECIAL COMPONENTS
BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.

B&W DISTORTION METER
Model 400



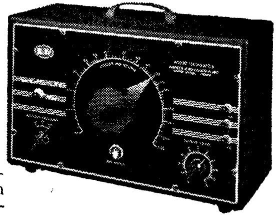
Net Price: $168.00.
Dimensions: 13¾" x 7¼" x 9½".

A sensitive instrument having a wide range of applications in the audio frequency measurements field. Ideal for measuring low level audio voltage and determining noise and harmonic content of same. Variable frequency selective filter provides a single frequency suppression circuit for the frequency range of 30 to 15,000 cycles. Small size, light weight and outstanding performance make this instrument an ideal unit for either laboratory or field work.

FEATURES

1. **Frequency Range:**
   (a) Distortion meter. For fundamentals from 30 to 15,000 cycles, measuring harmonics up to 45,000 cycles.
   (b) As voltmeter and D.B. meter from 30 to 45,000 cycles.
2. **Sensitivity:**
   (a) Noise and distortion measurements, minimum input .3 volts.
   (b) Voltmeter, full scale readings of .3, .1, .03, .01, .003 volts.
3. **Calibration:**
   For distortion measurements: ±.5 D.B. For voltage measurements: ±5% of full scale at 1000 cycles.

B&W AUDIO OSCILLATOR
Model 200



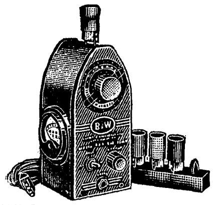
Net Price: $138.00.
Dimensions: 13¾" x 7¼" x 9½".

Ideal for use in distortion measurements, frequency measurements or in any application where a stable, accurately calibrated source of frequencies between 30 and 30,000 cycles is required. No zero reset or line calibration is required. Self-contained power supply. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet. Panel is of 1⁄8" reverse etched aluminum.

FEATURES

Voltage Output: 10 volts into a 500 ohm load.
Wave Form: RMS harmonics at 3 volts on 500 ohm load less than 1% on all frequencies between 50 and 15,000 cycles.
Frequency Response: Better than ±1 D.B. from 30 to 15,000 cycles with 500 ohm load.
Stability: Better than 1%.
Calibration: ±3% of scale reading.

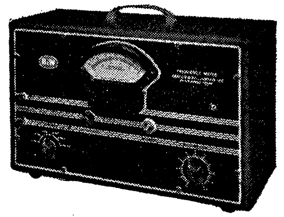
B&W GRID DIP METER
Model 600



Compact, instrument having innumerable applications in the laboratory, service shop, and ham shack. May be used as an RF signal monitor, auxiliary signal generator and absorption wavemeter. In addition, it can be used for measurements of capacity, inductance, circuit "Q", and as a means of determining other factors in electrical circuits. In the television and radio shop the dip meter may be used for alignment of filters, traps, and for peaking coils. With the B+ disabling switch in the off position, it provides a diode detector for use as a monitor for audible observation of RF signals with respect to hum level, audio quality, and other elements concerning the audible characteristics of radiated opwer. Covers 1.75 to 260 mc in 5 calibrated overlapping bands. 0-100 scale also on dial for extension of frequency range. Sensitive 500 microampere meter with adjustable control. Wedge-shaped for easy access in hard-to-get-at places. Complete with color-coded, plug-in coils. Aluminum case, 3x3x7". For 110-120 volts, 60 cycles. Shipping weight, 3 lbs.

97F140 .... **Net Price $39.75**

B&W FREQUENCY METER
Model 300



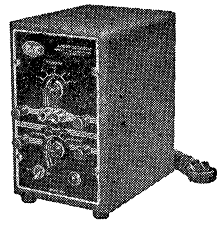
Net Price: $126.00.
Dimensions: 13¾" x 7¼" x 9½".

An accurate and convenient means of making direct measurements of unknown audio frequencies up to 30,000 cycles. Integral power supply. Extremely useful for routine checking of audio oscillators or tone generators. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet.

FEATURES

Frequency Range: 0 to 30,000 cycles in 6 ranges.
Sensitivity: Minimum .25 volts input.
Wave Form: Will operate on any wave form with peak ratios of less than 8 to 1.
Calibration: When referenced against 60 cycles line frequency, all other frequencies will fall within 5%.

B&W LINEAR DETECTOR



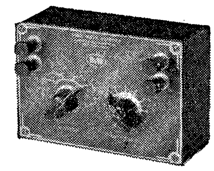
Model 404 — Net Price $85.00
Dimensions: 8¾" x 7½" x 5"

Provides combined RF detection and audio bridging circuits for use with any distortion meter, to measure distortion or noise in AM carriers or in balanced and unbalanced audio circuits. Includes a bridging transformer, a vacuum tube rectifier, a 40 D.B. pad adjustable in 10 D.B. steps, and a function selector switch.

FEATURES

RF Operating Range: 400 kc. to 30 mc.
Input: Single-ended; impedance 10,000 ohms.
Bridging Impedance: 6000 ohms; insertion loss 1 D.B.
Frequency: Essentially flat from 20 to 50,000 CPS.

B&W SINE WAVE CLIPPER
Model 250



Equipped with a pair of input terminals, a pair of output terminals, an output volume control and a selector switch.

Net Price: $10.00.
Dimensions: 2" x 4" x 5½".

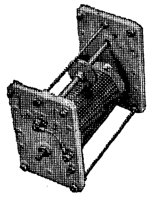
SPEEDS ACCURATE ANALYSIS OF AUDIO CIRCUITS. SIMPLIFIES SELECTIONS OF COMPONENTS. SAVES VALUABLE TIME. Here's an instrument that will do most of the jobs usually assigned to a square wave generator costing about 10 times as much! The B & W Sine Wave Clipper provides a test signal particularly useful in examining the transient and frequency response of audio circuits. Designed to be driven by an audio oscillator, the clipper provides a clipped sine wave — hence the name "Sine Wave Clipper." Used in engineering work, repairs, or with equipment under development, it will quickly pay for itself many times over.

B&W TOROIDS

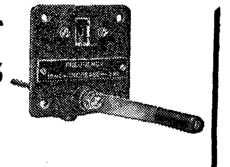
B & W toroidal* coils are available in frequency ranges from 1000 cycles to 200 KC, with inductance and Q value to your specific application requirements. Sizes for these toroids range from ⅞" to 3" diameter.

These coils have a specific application in low and medium frequency ranges and provide a high degree of stability vs. voltage and temperature. Available in either open, cased, potted or hermetically sealed types, wound on cores having any desired properties, including the latest high permeability cores. Where required, they may be designed to compensate for conditions of extreme temperature variations.

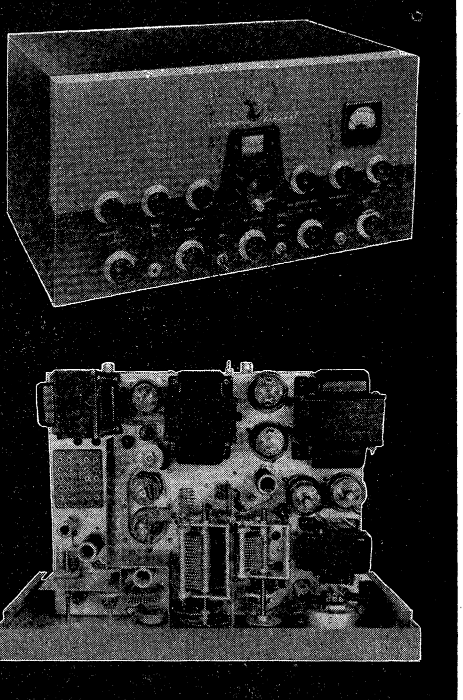
*Western Electric license



B&W ROTARY COILS AND CYCLOMETERS



The B & W Rotary Coil offers a practical method of continuously varying circuit inductance over the entire range of the coil. Types are available for powers up to 1000 watts. B & W Cyclometer type counters for rotating and resetting these and other rotary units assure close accuracy. Write for details to Barker & Williamson, Inc., Upper Darby, Pa.



VIKING II TRANSMITTER KIT

JOHNSON VIKING II TRANSMITTER KIT

Effectively TVI Suppressed!

180 Watts CW Input	130 Watts CW Output
135 Watts Phone Input	100 Watts Phone Output
100% AM Modulation	Completely Shielded

The JOHNSON Viking II is a self-contained, bandswitching, TVI suppressed amateur transmitter supplied in kit form and complete to the last detail. Full output is available on the 160, 80, 40, 20, 15, 10-11 meter amateur bands. Complete range of output frequencies is as follows:

BAND	LOW FREQ. LIMIT	HIGH FREQ. LIMIT
160	1.8 mc.	2.4 mc.
80	2.9	4.4
40	5.2	8.0
20	9.8	15.0
15	15.0	21.8
10-11	21.0	30.0

The RF section consists of a 6AU6 oscillator, a 6AQ5 buffer/multiplier and parallel 6146 output amplifier. Modulator; pp 807's operating class AB_2 with 6AU6 speech amplifier and 6AU6 triode connected driver. Parallel 5R4GY HV rectifiers, 5V4G low voltage rectifier and 6AQ5 clamper screen voltage regulator. Fixed bias applied to buffer and output amplifier permits break-in CW operation. Audio response is limited to the center of the speech range. The pi-network amplifier matches a wide range of impedances and provides up to 30 db second harmonic attentuation **before** the addition of a low-pass filter.

One of the outstanding features of the Viking II is its completely new cabinet. Heavily copper plated, it is the equivalent of a solid copper box. There are no butt joints which would permit RF leakage and cause TVI. The dial window and meter are equipped with copper plated shields to prevent radiation from these panel openings. The lid is bonded to the cabinet with silver plated phosphor bronze bonding fingers. It can be opened easily however by the removal of just three thumbscrews. Both lid and bottom plate are perforated permitting free circulation of cooling air.

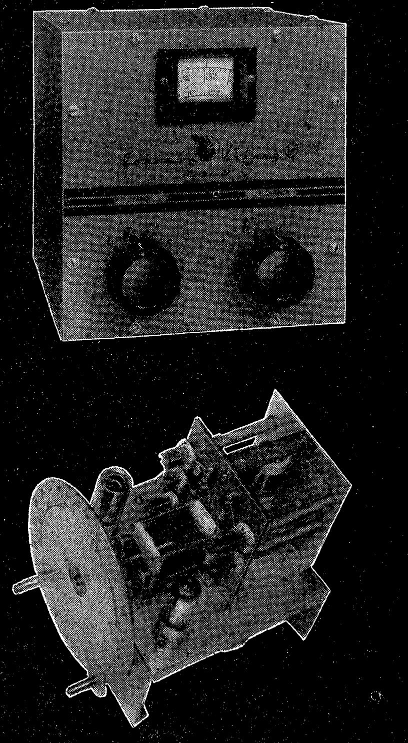
Power leads, VFO power receptacle, key jack, microphone connector and meter leads are filtered to prevent radiation from these points. Filters consist of chokes and low inductance capacitors, not simply bypass capacitors. Other filters are used in the transmitter to suppress spurious output at its source. Antenna relay terminals are provided and they too are filtered. Shielded coaxial connectors are used for VFO input and RF output terminals.

When used to feed an antenna system directly, the pi-network output coupling circuit is capable of matching unbalanced loads within the range of 50 to 600 ohms. The pi-network can tune out several hundred ohms reactance as well. In order not to compromise this flexibility unnecessarily, low pass filters which require fixed impedance loads have been omitted from the Viking. There are many urban areas where the shielding and inherent harmonic attenuation of the amplifier are sufficient to eliminate television interference completely. Where required, however, the JOHNSON 250-20 JOHNSON Low Pass Filter (available as a separate accessory) will provide 75 db of additional harmonic attenuation (above 54 mcs.) making the Viking II virtually TVI proof.

All parts furnished including a complete set of tubes, cabinet, punched chassis, wiring harness, wire, terminals, grommets and all other hardware. Carefully detailed and illustrated instructions for assembly, test and operation are also included. The Viking II is available wired and tested by factory authorized wiremen at nominal additional cost.

Supplied for 115 volt 50/60 cycle operation only. Cabinet dimensions 20" wide, 10 5/16" high, 13" deep. Net weight assembled, 65 pounds.

Cat. No.	Amateur Net
240-102 Viking II Kit, with tubes	**$279.50**



VIKING VFO KIT

VIKING VFO KIT

An extremely stable variable frequency oscillator designed for use with frequency multiplying transmitters. Using two entirely separate oscillator tank circuits, the VFO delivers 8 to 10 volts RF throughout the range 7.0 to 7.425 mcs., 5.5 to 7.5 volts throughout the range 1.75 to 2.0 mcs. Although designed as a companion unit for the Viking transmitter it will excite any transmitter having a conventional pentode crystal oscillator circuit. The transmitter oscillator stage serves as an isolating RF amplifier or frequency doubler when driven by the VFO.

The tuning capacitor is a special ceramic insulated JOHNSON with full soldered construction. Ceramic insulated air dielectric trimmers, temperature compensated ceramic padders, ceramic coil form and rigid construction are features contributing to the high overall stability. The tube complement consists of a 6AU6 electron coupled oscillator and an OA2 regulator. Excellent isolation between oscillator and the output circuit together with screen grid voltage regulation account for the clean, chirp-free keying.

The Viking VFO is accurately calibrated for all amateur bands from 160 to 10 including 15 and 11 meters. A 5" dial with 180° bandspread and 6-1 vernier dial provide smooth tuning and high reset accuracy. Power requirements, 6.3 volts AC or DC, .3 amperes; 250-300 volts DC, 15 ma. unregulated. (Power and RF input connections provided on every Viking transmitter.)

Kit furnished complete with all parts, assembly and calibration instructions but less tubes. When used with a Viking II or other shielded transmitter having filtered power leads, no TVI suppression measures are required.

Size 7"x6 7/8"x6 9/16", net weight assembled, 4 pounds.

Cat. No.	Amateur Net
240-122 Viking VFO Kit, less tubes	**$42.75**

JOHNSON "MATCHBOX"

Transmitting Antenna Coupling System

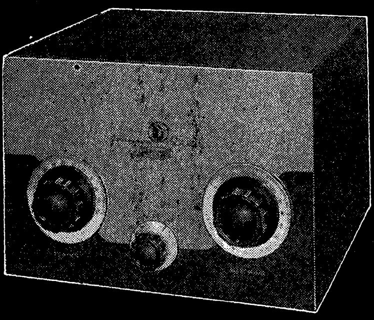
More than an antenna coupler, the JOHNSON "Matchbox" performs all transmission line matching and switching functions required in medium power amateur stations. The unit is bandswitching and completely self-contained.

Almost an infinite variety of antennas can be loaded throughout the amateur bands from 3.5 to 30.0 mcs. Balanced antennas from 25 to 1200 ohms resistance can be matched while unbalanced or single wire antennas within the range of 25 to 3000 ohms resistance can be successfully loaded. Furthermore, the "Matchbox" is capable of tuning out large amounts of reactance. Nominal input impedance is 52 ohms, power rating 250 watts. A special JOHNSON dual variable capacitor with four stator sections serves as a capacity divider providing continuously variable matching to the load.

A change-over relay built into the "Matchbox" switches the antenna from receiver to transmitter and grounds the receiver antenna terminals in the "transmit" position. This same relay will also serve to mute the receiver while transmitting. The "Matchbox" improves receiver performance by matching antenna impedance to the input impedance of the receiver. Adjustment for matching receiver input impedance is independent of transmitter loading adjustments. For CW operation a keying monitor may be actuated by the RF probe provided.

The "Matchbox" is supplied in a fully shielded maroon and gray cabinet matching the Viking II transmitter, cabinet dimensions 9⅞" wide, 10½" deep, 7" high. Supplied only as a completely assembled and tested unit, the "Matchbox" weighs approximately 6 pounds. Ceramic insulated output terminals, SO-239 coaxial RF input connector and seven terminal receiver and relay terminal strip are all located on the rear of the cabinet.

Cat. No.	Amateur Net
250-23	**$49.85**



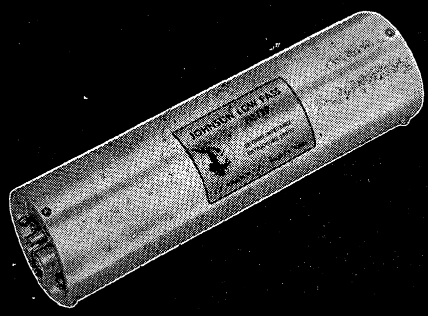
MATCHBOX ANTENNA COUPLER

LOW PASS FILTER

The JOHNSON Low Pass Filter consists of four individually shielded sections, capable of handling more than 1000 watts RF, amplitude modulated. Cut-off frequency is 45 mcs. with "M" derived end sections adjusted to provide maximum attenuation at 57 mcs., the center of TV Channel 2. Attenuation of harmonic and spurious frequencies above 54 mcs. is 75 DB or more. Insertion loss less than .25 DB at 30 mcs. Characteristic impedance of the filter is 52 ohms. Construction permits the replacement of Teflon dielectric of the fixed capacitors should there be damage due to accidental overloads. Standard SO-239 coaxial connectors are used for input and output terminals. Completely assembled, pretuned and equipped with convenient mounting hardware.

When inserted in a 52 ohm flat line between transmitter and an antenna coupler such as the "Matchbox" (above), flexibility is not impaired and the filter is operating under the matched impedance conditions required for maximum harmonic attenuation. Dimensions: 2½" dia. x 9⅝" length overall, weight approximately 1½ lbs.

Cat. No.	Amateur Net
250-20	**$16.50**



LOW PASS FILTER

STANDING WAVE RATIO BRIDGE

Provides accurate measurements of standing wave ratio enabling an operator to adjust his transmission line and antenna coupling system for minimum SWR. A necessity for most effective use of a low pass filter. Other uses include measurement of antenna reactance and antenna feed point impedance.

Impedance is 52 ohms, can be changed to 70 ohms or other desired value by simply changing the standard resistor. Designed for use with a 0-1 ma meter but supplied with data for 100 and 250 microampere meters thus any standard multimeter may be used as an indicator.

Shielded construction, 2⅜" dia. x 4½" overall length. Equipped with SO-239 coaxial connectors and polarized meter jacks, weight ½ pound.

Cat. No.	Amateur Net
250-24	**$9.75**

S. W. R. BRIDGE

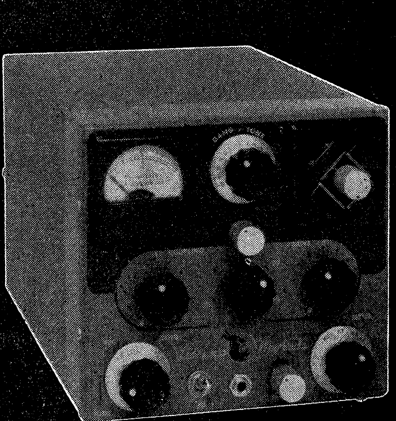
VIKING I, TVI SUPPRESSION KIT

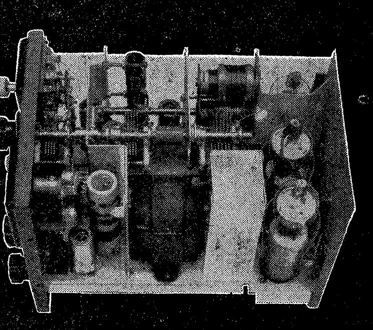
This TVI suppression kit enables owners of the JOHNSON Viking I to shield their transmitters and suppress harmonic radiation. Parts furnished include custom made shields designed for easy installation and all the necessary chokes, capacitors and hardware.

The shield encompasses the chassis, fits inside the standard Viking I cabinet without affecting the transmitter appearance or operation. Shield is formed from perforated, etched aluminum; top removable for access to tubes and crystals. Shielding is completed with an aluminum chassis bottom plate, dial window and meter shields. Assembly is simple, the shield serving as a template. Self-tapping screws are furnished to aid in the speedy assembly of this kit.

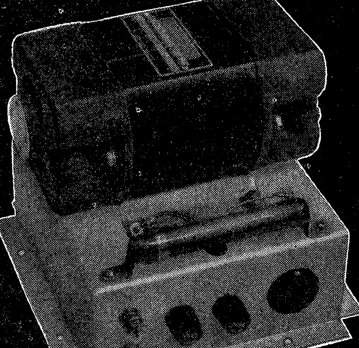
Nine individual filters consisting of low inductance chokes and ceramic disc capacitors are located as follows: meter leads, keying lead, VFO power socket, PA high voltage lead, PA screen and buffer plate supply. Similar filters are provided for the AC line, filaments and for antenna relay terminals. A receptacle for an antenna relay is included in the kit. Shipping weight 7½ pounds.

Cat. No.	Amateur Net
250-21 TVI Suppression Kit	**$24.75**





VIKING MOBILE TRANSMITTER



DYNAMOTOR POWER SUPPLY

VIKING MOBILE TRANSMITTER KIT

Designed for most effective amateur mobile use, the Viking Mobile **Transmitter** Ki features:

Instant bandswitching, 75, 40, 20, **15, 11-10 meter bands**
Gang tuning
Efficient antenna coupling circuits
Front panel control—dash mounting
Up to 60 watts PA input
All stages metered—illuminated meter

Not only does the Viking Mobile cover six bands but all coils are self-contained an switched from the front panel. Maximum input of 60 watts 100% amplitude modulatec Sufficient audio gain for either high impedance or carbon microphones.

Three gang tuned RF stages, 6BH6 oscillator, 6AQ5 buffer/multiplier and an 80 amplifier. Panel mounted crystal holder accommodates four crystals and VFO/crysta selector switch. The transmitter may be driven to full output with the Viking VFO an VFO RF input and power receptacles are provided for this purpose.

The 807 amplifier stage employs three separate inductors, permanently mounted in th transmitter and selected by the bandswitch, to cover the tuning range. Each inducto has a series tuned antenna coupling link. These ganged links, adjusted by means of front panel control, eliminate "cut and try" antenna loading methods. The final amplifie is equipped with a trimmer which serves to tune out antenna reactance when a chang in operating frequency is desired without the necessity of adjusting the antenna mounte loading coil.

The audio system is comprised of a 6AU6 speech amplifier, a 6AU6 driver and pp 80 modulators operating class AB_1. Audio gain control and three circuit microphon connector for "push to talk" operation are located on the front panel. Input circuit ma be wired for either carbon or high impedance microphones.

A unique and exclusive feature of the Viking Mobile is its RF type fixed bias suppl Utilizing one triode of a 12AU7 as an oscillator operating around 4.5 mcs. and th other triode as a half wave rectifier, the supply provides fixed bias for the 807 modula tors, 807 final amplifier and 6AQ5 buffer/multiplier. By this means cathode bias eliminated, RF tubes are protected in the event of an excitation failure. Modulato "no signal" current is kept low thus greatly improving efficiency by reducing the tot battery power required for each transmitting cycle. The bias supply is well shielde and decoupled from other circuits, radiation is negligible.

An illuminated meter, switched from the front panel, measures oscillator, buffer, PA an modulator cathode current also PA grid current. Locations of the meter and cryst selector switch are reversible providing maximum visibility with the transmitter mounte either to the right or left of the driver. Knobs are marked so that their positions a visible at wide angles.

Ready accessibility to the chassis has been a paramount design consideration. Fro panel, rear cover, bottom plate and chassis are all one assembly. The cabinet is sturdy steel cover consisting of top and sides, open at the ends and with lips at th bottom supporting the chassis. It is thus possible to slide the chassis out of the cabin without even the necessity of disconnecting cables. Since the cabinet is open at th bottom, the empty cabinet can be very simply and easily mounted.

PA excitation control, filament switch, audio gain control and a three position functio switch ("Tune-Transmit-Receive") are located on the front panel. Optional auxilia functions of the "Tune-Receive-Transmit" switch include "Non-Swish" VFO tunin receiver muting and use of receiver power supply for exciter and speech amplifier pla voltage. Where convenient the exciter and speech amplifier may be operated from separate supply delivering 260 to 300 volts at 70 ma. The class C amplifier may the be operated from another supply avoiding the necessity for voltage dropping circu and securing maximum use of existing equipment.

The Viking Mobile may be wired for either 6 or 12 volt operation. With the pow supplies listed below, power output is approximately 32 watts. Using a 600 volt D supply maximum output is 42 watts. Eighteen watts output can be achieved with 300 volt supply.

The Viking Mobile is another outstanding JOHNSON transmitter furnished in form. Included are all necessary component parts, punched and formed chassis a cabinet, wiring harness and hardware. Assembly instructions are carefully written a the order of assembly worked out so that no difficulty will be encountered. Instructio include photos at various stages of assembly, supplemental drawings, alignment dat receiver interconnection, antenna suggestions etc. The experienced amateur will fi the Viking Mobile easy to assemble and convenient to use.
Overall dimensions 6 7/16" high, 7 1/8" wide, 10 5/16" deep, shipping weight 16 pounds.

Cat. No.		Amateur N
240-141	Viking Mobile Kit complete less tubes, microphone, crystals, power supp and antenna	**$99.**

DYMAMOTOR POWER SUPPLIES

DC rating 500 volts, 200 ma. intermittent duty. Supplies plate voltage for all stag of the JOHNSON Viking Mobile; maximum PA input approximately 50 watts. Ba contains primary contactor, dynamotor primary fuse, transmitter filament fuse, filter c pacitor and 6,000 ohm 50 watt adjustable dropping resistor for exciter and spee amplifier plate voltage. Primary terminals and an octal receptacle serving as a pow and control cable connector are also mounted on the base. Supplied with the bas power and control connectors required for the Viking Mobile. Completely wired a assembled. Nominal dimensions 6 1/8" high, 7 1/4" deep, 7 1/8" wide, weight 13 1/4 lbs.

Cat. No.		Amateur N
239-102	6 volt primary input	**$89.**
239-104	12 volt primary input	**92.**

DYNAMOTOR BASE KITS

Provide a mounting and connectors for dynamotors already on hand such as PE-103 other similar units. Kit includes punched and formed base and all parts used in assembli 239-102 and 239-104 except for the dynamotor unit. **Supplied with receptacles a plugs for Viking Mobile power and control cables.**

Cat. No.		Amateur N
239-101	6 volt primary base kit	**$16.**
239-103	12 volt primary base kit	**17.**

JOHNSON ROTOMATIC ROTATOR

An improved all-weather rotator designed for the most rigorous service. The housing is an aluminum casting, light weight yet sturdy enough to withstand the stresses imposed by high wind loads and icing. Rotator is conservatively rated to support 20 meter arrays together with higher frequency antennas weighing a total of 175 pounds. Rotating table is 5/16" steel, is drilled and tapped to accommodate JOHNSON Boom Assemblies.

The main shaft is driven by an oversized, continuously lubricated worm gear assembly. Drive unit consists of a 1/20 HP, instantly reversible, capacitor type gear motor. Total reduction is 1200 to 1 resulting in 1¼ RPM rotator speed. Both the motor and its integral gear assembly are equipped with ball bearings and special lubricant; full torque is delivered even at extremely low temperature. Motor creates no radio nor TV interference.

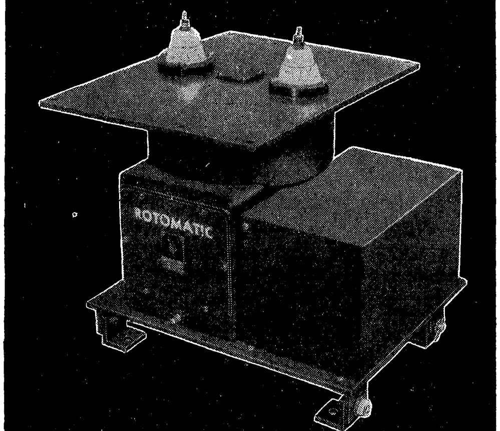
RF slip rings, insulated with glass bonded mica, permit continuous rotation thru 360 degrees in either clockwise or counter-clockwise directions. Heavily chrome plated slip rings provide low resistance contact, noise-free operation and resist corrosion. Rotator is equipped with auxiliary slip rings and convenient terminals for beam switching relay.

A hinged base permits the entire rotator and antenna assembly to be tilted a full 90° for antenna adjustment. The rotator may be turned while in the tilted position.

The complete 138-112 assembly includes a control box with selsyn direction indicator. Accurate azimuth bearings are continuously presented on an illuminated dial. Controls include Clockwise-Off-Counterclockwise rotation control switch, power switch and antenna relay switch.

Rotator nominal dimensions, 15½" x 15 3/16" x 15", weight 76 pounds, mounting area required 11" x 14". Control box dimensions 6" x 6" x 6", weight 2¾ pounds. Eight conductor interconnecting cable for rotator and control box furnished as a separate accessory item.

Cat. No.		Amateur Net
138-112	Rotomatic Rotator for 115 volt 60 cycle power	**$324.00**
144-16	Eight conductor cable	**.26/ft.**



ROTOMATIC ROTATOR

JOHNSON ANTENNA ARRAYS

Parasitic beam antennas for the 10, 15 or 20 meter amateur bands. Dual 10 and 20 meter arrays may be mounted on the same boom and selected by means of the 138-108 relay. Elements are strong, lightweight aluminum alloy tubing, grounded at the center to the boom assembly. Both element lengths and spacing are continuously variable, elements may be located at any point along the boom. Balanced open wire transmission lines may be matched to the driven element by means of the adjustable "T" matching section. Coaxial transmission lines matched by "Gamma" or half "T" section.

Boom assemblies are 2" galvanized steel tubing. U-bolts, together with element support clamps are used to fasten each element to the boom. Elements are firmly clamped to the boom and cannot work loose yet their positions are readily adjusted. The assembled beam requires no cross-bracing and has low wind resistance.

Ten meter elements consist of a ⅞" diameter tube 12 feet long with ⅝" adjustable end sections. Maximum element length 19 feet, minimum length 12 feet. Fifteen meter elements are similarly constructed with maximum length of 25 feet. Tubing diameters of 20 meter elements are 1⅛", ⅞" and ⅝"; elements extend to a maximum length of 36 feet. Bushings are used to insure close fit, minimum resistance and maximum rigidity of telescoping elements.

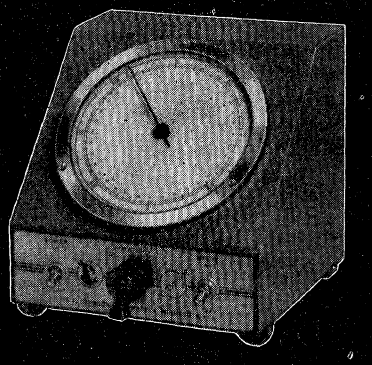
Because of the large number of antenna combinations available, boom assemblies and element kits are listed separately. Boom assemblies are not included in the prices of antenna element kits. For example, a dual three element 10 and 20 meter interlaced beam consists of one 138-210-3 element kit, one 138-220-3 element kit and a 138-153 boom assembly. In addition, a 138-108 beam switching relay is required.

Boom assemblies have fixed length and are available as follows:

Cat. No.	Length	For beams:	Amateur Net
138-151	9'0"	3 elements 10 meters	**$13.00**
138-152	12'0"	3 elements 15 meters	**17.00**
138-153	18'9"	3 elements 20 meters, 4 elements 15 meters or dual interlaced beams	**24.00**

Element kits complete with "T" match, hardware and element clamps but less boom.

Cat. No.	Description	Amateur Net
138-210-3	3 element 10 meter kit	**$43.50**
138-210-4	4 element 10 meter kit	**56.50**
138-215-3	3 element 15 meter kit	**49.00**
138-215-4	4 element 15 meter kit	**62.00**
138-220-3	3 element 20 meter kit	**77.50**
138-108	beam switching relay	**19.60**



DIRECTION INDICATOR

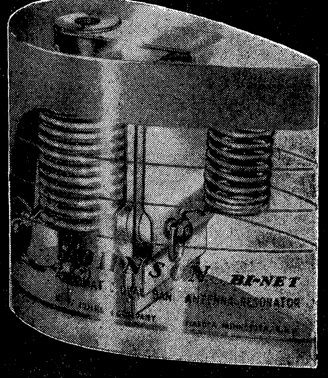
JOHNSON "BI-NET"

Fully Automatic
Mobile Dual Band Antenna Resonator
(Patents Pending)

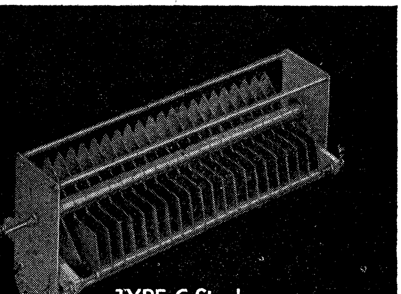
Dual mobile antenna loading network for 10 and 20 meter amateur bands. Mounted in the center of a standard mobile whip antenna, it enables the operator to change bands while in motion. Operation is completely automatic, no relays nor mechanical control are required. After initial adjustment, the "BI-NET" requires no further attention. Now, for the first time, true bansdwitching mobile operation is attainable.

The "BI-NET" is a tuning network consisting of two adjustable low-loss inductors and a ceramic insulated fixed capacitor. Inductors are silver plated for maximum conductivity. The assembly is enclosed in a streamlined, weatherproof-plastic housing and is equipped with ⅜" x 24 female threads at each end for antenna mounting. Overall size, 4 7/16" high, 5 5/16" long, 2⅜" maximum width, weight 14 oz.

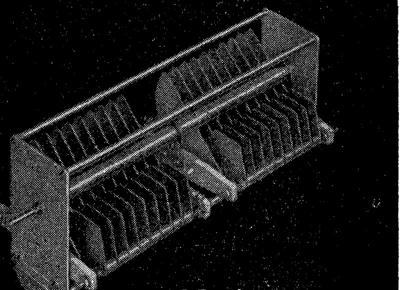
Cat. No.	Amateur Net
250-22	**$10.95**



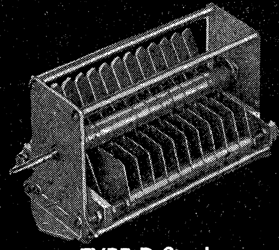
BI-NET ANTENNA RESONATOR



TYPE C Single



TYPE C Dual



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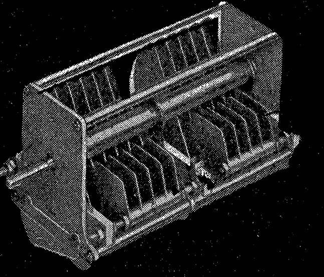
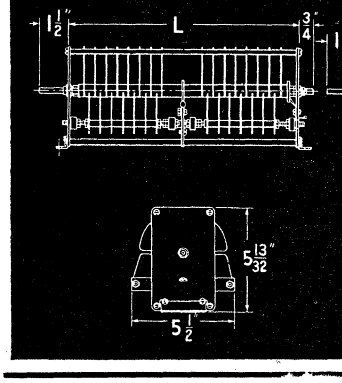


TYPE D Dual

TYPE C



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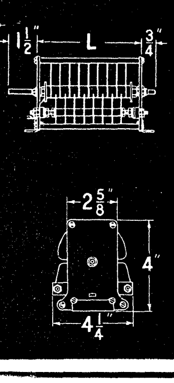


TYPES "C" AND "D" CAPACITORS

JOHNSON C and D Capacitors are rugged, reliable and simple. Their functional design permits rapid, accurate assembly which results in lower cost to the user. Materials are appropriate for the application and the finest available today. If you're building medium powered radio frequency equipment it will pay you to use JOHNSON C and D Capacitors.

CONSTRUCTION

Heavy aluminum end frames, .051" plates and 5/16" tie rods assure extreme rigidity. Rotor contacts are laminated phosphor bronze. Dual models have center rotor contact for electrical symmetry. Low-loss Steatite insulators are located outside the most intense RF fields and used solely to support stator assemblies. Shafts are 1/4" diameter, cadmium plated with 3/4" rear extensions.

Mounting brackets furnished for normal or inverted mounting. End frames drilled and tapped for panel mounting, special brackets or mounting of accessory components.

SPECIAL TYPES

Variations from standards such as special capacitances, ball bearings, dynamically balanced rotors, stainless steel shafts and right angle drive duals can be furnished in production quantities.

TYPE C SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
152-1	**250C70**	**$14.25**	252	34	.175"	24	6 13/16"
152-2	**500C70**	**17.40**	496	56	.175"	47	12 3/16"
152-3	**250C90**	**15.00**	245	45	.250"	31	12 3/16"
152-4	**350C90**	**17.00**	337	63	.250"	43	14 27/32"
152-5	**50C110**	**8.75**	51	19	.350"	8	4 25/32"
152-6	**100C110**	**10.60**	103	30	.350"	17	8 19/32"
152-7	**250C110**	**17.10**	251	66	.350"	41	18 9/32"
152-8	**50C130**	**9.75**	51	24	.500"	10	7 11/16"
152-9	**100C130**	**12.20**	102	42	.500"	21	13 11/32"

TYPE C DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
152-501	**200CD45**	**$14.90**	204	21	.125"	15	8 19/32"
152-502	**300CD45**	**17.70**	290	26	.125"	21	10 5/16"
152-503	**200CD70**	**17.20**	198	27	.175"	19	12 3/16"
152-504	**300CD70**	**22.80**	305	37	.175"	29	16 25/32"
152-505	**150CD90**	**18.00**	147	30	.250"	19	14 27/32"
152-507	**50CD110**	**12.35**	50	18	.350"	8	10 5/16"
152-509	**100CD110**	**18.40**	103	32	.350"	17	16 25/32"
152-510	**50CD130**	**14.70**	51	24	.500"	10	14 27/32"

TYPE D SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
153-2	**100D35**	**6.70**	99	14	.080"	8	2 29/32"
153-4	**250D35**	**8.90**	252	24	.080"	20	4 25/32"
153-6	**500D35**	**13.50**	496	36	.080"	39	6 25/32"
153-7	**100D45**	**7.40**	104	19	.125"	12	4 25/32"
153-8	**150D45**	**8.35**	146	23	.125"	17	4 25/32"
153-9	**50D70**	**6.50**	51	17	.175"	7	2 29/32"
153-10	**70D70**	**7.50**	72	18	.175"	11	4 25/32"
153-11	**100D70**	**8.10**	98	23	.175"	15	4 25/32"
153-12	**150D70**	**9.65**	151	31	.175"	23	6 13/16"
153-13	**250D70**	**12.00**	244	45	.175"	37	10 5/16"
153-14	**350D70**	**15.00**	351	62	.175"	53	13 11/32"
153-15	**50D90**	**7.40**	53	20	.250"	10	4 25/32"
153-16	**70D90**	**8.20**	73	25	.250"	14	5 13/16"
153-17	**100D90**	**9.15**	99	30	.250"	19	7 11/16"
153-18	**150D90**	**11.00**	149	43	.250"	29	10 5/16"

TYPE D DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
153-501	**100DD35**	**$ 9.30**	95	13	.080"	8	4 25/32"
153-502	**150DD35**	**10.70**	147	15	.080"	12	5 13/16"
153-503	**200DD35**	**13.00**	202	19	.080"	16	7 11/16"
153-504	**300DD35**	**14.90**	291	24	.080"	23	9 15/32"
153-505	**500DD35**	**20.70**	496	38	.080"	39	13 11/32"
153-506	**150DD45**	**13.30**	155	24	.125"	18	9 15/32"
153-507	**200DD45**	**15.00**	198	27	.125"	23	12 3/16"
153-508	**50DD70**	**9.50**	52	15	.175"	8	5 13/16"
153-509	**70DD70**	**11.00**	72	17	.175"	11	7 11/16"
153-510	**100DD70**	**12.40**	97	22	.175"	15	9 15/32"
153-511	**150DD70**	**16.00**	151	31	.175"	23	13 11/32"
153-513	**50DD90**	**11.00**	52	19	.250"	10	9 15/32"
153-514	**100DD90**	**14.55**	97	30	.250"	19	14 27/32"

See Explanation of Type Numbers on Opposite Page.

Stated maximum and minimum values of capacitors are nominal, subject to plus or minus tolerances. Guaranteed values, or "lowest maximum, highest minimum" should be requested from the factory if necessary.

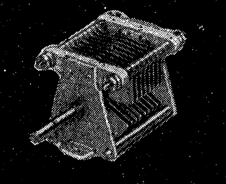
E. F. JOHNSON Company WASECA, MINNESOTA

TYPES "E" AND "F" CAPACITORS

Designed as rugged, compact units for medium and low power transmitters, type E and F capacitors are in a class by themselves. They have more capacity per cubic inch and occupy less panel space for their rating than any other capacitor on the market.

Points of superiority: Heavy aluminum plates, .032" thick, with rounded edges for maximum voltage rating — Heavy aluminum tie rods 1/4" diameter for frame strength and rigidity — Steatite insulation — mount with stator up to reduce capacity to ground — heavy phosphor bronze contact springs, cadmium plated — Center contact on dual models — Chassis or panel mounting — Stainless steel shafts.

In addition to mounting foot shown, removable single hole brackets are furnished so that capacitor may be inverted from position shown, or other components mounted above.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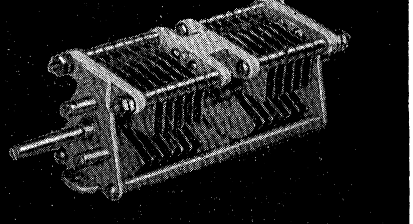
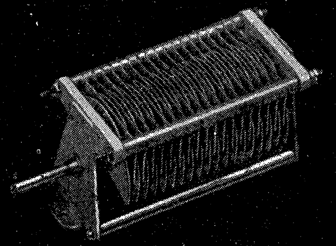

TYPE F Dual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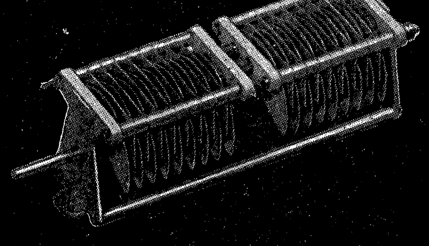

TYPE E Dual

TYPE F SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
155-1	35F20	$4.50	35	7	.045"	6	1 15/32"
155-2	50F20	4.70	54	8	.045"	9	1 5/8"
155-3	70F20	4.85	66	8	.045"	11	1 25/32"
155-4	100F20	5.30	106	10	.045"	17	2 1/4"
155-5	150F20	5.90	154	12	.045"	25	2 7/8"
155-6	250F20	6.95	252	17	.045"	41	4 3/32"
155-8	50F30	5.00	52	9	.075"	13	2 5/16"5
155-9	70F30	5.35	67	11	.075"	17	2 23/32"
155-10	100F30	5.90	99	14	.075"	25	3 19/32"
155-11	150F30	6.75	148	18	.075"	37	4 7/8"

TYPE F DUAL SECTION

155-501	50FD20	6.40	53	7	.045"	9	3 1/2"
155-502	70FD20	6.80	66	7	.045"	11	3 27/32"
155-503	100FD20	7.60	104	9	.045"	17	4 11/16"
155-504	150FD20	8.80	153	11	.045"	25	6"
155-505	200FD20	9.85	202	14	.045"	33	7 7/32"
155-506	50FD30	6.90	51	8	.075"	13	4 27/32"
155-507	70FD30	7.70	66	10	.075"	17	5 23/32"
155-508	100FD30	8.90	99	13	.075"	25	7 7/16"

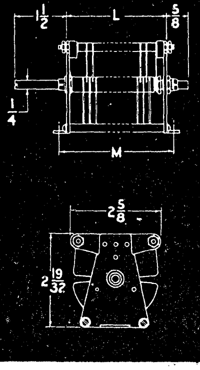
TYPE E SINGLE SECTION

154-1	250E20	5.35	244	12	.045"	23	2 25/32"
154-2	350E20	6.10	353	15	.045"	33	3 17/32"
154-3	500E20	7.05	488	19	.045"	45	4 15/32"
154-7	100E30	4.95	100	11	.075"	15	2 9/16"
154-8	150E30	5.55	154	14	.075"	23	3 7/16"
154-9	250E30	6.55	251	20	.075"	37	4 15/16"
154-10	350E30	7.70	347	25	.075"	51	6 7/16"
154-11	35E45	4.40	38	9	.125"	9	2 5/16"
154-12	50E45	4.75	53	11	.125"	12	2 31/32"
154-13	70E45	5.05	74	13	.125"	17	3 9/16"
154-14	100E45	5.45	101	16	.125"	23	4 17/32"
154-15	150E45	6.30	145	20	.125"	33	6 3/32"
154-16	250E45	8.05	241	32	.125"	55	9 9/16"

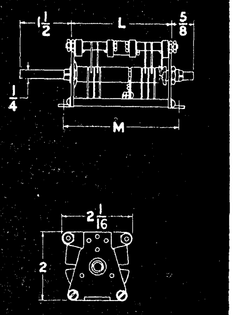
TYPE E DUAL SECTION

154-502	300ED20	9.90	312	13	.045"	29	6 21/32"
154-503	50ED30	6.80	52	8	.075"	8	4 3/32"
154-504	70ED30	7.15	72	8	.075"	11	4 17/32"
154-505	100ED30	7.85	99	10	.075"	15	5 3/8"
154-506	150ED30	9.20	153	13	.075"	23	7 1/16"
154-507	200ED30	10.80	196	15	.075,	29	8 3/8"
154-508	50ED45	7.20	52	10	.125"	12	6 5/32
154-509	70ED45	8.05	74	12	.125"	17	7 7/16"
154-510	100ED45	9.45	100	15	.125"	23	9 9/32"

TYPE E



TYPE F



EXPLANATION OF TYPE NUMBERS

The first part of the type number indicates the capacity per section in mmfd. The following letter indicates the frame size. A second letter D indicates a two section type. The final number multiplied by 100 is the approximate peak breakdown voltage. Capacity measurements of the E and F types are made with the capacitors in the position shown in the above illustration. The C and D types are measured in inverted position.

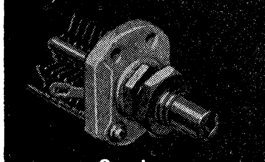
DEPARTURES FROM STANDARD

Special plate spacings, capacities, shaft extensions, insulation, mounting brackets, terminals, etc., can be furnished to specifications for commercial applications.

CAPACITORS FOR HIGHER VOLTAGES

The JOHNSON line includes heavy duty pressurized or air dielectric fixed and variable capacitors for high voltage commercial applications. Data sheets furnished on request.

TYPE M



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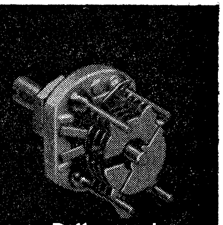
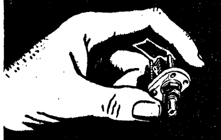
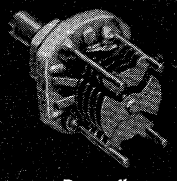


Differential





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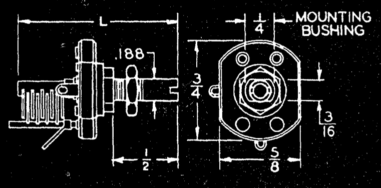
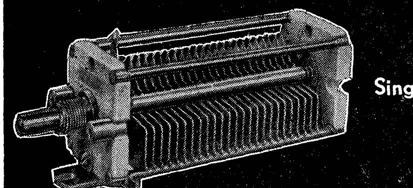


TYPE L



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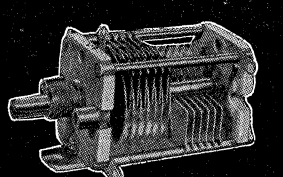
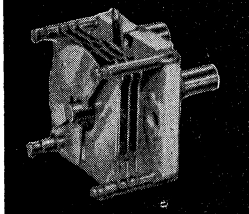
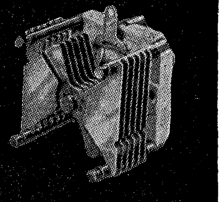


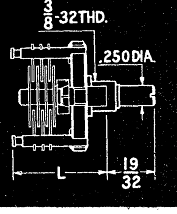
Dual

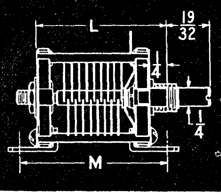


Differential



Butterfly





TYPE "M" CAPACITORS

Requiring a panel area just 5/8" wide by 3/4" high, these diminutive capacitors provide the answers to many problems encountered in the design of compact radio frequency equipment.

JOHNSON Miniature Air Variables are available in three types: single section, differential and butterfly. Ideally suited for portable, mobile and airborne equipment thru the VHF range of frequencies, they are designed and constructed with features that assure reliable performance throughout long service life.

Specifications

Low inductance. Soldered plates assembled with precision tools. Split sleeve bearings. Beryllium copper tension spring contact for permanent alignment, constant torque and low inherent noise. Differential and butterfly types electrically symmetrical. Excellent vibration characteristic due to low inertia. Steatite insulation impregnated with DC-200. Metal parts brass, nickel plated. Single hole mounting bushing threaded 1/4-32 with flats to prevent turning. 3/16" shaft slotted for screw driver adjustment. Plate spacing .017". Peak voltage rating, 1250.

Specials

JOHNSON Miniature Air Variables are available in production quantities with features such as: 1. Locking bearing. 2. With 180° stop. 3. Various shaft extensions. 4. .0135" spacing offering capacities up to 30 mmfd. 5. High torque.
We would be pleased to quote on your special requirements.

Cat. No.	Type No.	Net Price	Nominal Max.	Cap. mmf. Min.	Number Plates	L
			SINGLE			
160-102	**5M11**	**$0.95**	5.0	1.5	5	1 7/64"
160-104	**9M11**	**1.00**	8.7	1.8	9	1 7/32"
160-107	**15M11**	**1.15**	14.2	2.3	15	1 13/32"
160-110	**20M11**	**1.30**	19.6	2.7	21	1 37/64"
			BUTTERFLY			
160-203	**3MB11**	**1.35**	3.1	1.5	7	1 7/64"
160-205	**5MB11**	**1.50**	5.1	1.8	13	1 7/32"
160-208	**9MB11**	**1.70**	8.0	2.2	22	1 13/32"
160-211	**11MB11**	**1.90**	10.8	2.7	31	1 37/64"
			DIFFERENTIAL			
160-303	**6MA11**	**1.40**	5.0	1.5	7	1 7/64"
160-305	**9MA11**	**1.55**	8.7	1.8	13	1 7/32"
160-308	**15MA11**	**1.75**	14.2	2.3	22	1 13/32"
160-311	**19MA11**	**2.00**	19.6	2.7	31	1 37/64"

TYPE "L" CAPACITORS

Perfected ceramic soldering assures permanent rigidity and maintenance of capacitance. JOHNSON ceramic soldering leaves a bond which is stronger than the rugged end plates themselves. There are no eyelets, nuts or screws to work loose which would cause stator wobble and fluctuations in capacity.

Split sleeve tension bearing assures silent operation on highest frequencies. Ceramic end plates, 1 3/8" square with two mounting posts tapped for 6-32 screws on 1 3/32" centers. Mounting (M) dimension is 1/4" more than L dimension.

Two sets of stator contacts. Corrosion resistant, bright alloy plating has low electrical resistance.

These new variables are suitable for the severest conditions of portable-mobile operation. Other capacities and spacings on special order in production quantities.

SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	*Spacing	Plates Per Sec.	L
			Single End Plate				
167-101	**10L15**	**$1.85**	11	2.8	.030"	3	15/16"
167-102	**25L15**	**1.95**	27	3.5	.030"	7	1 9/64"
167-103	**50L15**	**2.15**	51	4.6	.030"	13	1 7/16"
167-104	**75L15**	**2.35**	75	5.7	.030"	19	1 3/4"
			Double End Plate				
167-151	**100L15**	**3.60**	99	6.8	.030"	25	2 7/32"
167-152	**200L15**	**4.50**	202	11.6	.030"	51	3 33/64"
			BUTTERFLY				
167-201	**10LB15**	**2.20**	10.5	2.8	.030"	5	1 3/64"
167-202	**25LB15**	**2.50**	26	4.3	.030"	12	1 7/16"
167-203	**50LB15**	**2.90**	51	6.8	.030"	23	1 15/16"
			DIFFERENTIAL				
167-301	**10LA15**	**2.10**	11	2.8	.030"	3	15/16"
167-302	**25LA15**	**2.35**	27	3.5	.030"	7	1 9/64"
167-303	**50LA15**	**2.65**	51	4.6	.030"	13	1 7/16"
			DUAL SECTION				
167-501	**25LD15**	**3.90**	27	3.5	.030"	7	1 13/16"
167-502	**50LD15**	**4.30**	51	4.6	.030"	13	2 27/64"
167-503	**100LD15**	**5.05**	99	6.8	.030"	25	3 5/8"

*.020", .060", .080" spacing available in quantities justifying special set-up.

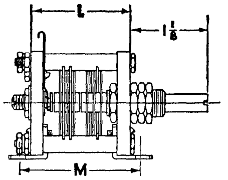
EXPLANATION OF TYPE NUMBERS

The first part of the type number indicates the capacity per section in mmfd. The following letter indicates the frame size or type. A second letter D indicates a two-section type. The final number multiplied by 100 is the approx. peak breakdown voltage.

E. F. JOHNSON Company WASECA, MINNESOTA

TYPE "H" CAPACITORS

Minimum weight and size with rugged construction. Steatite end plates 1-1/2" square permit panel mounting with both rotor and stator insulated. Aluminum plates .020" thick. Mounting dimension (M) is 5/16" more than the L dimension. Shaft dia. 1/4".



TYPE H SINGLE SECTION

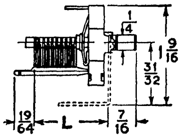
Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Plates Per Sec.	L
			Single End Plate				
156-1	**25H15**	**$2.20**	25	4	.030"	6	11/16
156-2	**35H15**	**2.35**	36	4	.030"	8	13/16
156-3	**50H15**	**2.55**	49	4	.030"	11	7/8
156-4	**70H15**	**2.80**	69	6	.030"	15	1 3/16
156-5	**100H15**	**3.25**	97	7	.030"	21	1 1/2
			Double End Plate				
156-6	**150H15**	**4.70**	146	9	.030"	31	2 13/32
156-7	**250H15**	**5.75**	242	13	.030"	51	3 13/32
156-11	**70H30**	**5.50**	74	13	.080"	35	4 13/32

TYPE H DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Plates Per Sec.	L
156-512	**35HD15**	**4.60**	31	6	.030"	7	1 11/16
156-513	**50HD15**	**5.25**	51	7	.030"	11	2 3/32
156-514	**70HD15**	**5.80**	71	8	.030"	15	2 1/2
156-515	**100HD15**	**6.30**	99	10	.030"	21	3 3/32
156-516	**35HD30**	**5.90**	38	12	.080"	17	4 13/32
156-517	**50HD30**	**7.25**	55	15	.080"	25	6

TYPE "J" CAPACITORS

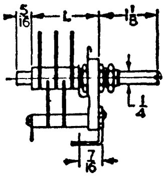
Has wider spacing, .025", than most small types, yet occupies little more space. Ideal for oscillator and low power stages. Steatite end plate is 1-1/8" wide. Mounting brackets included.



Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Plates Per Sec.	L
157-1	**7J12**	**$1.65**	8	2.6	3	19/32
157-2	**15J12**	**1.75**	17	3.3	6	23/32
157-3	**25J12**	**1.90**	29	3.6	10	7/8
157-4	**50J12**	**2.15**	52	4.9	19	1 1/4
157-5	**75J12**	**2.40**	73	6	26	1 17/32
157-6	**100J12**	**2.70**	102	7	36	1 31/32

TYPE "G" CAPACITORS

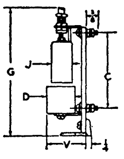
Neutralizing capacitor for medium and low power stages. .032" rounded aluminum plates, Steatite insulation. Furnished with universal mounting bracket and locking nut. Mounting space required: 2-1/16" wide, 2-17/64" high.



Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
165-2	**50G20**	**$3.00**	52	5	.045"	9	1 5/32
165-4	**13G45**	**2.75**	13	4.7	.125"	5	1 5/32
165-5	**23G45**	**3.00**	23	6.4	.125"	9	1 13/16
165-6	**6G70**	**3.00**	5.7	3.5	.225"	3	1 1/16
165-7	**12G70**	**3.50**	12	6	.225"	7	2 5/8

TYPE "N" CAPACITORS

Extremely high voltage rating in proportion to size and requiring small mounting area. Constant voltage rating throughout full capacity range. Plates are aluminum cups supported by Steatite frame with cast aluminum mounting bracket. Peak RF breakdown ratings at 2 Mc.; N125—8,500, N250—11,500, N375—14,500.



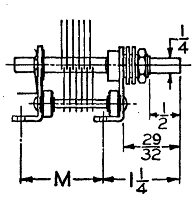
Cat. No.	Type No.	Net Price	Capacity Max.	Capacity Min.	D	C	G	V	Spacing
159-125	**N125**	**$5.70**	11.0	1.1	1 3/8	3 1/8	6 13/32	1 15/16	.125"
159-250	**N250**	**6.75**	10.6	1.4	1 47/64	3 3/4	7 17/32	2 9/32	.250"
159-375	**N375**	**8.60**	10.7	1.7	2 3/8	5 19/32	8 23/32	2 15/16	.375"

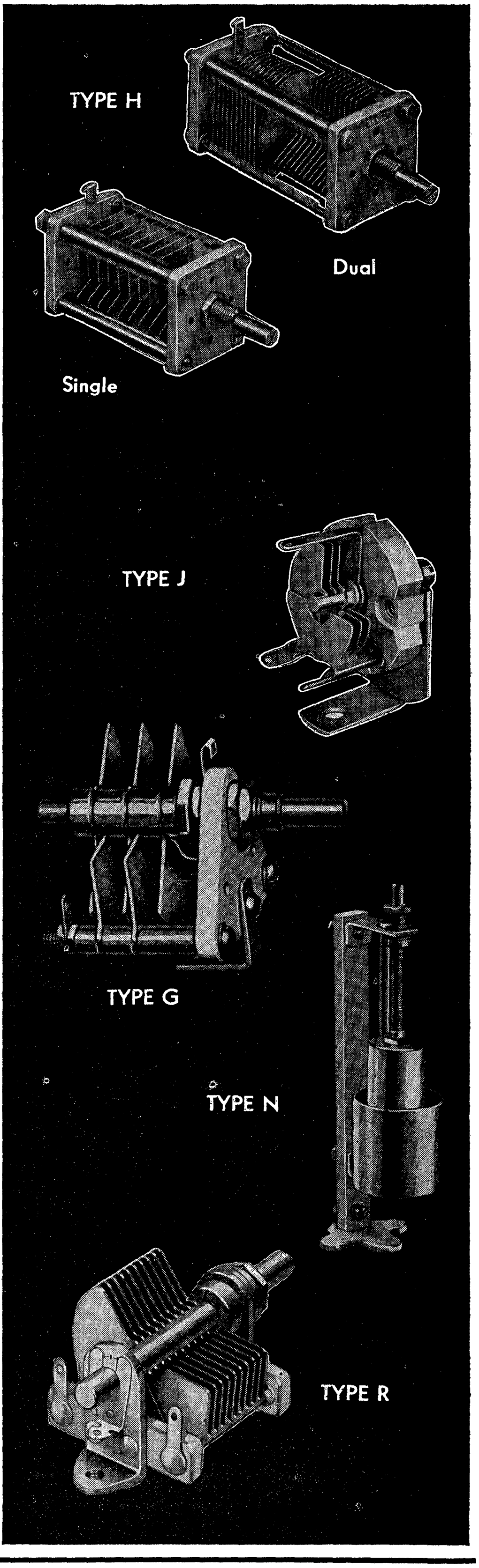
TYPE "R" CAPACITORS

The JOHNSON version of a highly popular standardized capacitor widely used in compact portable and mobile equipment. End plates are of extra heavy nickel-plated brass, Steatite insulating bars. All soldered and riveted construction.

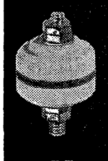
SPECIFICATIONS

All plates are .0225" thick, of brass with bright allow plating, far more corrosion resistant than cadmium. Spacing is ordinarily .0245", but available on special order in spacings up to .0715". Panel mounting area required; 1-5/8" wide, 1-11/16" deep. Supplied at present only on special order in production quantities. Write for full details.





Steatite and porcelain RF insulators with a long history of user satisfaction. Dense molding and glazing impart fracture resistance together with low moisture absorption. Extended creepage paths provide maximum voltage breakdown compatible with compact design. Relatively large mounting faces permit substantial lateral loads. Heavily nickel plated brass hardware suitable for exposed applications.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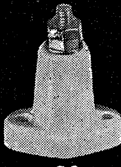
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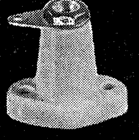
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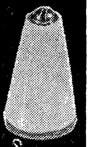
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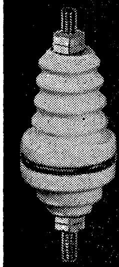
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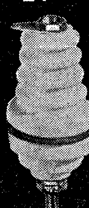
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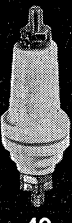
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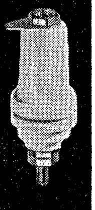
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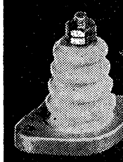
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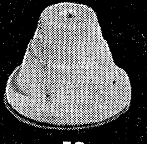
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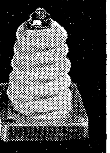
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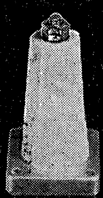
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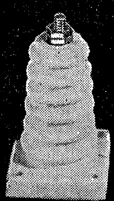
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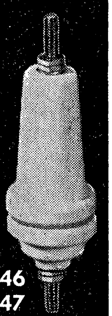
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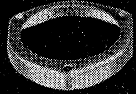
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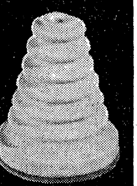
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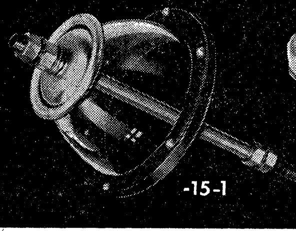
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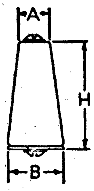
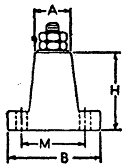
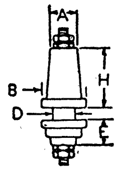
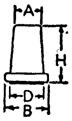








STAND-OFF INSULATORS

Steatite insulators combining excellent strength with economy for surface mounting applications. Heavy integral mounting bases; ample clearance for screw heads.

Cat. No.	Net Price	Dimensions H	B	M	A	Hdwe.
135-20	$0.15	1 9/16	1 3/4	1 5/16	3/4	10-32
135-20-2	.20	1 9/16	1 3/4	1 5/16	3/4	74 Jack
135-22	.13	1	1 5/32	13/16	15/32	8-32
135-22-2	.16	1	1 5/32	13/16	15/32	74 Jack
135-24	.10	5/8	1	11/16	3/8	6-32

Ribbed porcelain insulators with square mounting bases and four mounting holes; top glazed.

Cat. No.	Net Price	H	B	M	A	Hdwe.
135-60	.68	4 1/2	2 1/2	1 7/8	1 3/16	1/4-20
135-62	.36	2 3/4	1 7/8	1 3/8	7/8	1/4-20

Surface mounting porcelain insulators with drawn and etched aluminum bases. Nos. 135-65, 135-65-2, 135-68, 135-68-2 are ribbed.

Cat. No.	Net Price	H	B	M	A	Hdwe.
135-65	.21	1 3/8	1 7/8	1 1/2	5/8	10-32
135-65-2	.29	1 3/8	1 7/8	1 1/2	5/8	74 Jack
135-66	.50	2 3/4	1 3/4	1 3/8	15/16	1/4-20
135-66-2	.72	2 3/4	1 3/4	1 3/8	15/16	76 Jack
135-67	.72	4 1/2	2 1/4	1 3/4	1 1/16	1/4-20
135-67-2	.94	4 1/2	2 1/4	1 3/4	1 1/16	76 Jack
135-68	.34	2 1/16*	1 3/4	1 3/8	23/32	10-32
135-68-2	.42	2 1/16*	1 3/4	1 3/8	23/32	74 Jack

STEATITE CONE INSULATORS

Material, grade L-4 or better, Steatite. Deep clean threads are tapped directly into the ceramic. Furnished complete with machine screws, brass and cork cushion washers.

Cat. No.	Net Price	H	B	M	A	Hdwe.
135-500	$0.20	21/32*	5/8		7/16	6-32
135-501	.24	1 1/32*	3/4		1/2	8-32
135-502	.43	1 9/16*	1		1/2	8-32
135-503	.49	2 1/16*	1 1/8		5/8	10-32
135-504	.85	3 1/16*	1 1/2		3/4	10-32

METAL BASES

Aluminum bases for replacement on 135-65, -66, -67 and -68 insulators.

Cat. No.	Net Price	Fit insulators
135-865	$0.10	135-65
135-866	.12	135-66, 135-68
135-867	.15	135-67

FEED-THRU BOWL ASSEMBLIES

Bowls, electrical glass, 6 15/16″ maximum diameter. 4 3/8″ high. Steel mounting flange 7 3/4″ dia. Stud threaded 1/2″ – 13. Cork gaskets and spun aluminum corona shields included in fittings. 135-15-1 consists of single bowl with fittings, 10 1/4″ stud; 135-15-3 two bowls and fittings with 16″ stud for walls up to 4″. 135-15-7 with 24″ stud for walls up to 12″. Can also be furnished with special hollow studs.

Cat. No.		Net Price
135-15-0	Glass bowl only, less fittings..	6.65
135-15-1	One bowl and fittings.......	12.30
135-15-3	Two bowls and fittings......	21.50
135-15-7	Two bowls and fittings......	22.00

*Height dimension includes cushion mounting washer.

THRU-PANEL INSULATORS

High voltage insulators compression mounted by means of a stud throughout length. Extrusion of insulator base extends thru mounting hole increasing breakdown rating. Flat mounting surfaces with cushion washers eliminate breakage. Types equipped with jacks have terminal permitting connection above as well as below the panel.

STEATITE

Cat. No.	Net Price	H	B	D	E	A	Hardware
135-40	$0.25	1 1/4	15/16	7/16	1/2	19/32	10-32
135-40-2	.33	1 1/4	15/16	7/16	1/2	19/32	74 Jack
135-42	.24	7/8	3/4	.400	3/8	1/2	10-32
135-42-2	.32	7/8	3/4	.400	3/8	1/2	74 Jack
135-44	.18	5/8	5/8	.305	5/16	3/8	6-32

PORCELAIN

Cat. No.	Net Price	H	B	D	E	A	Hardware
135-45	$0.33	1 3/8	1 1/4	1/2	11/16	5/8	10-32
135-45-2	.41	1 3/8	1 1/4	1/2	11/16	5/8	74 Jack
135-46	.84	2 3/4	1 5/8	11/16	1	15/16	1/4-20
135-46-2	1.06	2 3/4	1 5/8	11/16	1	15/16	76 Jack
135-47	1.24	4 1/2	2 1/8	31/32	1 1/2	1 1/16	1/4-20
135-47-2	1.46	4 1/2	2 1/8	31/32	1 1/2	1 1/16	76 Jack
135-48	.48	2	1 5/8	11/16	7/8	3/4	10-32
135-48-2	.60	2	1 5/8	11/16	7/8	3/4	74 Jack

INSULATED THRU-PANEL BUSHINGS

Assemblies consist of a pair of identical steatite insulators, hardware and cushion washers. The 135-55 assembly has interlocking insulators which are self-centering in mounting hole and may be used on very thin panels.

135-50	$0.24	1/2	3/4	15/32	3/8	6-32
135-51	.40	13/16	1 1/4	27/32	5/8	10-32
135-52	.59	1 1/8	1 3/4	1 7/32	7/8	1/4-20
135-55	.23	1/4	3/4	15/32	1/2	6-32

LEAD-IN BUSHINGS

Single porcelain insulators less all hardware except cushion washer. Mounting flanges listed separately.

135-53	$0.26	1 3/4	2 1/2	1 27/32	1 1/16
135-54	.62	4	3 1/2	2 11/16	1

MOUNTING FLANGES

Stamped aluminum mounting flanges for lead-in bushings 135-53 and 135-54. Three mounting holes spaced 120 degrees apart.

Cat. No.	For Bushing No.	Net Price
135-90	135-53......................	$0.25
135-91	135-54......................	.55

THREADED BRASS ROD

Intended primarily for use with lead-in bushings 135-53 and 135-54. Rod threaded overall 1/4-20. Complete assembly includes rod, 4 brass washers and 4 nuts, all parts heavily nickel plated.

Cat. No.	Length	Net Price
115-240	8″........................	$0.40
115-241	10″.......................	.50
115-242	15″.......................	.70

Catalog numbers ending in -2 denote jack types which were formerly identified with a J suffix

E. F. JOHNSON Company WASECA, MINNESOTA

ENAMELLED COPPERWELD ANTENNA WIRE

DISCONTINUED

JOHNSON Enamelled Copperweld Antenna Wir[illegible] not stretch nor sag. Prices are per 100 feet. Carried by most suppliers in [illegible] available from the factory in any specified length.

Cat. No.	Net Price	[illegible]	Ft. per Lb.	Breaking Strength
144-348	$2.91	[illegible]	34½	1130 lbs.
144-350	[illegible]	12	54	720 lbs.
144-352	1.[illegible]	14	85	400 lbs.

FEEDER INSULATORS

Nos. 136-122, -124 and -126 are conventional feeder spreaders of high grade low absorption porcelain, Silicone impregnated. No. 136-122 has notches for 1½" line spacing. All have ⅜x½" cross section.

Cat. No.	Net Price	Lgth.	Cat. No.	Net Price	Lgth.	Cat. No.	Net Price	Lgth.
136-122	**$.12**	2"	**136-124**	**$.17**	4"	**136-126**	**$.22**	6"

ANTENNA INSULATORS

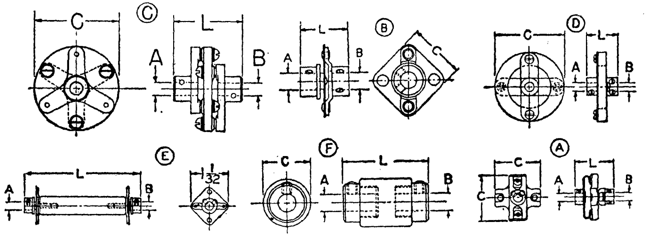
The 135-151, -152, -153 are 1½" in dia., wet process porcelain with non-corrosive aluminum end bells. The 136-107-112, are wet process 1" in dia. The 136-104 is dry process ⅝" square. The 136-32 is dry process compression strain type, 1½" long. All antenna insulators glazed.

Cat. No.	Net Price	Breaking Strength	Length Net	Length Over-all
136-151	**$7.70**	5000 lbs.	8"	15½"
136-152	**8.25**	5000 lbs.	12"	19½"
136-153	**13.25**	5000 lbs.	20"	25½"
136-104	**.15**	400 lbs.		4"
136-107	**.75**	800 lbs.		7"
136-112	**.85**	800 lbs.		12"
136-32	**.10**			1½"

RADIO FREQUENCY CHOKES

Have high reactance over the range for which they are designed. Coils are of enamelled silk-covered wire impregnated with high grade R.F. lacquer and wound on Steatite cores. Current ratings may be increased for intermittent use.

Cat. No.	Net Price	Frequency	Current	Induct. (1 mc.)	Ohms DC	Lgth.
102-750	**$1.15**	1.7 to 30 mc.	150 ma	.83 mh	15	1½"
102-752	**1.80**	1.7 to 30 mc.	500 ma	1.0 mh	5.2	2⅞"
102-754	**2.50**	1.7 to 30 mc.	750 ma	1.9 mh	4	4$\frac{5}{16}$"
101-760	**.49**	Ultra-high	250 ma	6.8 mh	.33	1½"



SHAFT COUPLINGS

All JOHNSON shaft couplings are manufactured with high quality, low loss insulation, accurately machined and suitably finished metal parts. Each is capable of many thousands of operating cycles without failure due to fatigue. DC "breakdown" ratings derated in accordance with good engineering practice. The phosphor bronze springs of the -250 and -251 series shaft couplings provide flexibility without backlash and adjust to minor shaft misalignments. Rigid types -252, -262 and -261 meet the requirements of accurate shaft alignment and high torque. The -259 is a bar type shaft coupling recommended for high voltages or very high frequencies. The -264 is a small bakelite insulated flexible shaft coupling for DC or low voltage RF applications.

Cat. No.	Net Price	DC "Breakdown"	Dim.Dwg.	Dimension C	Dimension L	Dimension A	Dimension B
104-250	**$.70**	4000	A	1$\frac{5}{16}$	1⅛	¼	¼
104-250-3	**.90**	4000	A	1$\frac{5}{16}$	1$\frac{3}{16}$	¼	⅜
104-251	**1.00**	8000	A	2⅛	1$\frac{15}{32}$	⅜	⅜
104-251-2	**1.00**	8000	A	2⅛	1$\frac{15}{32}$	¼	¼
104-251-3	**1.00**	8000	A	2⅛	1$\frac{15}{32}$	¼	⅜
104-252	**.65**	7000	F	$\frac{11}{16}$	1¼	¼	¼
104-258	**.29**			½	¾	¼	¼
104-259	**1.30**	8000	E		3⅜	¼	¼
104-261	**3.95**	7500	C	2½	1$\frac{15}{16}$	⅜	⅜
104-262	**.67**	5000	D	2	$\frac{29}{32}$	¼	¼
104-264	**.52**	750	B	$\frac{13}{16}$	$\frac{23}{32}$	¼	¼

PANEL BEARINGS

Nickel plated brass for ¼" shaft and up to ⅜" panels. Also with 3" and 6" nickel-plated brass shafts.

Cat. No. 115-255 Panel bearing only..........................**Net Price $.17**
Cat. No. 115-256 Bearing and 3" shaft..........................**Net Price .30**
Cat. No. 115-256-2 Bearing and 6" shaft..........................**Net Price .40**

FLEXIBLE SHAFTS

Phosphor bronze, non-rusting with ¼" hubs. Permit out of line or up to 90 degree angular control.

Cat. No. 115-253 3" flexible shaft..........................**Net Price $.36**
Cat. No. 115-254 6" flexible shaft..........................**Net Price .50**

CRYSTAL SOCKETS

Designed for HC-6/U crystal holder. Steatite base, DC200 impregnated. Contacts spaced .486" accept pins .050" diameter, .248" long; silver plated, hot tin dipped terminals. Single ⅛" mounting hole. Withdrawal force 1½ lbs. plus or minus 40%.

Cat. No. 126-105 Body glazed, phosphor bronze contacts........**Net Price $.12**
Cat. No. 126-105-2 Body glazed, beryllium copper contacts........**Net Price .15**

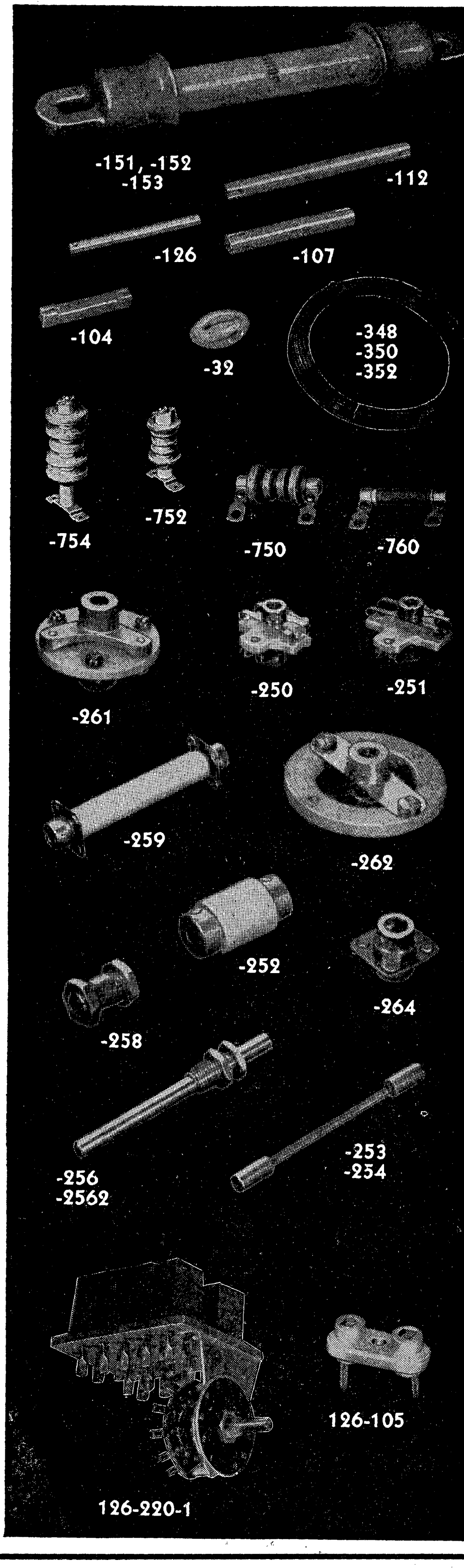
MULTIPLE CRYSTAL SOCKETS

Crystal socket accommodates up to ten FT-243 holders (pin spacing .486"). Base is mica filled phenolic; contacts are brass, cadmium plated, accept pins .400" long, .093" dia.

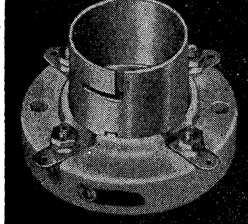
Cat. No. 126-120-1 (Board Only)..........................**Net Price $2.30**

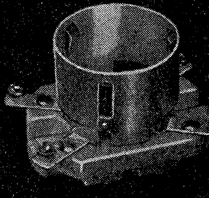
Crystal selector assembly: socket, bracket, 11 position switchand index plate.

Cat. No. 126-220-1 (Crystal Selector)..........................**Net Price $4.20**



E. F. JOHNSON Company WASECA, MINNESOTA


123,-209, -210, -211, -216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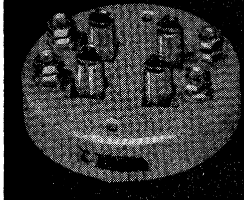
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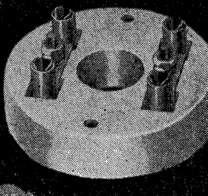
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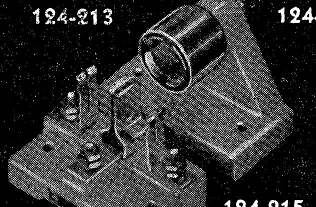
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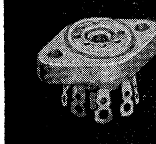
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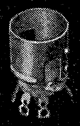
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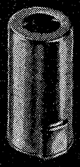
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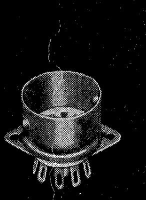
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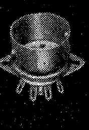
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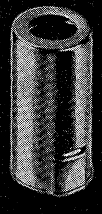
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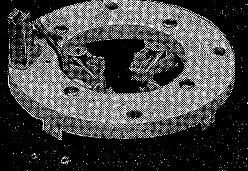
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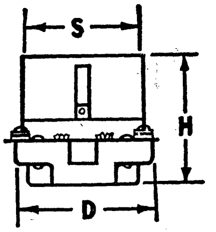
TUBE SOCKETS



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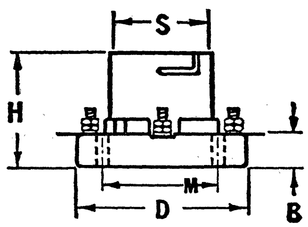


123-209, -210, -211, -216

No. 123-206 industrial bayonet socket with rugged metal shell for extremely high voltage applications. Will accommodate 8008, 5C22, FG104, GL146 and other tubes with super jumbo 4 pin bayonet bases RTMA No. A4-18. Has steatite insulation, silver plated beryllium copper contacts, screw terminals and three heavy retaining springs in the shell to insure holding tube securely.

No. 123-209 for all tubes equipped with medium 4 pin bayonet bases, RTMA No. A4-10. Heavy etched aluminum shell, white, glazed porcelain base. Heavy, side wiping phosphor bronze contacts. Base equipped with four mounting holes.

No. 123-209-4 identical with 123-209 except for Steatite base and beryllium copper contacts.

No. 123-210 accepts medium four pin bayonet bases, RTMA No. A4-10. More compact than the 123-209 and has two mounting holes. Glazed white porcelain base, phosphor bronze contacts.

No. 123-211 fits jumbo 4 pin bayonet bases, RTMA No. A4-29 (standard "50 watt"). Etched aluminum shell, glazed porcelain base with four mounting holes. Double filament contacts for heavy current.

No. 123-211-4 identical with 123-211 except for Steatite base and beryllium copper contacts.

In production quantities all the bayonet sockets above are available with plated brass shells and special contact plating.

Cat. No.	Net Price	D	H	M	S	Pins	Tube Base
123-206	**$2.25**	2⅝ x 3½	2½	2¾	2.250	4	Super Jumbo
123-209	**1.10**	2¹³⁄₁₆	1²⁷⁄₃₂	2⁵⁄₁₆	1.386	4	Med. Bay.
123-209-4	**2.30**	2¹³⁄₁₆	1²⁷⁄₃₂	2⁵⁄₁₆	1.386	4	Med. Bay.
123-210	**1.10**	2½	1⅞	2¹⁄₁₆	1.386	4	Med. Bay.
123-211	**1.40**	3⅜	2⁹⁄₃₂	2¹³⁄₁₆	1.886	4	Jumbo
123-211-4	**2.90**	3⅜	2⁹⁄₃₂	2¹³⁄₁₆	1.886	4	Jumbo

No. 124-213 is a special socket for Eimac 152TL and 304TL. Contacts may be connected for series or parallel filaments.

No. 124-214 is a special socket for Eimac 1500TH. Both the -213 and -214 have glazed porcelain bases with two mounting holes. Contacts are phosphor bronze with nickel silver sleeves nickel plated.

No. 124-215 is a two unit socket for "250 watt" tubes such as 204A and 849. Anode cap RTMA No. C1-6, cathode mounting RTMAm Nos. A3-20 and A3-23. Bases are glazed porcelain, contacts phosphor bronze nickel plated.

Cat. No.	Base	Net Price
124-213	"Eimac"	**$1.45**
124-214	"Eimac"	**1.80**
124-215	"250 watt"	**3.60**

MINIATURE SOCKETS

Sockets for tubes with miniature button 7 pin bases, RTMA No. E7-1. Bases are Steatite, DC-200 impregnated. Silver plated phosphor bronze contacts. Contacts for -277 are hot tin dipped. -277 shield base is brass, nickel plated. Mounting centers ⅞".

Cat. No.		Net Price
120-267	Miniature socket, all ceramic	**$ .33**
120-277	Miniature socket with shield base	**.49**

MILITARY TYPE MINIATURE SOCKETS

Top mounting, saddle type sockets per JAN spec. S-28A. One piece ceramic insulator, grade L-4B or better, top glazed, DC-200 impregnated. Brass shell and center shield nickel plated to withstand salt spray test. Contacts beryllium copper, silver plated. Terminals hot tin dipped. Mounting centers ⅞" on 7 prong type, 1⅛" on 9 prong type. -177 is for tubes with 7 prong bases RTMA No. E7-1, -199 for tubes with 9 prong bases RTMA No. E9-1.

Cat. No.	Military Designation	Type	Net Price
120-177	TS102C01	7 prong	**$ .59**
120-199	TS103C01	9 prong	**.79**

MINIATURE TUBE SHIELDS

Brass, nickel plated to meet JAN specifications. Twist to lock type construction with internal tube retaining spring. Both spring and shield are non-ferrous, non-magnetic material.

Cat. No.	Military Designation	Fits Socket	Length	Net Price
133-278-6	TS102U01	177, 277	1⅜"	**$ .15**
133-278-7	TS102U02	177, 277	1¾"	**.19**
133-278-8	TS102U03	177, 277	2¼"	**.22**
133-278-9	TS103U01	199	1½"	**.22**
133-278-10	TS103U02	199	1¹⁵⁄₁₆"	**.24**
133-278-11	TS103U03	199	2⅜"	**.29**
133-277	Miniature shield base only for use with 120-267 socket.			**.12**

SPECIAL FOR 5D21, 705A AND 715A & B

No. 122-234 for Western Electric 5D21, 705A, 715A, 715B includes heavy Steatite base and special locking device for retaining tube in socket.

Cat. No.	Net Price
122-234	**$2.00**

TUBE SOCKETS

WAFER SOCKETS

JOHNSON wafer sockets are insulated with grade L-4 Steatite or better, top and sides glazed, underside impregnated in conformance with latest Army Navy specifications. Contacts are brass with steel spring, cadmium plated and are mounted against phenolic washers in molded recesses to prevent movement. Rivets are countersunk and mounting holes bossed to permit sub-panel mounting. Locating grooves facilitate tube insertion.

Cat. No.		Net Price
122-217	7 pin small	$ .52
122-224	4 pin	.39
122-225	5 pin	.42
122-226	6 pin	.46
122-227	7 pin medium	.49
122-228	Octal	.52

SEPTAR SOCKET

The 122-101 is a 7 pin Steatite wafer socket for tubes with medium molded flare Septar base, RTMA No. E7-2. Socket is equipped with a ventilated base shield, five tube retainer springs and provision for mounting button mica capacitors directly to the socket. Socket is specially designed for VHF use with tubes such as the 826, 829, 832, 4D32 and 4D22. Contacts silver plated and recessed to prevent movement. Special terminals permit direct mounting of grid coils. Two holes provided for mounting of buss bar neutralizing leads. .185″ mounting holes on $2\frac{5}{16}$″ square.

Cat. No.	Net Price
122-101	$2.00

Sockets 122-247 and 122-248 are similar to the 122-101 above in that they mount Septar based tubes (RTMA base no. E7-2). These sockets are designed for applications where the special features of the 122-101 are not required. Steatite bases equipped with silver plated, phosphor bronze contacts mounted on phenolic washers to prevent turning. Each socket furnished with a $2\frac{29}{32}$″ dia. aluminum shield ring $\frac{11}{16}$″ high. Ring and socket mounted by four .174″ holes on $1\frac{7}{8}$″ square. 122-247 is $2\frac{5}{8}$″ square, the 122-248 is $2\frac{3}{8}$″ square.

Cat. No.	Net Price
122-247	$ .85
122-248	1.60

GIANT 7 PIN

No. 122-237 is a 7 pin Steatite insulated wafer socket for transmitting tubes having a GIANT 7-pin base, RTMA No. A7-17, such as the 4E27, HK257 and 813. Contacts are brass with cadmium plated steel springs, are mounted on phenolic washers to prevent turning. Ceramic wafer is $2\frac{5}{8}$″ square, 4 mounting holes .174″ dia. on $1\frac{7}{8}$″ square, Ventilating hole in base $\frac{3}{4}$″ dia.

Cat. No.	Net Price
122-237	$ .72

SUPER JUMBO 4 PIN

Steatite insulated 4 pin wafer socket for tubes equipped with Super Jumbo Base, RTMA No. A4-18 such as the 8008. Brass contacts and steel springs both cadmium plated and designed for high current. Wafer $2\frac{5}{8}$″ square, .174″ dia. mounting holes on $1\frac{7}{8}$″ square.

Cat. No.	Net Price
122-244	$1.50

FOR 833 AND 833A

The 124-212 is a special socket assembly for the 833 and 833A consisting of a Steatite base which supports the tube and a pair of 119-843 tube cap connectors. Knurled thumb nuts permit easy installation of tube and base is designed to minimize strains on the tube envelope and prevent breakage. Heat radiating aluminum plate terminals have $4\frac{3}{8}$″ flexible laminated leads.

Cat. No.	Net Price
124-212	$6.55

GIANT 5 PIN

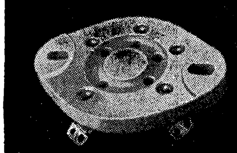
A 5 pin Steatite insulated wafer socket for tubes having bases per RTMA specification A7-17, such as the 4-125A and RK48. A series of small holes and a $\frac{1}{2}$″ central hole in the base provide ventilation. Contacts are brass, cadmium plated and will handle high current. Size $2\frac{5}{8}$″ square with four .174″ dia. mounting holes on a $1\frac{7}{8}$″ square.

Cat. No.	Net Price
122-275	$1.31

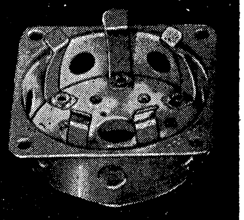
TUBE CAP CONNECTORS

Types 119-846 thru 119-849 are silver plated beryllium copper and assure permanent low resistance contact. 119-852 and -854 are phosphor bronze, cadmium. The 119-843 is a heat radiating connector for power tubes having terminals, RTMA Nos. C1-5, C1-6, C1-7, C1-19 or C1-27.

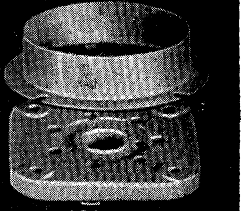
Cat. No.	Tube Cap Dia.	Net Price
119-843	.567″	$ 1.05
119-846	.125″	.34
119-848	.070″	10.80/c
119-849	.048″	8.90/c
119-852	.360″	4.30/c
119-854	.566″	9.75/c



122-217, -224, -225, -226, -227, -228



122-101



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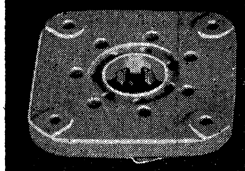

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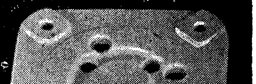

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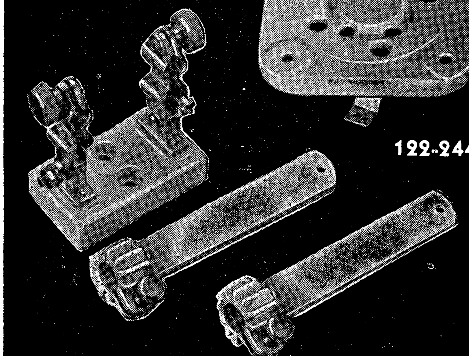

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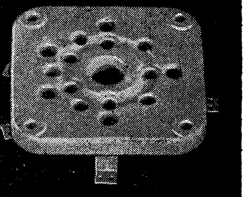

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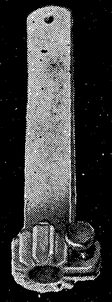
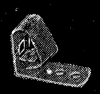
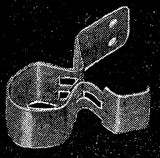


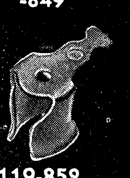
119-843



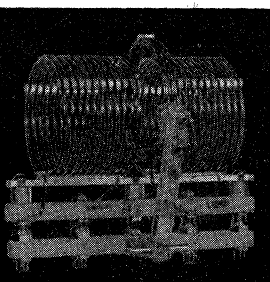
119-848, -849



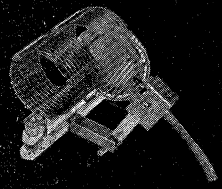
119-846



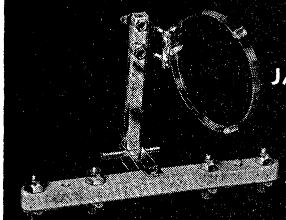
119-852, -854



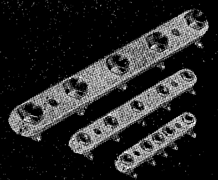
INDUCTOR 1000 HCS 40
LINK 1000 SL5



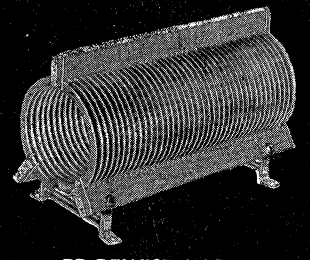
INDUCTOR
500 LCS 40
WITH LINK
& FARADAY
SHIELD



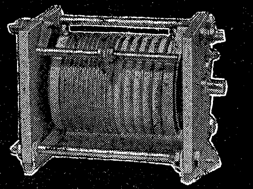
JACK BAR 1000 JBS
WITH 1000 SLA
ARM ASSEMBLY
& 1000 SL5 LINK



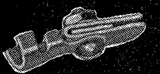
JACK BARS
1000 JBS, 500 JBS,
150 JBS



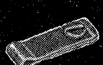
EDGEWISE WOUND
"HI-Q" INDUCTOR



ROTARY INDUCTOR



-804



-860

JOHNSON AIR WOUND INDUCTORS

Swinging link inductors for amateur bands 160 thru 6 meters; 150, 500 and 1000 watt sizes. Two inductance values for each band permits choice of appropriate L/C ratio dictated by amplifier plate voltage and plate current. Polystyrene insulation, Steatite bases and heavier wire sizes insure highest efficiency. HCS—Inductors match high voltage, low current tubes. LCS—Inductors match low voltage, high current tubes.

SWINGING LINK INDUCTORS

1,000 watts

Cat. No.	Type No.	Net Price	Wire Size	Cap.*mmfds.	Height	Width
238-106	1000HCS160	$7.50	10	99	$5\frac{11}{16}$"	$4\frac{13}{32}$"
238-107	1000LCS160	7.50	10	140	$5\frac{11}{16}$"	$4\frac{13}{32}$"
238-101	1000HCS80	6.70	10	46	5"	$3\frac{23}{32}$"
238-102	1000LCS80	6.70	10	73	5"	$3\frac{23}{32}$"
238-103	1000HCS40	6.05	10	24	5"	$3\frac{23}{32}$"
238-104	1000LCS40	6.05	8	55	5"	$3\frac{3}{4}$"
238-105	1000HCS20	5.55	8	19	$4\frac{7}{8}$"	$3\frac{3}{4}$"
238-111	1000LCS20	5.55	.250"	26	$5\frac{1}{8}$"	4"
238-112	1000H/LCS14	5.20	.250"	19	$4\frac{7}{8}$"	$3\frac{1}{2}$"
238-113	1000H/LCS10	4.90	.250"	18	$4\frac{7}{8}$"	$3\frac{1}{2}$"

500 watts

Cat. No.	Type No.	Net Price	Wire Size	Cap.*mmfds.	Height	Width
238-125	500HCS160	3.75	14	100	$4\frac{7}{32}$"	$3\frac{1}{8}$"
238-126	500LCS160	3.75	14	148	$4\frac{7}{32}$"	$3\frac{1}{8}$"
238-121	500HCS80	3.45	14	45	$3\frac{23}{32}$"	$2\frac{5}{8}$"
238-122	500LCS80	3.45	12	76	$3\frac{3}{4}$"	$2\frac{21}{32}$"
238-123	500HCS40	3.15	12	27	$3\frac{3}{4}$"	$2\frac{21}{32}$"
238-124	500LCS40	3.15	10	50	$3\frac{25}{32}$"	$2\frac{23}{32}$"
238-131	500HCS20	2.70	6	25	$3\frac{13}{16}$"	$2\frac{13}{16}$"
238-132	500LCS20	2.70	6	37	$3\frac{13}{16}$"	$2\frac{13}{16}$"
238-133	500H/LCS14	2.25	6	19	$3\frac{11}{16}$"	$2\frac{9}{16}$"
238-134	500H/LCS10	2.10	6	19	$3\frac{9}{16}$"	$2\frac{5}{16}$"
238-135	500H/LCS6	2.10	6	18	$3\frac{9}{16}$"	$2\frac{5}{16}$"

150 watts

Cat. No.	Type No.	Net Price	Wire Size	Cap.*mmfds.	Height	Width
238-147	150HCS160	3.30	18	102	$4\frac{3}{16}$"	$3\frac{1}{16}$"
238-148	150LCS160	3.30	16	151	$4\frac{7}{32}$"	$3\frac{3}{32}$"
238-141	150HCS80	3.00	16	51	$4\frac{7}{32}$"	$2\frac{19}{32}$"
238-142	150LCS80	3.00	16	68	$4\frac{7}{32}$"	$2\frac{19}{32}$"
238-143	150HCS40	2.70	14	28	$3\frac{23}{32}$"	$2\frac{5}{8}$"
238-144	150LCS40	2.70	12	57	$3\frac{3}{4}$"	$2\frac{21}{32}$"
238-145	150HCS20	2.40	12	21	$3\frac{1}{2}$"	$2\frac{13}{32}$"
238-146	150LCS20	2.40	12	32	$3\frac{1}{2}$"	$2\frac{13}{32}$"
238-151	150H/LCS14	2.10	8	19	$3\frac{21}{32}$"	$2\frac{1}{2}$"
238-152	150H/LCS10	1.95	8	19	$3\frac{21}{32}$"	$2\frac{1}{2}$"
238-153	150H/LCS6	1.95	8	16	$3\frac{13}{32}$"	2"

*Total circuit capacity required to effect resonance at low frequency end of band.

Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd. Height measured from the bottom of the plug bar. Width is O.D. of winding.

PLUG-IN SWINGING LINKS

Plug-in links originated by JOHNSON. Select the link to match your line, coupler or output filter for optimum power transfer.

Cat. No.	Type No.	No. Turns	Net Price	Cat. No.	Type No.	No. Turns	Net Price
238-181	**150/500SL12**	12	**$1.80**	**238-191**	**1000SL10**	10	**$1.90**
238-182	**150/500SL5**	5	**1.15**	**238-192**	**1000SL5**	5	**1.45**
238-183	**150/500SL2**	2	**1.00**	**238-193**	**1000SL2**	2	**1.10**

SWINGING LINK ARM ASSEMBLIES

238-179 **150/500SLA**—Arm assembly for 150/500 watt inductors.....**Net $1.15**
238-180 **1000SLA**—Arm assembly for 1000 watt inductors...........**Net 1.40**

JACK BAR ASSEMBLIES

238-171 **150JBS**—150 watt, $3\frac{3}{4}$" x $\frac{9}{16}$" x $\frac{3}{8}$"......................**Net $ .90**
238-172 **500JBS**—500 watt, $5\frac{3}{4}$" x $\frac{5}{8}$" x $\frac{3}{8}$"......................**Net 1.20**
238-173 **1000JBS**—1000 watt, $7\frac{1}{2}$" x $\frac{7}{8}$" x $\frac{1}{2}$"....................**Net 1.80**

JOHNSON FARADAY SHIELD

Faraday shields to minimize capacitively coupled spurious output. Designed for JOHNSON plug-in links, equally effective and readily installed on other links including non plug-in types. Screen is copper plating on polystyrene. Grounded hood and copper braid complete shielding.

238-303 150/500 watt swinging link shield, hood and lead assembly....**Net $2.60**
238-304 1000 watt swinging link shield, hood and lead assembly.....**Net 2.75**
238-301 150/500 watt shield only..................................**Net 1.45**
238-302 1000 watt link shield only................................**Net 1.60**

(Link, coil, jack bar and arm not included)

EDGEWISE WOUND "HI-Q" INDUCTORS

Edgewise wound, $\frac{1}{4}$" copper strip, bright alloy plated, Mycalex supporting bars. Widely used commercially, they will safely handle more than 1000 watts in continuous service. Write for information on other types for industrial and broadcast applications.

Cat. No.	Net Price	Inductance micro H	Winding L x ID
232-610	**$8.90**	31	$7\frac{13}{16}$" x $2\frac{1}{2}$"
232-620	**11.40**	84	$8\frac{5}{16}$" x 4"
232-622	**8.90**	41	$6\frac{7}{16}$" x $3\frac{1}{4}$"
232-624	**6.30**	20	6 " x $3\frac{1}{4}$"
232-626	**5.80**	10	$4\frac{3}{4}$" x $2\frac{1}{2}$"

ROTARY INDUCTOR

Same efficient inductor used in final tank of the VIKING II. May be used in any low and medium power transmitter with bandswitching exciter to provide continuous tuning throughout the range 3.5 to 30.0 mcs. without changing coils. Variable pitch winding of No. 14 tinned copper wire. Maximum inductance 10 microhenries. Form and end plates Steatite. Positive rolling contact assured by beryllium copper tension springs. Overall size: $2\frac{1}{2}$" wide x $4\frac{1}{2}$" long x 3" high. Supplied with typical tuning curves.

Cat. No. 229-201..**Net Price $8.85**

INDUCTOR CLIPS

Clip No. 235-804 is plated phosphor bronze and is designed for making connections to edgewise wound inductors. No. 235-860 will admit wire from No. 20 to No. 10 without moving and shorting adjacent turns.

Cat. No. 235-804..**Net Price $ .22**
Cat. No. 235-860..**Net Price .11**

E. F. JOHNSON Company WASECA, MINNESOTA

KEYS, PRACTICE SETS, BUZZERS

STANDARD SEMI-AUTOMATIC KEYS

Improved standard model mounted on heavy steel base 6¼" x 3½" x ½". Four rubber feet insure stationary position while operating. Five adjustments with lock nuts assure dependable operation at all speeds. Smooth, easy action, adjustable from lowest to highest speeds. Vibrator arm, posts, circuit closing switch, and all machine parts heavily chrome plated for permanent finish. Heavy brass connector strips under base insure low resistance circuit. Two black fiber paddles can be adjusted separately to best height. Vibrator bearings are perfectly aligned and free-acting. Complete with circuit-closing switch and adjustable weight.

Cat. No.		Net Price
114-500	—⅛" contacts, black wrinkle base	**$13.50**
114-501	—¼" contacts, polished chrome base	**19.20**
114-501-2	—Same as 114-501 except left handed	**21.00**

AMATEUR SPECIAL MODEL SEMI-AUTOMATIC KEY

Sturdy steel base 6¼" x 3" x ⅜", attractively finished with black wrinkle enamel. Four rubber feet prevent slipping or tilting. Vibrator and all hardware heavily chrome plated. Two adjustable weights. Contacts are ⅛" coin silver. Adjustments have lock nuts to assure stable operation. No circuit closing switch.

Cat. No.		Net Price
114-515	—Amateur model, semi-automatic	**$9.60**

AMATEUR SEMI-AUTOMATIC KEY WITH SWITCH

For those who prefer a compact, light model. Has circuit closing switch. Base is die cast, 6" x 2¾" x ¾". Base and frame attractively finished in black wrinkle enamel. Vibrator arm is the same as on the Standard model, with the same smooth, easy action, Fully adjustable from eight words per minute to as high a rate as desired. ⅛" coin silver contacts. An outstanding value.

Cat. No.		Net Price
114-510	—Amateur model, with switch	**$10.50**

HEAVY DUTY KEYS

Heavy die cast base, chrome plated key arm, heavy brass connector strips under base Well insulated for heavy duty service. Large ¼" coin silver contacts. Improved Navy. type knob. Adjustable steel bearings and well designed spring give a light keying touch. The finest hand key money can buy.

Cat. No.		Net Price
114-320	—Black wrinkle enamel base	**$3.60**
114-321	—Polished chrome plated base	**5.10**

STANDARD KEYS

Heavy die cast base. Smooth adjustable bearings. Provision for plugging in semi-automatic keys. Contacts are ⅛" coin silver. A high quality key at low cost.

Cat. No.		Net Price
114-310	—Black wrinkle, no switch	**$ 3.00**
114-310-3	—Black wrinkle with switch	**3.25**
114-311	—Chrome plated, no switch	**4.90**
114-311-3	—Chrome plated with switch	**5.15**
114-316	—Brass wrinkle, no switch	**3.00**

PHENOLIC BASE KEYS

A high quality black phenolic base key. Adjustable, smooth-acting bearings, improved spring, pigtail connection, ⅛" coin silver contacts. All metal parts heavily nickel plated.

Cat. No.		Net Price
114-301	—No circuit-closing switch	**$1.95**

PRACTICE KEYS

Inexpensive practice keys for beginners. All metal parts except base nickel plated. Adjustable key arm spring, smooth action bearings, ⅛" coin silver contacts.

Cat. No.		Net Price
114-300	—Molded brown phenolic base	**$1.85**

PRACTICE SET

Constant frequency buzzer and key on a 4" x 6" molded brown Bakelite base. May be used singly or in pairs for code practice.

Cat. No.		Net Price
114-450	—Practice set	**$3.95**

CORD AND WEDGE FOR SEMI-AUTOMATIC KEYS

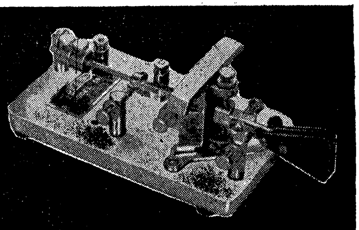
Cord and wedge for quick, easy attachment of semi-automatic key across the circuit-closing switch of a standard hand key. Used almost universally by railroad telegraphers, it is also ideal for amateur service where both hand key and semi-automatic are used.

Cat. No.		Net Price
114-380	—Cord and wedge	**$1.00**

CONSTANT FREQUENCY BUZZER

Molded black Bakelite base and cap. Fully adjustable, holds constant frequency. Coin silver contacts. Uses 2 dry cells or "C" battery.

Cat. No.		Net Price
114-400	—Constant frequency buzzer	**$1.50**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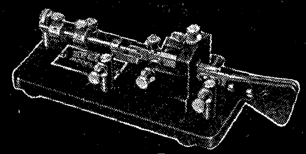
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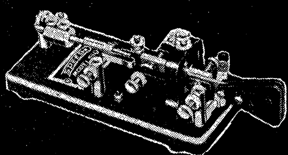
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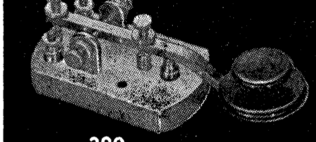
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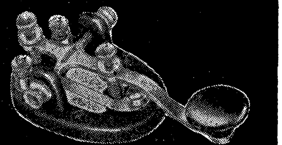
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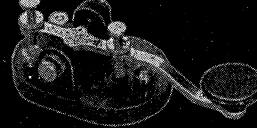
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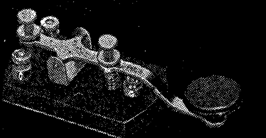
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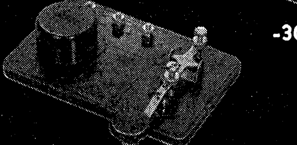
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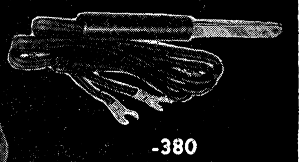
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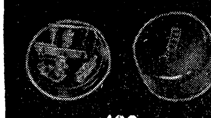
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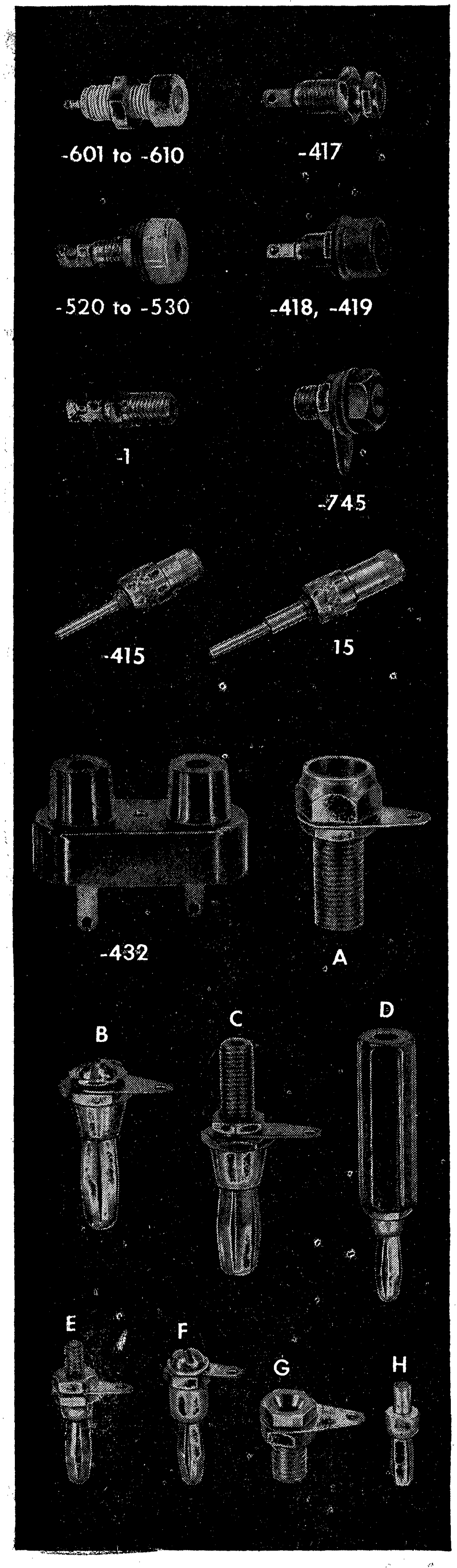


PLUGS AND JACKS

NYLON TIP JACKS

Patent Pending

Completely insulated jack, body molded from low-loss Nylon. Contact recessed for maximum voltage breakdown and safety. Capacity to ⅛″ panel approximately 2.0 mmf., suitable for high frequency test points. One piece phosphor bronze or beryllium copper contact for .081″ diameter pins. Integral solder terminal hot tin dipped, conventional soldering methods may be used without damaging jack body. Threaded ¼-32 jack body mounts in 17/64″ hole with single nut furnished. Overall dimensions, head diameter ⅜″, length 29/32″.

Beryllium Copper Contacts

Cat. No.	Color	Net Price
105-601-1	White	**$0.30**
105-602-1	Red	**.30**
105-603-1	Black	**.30**
105-604-1	Dark Green	**.30**
105-605-1	Light Blue	**.30**
105-606-1	Orange	**.30**
105-607-1	Yellow	**.30**
105-608-1	Brown	**.30**
105-609-1	Light Green	**.30**
105-610-1	Dark Blue	**.30**

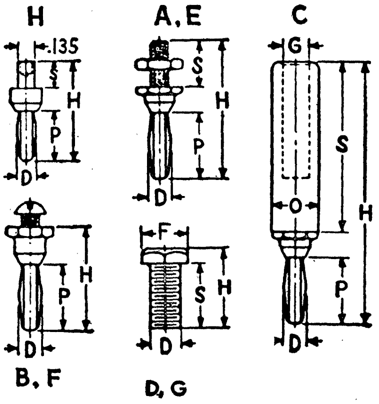
Phosphor Bronze Contacts

Cat. No.	Color	Net Price
105-601-2	White	**$0.27**
105-602-2	Red	**.27**
105-603-2	Black	**.27**
105-604-2	Dark Green	**.27**
105-605-2	Light Blue	**.27**
105-606-2	Orange	**.27**
105-607-2	Yellow	**.27**
105-608-2	Brown	**.27**
105-609-2	Light Green	**.27**
105-610-2	Dark Blue	**.27**

SHORTING TYPE TWIN TIP JACKS

Circuit closes automatically when tips are removed. Jacks spaced ⅞″. Single hole mounting, molded black phenolic body.

Cat. No.	Net Price
105-432	**$0.39**



"BANANA SPRING" TYPE

Nickel-silver springs and high grade nickel plated brass screw machine parts with accurate threads and milled nuts. Studs extend full length of springs for added support.

108-754 (75D) is designed for riveting. Spring is beryllium copper.

108-752-1 (75BB) has 1⅜″ black plastic handle, 108-752-2 (75BR) same but red.

108-772-1 (77BB) has 1¾″ black plastic handle, 108-772-2 (77BR) same but red.

108-750 (75) or 108-750-2 (75A) can be furnished with beryllium copper spring on special order and all plugs can be furnished with nickel, cadmium or silver plating if required.

108-745-1 is a jack similar to the 108-740 (74) with a red plastic insulated head and furnished with fibre insulating washers. 108-745-2 same but black.

PLASTIC HEAD TIP JACKS

Plastic heads in choice of colors listed. Supplied with fibre shoulder bushing and nickel-plated hex nut. Standard finish is nickel plate on body. Mounts in ⅜″ hole. Maximum panel thickness 5/32″ where insulating washers are used, ¼″ where omitted. ¼″-32 thread.

Cat. No.	Net	Color	Cat. No.	Net	Color
105-520	**$0.14**	Red	**105-526**	**$0.14**	Orng.
105-521	**.14**	Black	**105-527**	**.14**	Yel.
105-522	**.14**	DkGrn.	**105-528**	**.14**	Lt Grn
105-524	**.14**	Brown	**105-529**	**.14**	Dk Blu
105-525	**.14**	Lt Blue	**105-530**	**.14**	Ivory

Description similar to above type except that brass body is molded integral with head, and additional phenolic washer is furnished. 5/16″-40 thread.

Cat. No.		Net Price
105-418	Red	**$0.22**
105-419	Black	**0.22**

HEADLESS TIP JACK

Brass body, nickel plated, threaded ¼″-32. Contact beryllium copper cadmium plated. Ideal for special jack strips or terminal boards. Requires only a single tapped hole for mounting.

Cat. No.	Net Price
105-1	**$0.10**

HEX HEAD TIP JACK

All metal construction, brass nickel plated body with beryllium copper contact. Threaded ¼″-32, supplied with one extruded washer, one flat washer for insulation. Mounts in ⅜″ hole, maximum panel thickness 11/32″.

Cat. No.	Net Price
105-417	**$0.14**

SOLDERLESS PHONE TIP PLUGS

Pin length 13/16″ with ½″ of tip .081″ diameter. Knurled body and nut permit leads to be firmly secured without soldering. Body and nut brass, nickel plated. May be used with all tip jacks listed.

Cat. No.	Net Price
105-15	**$0.16**

Short solderless tip plug same as above except tip is 9/16″ long and .081 diameter throughout its length. May be used with all tip jacks listed except 105-432.

Cat. No.	Net Price
105-415	**$0.15**

PLUGS

Cat. No.	Old No.	Net Price	Illus.	Dwg.	S	P	D	H	G	O	Thread
108-750	108-75	$0.11	E	A	3/8	17/32	.175	1 1/8	....	....	6-32
108-750-2	108-75A	.12	E	A	3/4	17/32	.175	1 1/2	....	....	6-32
108-752-1	108-75BB	.28	D	C	1 3/8	17/32	.175	2 1/8	.215	7/16	....
108-752-2	108-75BR	.28	D	C	1 3/8	17/32	.175	2 1/8	.215	7/16	....
108-753	108-75C	.11	F	B	....	17/32	.175	15/16	....	....	6-32
108-754	108-75D	.08	H	H	7/32	13/32	.155	13/16	....	....	....
108-770	108-77	.24	C	A	5/8	3/4	.300	1 25/32	....	....	1/4-28
108-771	108-77A	.27	B	B	5/8	3/4	.300	1 1/8	....	....	10-32
108-772-1	108-77BB	.39	D	C	1 3/4	3/4	.300	2 25/32	3/8	5/8	....
108-772-2	108-77BR	.39	D	C	1 3/4	3/4	.300	2 25/32	3/8	5/8	....

JACKS

Cat. No.	Old No.	Net Price	Illus.	Dwg.	F	D	S	H	Hole Dia.	Thread
108-740	108-74	.10	G	D	3/8	1/4	17/32	5/8	.166	1/4-28
108-745-1	108-745-1	.20	..	D	7/16	1/4	1/2	21/32	.166	1/4-28
108-745-2	108-745-2	.20	..	D	7/16	1/4	1/2	21/32	.166	1/4-28
108-760	108-76	.26	A	D	9/16	3/8	21/32	1	.277	3/8-24

JOHNSON KNOBS AND DIALS

A distinctive line of matching knobs and dials suitable for the finest electronic equipment. All types are derived from a new basic knob design, the first in years. Knobs have twelve well defined flutes and present an essentially round appearance.

Tough, scratch resistant black phenolic is used for all molded parts. Metal dial scales have an etched satin chrome finish. This contrasts greatly with deeply etched and filled engraving, provides maximum legibility under poor lighting conditions. All types have accurately centered brass inserts for ¼" shafts.

In addition to the items listed, JOHNSON is prepared to supply variations (in production quantities) such as; special shaft sizes, scales, set screws or indicators.

Cat. No.	Illus.	Description	Net Price
		KNOBS	
116-220	1	Knob, 1⅛" dia., black phenolic	**$ .29**
116-260	1	Knob, 1⅝" dia., black phenolic	**.39**
116-280	1	Knob, 2⅜" dia., black phenolic	**.59**
		SKIRTED KNOBS	
116-221	2	Knob, 1⅛" dia. with 1½" black phenolic skirt	**$ .54**
116-261	2	Knob, 1⅝" dia. with 2x1/16" black phenolic skirt	**.67**
116-281	2	Knob, 2⅜" dia. with 3" black phenolic skirt	**.82**
		DIALS	
116-222	3	Dial, 1½" bevelled satin chrome scale with 1⅛" knob. Scales as follows:	
		116-222-1 100-0 over 180 degrees	**$ .56**
		116-222-2 10-0 over 270 degrees	**.56**
		116-222-3 7-1 over 180 degrees	**.56**
		116-222-4 ON-OFF over 60 degrees	**.56**
		116-222-5 Single line	**.56**
116-262	5	Dial, 2¾" satin chrome scale with single line indicator 0-100 over 180 degrees	**$1.40**
116-282	5	Dial, 4" satin chrome scale with single line indicator 0-100 over 180 degrees	**2.00**
		VERNIER DIALS	
116-265	6	Dial, 2¾" satin chrome scale 0-100 over 180 degrees with 3 to 1 friction vernier drive and single line indicator	**$3.00**
116-285	6	Dial, 4" chrome scale 0-100 over 180 degrees with 5 to 1 friction vernier drive and single line indicator	**$3.60**
		SPINNER KNOBS	
		For multi-turn devices such as variable inductors, potentiometers etc.	
116-226	4	Spinner knob 1⅛" black phenolic	**$ .56**
116-266	4	Spinner knob 1⅝" black phenolic	**.67**
116-286	4	Spinner knob 2⅜" black phenolic	**.82**

COUNTER DIAL

A positively calibrated drive for rotary variable inductors and other multi-turn devices. Counter records up to 99 turns. Vernier dial calibrated 0-100 over 360 degrees, making possible accurate return to any pre-determined setting. Built-in dial lock, "spinner knob" and attractive black phenolic escutcheon. Furnished with mounting template for easy installation.

Cat. No.		Net Price
116-208-1	Counter dial with dial lock, escutcheon and 2⅜" spinner knob	**$11.10**
116-208-4	Same as above without dial lock	**9.80**

INSTRUMENT KNOB

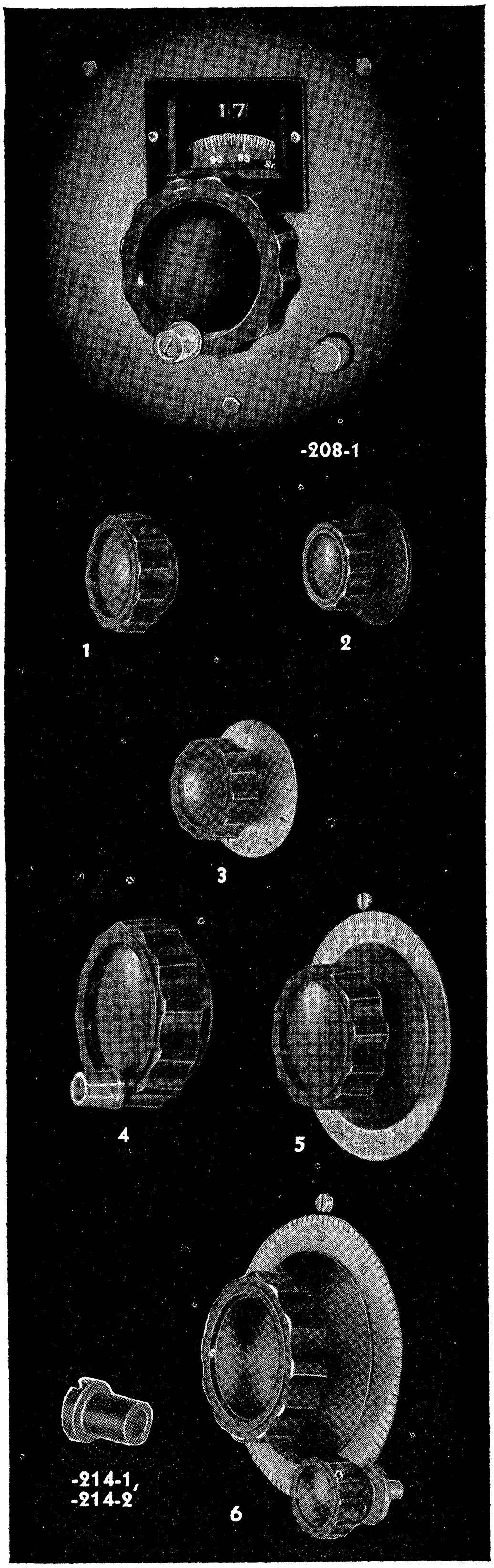
Unique black phenolic knob may be finger operated or mounted so as to project thru panel and screwdriver actuated. Length 13/16", skirt diameter ¾" main body diameter ½". Equipped with set screw.

Cat. No.	Net Price
116-214-1—for ¼" shaft	**$ .33**
116-214-2—for 3/16" shaft	**.33**

ESCUTCHEON PLATE

Attractive black phenolic escutcheon shown on 116-208-1 counter dial. Provides neat "window" for back-of-panel dial plate mounting. One edge of escutcheon suitable for attaching standard ⅜" wide etched name plate. Opening 1¼" wide x ⅞" high. Overall size 2¼" x 1 11/16". Furnished with No. 2 screws.

Cat. No.		Net Price
116-201	Escutcheon plate	**$ .65**



E. F. JOHNSON Company WASECA, MINNESOTA

PILOT LIGHTS

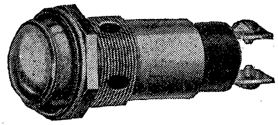
JOHNSON Pilot Lights are built to exacting standards from the finest appropriate materials. The listings on these pages include only those standard units in greatest demand. Many other types and variations from standards including those meeting military specifications are available in production quantities.

Standard finish for jewel holder bezels is polished chrome except for ½" and ⅝" sizes which are finished in nickel. Black oxide finish is frequently supplied to meet special requirements.

In addition to smooth and faceted types, one inch jewels can be furnished with colored, plastic backing discs which impart color to the clear inside frosted jewel only when the lamp is lighted. This prevents external light from giving false indication of illumination. Where required, lettering, numerals or insignia can be printed on the backing disc and arranged to be visible either continuously or only after lamp is lit.

Standard jewel colors are clear, red, green, amber, blue and opal. Be certain to specify jewel color on all orders.

ENCLOSED 1" LIGHT



Underwriters' Laboratories approved. One inch friction type jewel holder, bezel chrome plated brass. Lamp replaceable from front of panel. Mounting hole required 1". Porcelain insulated candelabra screw socket with solder terminals.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel
147-1000	$1.02	2½"	S-6	Faceted
147-1001	1.02	2½"	S-6	Smooth
147-1002	1.07	2½"	S-6	Colored Disc
147-1003	.99	2 3/16"	T 4½, NE45	Faceted
147-1004	.99	2 3/16"	T 4½, NE45	Smooth
147-1005	1.04	2 3/16"	T 4½, NE45	Colored Disc

The following assemblies are identical except socket bases are phenolic and equipped with screw terminals.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel
147-1032	$1.25	2¾"	S-6	Faceted
147-1033	1.25	2¾"	S-6	Smooth
147-1034	1.30	2¾"	S-6	Colored Disc
147-1035	1.23	2 7/16"	T 4½, NE45	Faceted
147-1036	1.23	2 7/16"	T 4½, NE45	Smooth
147-1037	1.28	2 7/16"	T 4½, NE45	Colored Disc

ENCLOSED 1" LIGHTS WITH BAYONET SOCKETS

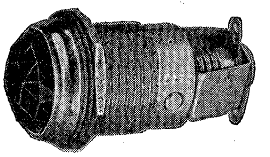
SEE ILLUSTRATION ABOVE

One inch friction type jewel holder, lamp replaceable from front of panel. Hard rubber insulation, screw terminals. All are Underwriters' Laboratories approved except 147-1050, -1051 and -1052 which have single contact bayonet sockets. Mounting hole 1".

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base	Jewel
147-1050	$1.07	2½"	G-6	SC Bayonet	Faceted
147-1051	1.07	2½"	G-6	SC Bayonet	Smooth
147-1052	1.12	2½"	G-6	SC Bayonet	Colored Disc
147-1053	1.20	2½"	G-6	DC Bayonet	Faceted
147-1054	1.20	2½"	G-6	DC Bayonet	Smooth
147-1055	1.30	2½"	G-6	DC Bayonet	Colored Disc
147-1056	1.21	2⅝"	G-6, NE48	DC Bayonet	Faceted
147-1057	1.21	2⅝"	G-6, NE48	DC Bayonet	Smooth
147-1058	1.26	2⅝"	G-6, NE48	DC Bayonet	Colored Disc
147-1076	1.45	2⅝"	G-6, NE48	DC Bayonet*	Faceted
147-1077	1.45	2⅝"	G-6, NE48	DC Bayonet*	Smooth
147-1078	1.50	2⅝"	G-6, NE48	DC Bayonet*	Colored Disc

*Has 30,000 ohm series resistor built in for NE48.

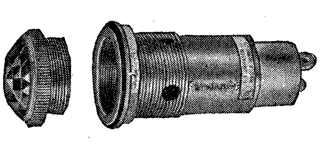
DETACHABLE SOCKET 1" LIGHTS



Economy 1" pilot light. Chrome plated friction jewel holder. Lamp replaceable from front or rear of panel. Socket detachable from panel bushing for applications demanding removable panel. Mounting hole 1". Two solder terminals, both insulated.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base	Jewel
147-800	$.69	1 11/16"	G 3½, T 3¼	Min. Screw	Faceted
147-801	.69	1 11/16"	G 3½, T 3¼	Min. Screw	Smooth
147-802	.71	2 3/16"	T 4½	Cand. Screw	Faceted
147-803	.71	2 3/16"	T 4½	Cand. Screw	Smooth
147-804	.70	1 11/16"	G 3½, T 3¼	Min. Bay.	Faceted
147-805	.70	1 11/16"	G 3½, T 3¼	Min. Bay.	Smooth
147-808	.75	1 11/16"	G 3½, T 3¼	Min. Bay.	Colored Disc

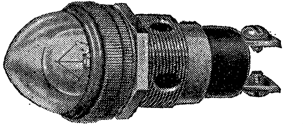
1" THREADED JEWEL HOLDER TYPES



Enclosed 1" light assemblies with candelabra screw bases; phenolic insulated sockets. Underwriters' Laboratories approved. Knurled brass, threaded jewel holder polished chrome plated. Mounting hole size 1".

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel	Terminals
147-1200	$1.26	2 9/16"	S-6	Faceted	Solder
147-1201	1.26	2 9/16"	S-6	Smooth	Solder
147-1202	1.27	2 9/16"	S-6	Colored Disc	Solder
147-1209	1.37	2¾"	S-6	Faceted	Screw
147-1210	1.37	2¾"	S-6	Smooth	Screw
147-1211	1.38	2¾"	S-6	Colored Disc	Screw
147-1212	1.49	2 7/16"	T4½, NE45	Faceted	Screw
147-1213	1.49	2 7/16"	T4½, NE45	Smooth	Screw
147-1214	1.50	2 7/16"	T4½, NE45	Colored Disc	Screw

WIDE ANGLE LENS TYPES



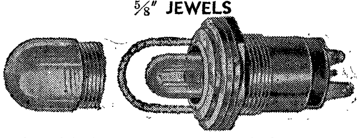
Good visibility from extremely wide angles. Lamp extends well into the internally ribbed, 1⅛" glass bullseye jewel providing diffused light of good intensity. Chrome plated brass bezel; phenolic or hard rubber insulated socket with screw terminals. Mounting hole 1". 147-1600 and 147-1605 Underwriters' Laboratories approved.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base
147-1600	$1.54	2⅛"	S 6	Cand. Screw
147-1604	1.46	1 13/16"	G 6	SC Cand. Bay.
147-1605	1.59	1 13/16"	G 6	DC Cand. Bay.

WIDE ANGLE LUCITE LENS TYPES

For applications utilizing low powered light sources yet requiring good visibility. Designed for neon or low powered incandescent lamps. While jewels are furnished in all standard colors, only red, amber or clear are recommended for neon lamps. Underwriters' Laboratories approved.

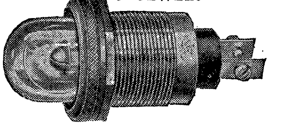
⅝" JEWELS



The three types listed below have ⅝" threaded Lucite jewels, mounting hole required 11/16", length behind panel 1 7/16". Single contact miniature bayonet socket, phenolic socket body, solder terminals.

Cat. No.	Net Price	Bulb Shape	Bulb	
147-1142	$.68	T 3¼	47, 49, 1490	
147-1143	.89	T 3¼	NE-51	Built in 200,000 ohm resistor
147-1144	.89	T 3¼	NE-51	Built in 100,000 ohm resistor

1" JEWELS

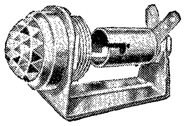


Lucite 1" jewels attached to chrome plated, threaded bezels. Hard rubber or phenolic insulation, screw terminals. Mounting hole required, 1".

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base	Insulation
147-1217	$1.16	1 15/16"	T 4½	Cand. Screw	Phenolic
147-1218	1.10	1½	T 3¼	Min. Bayonet	Phenolic
147-1219	1.46	2 1/16"	T 4½, G6	DC Cand. Bay.	Hard Rubber
147-1220	1.80	2 1/16"	T 4½, G6	DC Cand. Bay.	Hard Rubber has 30,000 ohm resistor for NE48

E. F. JOHNSON Company WASECA, MINNESOTA

1″ OPEN PILOT LIGHTS



One inch friction type jewels removable from front of panel. All parts heavily plated, jewel holder polished chrome. Requires 1″ mounting hole. For use on panels up to ⅜″ thick.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Base	Jewel
147-100	$.60	1½″	G 3½, T 3¼	Min. Screw	Faceted
147-101	.60	1½″	G 3½, T 3¼	Min. Screw	Smooth
147-103	.61	2 1/16″	S-6	Cand. Screw	Faceted
147-104	.61	2 1/16″	S-6	Cand. Screw	Smooth
147-106	.63	1½″	G 3½, T 3¼	Min. Bay.	Faceted
147-107	.63	1½″	G 3½, T 3¼	Min. Bay.	Smooth

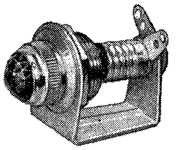
5/8″ OPEN LIGHTS

SEE ILLUSTRATION ABOVE

Horizontal lamp bracket and jewel secured by single mounting nut. Mounting hole required 11/16″ clearance size. For use on panels up to 7/32″ thick. Polished chrome jewel holder.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Base	Jewel
147-700	$.47	1¼″	G 3½	Min. Screw	Faceted
147-701	.47	1¼″	G 3½	Min. Screw	Smooth
147-703	.50	1¼″	G 3½	Min. Bay.	Faceted
147-704	.50	1¼″	G 3½	Min. Bay.	Smooth

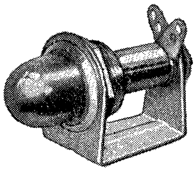
1/2″ THREADED JEWEL OPEN LIGHTS



Jewel removable from front of panel. For use on panels up to 7/32″ thick. Nickel plated jewel holder and bracket. Mounting hole clearance for 11/16″ thread.

Cat. No.	Net Price	Length Behind Panel	Bulb	Base	Jewel
147-400	$.47	1¼″	G 3½, T 3¼	Min. Screw	Faceted
147-401	.47	1¼″	G 3½, T 3¼	Min. Screw	Smooth
147-403	.50	1½″	G 3½, T 3¼	Min. Bay.	Faceted
147-404	.50	1½″	G 3½, T 3¼	Min. Bay.	Smooth

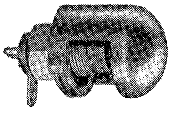
5/8″ LUCITE LENS OPEN LIGHTS



For efficient utilization of low powered light sources. Wide angle visibility; low cost. May be used with neon lamps or incandescent lamps with 3 watts or less dissipation. Mounting hole 11/16″, length behind panel 1¼″.

Cat. No.	Net Price	Bulb	Base	
147-406	$.42	T 3¼	Min. Bay.	
147-407	.66	NE51	Min. Bay.	200,000 resistor built in
147-408	.66	NE51	Min. Bay.	100,000 resistor built in

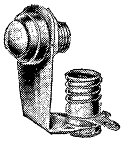
PANEL LIGHT



For front panel illumination. Polished nickel plated hood, easily removable for lamp replacement; can be rotated to any position. Fits ½″ mounting hole. Made for miniature bayonet or screw base T3¼ or G3½ bulbs.

Cat. No.		Net Price
147-330	Miniature Screw Base	$.75
147-329	Miniature Bayonet Base	.90

VERTICAL MOUNTING OPEN LIGHTS



Jewel holder and bracket heavily nickel plated. Brackets and nuts are steel, other metal parts brass.

3/8″ JEWEL

Mounting Hole 9/32″ Clearance.

Cat. No.	Net Price	Length Behind Panel	Bulb	Base	Jewel
147-500	$.25	1¼″	G 3½	Min. Screw	Faceted
147-501	.25	1¼″	G 3½	Min. Screw	Smooth
147-503	.28	1¼″	G 3½	Min. Bay.	Faceted
147-504	.28	1¼″	G 3½	Min. Bay.	Smooth

1/2″ JEWEL

Mounting Hole 7/16″ Clearance.

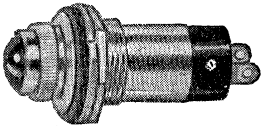
Cat. No.	Net Price	Length Behind Panel	Bulb	Base	Jewel
147-300	.30	1¼″	G 3½	Min. Screw	Faceted
147-301	.30	1¼″	G 3½	Min. Screw	Faceted
147-303	.31	1¼″	S-6	Cand. Screw	Faceted
147-304	.31	1¼″	S-6	Cand. Screw	Smooth
147-306	.33	1″	G 3½	Min. Bay.	Faceted
147-307	.33	1″	G 3½	Min. Bay.	Smooth

5/8″ JEWEL

Mounting Hole 11/16″ Jewel Holder
Polished Chrome Plated.

Cat. No.	Net Price	Length Behind Panel	Bulb	Base	Jewel
147-200	.49	1¼″	G 3½	Min. Screw	Faceted
147-201	.49	1¼″	G 3½	Min. Screw	Smooth
147-203	.50	1¼″	S-6	Cand. Screw	Faceted
147-204	.50	1¼″	S-6	Cand. Screw	Smooth
147-206	.53	1″	G 3½	Min. Bay.	Faceted
147-207	.53	1″	G 3½	Min. Bay.	Smooth

ENCLOSED LIGHTS WITH 1/2″ JEWELS



Threaded jewel holder and bulb removable from front of panel. All brass construction heavily plated. Phenolic insulated miniature bayonet socket equipped with solder terminals. Furnished in two lengths for either T 3¼ or G 3½ bulb. Mounting hole 11/16″ diameter.

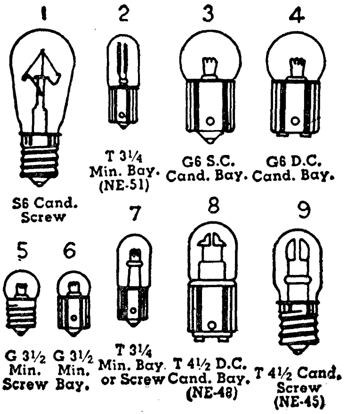
Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel
147-1110	$.76	1 9/16″	T 3¼	Faceted
147-1111	.76	1 9/16″	T 3¼	Smooth
147-1112	.76	1⅜″	G 3½	Faceted
147-1113	.76	1⅜″	G 3½	Smooth

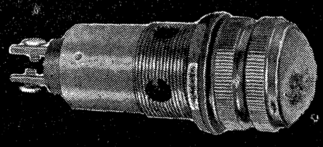
Enclosed lights with ½″ friction type jewel holders. Otherwise identical to those above.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel
147-1122	.86	1 9/16″	T 3¼	Smooth
147-1124	.86	1 9/16″	T 3¼	Faceted

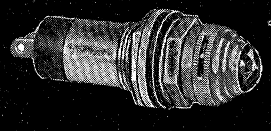
BULB SPECIFICATIONS

Bulbs used on all pilot lights may be identified from these illustrations, but are not included in prices.

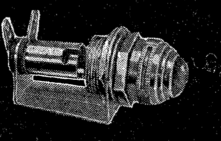




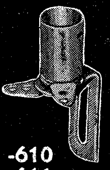
1" Jewel
(Illus. A)



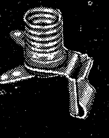
½" Jewel
(Illus. B)



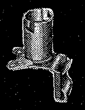
½" Jewel
(Illus. C)



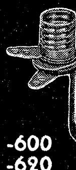
-610
-611



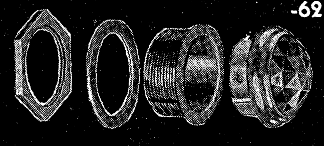
-640
-641



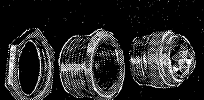
-630
-631



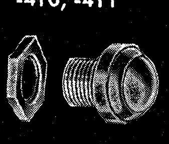
-600
-620
-601
-621



-110, -111, -112



-410, -411



-210, -211
-310, -311
-510, -511

VARIABLE INTENSITY LIGHTS

CAMERA SHUTTER TYPE. Rotation of jewel head thru a small angle will open shutter disc completely illuminating lens uniformly or will close shutter and cut off all light. A pin hole can be placed in one shutter making the jewel faintly visible in the off position. Polished chrome plated jewel holder. Except for the jewel head, these pilot lights are identical to the standard types listed under the heading "Similar Cat. No.".

Cat. No.	Net Price	Illus.	Bulb Shape	Lamp Base	Jewel Dia.	Type	Similar Cat. No.
147-430	**$1.14**	C	G3½, T3¼	Min. Bay.	½"	Faceted	**147-403**
147-431	**1.14**	C	G3½, T3¼	Min. Bay.	½"	Smooth	**147-404**
147-1114	**1.40**	B	T 3¼	Min. Bay.	½"	Faceted	**147-1110**
147-1115	**1.40**	B	T 3¼	Min. Bay.	½"	Smooth	**147-1111**
147-1116	**1.40**	B	G 3½	Min. Bay.	½"	Faceted	**147-1112**
147-1117	**1.40**	B	G 3½	Min. Bay.	½"	Smooth	**147-1113**
147-1504	**2.14**	A	S-6	Cand. Screw	1"	Faceted	**147-1209**
147-1505	**2.14**	A	S-6	Cand. Screw	1"	Smooth	**147-1210**
147-1506	**2.14**	A	S-6	Cand. Screw	1"	Colored Disc	**147-1211**
147-1508	**1.58**	A	G3½, T3¼	Min. Screw	1"	Faceted	**147-800***
147-1509	**1.58**	A	D3½, T3¼	Min. Screw	1"	Smooth	**147-801***
147-1510	**1.58**	A	G3½, T3¼	Min. Screw	1"	Colored Disc	....
147-1511	**1.59**	A	G3½, T3¼	Min. Bay.	1"	Faceted	**147-804***
147-1512	**1.59**	A	G3½, T3¼	Min. Bay.	1"	Smooth	**147-805***
147-1513	**1.59**	A	G3½, T3¼	Min. Bay.	1"	Colored Disc	....
147-1514	**1.59**	A	S-6	Cand. Screw	1"	Faceted	**147-802***
147-1515	**1.59**	A	S-6	Cand. Screw	1"	Smooth	**147-803***
147-1516	**1.59**	A	S-6	Cand. Screw	1"	Colored Disc	....
147-1518	**2.16**	A	G-6	D. C. Bay.	1"	Faceted	**147-1053***
147-1519	**2.16**	A	G-6	D. C. Bay.	1"	Smooth	**147-1054***
147-1520	**2.16**	A	G-6	D. C. Bay.	1"	Colored Disc	**147-1055***

***Shutter types have threaded jewels instead of friction holders.**

POLARIZED TYPE VARIABLE INTENSITY LIGHTS

Light passes thru two polarized discs. Rotation of jewel holder thru 90 degrees varies light from full intensity to near cut-off. Various graduations of light intensity may be obtained by varying the angle of rotation. Jewels all ½". See similar catalog numbers for further data.

Cat. No.	Net Price	Illus.	Bulb Shape	Base	Jewel Dia.	Type	Similar Cat. No.
147-420	**$1.14**	C	T3¼, G3½	Min. Bay.	½"	Faceted	**147-403**
147-421	**1.14**	C	T3¼, G3½	Min. Bay.	½"	Smooth	**147-404**
147-1118	**1.40**	B	T3¼	Min. Bay.	½"	Faceted	**147-1110**
147-1119	**1.40**	B	T3¼	Min. Bay.	½"	Smooth	**147-1111**
147-1120	**1.40**	B	G3½	Min. Bay.	½"	Faceted	**147-1112**
147-1121	**1.40**	B	G3½	Min. Bay.	½"	Smooth	**147-1113**

JEWEL ASSEMBLIES

Colors, all types: Red, Green, Amber, Blue, Opal, Clear.

1" JEWEL

Polished chrome bezel with panel bushing to fit 1" hole, fiber washer and nut.

Cat. No.		Net Price
147-110	Faceted Jewel	**$.43**
147-111	Smooth Jewel	**.43**
147-112	Colored Disc	**.48**

⅝" JEWEL

Polished chrome holder fits $^{11}/_{16}$" mounting hole. Furnished with nut.

147-210	Faceted Jewel	**.34**
147-211	Smooth Jewel	**.34**

½" JEWEL

Nickel plated holder and nut, fits $^{7}/_{16}$" mounting hole.

147-310	Faceted Jewel	**.18**
147-311	Smooth Jewel	**.18**

⅜" JEWEL

Nickel plated holder and nut, fits $^{9}/_{32}$" mounting hole.

147-510	Faceted Jewel	**.13**
147-511	Smooth Jewel	**.13**

½" JEWEL

Nickel plated internally threaded panel bushing fits $^{11}/_{16}$" hole. Furnished with nut.

147-410	Faceted Jewel	**.34**
147-411	Smooth Jewel	**.34**

DIAL LIGHT BRACKETS

Both terminals insulated on all types. Many other styles and combinations including wire leads, can be furnished from available tools.

Cat. No.	Socket	Net Price
147-600,	Min. Screw (Bracket down)	**$.10**
147-601,	Min. Screw (Bracket up)....	**.10**
147-610,	Min. Bay. (Bracket down)...	**.12**
147-611,	Min. Bay. (Bracket up)......	**.12**
147-620,	Cand. Screw (Bracket down).	**11**
147-621,	Cand. Screw (Bracket up)...	**.11**
147-630,	Min. Bay. (Bracket down)...	**.14**
147-631,	Min. Bay. (Bracket up)......	**.14**
147-640,	Min. Screw (Bracket down)..	**.12**
147-641,	Min. Screw (Bracket up)....	**.12**

In view of the existing material situation, certain changes in materials may be made from time to time. These changes will not affect the suitability of parts or equipment.

E. F. JOHNSON Company WASECA, MINNESOTA

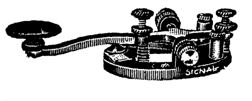
SIGNAL ANNOUNCEMENT

The E. F. Johnson Company has purchased the inventory, tools, dies and rights to manufacture the Signal line of telegraph instruments and keys. For many years, Signal instruments have been well known among professional telegraphers and radio amateurs for their quality workmanship and rugged dependability. Their manufacture by Johnson will provide a valuable addition to the Speed-X line of keys described elsewhere in the Johnson catalog pages.

Signal items with newly assigned Johnson catalog numbers are described and illustrated below for reference purposes. Where there are existing Speed-X items, the comparable Signal item may or may not be continued and any item may be modified to adapt it to our manufacturing methods.

The E. F. Johnson Company is now able to offer the most complete line of radio practice sets, telegraph learner sets, hand and semi-automatic keys, sounders and relays available from any source.

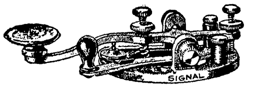
Standard Key



A key suited to high speed work. Spring tension, contact spacing and bearings fully adjustable. Base and binding posts are brass with instrument lacquer finish. Platinor contacts .072" diameter. Net weight 8 oz., shipping weight 1 lb.

Johnson Cat. No.	Signal Number
114-100	R48

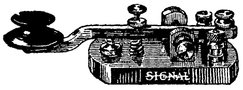
Telegraph Key



A professional telegrapher's key equipped with circuit closing switch. Base, binding posts and switch lever are brass with instrument lacquer finish. Key lever gun metal finish. Platinor contacts .072" diameter. Net weight 8 oz., shipping weight 1 lb.

Johnson Cat. No.	Signal Number
114-100-3	M-100

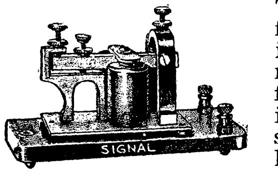
Heavy Duty Key



This standard key is designed to carry heavy currents. All brass construction with lacquer finish. Furnished with 3/16", 1/4" or 3/8" coin silver contacts. Navy type key knob. Net weight 12 oz., shipping weight 2 lbs.

Johnson Cat. No.	Signal Number	
114-62	R-62	3/16" contacts
114-63	R-63	1/4" contacts
114-64	R-64	3/8" contacts

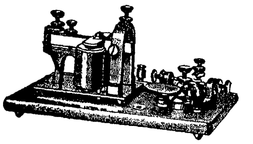
Sounder



Telegraph sounder designed for instant response. Aluminum sounder bar for clear resonant tone. Cast iron bar frame with black enamel finish. Bridge and adjustment screws brass with instrument lacquer finish. Black lacquered steel sounder plate. Instrument mounted on a mahogany finished wood base equipped with brass binding posts and rubber feet. Net weight 2 lbs., shipping weight 3 lbs.

Johnson Cat. No.	Signal Number	
114-112	112-S	4 ohms resistance
114-113	113-S	20 ohms resistance

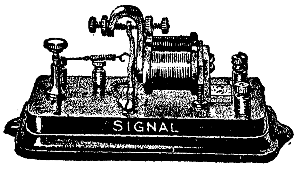
Learner Set



Telegraph practice set for two way operation. Bar frame cast iron black enameled. Bridge and adjustment screws brass with instrument lacquered finish, sounding bar aluminum. Black lacquered steel sounder plate. Key has cast iron black enamel base, key lever gunmetal finish with .072" platinor contacts, brass adjusting screws. Sounder and key mounted on mahogany finished wood base with brass binding posts and rubber feet. Instruction manual packed with each instrument. Net weight 2 lbs., shipping weight 3 lbs.

Johnson Cat. No.	Signal Number	
114-110	M-110	4 ohms resistance
114-111	M-111	20 ohms resistance

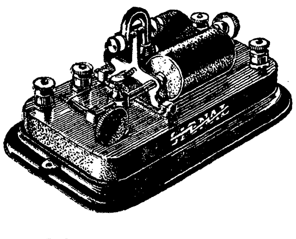
Pony Relay



All the metal parts on this pony relay are brass with lacquer finish excepting armature which is polished and plated steel. Magnets are non-adjustable. Mounted on a mahogany finished wood sub base and cast iron black enamel base. Net weight 1¾ lbs., shipping weight 3 lbs.

Johnson Cat. No.	Signal Number	
114-104	M-104	4 ohms resistance
114-105	M-105	20 ohms resistance
114-106	M-106	50 ohms resistance
114-107	M-107	75 ohms resistance

Commercial Relay



The commercial relay is correctly designed and constructed for long continuous commercial service. Heel iron and armature are made of Norway iron. Has rubber covered adjustable coils. Mounted on mahogany finished wood sub base and cast iron black enamel base. Net weight 2 lbs. 14 ozs., shipping weight 4 lbs.

Johnson Cat. No.	Signal Number	
114-916	916	150 ohms resistance
114-917	917	250 ohms resistance

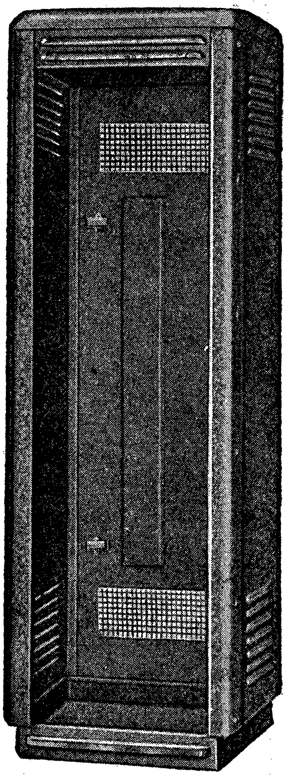
Formerly manufactured by:
Signal Electric Manufacturing Company
Menominee, Michigan

Address all correspondence:
E. F. Johnson Company
Waseca, Minnesota

SINCE 1921 insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA DE LUXE TRANSMITTER RACKS



New modern design, streamlined transmiter and public address racks. Removable vertical corner mouldings are rounded and completely cover panel edges and mounting screws. Chrome trim. Rack is made of $\frac{1}{16}$″ cold rolled steel. Panel mounting angles drilled for RMA, Amateur or Western Electric type panels. Screen ventilators on rear door and louvres afford ample ventilation. Easily assembled. Supplied in Marine gray ripple finish. Black ripple finish furnished only on specification.

No. 3865

Overall Size....43¼″x22″x18″
Panel Space ....36¾″x19″
Interior Width..............17⅝″
Interior Depth...............16¾″
Shipping Weight........110 lbs.

Dealer Cost $43.38

No. 3866

Overall Size ....67¾″x22″x18″
Panel Space ....61¼″x19″
Interior Width..............17⅝″
Interior Depth...............16¾″
Shipping Weight........162 lbs.

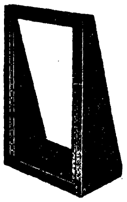
Dealer Cost $53.95

No. 3867

Overall Size ....83½″x22″x18″
Panel Space ....77″x19″
Interior Width..............17⅝″
Interior Depth ....16¾″
Shipping Weight........190 lbs.

Dealer Cost $64.35

ICA TABLE MOUNT RELAY RACKS



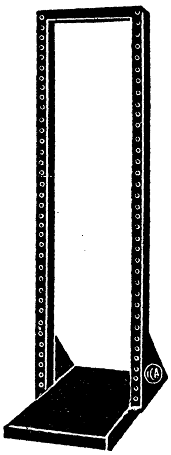
Sturdily constructed heavy duty table rack with one piece base. Accurately drilled mounting holes universally spaced for RMA, Western Electric or Amateur panels. Finished in black ripple. Supplied "KNOCKED DOWN" with all necessary hardware.

No.	W.	H.	D.	Panel Space	Dlr. Cost
3910	21″	x 25″	x 12″	21″ x 19″	$6.60
3911	21″	x 32″	x 12″	28″ x 19″	8.25

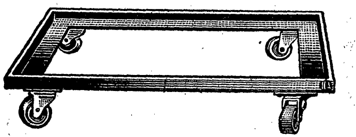
OPEN FACE RELAY RACK

For standard 19″ Rack Panels. Black Ripple Finish. Rigidity assured with top cross-brace and vertical sections strongly welded. Designed for P.A. units, various types of transmitters, etc. Sturdily made of ⅛″ thick steel. Base depth: 22″. Accurately drilled mounting holes.

No.	Size Overall	Panel Space	Dlr. Cost
3912	73½″ x 20″ x 20⅞″	71¾″	$22.36
3913	38¼″ x 20″ x 18⅜″	36¾″	19.14



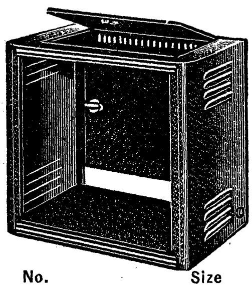
ICA RACK DOLLY



Especially designed to simplify the moving of heavy or large racks or cabinets of any type. Constructed of heavy gauge steel, all-welded with reinforcing corner gussets. The Insuline rack dolly measures 21″ x 22″. Accommodates a wide range of cabinet sizes. Has sturdy heavy duty casters. Supplied in black wrinkle finish.

No. 4036 ....Dealer Cost $9.60

ICA MULTI-USE METAL CABINETS

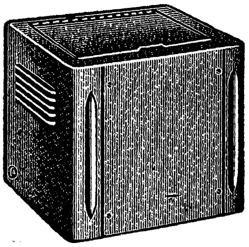


An ideal unit for public address systems, transmitters, receivers, test equipment, etc. Has rounded corners on front of Cabinet. Trimmed with handsome chrome trim moulding. Equipped with hinge doors, and nickel-plated snap locks. Completely assembled, ready for use. Finished in Black or Marine Gray Ripple Enamel. Black will be supplied unless Gray is specified. Accommodates RMA, W.E., or Amateur panels.

No.	Size	Panel Space	Dealer Cost
*3880	10½″ x 21″ x 15″	8¾″ x 19″	$12.00
*3885	12¼″ x 21″ x 15″	10½″ x 19″	13.50
*3881	14″ x 21″ x 15″	12¼″ x 19″	14.58
*3886	15¾″ x 21″ x 15″	14″ x 19″	16.20
†3882	19¼″ x 21″ x 15″	17½″ x 19″	19.16
†*3883	28″ x 21″ x 15″	26¼″ x 19″	22.49
†*3884	36¾″ x 21″ x 15″	35″ x 19″	25.00

*Door on top. †Doors on top and rear. †*Door on rear panel.

ICA DE LUXE HINGED STEEL CABINETS



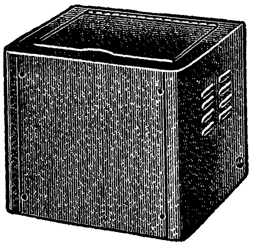
The cabinets have rounded corners with specially designed Chrome plated "Air-Gate" ventilators on sides; and vertical Chrome Plated Trim moulding on front. Modern grille type ventilators are provided on the back panels which also have an opening on the bottom to allow for leads, cable connections, etc.

Bottoms have 4 embossed feet.

Finished in a beautiful Marine Gray Ripple Enamel.

No.	H.	W.	D.	Panel Size	Dealer Cost
3860	8″	x 10″	x 8″	8″ x 8″	$ 4.15
3861	8″	x 12″	x 8″	8″ x 10′	4.67
3862	8″	x 14″	x 8″	8″ x 12‸	4.95
3863	12″	x 20″	x 12″	12″ x 18″	10.66

ICA STANDARD HINGED STEEL CABINETS



Designed in the same style and appearance as the De Luxe cabinets shown above except that the Chrome Trim is eliminated. Sides and backs have ventilating louvres. Backs have opening for cable connections, etc. Top panel hangs on full sized piano type hinge. Bottoms have 4 embossed feet. Finished in Marine Gray Ripple Enamel.

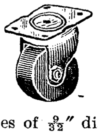
No.	H.	W.	D.	Panel Size	Dealer Cost
3925	8″	x 10″	x 8″	8″ x 8″	$3.60
3926	8″	x 12″	x 8″	8″ x 10″	3.90
3927	8″	x 14″	x 8″	8″ x 12″	4.58
3928	12″	x 20″	x 12″	12″ x 18″	9.96

CHASSIS FOR ICA CABINETS

No.	Size	For Cabinet Numbers	Dlr. Cost
4024	7″ x 7″ x 2″	3860 and 3925	$ .90
4004	7″ x 9″ x 2″	3861 and 3926	1.08
4005	7″ x 11″ x 2″	3862 and 3927	1.12
4033	10″ x 17″ x 3″	3863 and 3928	1.63

SEE FOLLOWING PAGES FOR COMPLETE LINE OF RACK PANELS, METER PANELS, RACK SHELVES, MOUNTING BRACKETS, ETC.

INSULINE CASTERS



Heavy gauge steel frames; durable composition rollers (2″ diam. x 1″ w.) on ball bearing swivel that adds mobility to any cabinet, rack, etc. The mounting plate measuring 1⅞″ x 2⅝″ has 4 holes of $\frac{9}{32}$″ diam.; mounting hole centers 1″ x 2⅛″. Overall height: 2½″. Rated load: 500 lbs. Shipping weight: 7 oz.

No. 3209 ....Dealer Cost $0.90

Net

SINCE 1921

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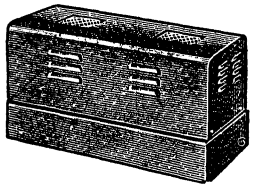
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA STANDARD AMPLIFIER FOUNDATION UNITS

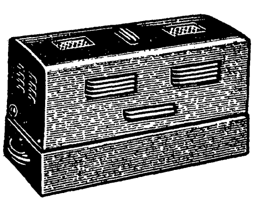


Top covers have rounded corners. The front, sides and back are equipped with louvre ventilators. The tops have raised screen openings for additional ventilation.

Finished in beautiful Marine Gray Ripple Enamel. Height of Chassis 3″.

No.	Over-all Size	Dealer Cost	Bottom Plate No.	Dealer Cost
3980	5½″ x 10″ x 9″	$2.70	1677	$ .50
3981	8″ x 12″ x 9″	4.00	1679	.85
3982	7″ x 17″ x 9″	4.33	1681	.85
3983	10″ x 14″ x 9″	4.66	1683	.92
3984	10″ x 17″ x 9″	5.00	1685	1.07

ICA DE LUXE AMPLIFIER FOUNDATION CHASSIS

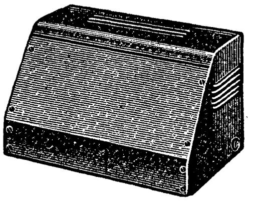


Top covers have rounded corners and fronts are embellished with the newly created Chrome plated "Air-Gate" Ventilators. Additional ventilation is obtained through the raised screen openings on the top as well as louvres on both sides and back.

Have beautiful Chrome mouldings and Chrome handles. Finished in Marine Gray Ripple Enamel. Height of Chassis 3″.

No.	Over-all Size	Dealer Cost	Bottom Plate No.	Dealer Cost
3971	5½″ x 10″ x 9″	$3.90	1677	$ .50
3972	8″ x 12″ x 9″	5.00	1679	.85
3973	7″ x 17″ x 9″	5.50	1681	.85
3974	10″ x 14″ x 9″	5.67	1683	.92
3975	10″ x 17″ x 9″	6.33	1685	1.07

ICA DE LUXE SLOPING PANEL CABINETS



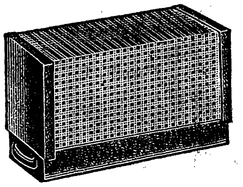
The top corners are rounded and trimmed with an attractive striped chrome trim. The sides of the cabinets have the beautiful "Air-Gate" Chrome ventilators.

The front panel is removable so that the chassis can be attached to it and used as one unit.

Beautifully finished in Marine Gray Ripple Enamel.

No.	H.	W.	D.	Dealer Cost
3990	8″ x	8″ x	8″	$4.88
3991	8″ x	10″ x	8″	5.75
3992	8″ x	14″ x	8″	7.00
3993	12″ x	18″ x	12″	9.41

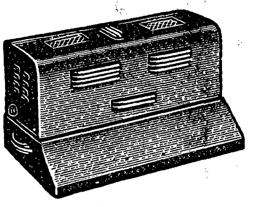
ICA PERFORATED AMPLIFIER FOUNDATION CHASSIS



Features a perforated metal cover that provides the maximum ventilation. Includes streamlined chrome handles. Finished in marine gray ripple enamel. Height of chassis: 3″.

No.	Overall Size	Dealer Cost
3965	5½″ x 10″ x 9″	$3.90
3966	8″ x 12″ x 9″	5.00
3967	7″ x 17″ x 9″	5.50
3968	10″ x 14″ x 9″	5.67
3969	10″ x 17″ x 9″	6.33

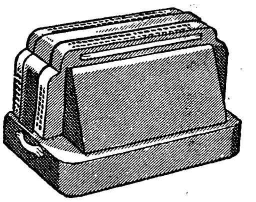
ICA DE LUXE SLOPING CHASSIS AMPLIFIER UNITS



Chassis are sloped and are equipped with beautiful chrome trimmed handles. Slope provides ample space for mounting instruments. The top covers have beautiful Chrome Plated "Air-Gate" Ventilators with striped chrome trim. Supplied with ventilating louvres on sides and back. Have raised rectangular screen opening on the tops, embellished with chrome moulding. Marine Gray Ripple finish. Chassis Ht. 3½″; Slope 4″.

No.	Over-all Size	Chassis.. Bottom	Dealer Cost	Bottom Plate No.	Dealer Cost
3962	7″ x 17″ x 9½″	10″ x 17″	$7.55	1681	$ .85
3963	10″ x 14″ x 9½″	13″ x 14″	8.00	1683	.92
3964	10″ x 17″ x 9½″	13″ x 17″	8.30	1685	1.07

ICA "SUPER" STREAMLINED SLOPING-FRONT AMPLIFIER CHASSIS

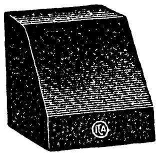


New, modern design amplifier chassis. Front panel sloped with streamlined top cover. Removable front panel Marine Gray Ripple finish with Chrome trim. Bottom plates supplied. Top cover 6½″ high.

No.	Chassis Size	Dlr. Cost
3930	10″ x 12″ x 3″	$7.25
3931	10″ x 17″ x 3″	8.33
3932	13″ x 17″ x 3″	9.58

ICA SLOPING PANEL CABINETS

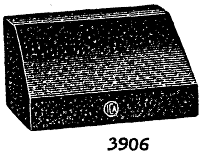
Small—Compact



3905

New streamlined cabinets, rugged, small and compact, have various uses such as speaker cabinets, oscillator cases, input stages, small receivers, teletalk systems, monitors, etc.

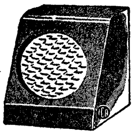
Beautifully designed, with rounded corners and finished in marine gray ripple.



3906

No.	W.	H.	D.	Dlr. Cost
3905	4 3/16″ x	4½″ x	4¼″	$1.00
3906	7½″ x	4½″ x	4¼″	1.67

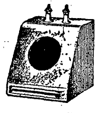
ICA MIDGET SPEAKER CASES



Especially designed for the smaller type speakers. Beautifully finished in gray ripple with attractively embossed grille. Speaker mounts on special removable internal chassis, punched for proper speaker opening. This unit fastens to side of cabinet with no visible screws to mar cabinet front. Facilitates ease of assembly. Measures 4¼″ d. x 4 3/16″ w. x 4½″ l.

No.	Description	Hole Dia.	Dlr. Cost
3986	For 2″ speakers	2 3/16″	$1.50
3987	For 3″ speakers	2 13/16″	1.50

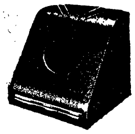
ICA DE LUXE METER CASES



Finished in Marine Gray Ripple Enamel with rounded tops and trimmed with beautiful Chrome band. Available for 2″ or 3″ meters. No. 3999 is equipped with stand-off insulators.

No.	D.	W.	H.	Meter Hole	Dealer Cost
3995	4¼″ x	4 3/16″ x	4½″	2 3/16″	$ .95
3996	4¼″ x	4 3/16″ x	4½″	2 13/16″	.95
3999	4¼″ x	4 3/16″ x	4½″	2 13/16″	1.45

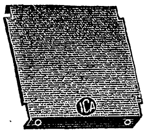
ICA STREAMLINED METER CASES



Modern streamlined cases, with raised "futura" design on top of cabinet. Finished in Marine Gray Ripple Enamel and trimmed with chrome band.

No.	D.	W.	H.	Meter Hole	Dealer Cost
3997	4¼″ x	4 3/16″ x	4½″	2 3/16″	$1.98
3998	4¼″ x	4 3/16″ x	4½″	2 13/16″	1.98

ICA CABINET REAR COVERS

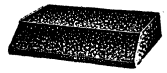


Rear cabinet covers designed specifically for the ICA cases indicated. Made of heavy duty steel in grey wrinkle finish.

No. 4155—For ICA cabinets Nos. 3905, 3995, 3996, 3986, 3987. Size: 4½″x4 3/16″. **Dealer Cost $ .30**

No. 4156—For ICA cabinet No. 3906. Size: 4½″x7½″ **Dealer Cost $ .42**

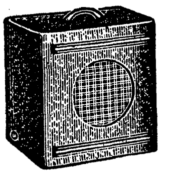
ICA SLOPING FRONT CHASSIS



Has a sloping front for mounting instruments. Has the effect of a beautiful open cabinet receiver, or amplifier unit, when used without top covers. Heavy Duty Steel, finished in Black Ripple Enamel.

No.	Top of Base	Bottom of Base	Hgt.	Size of Slope	Dlr. Cost
3320	7x17″	10x17″	3½″	4″	$2.53
3321	10x14″	13x14″	3½″	4″	2.83
3322	10x17″	13x17″	3½″	4″	3.27

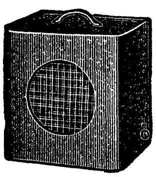
ICA DE LUXE SPEAKER CABINETS



Features rounded corners; neatly chrome trimmed front; equipped with chrome handle. Steel grille. Marine Gray Ripple finish

No.	Size	Hole Size	Speaker Size	Dlr. Cost
3935	10″ x 10″ x 6″	4¾″	6″	$3.92
3936	12″ x 12″ x 7″	6½″	8″	5.00
3937	14″ x 14″ x 8″	9″	10″	6.13
3938	16″ x 16″ x 8″	11″	12″	7.50

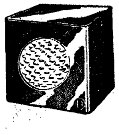
ICA STANDARD SPEAKER CABINETS



Finished in Black Ripple Enamel with plain black steel handles to match.

No.	Size	Hole Size	Speaker Size	Dlr. Cost
3942	10″ x 10″ x 6″	4¾″	6″	$3.42
3943	12″ x 12″ x 7″	6½″	8″	4.33
3944	14″ x 14″ x 8″	9″	10″	5.58
3945	16″ x 16″ x 8″	11″	12″	7.33

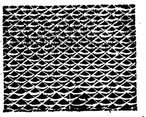
COMPOSITE SPEAKER CABINET



A neatly designed composite unit to house either a 4″ or 5″ speaker. Measures 7″ w. x 4″ d. x 7″ h. Gray ripple finished steel with embossed grille. Removable back plate has key 'ways for easy hanging.

No. 3988 .... Dealer Cost $3.33

ALUMINUM MESH GRILLE

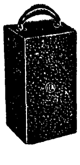


Expanded aluminum grille for use on custom built radios, phonographs, P.A. speakers, speaker cases, etc., results in unmuffled reproduction of sound. Permanent non-fading, non-tarnishing, gold finish. Non-dust catching. May be easily cut to desired size.

No.	Size	Dealer Cost
3947	12″ x 18″	$2.35
3948	18″ x 24″	4.65
3949	24″ x 36″	9.35

Sold in lots of 6 each size.

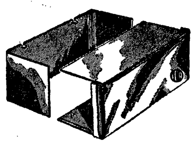
ICA PORTABLE STEEL CABINETS



Ideal for housing oscillators, transceivers, test equipment, etc. Both front and back panels are removable and are held with self-tapping screws which are supplied. Equipped with leather handle. Finished in black ripple.

		Dlr. Cost
No. 3850	Size 12″ x 7¾″ x 7″	$2.90
No. 3851	Size 15″ x 7¾″ x 7″	3.63

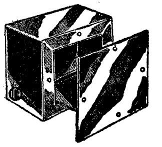
CHANNEL-LOCK ALUMINUM BOXES



Latest two-piece box with special "channel-lock" feature for snug and firm fit. Makes all mounting space easily accessible. Ideal for oscillators, amplifiers, etc. Easily assembled: merely tighten the two set screws provided. These sturdy boxes made of heavy aluminum in black wrinkle, gray hammertone and natural aluminum finish.

Natural Aluminum No.	Dealer Cost	Black Wrinkle No.	Gray Ham. No.	Dealer Cost	Size, Inches W.	L.	H.
29200	$ .72	29300	29400	$ .83	4	x 2⅛	x 1⅝
29205	1.00	29305	29405	1.12	5	x 2¼	x 2¼
29210	1.10	29310	29410	1.23	5¼	x 3	x 2⅛
29215	.93	29315	29415	1.05	3	x 4	x 5
29220	1.03	29320	29420	1.20	6	x 4	x 5
29225	2.00	29325	29425	2.17	10	x 4	x 2½

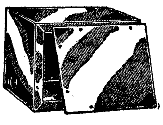
UTILITY CABINETS with built-in chassis



A multi-use small cabinet. Ideal for minor radio-television assemblies. The chassis is welded to front panel, making it a time-saving, convenient unit. Front and rear panels easily removable. Of sturdy steel in black ripple finish.

No.	Cabinet Size W. D. H.	Chassis Size W. D. H.	Dealer Cost
3816	4″ x 2″ x 4″	2⅞″ x 1⅞″ x 1″	$1.05
3817	4″ x 3″ x 5″	2⅞″ x 2⅞″ x 1″	1.15
3818	5″ x 3″ x 4″	3⅞″ x 2⅞″ x 1¼″	1.15
3819	4″ x 5″ x 6″	2⅞″ x 4⅞″ x 1¾″	1.43
3821	6″ x 5″ x 4″	4⅞″ x 4⅞″ x 1¼″	1.43
3823	6″ x 6″ x 6″	4⅞″ x 5⅞″ x 1¾″	1.50

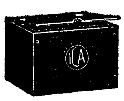
ALUMINUM . . . STEEL CABINETS



Popular utility cabinets now available in aluminum in gray hammertone and natural finish. Excellent for amplifiers, monitors, input stages, meters, transceivers, etc. Removable front and back covers may be fastened to cabinet with self-tapping screws provided. Also supplied in steel with black ripple finish.

Aluminum Natural	Dealer Cost	Aluminum Gray Hammertone	Dealer Cost	Size W.	L.	H.	STEEL Black Ripple	Dealer Cost
29840	$1.00	29810	$1.13	4″ x	4″ x	2″	3810	$ .85
29841	1.13	29811	1.30	4″ x	5″ x	3″	3811	.95
29842	1.47	29812	1.63	4″ x	6″ x	5″	3812	1.20
29843	1.53	29800	1.72	6″ x	6″ x	6″	3800	1.30
29844	2.20	29801	2.50	9″ x	6″ x	5″	3801	1.87
				10″ x	7″ x	8″	3802	2.30
				10″ x	10″ x	8″	3803	2.90
				12″ x	8″ x	11″	3804	3.60

ICA HINGED COVER CABINETS

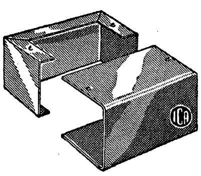


Supplied in knocked-down form for easy handling. Easily assembled.

Finished in Black Ripple Enamel. See listing of chassis bases to fit above cabinet.

No.	W.	D.	H.	Dealer Cost
3825	9″ x	5″ x	6″	$3.30
3826	10″ x	8″ x	7″	3.92
3828	12″ x	8″ x	7″	4.46
3829	12″ x	11″ x	8″	5.30
3830	14″ x	8″ x	7″	5.30
3831	18″ x	12″ x	9″	6.63

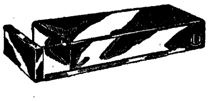
"FLEXI-MOUNT" ALUMINUM CASES



A two-piece case designed for maximum accessibility. Solves many problems demanding installation of numerous elements in limited space while assuring necessary shielding. Has wide application. Made of heavy aluminum—finished in gray hammertone or natural aluminum.

Cat. No. Gray H.	Dealer Cost	Cat. No. Natural	Dealer Cost	Dimensions W.	L.	H.
29435	$ .70	29335	$ .63	2⅛ x	2¾	x 1⅝
29436	.70	29336	.63	2⅛ x	3¼	x 1⅝
29437	.73	29337	.67	2⅛ x	4	x 1⅝
29438	.97	29338	.87	2¼ x	4	x 2¼
29439	1.00	29339	.93	2¼ x	5	x 2¼
29441	1.07	29341	1.00	3 x	5¼	x 2⅛
29440	1.10	29340	1.03	4 x	5	x 3
29442	1.37	29342	1.27	5 x	6	x 4
29443	1.53	29343	1.40	5 x	7	x 3
29447	3.83	29347	3.40	5 x	17	x 4
29444	2.23	29344	2.10	6 x	8	x 3½
29445	2.75	29345	2.30	6 x	10	x 3½
29446	3.27	29346	2.93	7 x	12	x 4

SLIP COVER ALUMINUM BOXES



Suitable for a variety of electronic device housing needs. Slide cover permits easy accessibility to mounted parts; offers shielding and dust-proof protection. May be used for television strips; terminal barriers, special equipment, amplifier units, etc. Heavy aluminum in natural finish or gray hammertone.

Gray Hammertone No.	Dealer Cost	Natural Finish No.	Dealer Cost	Size W.	L.	H.
29130	$3.62	29100	$3.45	3⅛″ x	13″ x	2⅝″
29135	3.92	29105	3.75	5⅛″ x	13″ x	2⅝″
29140	3.75	29110	3.58	3″ x	17″ x	2⅝″

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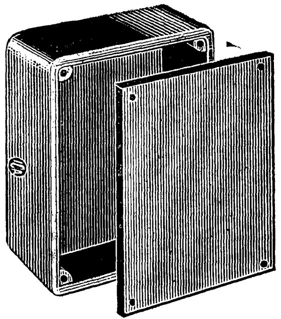
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

NEW ICA BAKELITE INSTRUMENT CASES

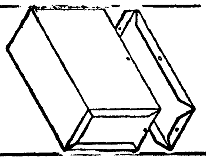


Solid molded bakelite one-piece case for a variety of electronic housings. Light in weight but durable. Has tapped corner holes and brass inserts with 4-36 threading for flush panel mounting. Offers shielding and dust proof protection for small amplifiers, oscillators, etc. Complete with ⅛" bakelite panel, drilled for mounting.

No. 8201—6¼" x 3¾" x 2" h. Dealer Cost $1.65

No. 8202—6¾" x 5¼" x 2⅜" h. Dealer Cost $2.19

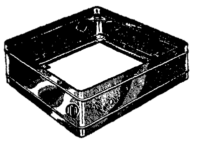
CONTROL . . . SWITCH CASE



Strongly welded steel case; removable cover. Suitable for control or switch box; enclosing small assemblies, etc. Includes cover screws. Gray hammertone finish. Outside dimensions: 3¼"x5¼"x2⅛".

No. 3797 .... Dealer Cost $1.00

RECORD CHANGER BASES



Sturdy steel base in beautiful brown hammertone finish with protective, non-marring cork rubber cushion. Especially designed for the better known record changers. Grommeted holes provided for AC lead on rear apron; also punched for easy addition of Insuline No. 2385 phono plug-socket.

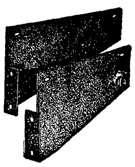
No.	Description	Dealer Cost
3308	For WEBSTER No. 100 Series changer models and similar sizes	$4.17
3308-BP	Steel bottom plate in matching finish; rubber bumpers and mounting screws complete, for above base	1.25
3309	For WEBSTER No. 106 Series changer models and similar sizes	4.17
3309-BP	Steel Bottom Plate in matching finish; rubber bumpers and mounting screws complete, for above base	1.25

GARRARD CHANGER BASE

Made for the new Garrard Model RC-80 3-way record changer. This steel base is finished in brown hammertone with protective cushions. Includes grommeted holes for AC lead. Complete with bottom plate.

No. 3315 .... Dealer Cost $6.33

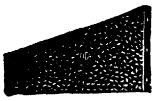
ICA CHASSIS MOUNTING BRACKETS



Designed for rack panels and chassis where additional strength is required for heavier units such as power supplies, etc. Heavy gauge steel, black ripple finish.

No.	Front	Back	Dealer Cost
4092	6½" Ht. x 8" D. x	4" Ht.	$ .85
4077	6½" Ht. x 10" D. x	3" Ht.	1.13
4093	6½" Ht. x 11" D. x	4" Ht.	1.20
4079	8½" Ht. x 10" D. x	4" Ht.	1.80
4081	6½" Ht. x 12" D. x	3" Ht.	1.50
4094	6½" Ht. x 13" D. x	4" Ht.	1.35
4083	8½" Ht. x 13" D. x	4" Ht.	1.92

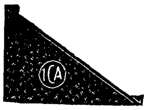
ICA CHASSIS MOUNTING BRACKETS



Made to fit on 17" relay rack chassis. Panels must be at least 7" high. Black ripple finish.

No.		Dlr. Cost
3955—For 8" base	Per Pair	$ .85
3958—For 10" base	Per Pair	1.02
3956—For 11" base	Per Pair	1.20
3957—For 13" base	Per Pair	1.70

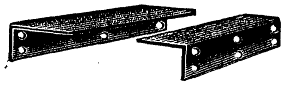
ICA RELAY RACK BRACKETS



Black Ripple Finish. Used to reinforce racks and for mounting of panels, shelves, chassis, etc.

No.		Dlr. Cost
3950— 5" Base Brackets	Per Pair	$ .80
3951— 8" Base Brackets	Per Pair	.92
3952—11" Base Brackets	Per Pair	1.10

CHASSIS BRACING ANGLES

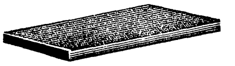


For supporting chassis bearing heavy loads. Angles provide necessary bracing, thus freeing panel from weight load. ⅛" steel in black wrinkle finish.

No. 3856—14" L. x 3" W. .... Dealer Cost $1.75 pair

No. 3857—12" L. x 3" W. .... Dealer Cost 1.65 pair

STEEL RACK SHELVES

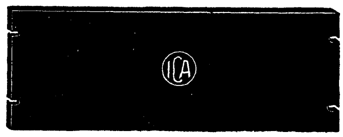


Made of heavy gauge steel in black wrinkle finish. Easily slid into rack for supporting heavier units such as power supplies, etc.

No. 3854—19" W. x 1" H. x 15" D. .... Dealer Cost $3.10

No. 3855—19" W. x 1" H. x 12" D. .... Dealer Cost 2.35

ICA MASONITE RELAY RACK PANELS



Made of Tempered Masonite—a non-magnetic material, sturdy and tough yet easily drilled and worked with ordinary wood - working tools and punches. Finished in Black or Gray. Supplied in Black Ripple finish unless Gray is specified. RMA notching. If Western Electric notching is desired, add "WE" to catalog No.

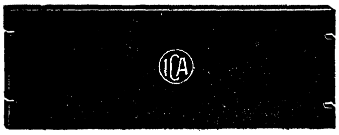
No.	Size	Dlr. Cost	No.	Size	Dlr. Cost
*3662RS	1¾"x19"	$ .67	3668RS	12¼"x19"	$1.67
*3663RS	3½"x19"	.83	3669RS	14" x19"	1.83
*3664RS	5¼"x19"	.97	3670RS	15¾"x19"	2.03
*3665RS	7" x19"	1.10	3671RS	17½"x19"	2.37
3666RS	8¾"x19"	1.33	*3672RS	19¼"x19"	2.57
*3667RS	10½"x19"	1.50	3673RS	21" x19"	2.87

*RMA and "WE" notching specifications are identical.

SPECIAL SIZES OF RACK PANELS AVAILABLE ON ORDER

Insuline Corporation of America is geared to supply rack panels in various sizes, thicknesses and finishes. Materials include Steel, Aluminum, or Masonite in any thickness from ⅛" to ¼". Any finish according to specifications.

STANDARD RELAY RACK PANELS



ICA standard relay rack panels are slotted to fit any standard 19" relay rack. ICA relay rack panels are supplied in ⅛" thickness. Notched according to RMA specifications. If Western Electric notching is desired, add "WE" to catalog numbers. Made of steel (in black ripple or gray finish) or aluminum (in black ripple or gray wrinkle; also in gray hammertone on request).

STEEL				ALUMINUM			
		Dlr.			Dlr.	Gray	Dlr.
Black	Gray	Cost	Size	Black	Cost	Wrinkle	Cost
*3600RS	*3612RS	$.67	1¾"	*8600RS	$.83	*8620RS	$.83
*3601RS	*3613RS	.75	3½"	*8601RS	1.20	*8621RS	1.20
*3602RS	*3614RS	.93	5¼"	*8602RS	1.37	*8622RS	1.37
*3603RS	*3615RS	1.08	7"	*8603RS	2.00	*8623RS	2.00
3604RS	3616RS	1.32	8¾"	8604RS	2.33	8624RS	2.33
*3605RS	*3617RS	1.58	10½'	*8605RS	2.77	*8625RS	2.77
3606RS	3618RS	1.88	12¼"	8606RS	3.17	8626RS	3.17
3607RS	3619RS	2.17	14"	8607RS	3.53	8627RS	3.53
3608RS	3620RS	2.40	15¾"	8608RS	4.00	8628RS	4.00
3609RS	3621RS	2.70	17½"	8609RS	4.43	8629RS	4.43
*3610RS	*3622RS	3.00	19¼"	*8610RS	4.83	*8630RS	4.83
3611RS	3623RS	3.30	21"	8611RS	5.17	8631RS	5.17

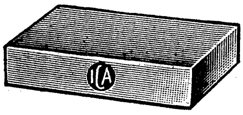
*RMA and "WE" notching specifications are identical.

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

STEEL OR ALUMINUM CHASSIS BASES

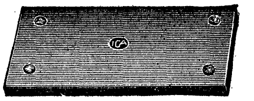


For receivers, transmitters, etc. Bases are folded over on bottom for additional strength and drilled to permit attaching of bottom plates. Solidly constructed. STEEL BASES—one piece; heavy duty; zinc plated or black ripple finish. ALUMINUM BASES—First grade aluminum, electronically welded. Thickness: 16 gauge (.050).

Steel—Zinc Plated Finish		Steel—Black Ripple Finish				Aluminum	
No.	Dlr. Cost	No.	Dlr. Cost	Gauge	Size W. L H.	No.	Dealer Cost
					4 x 6 x 2	29043	$1.13
					4 x 6 x 3	29044	1.13
					4 x 17 x 3	29027	2.03
1560*	$ .77	4000*	$ .77	20	4½ x 8 x 1½		
1586	.88	4037	.88	20	5 x 7 x 2	29030	.93
					5 x 7 x 3	29047	1.17
1530	.78	4001	.78	20	5 x 9½ x 1½		
1587	.93	4038	.93	20	5 x 9½ x 2	29033	1.10
1565	1.08	4002	1.08	20	5 x 9½ x 3	29002	1.30
1564	1.08	4042	1.08	20	5 x 10 x 3	29048	1.33
1566	1.33	4003	1.33	20	5 x 13 x 3	29003	1.40
1582	1.17	4032	1.17	20	5½ x 10 x 3	29004	1.58
					6 x 17 x 3	29050	2.10
1518	1.26	4043	1.26	16	6 x 14 x 3	29034	2.01
1526	.90	4024	.90	20	7 x 7 x 2	29005	1.10
1569	1.08	4004	1.08	20	7 x 9 x 2	29006	1.20
1570	1.12	4005	1.12	20	7 x 11 x 2	29007	1.33
1527	1.27	4006	1.27	20	7 x 12 x 3	29008	1.57
1571	1.20	4007	1.20	20	7 x 13 x 2	29009	1.40
1572	1.43	4008	1.45	20	7 x 15 x 3	29010	2.27
1528	1.57	4009	1.57	20	7 x 17 x 3	29011	2.20
1567	1.62	4013	1.43	20	8 x 12 x 3	29012	1.90
1573	1.45	4014	1.45	20	8 x 17 x 2	29013	2.10
1575	1.58	4035	1.58	20	8 x 17 x 3	29014	2.47
1588	1.65	4039	1.65	20	8½ x 15 x 3	29037	2.30
1520	1.50	4016	1.50	20	10 x 12 x 3	29015	2.10
1568	1.58	4017	1.58	20	10 x 14 x 3	29016	2.67
1589	1.60	4040	1.60	20	10 x 17 x 2	29039	2.53
1583	1.63	4033	1.63	20	10 x 17 x 3	29017	2.87
1521	1.87	4018	1.95	18	10 x 17 x 3		
1580	2.03	4030	2.03	18	10 x 17 x 4	29025	3.30
1522	2.43	4019	2.33	18	10 x 23 x 3	29018	3.32
1577	2.17	4027	2.00	18	11 x 17 x 2	29019	2.63
1519	2.20	4023	2.20	18	11 x 17 x 3	29020	3.33
1574	1.77	4020	1.77	18	12 x 17 x 2	29021	3.00
1578	2.03	4028	2.03	18	12 x 17 x 3	29022	3.53
1579	2.35	4029	2.47	18	13 x 17 x 2	29023	3.13
1524	2.55	4021	2.55	18	13 x 17 x 3	29024	3.73
1581	3.00	4031	3.00	18	13 x 17 x 4	29026	4.27

*Open ends.

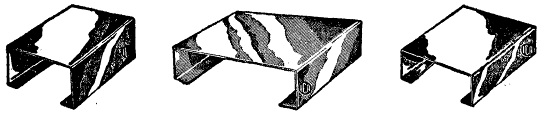
ICA CHASSIS BOTTOM PLATES



Designed to fit all ICA Chassis Bases and amplifier units listed to the left. Four raised bosses prevent marring or scratching. Supplied in steel or aluminum.

Steel				Aluminum	
Zinc Plated	Black Ripple	Dealer Cost	Size	No.	Dealer Cost
1636	4076	$ .40	5 x 7	8729	$ .70
1601	4051	.40	5 x 9½		
1600	4060	.46	5 x 10	8730	.71
1602	4052	.57	5 x 13	8702	.80
1625	4075	.50	5½ x 10	8725	.73
1623	4073	.60	7 x 7	8723	.73
1603	4053	.57	7 x 9	8703	.77
1604	4054	.65	7 x 11	8704	.87
1605	4055	.68	7 x 12	8705	.92
1606	4056	.68	7 x 13	8706	1.08
1607	4057	.75	7 x 15	8707	1.08
1608	4058	.78	7 x 17	8708	1.13
1612	4062	.78	8 x 12	8712	1.08
1613	4063	.82	8 x 17	8713	1.25
1629	4064	.85	8½ x 15	8721	1.12
1615	4065	.82	10 x 12	8715	1.22
1616	4066	.85	10 x 14	8716	1.12
1617	4067	1.00	10 x 17	8717	1.47
1618	4068	1.40	10 x 23	8718	1.75
1622	4072	1.10	11 x 17	8727	1.75
1619	4069	1.08	12 x 17	8719	1.87
1620	4070	1.42	13 x 17	8720	1.97
1624	4074	1.17	13 x 14		

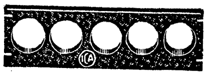
MINIATURE OPEN END ALUMINUM CHASSIS



Of first grade aluminum for less weight but long service. Base flange permits attaching of bottom plate or fastening down of chassis. Ideal where limited space is factor. Suitable for all small unit assemblies.

No.	W.	L.	H.	Dealer Cost	No.	W.	L.	H.	Dealer Cost
29076	1¾	x 3⅛	x 1	$.37	29083	4	x 4⅛	x 1	$.43
29075	2⅝	x 2¾	x 1¼	.33	29084	4	x 5⅛	x 1	.47
29078	2¾	x 4⅛	x 1½	.40	29085	4	x 6⅛	x 1	.50
29080	3	x 6⅛	x 1¼	.47	29000	4½	x 8	x 1½	1.00
29077	3¼	x 4½	x 2	.40	29001	5	x 9½	x 1½	1.10
29079	3¾	x 4⅛	x 1½	.40	29081	5¾	x 4⅞	x 1½	.50
29082	4	x 3⅛	x 1	.40					

ICA METER PANELS



Notched to RMA specifications ("WE" notching identical). Will fit all standard racks. Finished in Baked Black or Gray Ripple. Size 5¼″ x 19″.

Black will be shipped unless Gray is specified.

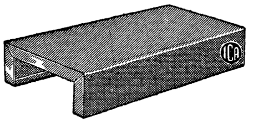
STEEL PANELS

No.	No. Holes	Meter Size	Hole	Dealer Cost
3651	5	2″	2 3/16″	$1.85
3652	3	2″	2 3/16″	1.30
3653	5	3″	2 13/16″	1.85
3654	3	3″	2 13/16″	1.30

MASONITE PANELS

No.	No. Holes	Meter Size	Hole	Dealer Cost
3641	3	2¼″	2¼″	$1.32
3642	4	2¼″	2¼″	1.45
3643	3	2 3/16″	2 13/16″	1.32
3644	4	2 3/16″	2 13/16″	1.45

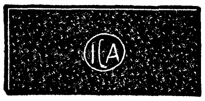
OPEN END STEEL CHASSIS

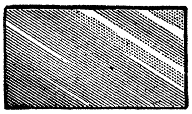


Permits easier wiring of the smaller assemblies. Has wide variety of applications. Made of sturdy steel with zinc plated finish.

No.	W.	L.	H.	Dealer Cost	No.	W.	L.	H.	Dealer Cost
1547	5	x 7	x 1½	$.60	1596	7	x 10	x 2	$.90
1559	5½	x 9	x 1½	.70	1597	7	x 11	x 1½	1.00
1546	7	x 6	x 2	.68	1595	7½	x 9	x 1½	.95
1548	7	x 7	x 1½	.78	1599	7¾	x 15	x 2	1.38
1556	7	x 8	x 2	.85	1598	10¾	x 14	x 2	1.43

ICA STEEL . . . MASONITE . . . ALUMINUM PANELS

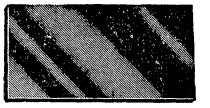




Steel panels are made in 1/16″ thickness, black ripple finish. Masonite panels are 3/16″ thick, black ripple finish. Aluminum panels have bright silver finish, 1/16″ thick.

Steel No.	Dealer Cost	Size	Masonite No.	Dealer Cost	Alum. No.	Dealer Cost
3175	$ .72	7″ x 10″	810	$ .77	1194	$1.00
3176	.80	7″ x 12″	811	.85	1195	1.17
3177	.93	7″ x 14″	812	.97	1196	1.27
3178	1.20	7″ x 18″	813	1.17	1198	1.53
		7″ x 21″	814	1.27	1199	2.17
		7″ x 24″			1200	2.70
3183	1.03	8″ x 12″	815	1.00		
3184	1.10	8″ x 14″	816	1.10		
		8″ x 16″	817	1.28		
3186	1.23	8″ x 18″	818	1.37		
		10″ x 12″			3157	2.00
3191	1.60	10″ x 14″				
3192	1.87	10″ x 18″			3158	2.27
3194	2.17	10″ x 24″			3159	4.00

ICA BAKELITE RADIO PANELS



Smooth Finish. Laminated Indestructible Material. For Panels and general use where low moisture absorption, good electrical properties and fine surface finish are required. Tensile strength 8,000 lbs. per square inch.

⅛" Thickness			$\frac{3}{16}$" Thickness		
No.	Size	Dealer Cost	No.	Size	Dealer Cost
832	7" x 10"	$1.17	842	7" x 10"	$1.73
833	7" x 12"	1.42	843	7" x 12"	2.10
834	7" x 14"	1.53	844	7" x 14"	2.50
835	7" x 18"	2.30	845	7" x 18"	2.97
836	7" x 21"	2.40	846	7" x 21"	3.33
837	7" x 24"	2.70	847	7" x 24"	4.17
840	7" x 30"	3.67	850	7" x 30"	5.16
860	10" x 12"	2.10	863	10" x 12"	3.17
861	10" x 18"	2.90	864	10" x 18"	4.35

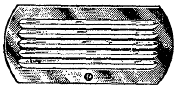
ICA FULL SIZE BAKELITE SHEETS

Black Glossy Finish

No.	Size	Thickness	Apprx. Wt.	Dealer Cost
852	38" x 49"	$\frac{1}{16}$"	6 lbs.	$16.35
853	38" x 49"	$\frac{3}{32}$"	9 lbs.	20.56
854	38" x 49"	⅛"	12 lbs.	33.49
857	38" x 49"	$\frac{3}{16}$"	18 lbs.	41.73
858	38" x 49"	¼"	24 lbs.	50.11

Prices on other sizes or thicknesses quoted on request.

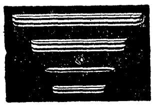
CHROME VENTILATING LOUVRES



Adds the attractive touch to any receiver, amplifier, transmitter, etc. A polished chrome finished steel "Air-Gate," consisting of 5 ventilating louvres. Over-all size: 5$\frac{7}{16}$" long—3" wide. Distance between mounting hole centers: 4$\frac{27}{32}$". Diameter of holes: $\frac{5}{32}$". Length of louvres: 4¼". Air space between louvre plates: $\frac{5}{16}$".

No. 3525..**Dealer Cost $ .67**

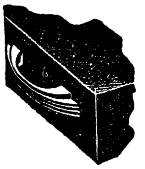
ICA CHROME TRIM MOULDING



Beautiful chrome trim mouldings to dress up any cabinet, chassis, receiver, speaker cabinet, transmitter, etc. All moulding furnished with mounting tracks or clips.

No.		Dealer Cost
3510	Chrome Moulding, with single Stripe. Size: ½" wide by 4" long	$ .67
3513	Chrome Moulding, with double Stripe. Size: ¾" wide by 8" long	1.07
3514	Chrome Moulding, with double Stripe. Size: ¾" wide by 12" long	1.23
3515	Chrome Moulding, with double Stripe. Size: ¾" wide by 17" long	1.50
3505	Bullet Shape all Chrome Moulding. Size ¼" wide by 6" long	.67

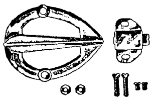
CHROME HANDLES . . . PLASTIC HANDLES



A neatly styled adornment for any cabinet, amplifier chassis transmitter, etc. Furnished with mounting screws. Supplied in gleaming chrome or attractive plastic.

No.		Dealer Cost
3500	Chrome. 4" l.; $\frac{11}{16}$" w. Mounting centers: 2¾" apart	$ .58
3502	Plastic. 4" l.; ⅝" w. Mounting centers: 2¾" apart	.48
3501	Chrome. 6¼" l.; ⅝" w. Mounting centers: 4$\frac{13}{16}$" apart	.77

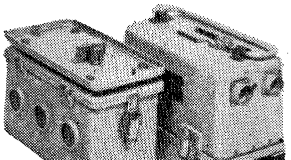
HANDLE . . . LOCK SET

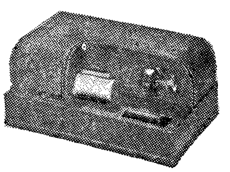


A complete, attractive handle and lock set that will dress up a variety of cabinets. Streamlined handle of zinc with nickel-plated finish; spring snap lock of durable steel for long service. Includes screws and nuts.

No. 3532............................**Dealer Cost $ .60**

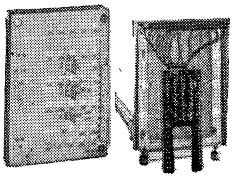
METAL GOODS TO *YOUR* SPECIFICATIONS

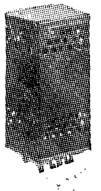


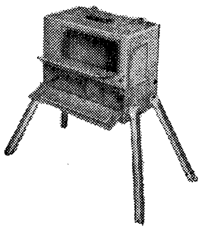


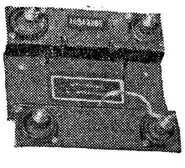
In addition to its wide range of stock metal items herein listed, Insuline's vast facilities are available for the manufacture of an extensive variety of products to particular specifications. Production capabilities includes Screw Machine Work, Stamping, Drilling, Assembling, Engraving, Screening, Machining, Finishing. Supplying some of the country's leading industrial organizations, Insuline is also available for sub-contract orders (industrial or military) including assemblies, sub-assemblies, completely wired junction boxes, shock mounts, wiring or any similar type of production.

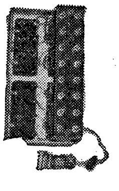
Detailed brochure describing Insuline's special manufacturing facilities, supplied on request.

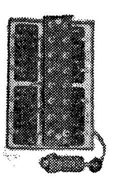


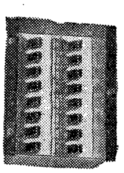








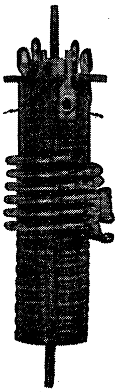




STANWYCK COILS Mfrd. by STANWYCK WINDING CO.

TELEVISION - I.F. - ANT. - R.F. - F.M. - OSCILLATOR COILS

TELEVISION COILS

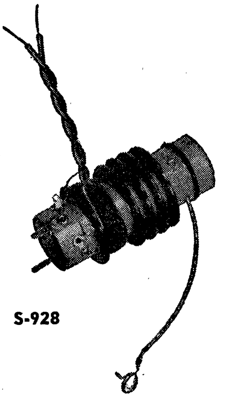

S-949

These components when used in a properly designed circuit can provide a gain of approximately 10,000 × in the picture I.F. amplifier with overall response as illustrated. The sound I.F. system can supply a gain of approximately 7,000 × from the converter grid to the grid of the last I.F. tube and a discriminator slope sensitivity of approximately 0.08 volts/kc. with 1.0 volt signal level at the last I.F. amplifier tube grid. The overall sound I.F. and discriminator response is linear over 150 mc.

TELEVISION REPLACEMENT COMPONENTS

R.C.A. REPLACEMENTS

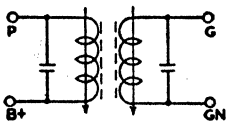
R.C.A. PART No.	STANWYCK PART No.	DESCRIPTION	LIST PRICE
211-T1	S-948	9 K. V. Horizontal H.V. Output (Flyback)	$7.70
203-L1	S-943	Video Peaking Coil	.50
203-L2	S-944	Video Peaking Coil	.50
203-L3	S-945	Video Peaking Coil	.50
203-L4	S-946	Video Peaking Coil	.50
202-K2	S-949	1st Pix I.F.	3.00
202-K3	S-950	2nd Pix I.F.	2.10
202-L1	S-951	3rd and 4th Pix I.F.	.75
202-K4	S-952	Cathode Trap	2.55
201-K1	S-953	Sound I.F.	2.10
203-K1	S-954	Sound Disc.	2.55
202-K1	S-955	Converter Transformer	2.65
204-L1	S-956	Filament Choke	.14
201-R1	S-957	Horizontal Width Control	.95
201-R3	S-958	Linearity Control	.95
208-T8	S-959	Syncrolok	2.75
203-R1	S-966	Syncoguide	2.00


S-928

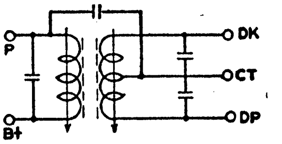
REPLACEMENTS FOR MOTOROLA - HALLICRAFTERS AND OTHER TRANSFORMLESS TELEVISION RECEIVERS

Stanwyck No. S-928—4.5 K.V. (4500-Volt) R.F. Power Supply Transformer	8.25
Stanwyck No. S-930—10 K.V. (10,000-Volt) R.F. Power Supply Transformer	11.55

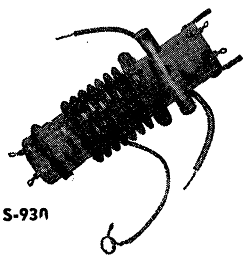
S-958 LINEARITY CONTROL — Directly interchangeable with R.C.A. No. 201-R3, this linearity control has extremely wide inductance variation and can be set to provide a linear operating condition in the horizontal deflection circuit. List Price, $0.95



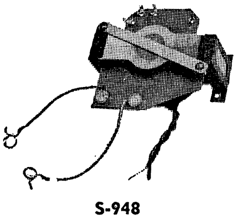
SFM-601



SFM-602


S-930

HIGH VOLTAGE COILS


S-948

S-928 4.5 Kv. POWER TRANSFORMER—A 4.5 Kv. R.F. power transformer of high efficiency for use in electrostatic deflection circuits employing a 7″ tube. **List Price, $8.25**

S-930 10 Kv. R.F. POWER TRANSFORMER—A 10 Kv. R.F. power transformer thoroughly vacuum impregnated for efficient operation. Mechanically designed for "corona-less" performance at full rated output. **List Price, $11.55**

S-948 HIGH VOLTAGE FLYBACK—This horizontal output transformer is similar to the R.C.A. No. 211-T1. Used in electromagnetic deflection circuit, it provides approximately 9 Kv. for excellent picture brilliancy in a 10″ or 12″ tube. **List Price, $7.70**

S-968 HORIZONTAL OUTPUT TRANSFORMER similar to R.C.A. No. 211-T3 (Wired same as S-948). **List Price, $7.70**

F.M. COILS

S-605 RATIO DETECTOR 10.7 mc.—To meet the critical demands for a sensitive and unusually stable F.M. detector, the S-605 was developed. Embodying every characteristic of a high quality product, this detector will outperform similar products. A peak to peak band width of 350 kc. with linearity exceeding plus or minus 125 kc. results in unusual quality of audio reproduction. High "Q" iron cores, stable ceramic capacitors plus ceramic construction throughout result in the ultimate for fine F.M. reproduction. **List Price, $4.95**

S-601 F.M. DISCRIMINATOR—Identical to I.F. electrically and mechanically. The electrically centered secondary results in perfect symmetry between positive and negative peaks. High output and excellent discrimination are obtained. A high quality transformer for production or replacement. **List Price, $4.70**

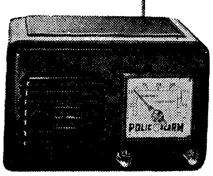
S-609 F.M. CHOKE—An excellent parasitic suppressor in the oscillator plate circuit. **List Price, $0.45**

971 4.5 Mc. MIDGET RATIO DETECTOR. **List Price, $3.30**

977 HORIZONTAL FREQUENCY AND PHASE COIL. **List Price, $2.75**

Monitoradio Receivers for two-way communications systems

Whatever your line, put Monitoradio to work for you, for extra efficiency. Policemen, firemen, auto and special emergency, truckers, doctors and industrial workers are among the hundreds who endorse Monitoradio as the perfect means of keeping alert to emergencies and up-to-the-minute on important two-way communications. Precision-engineered and manufactured for reliable performance always, there's a Monitoradio model to meet your own needs.

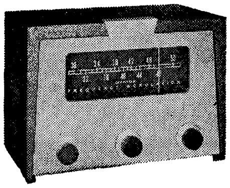


Model PR-9

Tunes 152-174 MC, FM. Five tubes plus rectifier. Sensitivity of 10 uv for 50 mw output. 100 KC bandwidth. Audio output 0.6 watts. Power supply of 110-120 V AC-DC. Plastic cabinet 6½-in. H; 6¾-in. W; 10½-in. L. Net price, $49.95

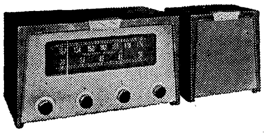
Model PR-31

30-50 MC. Other features same as above. $49.95, net



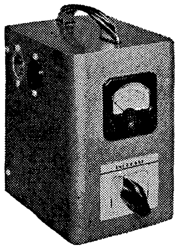
Model MR-32

Tunes 30-50 MC, FM. Seven tubes plus rectifier. Sensitivity of 6 uv for 50 mw. Audio output 0.8 watts. Power supply 105-125 V 50-60 cycle, AC. Brown and Grey metal cabinet is 6½-in. H; 8-in. D; 11¼-in. L. $74.50, net.



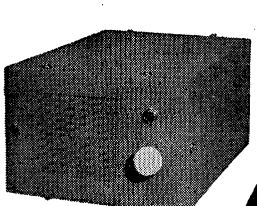
Model DR-200

Xtal control, fixed and tunable combination AC receiver for 30-50 MC FM and 152-174 MC FM. Covers all emergency FM band frequency. 14 tubes plus rectifier. Sensitivity of 1 uv for 20 db quieting. Selectivity of ±23 KC at 6 db. Audio output 1.2 watts. 105-125 V 60 cycle power supply. Brown and Grey metal case is 9⅜-in. H; 8-in. D; 14¼-in. L. $149.95, net. Matching speaker in separate metal case, $14.95, net.



Model V-15

Line voltage booster for areas where line voltage is below normal. Provides full rated performance from any 110-volt electrical device requiring up to 1500 watts. Portable: weighs only about 10 pounds. 7⅜-in. H; 4⅞-in. D; 5⅞-in. W. $59.95, net.



Model AMC-1

Xtal controlled receiver for between 25 and 50 MC, for AM radio paging systems for 6 volt mobile operations. Supplements pocket receivers utilized by most paging systems. Six tubes plus rectifier. Sensitivity of 2mv for 20 db. Selectivity ± 6 KC at 6 db, ±30 KC at 60 DB. Audio output is 0.8. Extra powerful to insure good reception in poor signal areas. 4¾-in. H; 6¾-in. L; 12-in. D. $100.00, net.

Model FMC-1. Xtal controlled FM mobile receiver for 30-50, or 152-174 MC. $100.00, net.

MONITORADIO

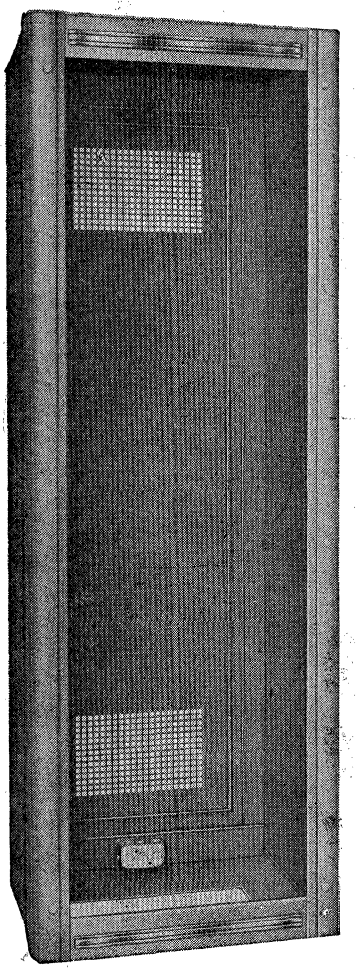
RADIO APPARATUS CORPORATION Factory—55 North New Jersey St., Indianapolis, Ind.
Sales Office—1604 West 92nd St., Chicago 20, Ill.

Burton browne advertising

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" STANDARD TYPE RACKS

15¼" & 18" DEEP for 19" WIDE PANELS



No. P-6625

15¼" Deep Racks

Cat. Nos.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
P. PG, 3675	42⅞x22x15¼"	36¾"	110	$54.00
P, PG, 6625	67⅜x22x15¼"	61¼"	155	72.00
P, PG, 8325	83⅛x22x15¼"	77"	175	93.00

18" Deep Racks

Cat. Nos.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
P, PG, 3618	42⅞x22x18"	36¾"	115	60.00
P, PG, 6618	67⅜x22x18"	61¼"	170	78.00
P, PG, 8318	83⅛x22x18"	77"	200	99.00

Since 1927, PAR-METAL has been a pioneer in the design and creation of superior metal equipment for the radio and communications industries. This experience in combination with skilled craftsmen and high quality material, have made PAR-METAL PRODUCTS the standard of the industry.

The fusion of the careful workmanship and mechanical efficiency with furniture steel brought about by this invaluable experience—results in a superior STANDARDIZED product that will serve you well, reasonably, and for a long period of time.

SPECIFICATIONS FOR THESE STANDARD TYPE RACKS

CABINET: Entire cabinet is welded together into one integral unit. Body of cabinet is made from 1/16" thick cold rolled sheet steel; top of cabinet is made from 5/64" thick steel; bottom of cabinet is made from 7/64" thick steel.

PANEL MOUNTING: Angle irons are 3/16" thick structural steel, holes are accurately drilled and tapped 12/24 thread on standard 1¼"-½" spacings.

DOOR: Doors are of a new type with vastly improved construction features. They are stamped from one piece of steel into a rigid unit. Door edges are folded to provide 1 smooth double thick edge. There are no "patch" type braces, etc., used for reinforcement.

HARDWARE: Doors are equipped with die-cast "automobile" type sturdy handles. Hinges are of the "slip-joint" type so that doors may be easily removed. Screws for mounting panels are supplied. Front of rack is trimmed with chrome plated trims at top and bottom.

OUTLETS: A duplex receptacle and outlet box are provided in the back under the door. A rectangular opening is provided in the bottom for conduits, leads, etc.

CORNER TRIMS: All racks have **quick, detachable,** new corner trims, which are fastened to front of rack with two **finger type "captive screws."** This permits quick, simple removal without the use of screw-drivers, etc. Where units are set up in "gangs" or "rows" and so specified in your order, suitable connecting trims are furnished in place of regular corner trims without additional charge.

PANELS: Panels 19" wide to fit these racks are listed and illustrated on Page J-104.

FINISH: Black ripple with corner trims finished in dull black; or slate grey ripple with corner trims finished in slate grey are standard. Prime coat only is optional in place of ripple enamel finish at no extra charge, if so specified in your order. Aluminum grey lacquer is available **at an additional charge.** The letter **"P"** before Catalog No. indicates black ripple enamel; the letter **"PG"** before Catalog No. indicates slate grey ripple enamel.

RACK SHELVES: Shelf R-2015 fits the 15¼" deep racks; Shelf R-2018 fits the 18" deep racks. Shelves are listed on Page J-105.

ROLLER TRUCKS: Truck RT-415 fits the 15¼" deep racks; and Truck RT-412 fits the 18" deep racks. Roller trucks are listed on Page J-103.

TO SET UP IN GANGS OR ROWS:

The racks may be joined together by means of a flat trim fastened to the front of the adjacent support angles, overlapping both racks. Knockout holes 1⅛" in diameter are provided at the sides of the racks to permit connections between them.

Racks are regularly shipped with corner trim as illustrated; where specified, the front joining trim is furnished without additional charge in place of the corner trim.

SIDE LOUVRES: Racks are available with louvres at sides if so ordered at no extra charge. (This is not suitable for "gang" installations.)

MODIFIED RACKS: The standard type racks listed on this page can be supplied for 24" wide panels on special order. Depth may be increased up to 28" to your specifications. Grille openings in top for additional ventilation are also available. Special openings in doors can also be provided.

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y. • FOR WEST COAST PRICES, ADD 10%

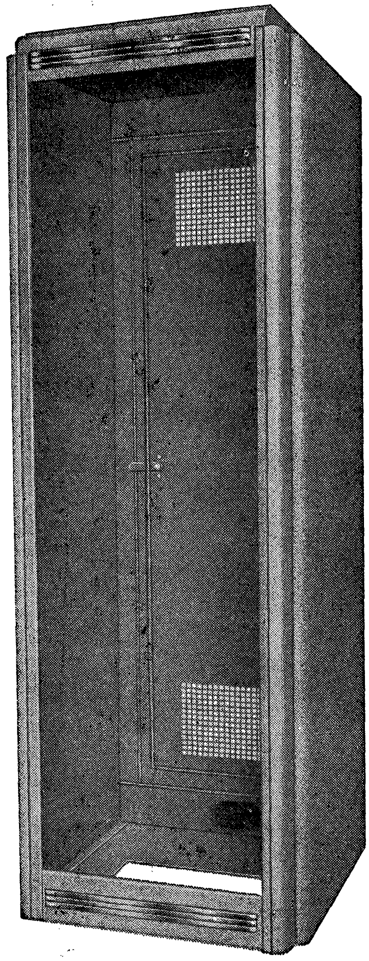
Export Dept.: Rocke International Corp., 13 E. 40th St., New York 16, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" DELUXE CABINET RACKS

FOR 19" WIDE PANELS

18½" & 24" DEEP



No. P-6918

The beauty of these new enclosed type racks should prove a welcome addition to our line. It will appeal to those who wish to combine the rugged construction of our standard Type "C" racks with modern styling and improved design.

The vertical trims which conceal the panel mounting screws are fastened by means of two "Cowl type" fasteners on each side, which permits the trims to be removed quickly and easily by a half-turn on the screw heads.

The design of the vertical posts permits these racks to be installed in rows or "gangs," without the use of front joining strips between the racks. This provides a greater flexibility in their installation, particularly in broadcast stations.

SPECIFICATIONS FOR THESE DELUXE TYPE RACKS

Specifications pertaining to Cabinet construction, Panel mounting, Door construction, Hardware and Outlets which apply to our Type "C" Standard Type Cabinet Racks listed on Page J-98 are also applicable to these "DeLuxe" type Cabinet Racks.

CORNER TRIMS: All racks have quick detachable corner trims, which are fastened to the rack by means of two "Cowl Type" fasteners on each trim.

PANELS: Panels 19″ wide to fit these racks are listed and illustrated on Page J-104.

FINISH: Black ripple with corner trims finished in dull black; or slate grey ripple with corner trims finished in slate grey are standard. Prime coat only is optional in place of ripple enamel finish at no extra charge, if so specified in your order.

Aluminum grey lacquer is available at an additional charge. The letter "P" before Catalog No. indicates black ripple enamel; the letter "PG" before Catalog No. indicates slate grey ripple enamel.

RACK SHELVES: Shelf R-2218 fits the 18½″ deep racks; and Shelf R-2224 fits the 24″ deep racks. Shelves are listed on Page J-105.

ROLLER TRUCKS: Truck RT-418 fits the 18½″ deep racks; and Truck RT-424 fits the 24″ deep racks. Roller trucks are listed on Page J-103.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
	18½″ Deep Racks			
P, PG, 6918	69⅝x23⅝x18½″	61¼x19″	170	$ 94.50
P, PG, 7818	78⅜x23⅝x18½″	70 x19″	190	103.50
P, PG, 8518	85⅜x23⅝x18½″	77 x19″	200	117.00
	24″ Deep Racks			
P, PG, 6924	69⅝x23⅝x24″	61¼x19″	200	111.00
P, PG, 7824	78⅜x23⅝x24″	70 x19″	215	120.00
P, PG, 8524	85⅜x23⅝x24″	77 x19″	225	135.00

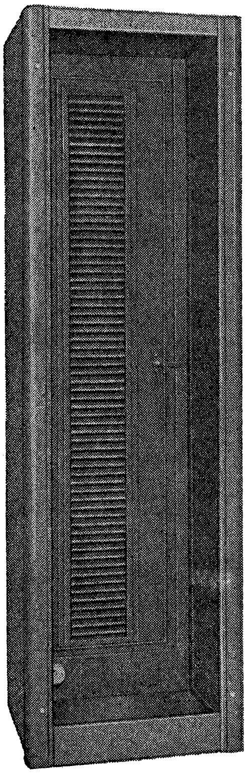
MODIFIED RACKS: The deluxe type racks listed on this page can be supplied for 24″ wide panels on special order. Grille openings in top for additional ventilation are also available. Special openings in doors can also be provided.

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y. • FOR WEST COAST PRICES, ADD 10%
Export Dept.: Rocke International Corp., 13 E. 40th St., New York 16, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" TRANSMITTER RACKS

STANDARD TYPE—for 19" & 30" Wide Panels



No. G-2218

These transmitter racks are similar to our Type "C" Standard Type Cabinet Racks shown on Page J-98 with the exception that they have been **reinforced at the rear corners** for use with heavier apparatus.

Specifications pertaining to Cabinet construction, Panel mounting, Door construction, Hardware, Outlets, Corner trims, Ganging and Modified Racks listed on Page J-98 are also applicable to these Standard Transmitter Racks. At the rear, knockouts are provided for conduit and 4" square duct. Rear door (which is removable), is covered on the inside with mesh screening.

PANELS: Panels 19" wide to fit No. G-2218 and No. G-2219 racks are listed on Page **J-104**. **Blank** panels 30" wide for No. G-3024 racks are available at twice the price of 19" **blank** panels. Other types of 19" wide panels can be made 30" wide on special order; prices on application.

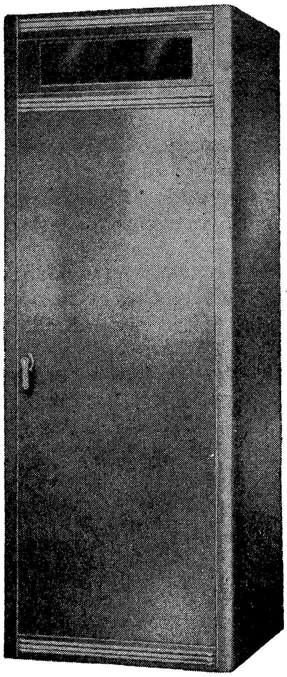
FINISH: Standard finish is black ripple enamel with dull black corner trims. Slate grey ripple enamel **or** gray primer coat only is optional without extra charge. For aluminum grey lacquer finish, add 10% to price.

RACK SHELVES: Shelf R-2219 is designed for Racks G-2218 and G-2219, and is listed on Page **J-105**.

ROLLER TRUCKS: Truck RT-412 is designed for Racks G-2218 and G-2219, and is listed on Page **J-103**.

Cat. No.	Overall Size	Panel Space	Clear Depth	Shp. Wt. Lbs.	Net Price
G-2218	76⅛x22x18"	70x19"	16⅞"	210	$105.00
G-2219	83⅛x22x18"	77x19"	16⅞"	230	117.00
G-3024	76⅛x33x24"	70x30"	22⅞"	380	174.00

DELUXE TYPE—for 24" Wide Panels



No. G-8024

This rack is undoubtedly the finest standard transmitter rack which we have ever made, and is reinforced for use with heavy duty apparatus. The meter panel at the top is 7" high, has a glass front, and is provided with a blank bakelite sub-panel. The inner sides of the rack are reinforced with ⅛" steel channels, to which may be attached angle brackets to support the chassis. These channels may also be used as wiring ducts.

The rack will accommodate panels 24" wide; the front panel mounting angles are recessed to allow 2" clearance behind the front door for dials, knobs, etc. Front door also has a lock.

This rack is also available without the meter panel at the top; a full height door is provided at the front, and the available panel space increased to 77" x 24". Price on application.

HARDWARE: The front door is equipped with a concealed "piano type" hinge. The rear door is mounted on "slip-joint" hinges for easy removal. Both doors have "automobile" type handles. The front of the rack is trimmed with chrome finished mouldings as illustrated.

PANELS: **Blank** panels 24" wide to fit this rack are available at an increase of 50% above the prices of 19" wide panels listed on Page J-104. Other types of 19" wide panels can be made 24" wide on special order; prices on application.

FINISH: Grey ripple enamel is standard. Black ripple enamel furnished without additional charge, if so specified. For aluminum grey lacquer finish, add 10% to prices.

Cat. No.	Overall Size	Panel Space	Clear Depth	Shp. Wt. Lbs.	Net Price
G-8024	83⅛x30½x27"	70x24"	24"	520	$240.00

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PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

CABINET RACKS WITH FRONT DOORS

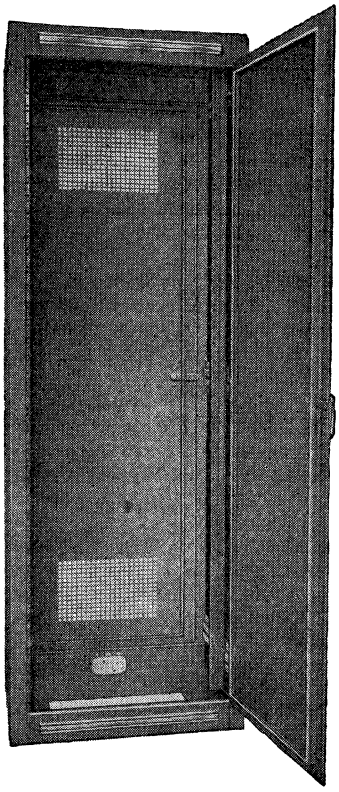
FOR 19" WIDE PANELS

TYPE "C" ENCLOSED RELAY RACKS

These racks are identical to our Type "C" Standard Racks (Page J-98), with the addition of front doors as well as rear doors; and the same general specifications apply to Cabinet construction, Panel mounting, Door construction, Outlets, Side Louvres, and Modified Racks to these racks. However, no corner trims are supplied, inasmuch as the panel mounting screws are concealed by the front door.

An important feature of these racks is provided by the full adjustment of panel mounting angles, so that they may be positioned at any distance from the front or rear doors.

Additional full-length or half-length panel mounting angles for terminal boards, etc., may also be installed, if so required. Extra angles can be supplied at an additional charge.



No. F-6618

HARDWARE: Doors are equipped with die-cast "automobile" type sturdy handles. Hinges are of the "slip-joint" type so that doors may be easily removed. The front door is provided with a lock which is an integral part of the handle.

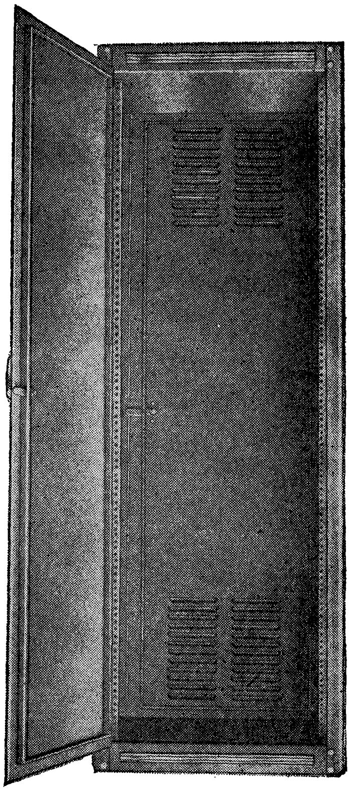
FINISH: Black ripple enamel or slate grey ripple enamel is standard. Prime coat only is optional in place of ripple enamel finish at no extra charge, if so specified in your order. The letter "F" before Catalog No. indicates black ripple; the letters "FG" before Catalog No. indicate slate grey ripple.

RACK SHELVES: Shelf R-2015, listed on Page J-105, fits both of these racks.

ROLLER TRUCKS: Truck RT-412, listed on Page J-103, fits both of these racks.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
F, FG-6618	67⅜ x 22 x 18"	61¼"	190	$105.00
F, FG-8318	83⅓ x 22 x 18"	77"	220	129.00

TYPE "A" ENCLOSED RELAY RACKS



No. FD-215

These racks are similar in design to our ER-213, ER-215, ER-217 racks listed on Page J-102 (the following page), except that they are equipped with both front and rear doors. The front door is provided with a lock which is an integral part of the handle. Panels mount 2" from the front, to allow 14" clear inside depth behind panels to rear door.

FINISH: Slate grey ripple enamel is standard. Black ripple enamel will be supplied without extra charge, if so specified in your order.

RACK SHELVES: Shelf R-2215 listed on Page J-105, fits these two racks.

ROLLER TRUCKS: Truck RT-411 listed on Page J-103, fits these two racks.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
FD-215	66½x22x16½"	61¼"	150	$66.00
FD-217	82¼x22x16½"	77"	160	82.50

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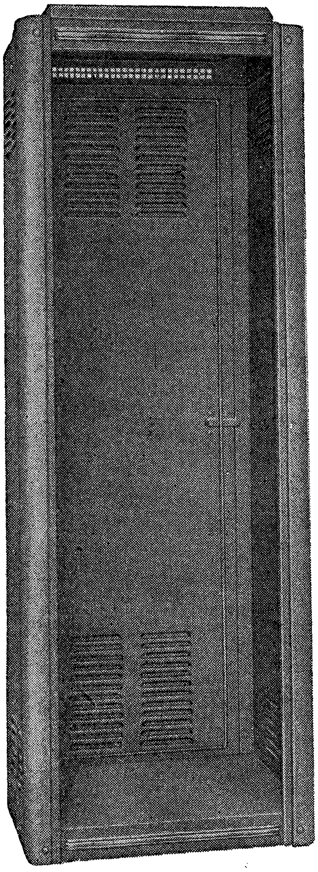
TYPE "A" ENCLOSED RELAY RACKS FOR 19" WIDE PANELS



No. ER-225

DELUXE TYPE

Our Type "A" Racks are produced in the modern, streamlined style in order that they blend in harmoniously with other equipment you have. In our DeLuxe type units (Series ER-225), the removable vertical corner mouldings are rounded and cover the panel mounting screws.

CABINET: Entire cabinet is constructed of $\frac{1}{16}$" thick cold-rolled steel. These racks are shipped "knocked-down" with necessary bolts for easy assembly.

PANEL MOUNTING: Angle irons are 7/64" thick steel, holes are accurately drilled and tapped 10/32 thread on universal centers for all types of panels.

CORNER TRIMS: All racks have quick, detachable, new corner trims which are fastened to front with two studs. This provides for rapid, finger-tip removal without the use of screw-drivers, etc.

HARDWARE: Doors are of new design same as our Type "C" commercial racks. No. ER-223 is equipped with a "push-button" type concealed snap catch. The two larger models have "automobile" type handles. Hinges are the "slip-joint" type so that doors may be easily removed. Front of rack is trimmed with chrome finished mouldings. Screws for mounting panels are supplied.

GANGING: These units may be ganged in double or "multi-rack" units. When so ordered, racks are supplied with common intermediate sides which are joined to adjacent tops and bottoms. Solid intermediate sides are supplied unless otherwise specified. In multiple units, center joining trims are supplied.

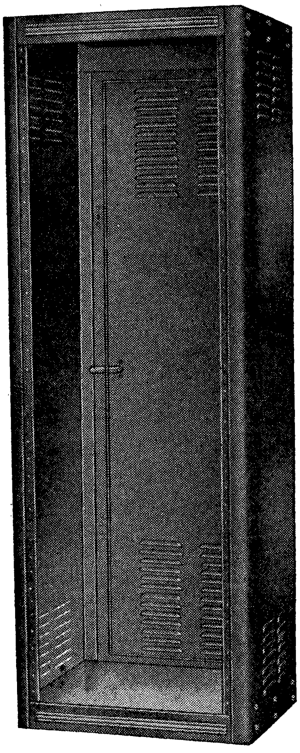
FINISH: Slate grey ripple enamel with corner trims finished in slate grey is standard. Black ripple enamel with corner trims finished in dull black will be supplied without extra charge if so specified in your order.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
ER-223	48¼x22x18"	36¾"	90	$46.50
ER-225	67¾x22x18"	61¼"	130	57.00
ER-227	83½x22x18"	77"	150	69.00

RACK SHELVES: Shelf ER-2212 listed on Page J-105 fits these 3 racks.

ROLLER TRUCK: Truck RT-412 listed on Page J-103 fits these 3 racks.

ROUNDED CORNER TYPE



NO. ER-215

These racks are similar in construction to the ER-225 type listed on this page. The panels fit into a recess so that the edges are not exposed; corner trims are omitted. Combines standard functional design and superior construction at an economical price.

FINISH: Slate grey ripple enamel is standard. Black ripple enamel is optional without extra charge, if so specified on your order.

RACK SHELVES: Shelf ER-2112 listed on Page J-105, fits these three racks.

ROLLER TRUCKS: Truck RT-411, listed on Page J-103, fits these three racks.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
ER-213	42 x22x16½"	36¾"	85	$32.70
ER-215	66½x22x16½"	61¼"	125	48.60
ER-217	82¼x22x16½"	77"	145	58.50

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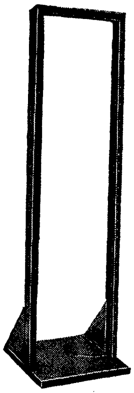
PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "A"
CHANNEL RELAY RACKS

For Standard 19" Rack Panels

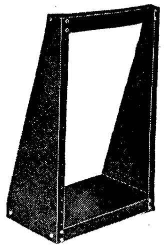
Black Ripple Finish



Ideal for use on all types of transmitters and public address systems. Substantially constructed of 7/64″ pressed steel. Vertical members and top crossbrace securely welded together. Base is 22″ deep and extends both front and rear on the RR-195 rack; it is 19″ deep on the RR-193 rack. Panel mounting holes accurately drilled on universal centers for either "Amateur" or type "C" panels, tapped for 10/32 machine screws. Ample supply of panel mounting screws supplied.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
RR-195	73¼x20x20⅞″	71¾″	55	$20.70
RR-193	38¼x20x18⅜″	36¾″	45	17.40

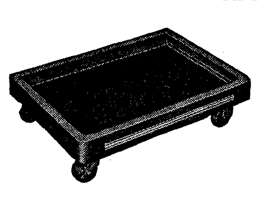
TABLE TYPE RELAY RACKS



Useful where floor type heavy duty rack is not required. Mounting holes accurately drilled on universal centers. Tapped for 10/32 screws. Finished in black ripple enamel and shipped "knocked-down" with all necessary screws.

Cat. No.	Overall Size	Panel Space	Shp. Wt. Lbs.	Net Price
TR-2520	25x21x12″	21x19″	17	$ 6.60
TR-3220	32x21x12″	28x19″	20	8.25

ROLLER TRUCKS FOR RACKS



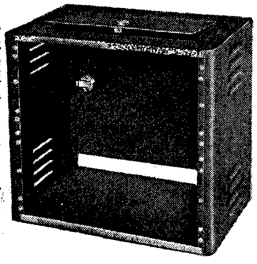
Designed for use on our racks. Overall size 3″ wider than racks for better distribution of weight. Has rubber composition wheels. Finished in slate grey ripple, with chrome trim. **Shipping Weight** on all size Roller Trucks is 20 lbs.

Cat. No.	Will Fit Rack No.	Net Price
RT-410	DL-2613, DL-3513	$ 9.00
RT-411	ER-213 ER-215, ER-217	10.20
RT-412	All 18″ deep racks	11.40
RT-415	All 15¼″ deep racks	11.55
RT-418	All 18½″ deep racks	12.75
RT-424	All 24″ deep racks	13.80

DESK PANEL CABINET RACKS

For Standard 19" Rack Panels

21½″ Long x 15″ Deep

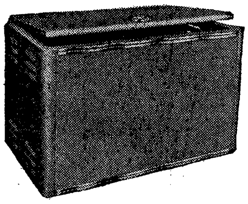


Streamlined styling. The vertical front corners are rounded and trimmed with mouldings. Panels fit into a recess, so that the edges are not exposed. Panel mounting holes drilled on universal centers, for "Amateur" or type "C" panels; holes are tapped 10/32. May be used with any chassis up to 13″ x 17″ in size. Louvres provide ample ventilation. Panel mounting screws and washers furnished. **Black ripple enamel is standard.** Slate grey is optional at same price.

Cat. No.	Overall Height	Panel Space	Shp. Wt. Lbs.	Net Price
With Door in Top Only				
DL-128	10½″	8¾″	28	$12.00
DL-1210	12¼″	10½″	29	13.50
DL-1225	14″	12¼″	30	14.55
DL-1413	15¾″	14″	32	16.20
With Door in Top and Door on Rear Panel				
DL-1713	19¼″	17½″	38	19.20
DL-2613	28″	26¼″	48	22.50
DL-3513	36¾″	35″	58	24.90

HINGED STEEL CABINETS

De Luxe Type

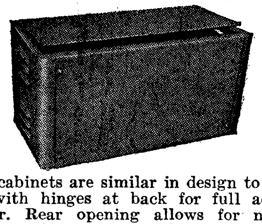


Has rounded front corners. New type formed top door hinged at back with large opening for full access to interior. Chrome finished mouldings, modern handle at top and bottom opening at rear for leads. Grey ripple enamel finish. Prices do not include chassis.

Cat. No.	H. L. D.	Panel Space	Shp. Wt. Lbs.	Net Price
CA-300	9x12⅛x 8″	8½x10⅛″	6	$ 5.40
CA-301	9x16⅛x 8″	8½x14⅛″	7	6.30
CA-302	10x17⅛x11″	9½x15⅛″	8	9.30
CA-303	10x20⅛x 9″	9½x18⅛″	11	9.30
CA-304	13x20⅛x12″	12½x18⅛″	15	10.20

HINGED STEEL CABINETS

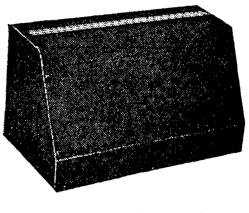
Rounded Corner Type



These cabinets are similar in design to DeLuxe type with hinges at back for full access to interior. Rear opening allows for necessary leads, etc. Slate grey ripple finish. Prices do not include chassis.

Cat. No.	H. L. D.	Panel Space	Shp. Wt. Lbs.	Net Price
CA-200	8½x10⅛x 8″	8½x 8⅛″	6	$ 3.60
CA-201	8½x12⅛x 8″	8½x10⅛″	7	3.90
CA-202	8½x16⅛x 8″	8½x14⅛″	8	5.07
CA-203	9½x17⅛x11″	9½x15⅛″	11	7.89
CA-204	12½x20⅛x12″	12½x18⅛″	15	9.30

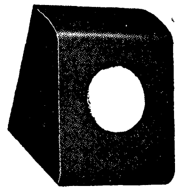
SLOPING FRONT CABINETS



Adaptable as instrument cases for studios, laboratories, etc. Top corner rounded and trimmed with chrome moulding. Slate grey ripple finish. A chassis may be mounted to front panel and removed as a unit. Rear of case ventilated, with opening for connections. Prices do not include chassis.

Cat. No.	H. W. D.	Panel Space	Shp. Wt. Lbs.	Net Price
SF-500	8x 8x 8″	7x 7x2″	6	$ 3.84
SF-501	8x10x 8″	7x 9x2″	7	4.26
SF-502	8x14x 8″	7x13x2″	8	4.59
SF-503	9x18x 8″	7x17x3″	10	6.60
SF-504	12x18x12″	10x17x3″	14	8.40

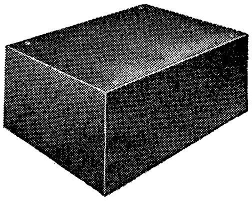
STEEL METER CASES



These meter cases may be obtained for 2″ and 3″ meters, in both single and triple units. They are substantially made of steel, with welded joints, and black ripple enamel finish. Top front corner is rounded.

Cat. No.	Meters	Meter Hole	Shp. Wt. Lbs.	Net Price
SM-12	Single 2″	2¼″	1	$ 1.14
SM-32	Three 2″	2¼″	2	2.76
SM-13	Single 3″	2 13/16″	1	1.14
SM-33	Three 3″	2 13/16″	2	2.76

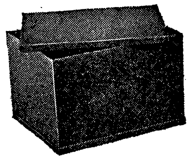
STEEL UTILITY CASES



These cases have flat tops and bottoms, which are removable. Made from 20 gauge sheet steel, with flanged edges and spot-welded corners. Finished in black ripple enamel.

Cat. No.	Overall Size	Shp. Wt. Lbs.	Net Price
MC-442	4x 4 x 2″	1	$ .75
MC-453	4x 5 x 3″	2	.87
MC-596	5x 9 x 6″	4	1.65
MC-666	6x 6 x 6″	3	1.20
MC-8101	8x10 x10″	7	2.70
MC-8107	8x10 x 7″	6	2.22
MC-1128	11x12 x 8″	9	3.00
MC-1576	15x 7¾x 6½″	9	2.70
MC-1597	15x 9 x 7″	8	3.09

STEEL UTILITY CANS



Can be used for monitors, shield cans, etc. Made of sheet steel with spot welded reinforced corners. Tops and bottoms removable with self-tapping screws. Black ripple enamel finish.

Cat. No.	Overall Size	Shp. Wt. Lbs.	Net Price
UC-565	5½x 6x 5½″	3	$1.20
UC-596	5 x 9x 6″	5	1.86
UC-8107	8 x10x 7″	6	2.49
UC-8101	8 x10x10″	7	3.00
UC-1128	11 x12x 8″	9	3.30

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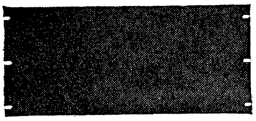
PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" RACK PANELS—19" WIDE

Unless otherwise indicated, these panels are made from 1/8" thick steel and are uniformly slotted to fit type "C" cabinet racks and all type "A" racks. They will also fit any other rack equipment having multiple 1¼" - ½" spacings or what is commonly termed as "W.E. spacing." They may be obtained in either black ripple enamel or slate grey ripple enamel. Panels can be furnished in aluminum grey lacquer at extra charge.

BLANK PANELS

1/8" STEEL



Standard finish is either black ripple enamel or slate grey ripple enamel.

Cat. No. Black	Cat. No. Grey	Height	Ship. Wt. Lbs.	Net Price
6600	G-6600	1¾"	2	$ .66
6601	G-6601	3½"	3	.75
6602	G-6602	5¼"	4	.93
6603	G-6603	7"	5	1.08
6604	G-6604	8¾"	7	1.32
6605	G-6605	10½"	8	1.59
6606	G-6606	12¼"	9	1.89
6607	G-6607	14"	10	2.16
6608	G-6608	15¾"	12	2.46
6609	G-6609	17½"	13	2.70
6610	G-6610	19¼"	14	3.00
6611	G-6611	21"	15	3.30

BLANK PANELS

1/8" ALUMINUM

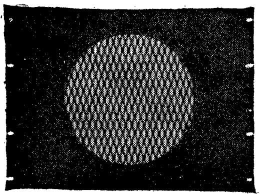
Cat. No. Black	Cat. No. Grey	Height	Ship. Wt. Lbs.	Net Price
6675	G-6675	1¾"	1	$ .75
6676	G-6676	3½"	1	1.08
6677	G-6677	5¼"	2	1.59
6678	G-6678	7"	2	1.92
6679	G-6679	8¾"	3	2.31
6680	G-6680	10½"	3	2.91
6681	G-6681	12¼"	4	3.39
6682	G-6682	14"	4	3.90
6683	G-6683	15¾"	5	4.35
6684	G-6684	17½"	5	4.80
6685	G-6685	19¼"	6	5.25
6686	G-6686	21"	7	5.70

Aluminum panels can also be supplied 3/16" thick, at an additional cost of 60%.

SPEAKER PANELS

1/8" STEEL

SP—Black SG—Grey



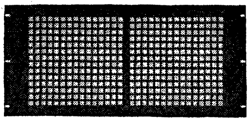
To fit either 6", 8", 10", or 12" speakers. The opening is covered with a steel grille.

Cat. No.	Panel Size	Speaker Size	Ship Wt. Lbs.	Net Price
SP, SG-875	8¾x19"	6"	4	$2.46
SP, SG-1050	10½x19"	8"	8	3.15
SP, SG-1225	12¼x19"	10"	9	3.75
SP, SG-1400	14 x19"	12"	10	4.35

GRILLE PANELS

1/8" STEEL

P—Black G—Grey



This modern type ventilating grille is stamped into the panel itself; it is not a pierced assembly.

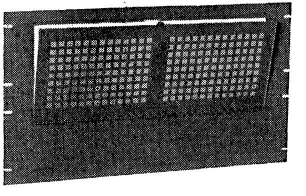
Cat. No.	Panel Size	Grille Size	Shp. Wt. Lbs.	Net Price
P, G-661	5¼"	3⅜x14⅜"	4	$2.64
P, G-662	7"	4⅞x14⅜"	5	2.85
P, G-663	8¾"	6⅞x14⅜"	6	3.45
P, G-664	8¾"	*3⅞x14⅜"	6	3.15
P, G-665	10½"	8⅜x14⅜"	7	3.75
P, G-666	10½"	*5⅞x14⅜"	7	3.45
P. G-667	12¼"	*7⅜x14⅜"	8	3.90

*Allows 3½" space at bottom for chassis mounting.

GRILLE DOOR PANELS

1/8" STEEL

P—Black G—Grey



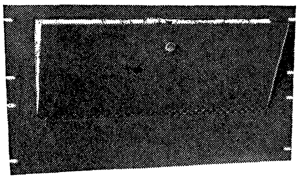
These panels have flush hinged doors with modern type ventilating grille. Doors are equipped with piano hinges, knob and concealed catch. All doors start 1" from top to allow space for chassis at bottom. Regular chassis brackets may be used.

Cat. No.	Panel Size	Door Size	Shp. Wt. Lbs.	Net Price
P, G-680	8¾"	4½x15⅜"	7	$5.40
P, G-681	10½"	6 x15⅜"	8	5.85
P, G-682	12¼"	7½x15⅜"	9	6.45

SOLID DOOR PANELS

1/8" STEEL

P—Black G—Grey

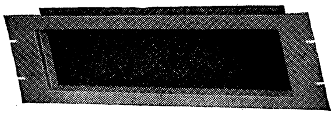


These panels have flush hinged doors with full length piano hinges; they are equipped with a knob and concealed catch. All doors are located 1" from top to allow space for chassis at bottom. Regular chassis brackets may be used.

Cat. No.	Panel Size	Door Size	Shp. Wt. Lbs.	Net Price
P, G-670	8¾"	4½x15⅜"	7	$4.20
P, G-671	10½"	6 x15⅜"	8	4.50
P, G-672	12¼"	7½x15⅜"	9	4.95

RECESSED METER PANELS

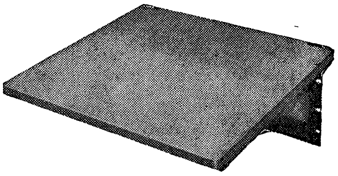
1/8" STEEL



These panels are made so that the meters may be recessed from the front of the panel. Meters are protected by a plate glass insert, allowing ¾" clearance in back of panel. A blank aluminum sub-panel is provided. The clear sub-panel space is 4⅛" x 15" on the 19" wide panel which is sufficient for 4-3" meters. On the 24" and 30" wide panel the clear sub-panel space is 5¾" x 20" and 5¾" x 26" respectively.

Cat. No. Black	Cat. No. Grey	Size	Shp. Wt. Lbs.	Net Price
P-690	G-690	5¼x19"	5	$ 5.85
P-691	G-691	7 x24"	6	9.75
P-692	G-692	7 x30"	8	13.20

STANDARD DESK PANELS

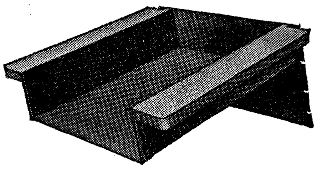


Tables are rigidly made of 1/16" thick steel. Securely mounted to regular ⅛" steel panels, size 10½" x 19". Tables 22" wide give full working space across front of racks when mounted in place.

FINISH: BT — Black enamel; GT — Grey enamel. Shipping weight of all standard desk panels is 25 lbs.

Cat. No.	Width	Depth	Net Price
BT-2220	22"	20"	$13.80
BT-2216	22"	16"	13.50
GT-2220	22"	20"	15.90
GT-2216	22"	16"	14.40

TYPEWRITER DESK PANELS



These tables are similar in construction to our standard desk type depicted above, except that a recess 4½" deep is provided for using a standard typewriter.

FINISH: BY — Black enamel; GY — Grey enamel. Shipping weight of both typewriter desk panels is 30 lbs.

Cat. No.	Width	Depth	Finish	Net Price
BY-2220	22"	20"	Black enamel	$19.50
GY-2220	22"	20"	Grey enamel	21.60

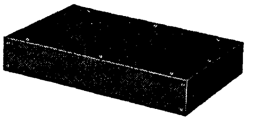
ALL PRICES F.O.B. LONG ISLAND CITY, N. Y. • FOR WEST COAST PRICES, ADD 10%

Export Dept.: Rocke International Corp., 13 E. 40th St., New York 16, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

STEEL CHASSIS BASES

STANDARD TYPE



Construction is the same as our heavy-duty chassis. Stamped from one piece of cold rolled steel, and have four solid sides with welded corners. Bottom edges are flanged in on four sides to provide additional reinforcement, and they are drilled for bottom plates. The chassis are made from #20 gauge steel, except those marked (*) which are stamped from 1/16″ steel exactly like our heavy-duty type.

Cat. No. Black Ripple	Cat. No. Zinc Plated	Size	Shp. Wt. Lbs.	Net Price
B-4500	C-4500	5½x9½x1½″	2	$0.78
B-4507	C-4507	5x 7x2″	2	.78
B-4508	C-4508	5x10x3″	3	1.08
B-4509	C-4509	6x14x3″	4	1.26
B-4510	C-4510	7x 7x2″	2	.90
B-4511	C-4511	7x 9x2″	2	1.08
B-4512	C-4512	7x11x2″	3	1.11
B-4513	C-4513	7x13x2″	3	1.20
B-4514	C-4514	7x15x3″	4	1.44
B-4518	C-4518	4x17x3″	4	1.29
B-4515	C-4515	7x17x3″	4	1.56
B-4502	C-4502	8x12x3″	5	1.41
B-4531	C-4531	8x17x2″	4	1.44
B-4532	C-4532	8x17x3″	5	1.56
B-4525	C-4525	10x12x3″	4	1.50
B-4524	C-4524	10x14x3″	5	1.59
B-4528	C-4528	10x17x2″	5	1.59
B-4529	C-4529	10x17x4″	7	2.04
B-4526	C-4526	10x17x3″	7	1.65
B-4527	C-4527	10x23x3″	7	2.04
B-4533*	C-4533*	11x17x2″	7	2.25
B-4534*	C-4534*	11x17x3″	9	2.46
B-4516	C-4516	12x17x2″	5	1.71
B-4517	C-4517	12x17x3″	6	2.04
B-4530	C-4530	12x17x4″	6	2.25
B-4535*	C-4535*	13x17x2″	8	2.46
B-4536*	C-4536*	13x17x3″	9	2.85
B-4537*	C-4537*	13x17x4″	10	3.25

BOTTOM PLATES

Bottom plates have holes to match the chassis, and have pressed "bumpers" at the corners.

Cat. No. Black Ripple	Cat. No. Zinc Plated	Size	Shp. Wt. Lbs.	Net Price
BP-4507	CP-4507	5x 7″	1	$ .39
BP-4502	CP-4502	8x12″	1	.66
BP-4500	CP-4500	5½x9½″	1	.36
BP-4508	CP-4508	5x10″	1	.39
BP-4509	CP-4509	6x14″	1	.54
BP-4510	CP-4510	7x 7″	1	.39
BP-4511	CP-4511	7x 9″	1	.42
BP-4512	CP-4512	7x11″	1	.51
BP-4513	CP-4513	7x13″	2	.57
BP-4514	CP-4514	7x15″	2	.63
BP-4518	CP-4518	4x17″	2	.51
BP-4515	CP-4515	7x17″	2	.66
BP-4531	CP-4531	8x17″	2	.66
BP-4525	CP-4525	10x12″	2	.66
BP-4524	CP-4524	10x14″	2	.69
BP-4528	CP-4528	10x17″	2	.87
BP-4527	CP-4527	10x23″	3	1.14
BP-4533	CP-4533	11x17″	2	.90
BP-4516	CP-4516	12x17″	3	.96
BP-4535	CP-4535	13x17″	3	1.02

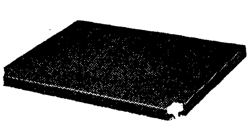
HEAVY DUTY TYPE

These heavy duty bases resemble the standard types illustrated in the column at the left. However, they are substantially constructed for "**heavy duty**" uses since they are formed from one piece of **1/16″ sheet steel.** Bottom plates and mounting screws are supplied with each of these chassis.

Ends are drilled to fit standard chassis mounting brackets listed at the bottom of this column.

Cat. No. Black Ripple	Cat. No. Zinc Plated	Dimensions	Shp. Wt. Lbs.	Net Price
15280	15208	8x17x2″	8	$2.76
15281	15209	8x17x3″	9	3.00
15282	15218	11x17x2″	9	3.15
15210	15219	11x17x3″	11	3.36
15212	15214	13x17x2″	11	3.48
15213	15215	13x17x3″	12	3.87
15216	15217	13x17x4″	13	4.26
15283	15284	17x17x4″	15	5.70

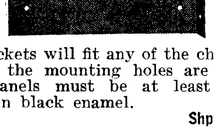
SHELVES FOR CABINET RACKS



These shelves are designed to fit into the various enclosed racks listed in this catalog. They are constructed to be mounted inside the rack, with side bolt mounting. All shelves are 1″ high, and finished in black ripple enamel. Shipping weight of all shelves, 10 lbs.

Cat. No.	Will Fit Rack No.	Shelf Size	Net Price
R-2015	P, PG or A-3675 P, PG or A-6625 P, PG or A-8325 F-6618, F-8318	13x21⅞″	$4.35
R-2018	P, PG or A-3618 P, PG or A-6618 P, PG or A-8318	16x21⅞″	4.50
ER-2112	ER, 213, ER-215, ER-217	13x21 15/16″	3.15
R-2128	DL-128, DL-1225, DL-1413, DL-1713, DL-2613, DL-3513	12x21 3/16″	2.55
ER-2212	ER-223, ER-225, ER-227	15x21 15/16″	3.15
R-2215	FD-215, FD-217	10⅝x21 15/16″	3.15
R-2218	P, PG or A-6918 P, PG or A-7818 P, PG or A-8518	16x23½″	4.20
R-2219	G-2218, G-2219	16x21⅝″	4.50
R-2224	P, PG or A-6924 P, PG or A-7824 P, PG or A-8524	22x23½″	5.10

CHASSIS MOUNTING BRACKETS

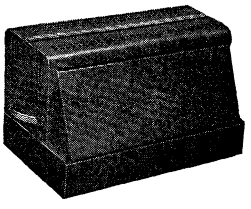


These brackets will fit any of the chassis listed above, as the mounting holes are drilled to match. Panels must be at least 7″ high. Finished in black enamel.

Cat. No.	Dimensions	Shp. Wt. Lbs.	Net Price
SB- 78	For 8″ Base	2	$ .78
SB-710	For 10″ Base	2	1.05
SB-711	For 11″ Base	2	1.14
SB-713	For 13″ Base	3	1.32
SB-717	For 17″ Base & Larger	4	2.04

SLOPING FRONT TYPE

Amplifier Foundation Chassis

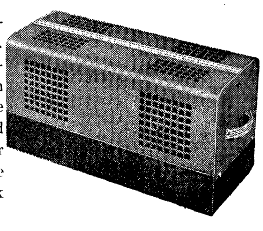


Latest trend in amplifier design. Combination of sloping front panel and streamlined cover enables you to build up a job similar to that used on commercial deluxe type amplifiers. All parts finished in slate grey ripple enamel trimmed with chrome moulding and handles. Front panel removable and protrudes 3″ from face of screen cover. Chassis supplied complete WITH bottom plates.

Cat. No.	Chassis Size	Screen Cover	Shp. Wt. Lbs.	Net Price
F-10120	10x12x3″	6½″ high	11	$6.90
F-10170	10x17x3″	6½″ high	13	7.80
F-13170	13x17x3″	6½″ high	15	8.85

ROUNDED CORNER TYPE

Amplifier Foundation Chassis

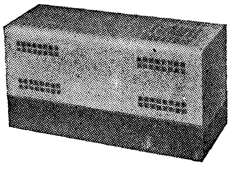


Modern professional type. Rounded corners on screen cover. Chrome mouldings and handles. Cover finished in slate grey, with black ripple chassis.

Cat. No.	Chassis Size	Depth of Cover	Shp. Wt. Lbs.	Net Price
DF-510	5x10x3″	6″	7	$3.75
DF-615	6x14x3″	6″	8	4.35
DF-717	7x17x3″	6″	9	4.95
DF-1012	10x12x3″	6″	9	4.95
DF-1017	10x17x3″	6″	10	5.85
DF-1317	13x17x3″	6″	12	7.05

STANDARD TYPE

Amplifier Foundation Chassis



Rounded corners effectively streamline the covers on these units. Grille type ventilation gives them a modern appearance. Chassis stamped from one piece of cold rolled steel, with corners securely spot welded. Covers finished in slate grey, chassis in black ripple enamel. Chassis are drilled for bottom plates.

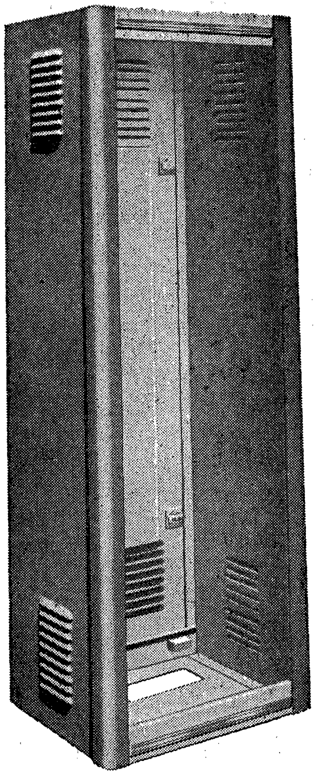
Cat. No.	Size	Depth of Cover	Shp. Wt. Lbs.	Net Price
F-510	5x10x3″	6″	7	$2.70
F-615	6x14x3″	6″	8	3.00
F-717	7x17x3″	6″	9	3.75
F-1012	10x12x3″	6″	9	3.75
F-1017	10x17x3″	6″	10	4.50
F-1317	13x17x3″	6″	12	5.40

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y. • FOR WEST COAST PRICES, ADD 10%

Export Dept.: Rocke International Corp., 13 E. 40th St., New York 16, N. Y.

PREMIER PRECISION BUILT METAL HOUSINGS

TRANSMITTER RACKS



- Rigidly constructed of #16 gauge steel with a #12 gauge steel bottom and welded throughout.
- Panel mounting angles are 3/16 thick and are tapped 12-24 on Universal spacing.
- Rear doors are hung on sturdy loose-jointed hinges and closed by a flush snap catch.
- A rectangular cut-out is made in the bottom for leads, etc.
- Racks are supplied with or without louvres.
- Vertical rounded corner moldings are supplied on **RM** racks.
- Tops and bottoms are trimmed with red striped **chrome** moulding.
- Panel mounting angles are adjustable to any distance from the front door by means of channel slides.
- **FD** racks have handles and locks.
- Racks finished in either black or gray wrinkle.

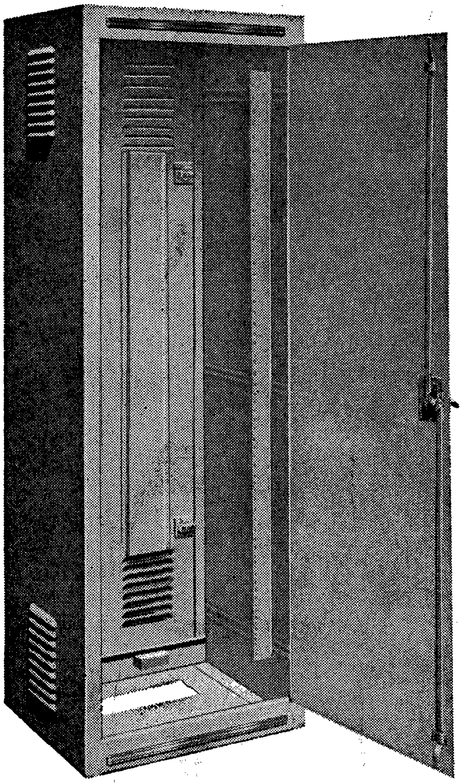
A Duplex Receptacle and Outlet Box are Furnished in the Back Under the Door.

RM-6119
Overall Size
67⅜x22x18"
Panel Space
61¼x19"
List Price **$130.00**

FD-6119
Overall Size
67⅜x22x18"
Panel Space
61¼x19"
List Price **$175.00**

RM-7719
Overall Size
83⅛x22x18"
Panel Space
77x19"
List Price **$165.00**

FD-7719
Overall Size
83⅛x22x18"
Panel Space
77x19"
List Price **$215.00**



CHANNEL RELAY RACKS

- Rigidly constructed of #12 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Vertical members and top cross-brace are welded together.
- Panel mounting holes are tapped for 10/32 machine screws on Universal Spacings.
- Racks are shipped knocked down with all necessary bolts for easy assembly.

Cat No.	Overall Dimensions	Available Panel Space	List Price
RR-800	38¼" x 20" x 18⅜"	36¾"	**$29.00**
RR-801	73¼" x 20" x 20⅞"	71¾"	**34.50**

All prices F.O.B., Bronx, N. Y.

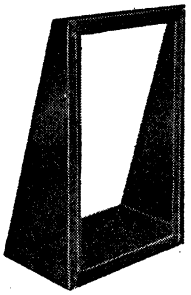


TABLE TYPE RELAY RACKS

- Rigidly constructed of #16 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Base constructed of one piece, similar to a chassis.
- Panel mounting holes are tapped for 10/32 machine screws on Universal Spacings.
- Racks are shipped knocked down with all necessary bolts for easy assembly.

Cat. No.	H.	W.	D.	Space Panel	List Price
TR-2119	**25"**	**21"**	**12"**	21 x 19"	**$11.00**
TR-2819	32"	21"	12"	28 x 19"	**13.75**

PREMIER METAL PRODUCTS COMPANY

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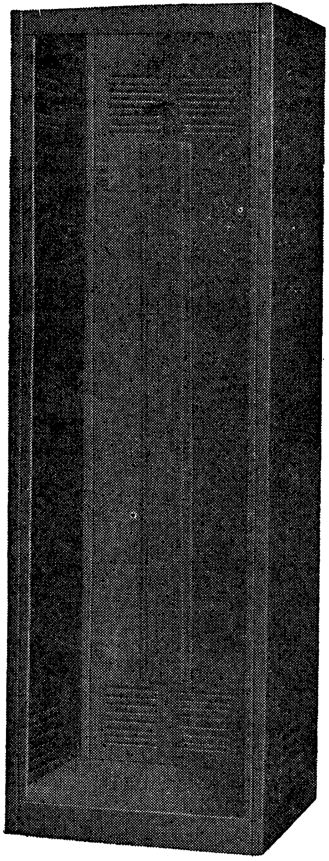
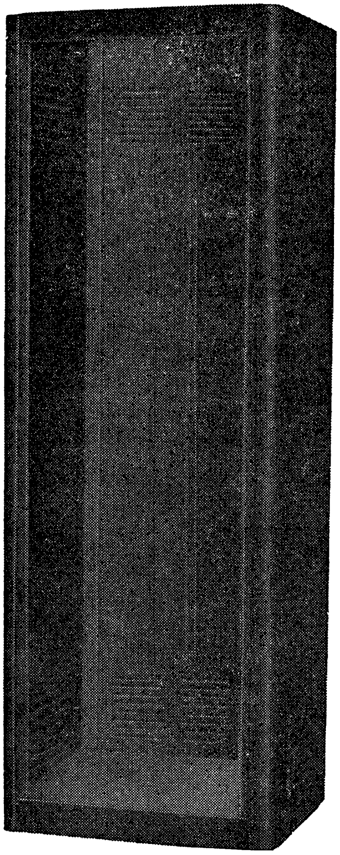
PREMIER PRECISION BUILT METAL HOUSINGS

ENCLOSED RELAY RACKS

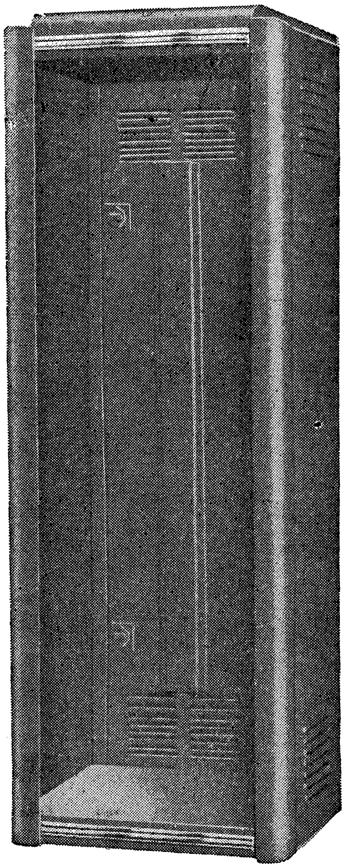
STANDARD TYPE



ROUNDED TYPE



DELUXE TYPE



- Rigidly constructed of #16 gauge cold rolled sheet steel.
- The panel mounting angles are of #12 gauge steel and are tapped for 10/32 machine screws on Universal spacings.
- Panels fit into a recess so that the edges are not exposed.
- Racks are shipped knocked down with all necessary bolts for easy assembly.
- Rear doors are hung on sturdy loose-jointed hinges, and closed by flush snap catches.
- Cabinets finished in either Black or Grey wrinkle.
- ROUNDED TYPE have front vertical rounded corners.
- DELUXE TYPE — The removable vertical corner mouldings are rounded and cover the mounting screws.
- DELUXE TYPE — Top and bottom are trimmed with red striped chrome finished moulding.

Catalog No.
RS-3619
Overall Dimensions
41⅞x22x18"
Available Panel Space
36¾x19"
List Price **$54.50**

RS-6119
Overall Dimensions
66⅜x22x18"
Available Panel Space
61¼x19"
List Price **$81.00**

RS-7719
Overall Dimensions
82⅛x22x18"
Available Panel Space
77x19"
List Price **$97.50**

Catalog No.
R-3619
Overall Dimensions 41⅞x22x18"
Available Panel Space 36¾x19"
List Price **$54.50**

R-4219
Overall Dimensions 47⅛x22x18"
Available Panel Space 42x19"
List Price **$62.40**

R-6119
Overall Dimensions 66⅜x22x18"
Available Panel Space 61¼x19"
List Price **$81.00**

R-7719
Overall Dimensions 82⅛x22x18"
Available Panel Space 77x19"
List Price **$97.50**

Catalog No.
DR-3619
Overall Dimensions
43⅛x22x18"
Available Panel Space
36¾x19"
List Price **$77.50**

DR-6119
Overall Dimensions
67⅝x22x18"
Available Panel Space
61¼x19"
List Price **$95.00**

DR-7719
Overall Dimensions
83⅜x22x18"
Available Panel Space
77x19"
List Price **$115.00**

All prices F.O.B., Bronx, N. Y.

PREMIER METAL PRODUCTS COMPANY

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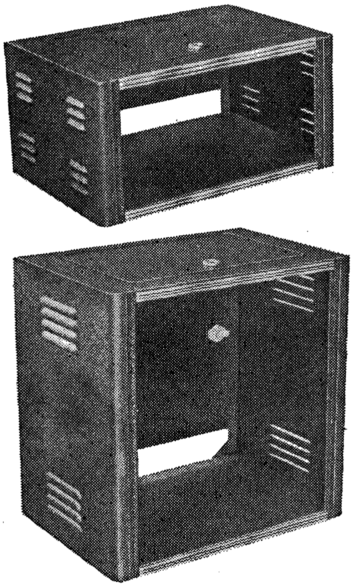
PREMIER PRECISION BUILT METAL HOUSINGS

DELUXE DESK PANEL CABINET RACKS

FOR STANDARD 19" RACK PANELS



- Front vertical corners are rounded and the top and bottom are trimmed with red striped chrome finished moulding.
- Rigidly constructed of #16 gauge cold rolled sheet steel.
- Panels fit into a recess so that the edges are not exposed.
- Panel mounting holes are tapped for 10/32 machine screws on Universal Spacings.
- Piano type hinges are used on the top doors, which are provided with flush snap catches.
- Cabinets finished in either Black or Grey Wrinkle.

SINGLE UNIT
(with door in top only)

Cat. No.	Cabinet Size	Available Panel Space	List Price
DCR-80	10½ x 21¾ x 15¼" deep	8¾" x 19"	$20.00
DCR-100	12¼ x 21¾ x 15¼" deep	10½" x 19"	22.50
DCR-120	14 x 21¾ x 15¼" deep	12¼" x 19"	24.25
DCR-140	15¾" x 21¾ x 15¼" deep	14 " x 19"	27.00

DOUBLE UNIT
(with door in top and door on rear panel)

Cat. No.	Cabinet Size	Available Panel Space	List Price
DCR-170	19¼ x 21¾ x 15¼" deep	17½" x 19"	32.00
DCR-190	21 x 21¾ x 15¼" deep	19¼" x 19"	33.50
DCR-210	22¾ x 21¾ x 15¼" deep	21 " x 19"	34.75

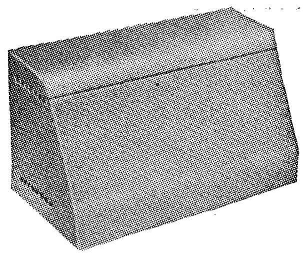
TRIPLE UNIT
(with door in top and door on rear panel)

Cat. No.	Cabinet Size	Available Panel Space	List Price
DCR-260	28 x 21¾ x 15¼"deep	26¼" x 19"	37.50
DCR-310	33¼ x 21¾ x 15¼" deep	31½" x 19"	39.50

QUAD UNIT
(with door in top and door on rear panel)

Cat. No.	Cabinet Size	Available Panel Space	List Price
DCR-350	36¾ x 21¾ x 15¼" deep	35 " x 19"	41.50

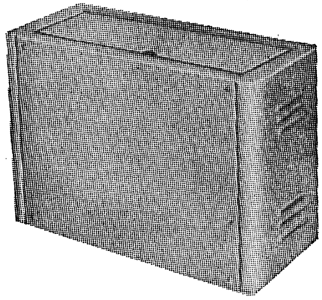
CABINETS



SLOPING FRONT

Cabinet has rounded top corners and a removable front panel. Back of cabinet is perforated and has opening for leads. Constructed of #20 gauge steel. Finished in Grey Wrinkle.

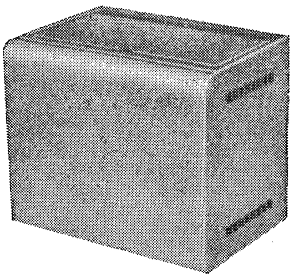
Cat. No.	H. W. D.	For Chassis	List Price
SFC-500	8 x 8 x 8"	7 x 7 x 2"	$6.40
SFC-501	8 x 10 x 8"	7 x 9 x 2"	7.10
SFC-502	8 x 14 x 8"	7 x 13 x 2"	7.65
SFC-503	9 x 18 x 8"	7 x 17 x 3"	11.00
SFC-504	12 x 18 x 12"	10 x 17 x 3"	14.00



HINGED TOP ROUNDED CORNER TYPE

Cabinet has front vertical rounded corners and a removable front panel. Back of cabinet is perforated and has opening for leads. Constructed of #20 gauge steel. Finished in Grey Wrinkle.

Cat. No.	H. W. D.	Panel Size	For Chassis	List Price
HTC-200	8 x 10 x 8"	8 x 8"	7 x 7 x 2"	$6.00
HTC-201	8 x 12 x 8"	8 x 10"	7 x 9 x 2"	6.50
HTC-202	8 x 16 x 8"	8 x 14"	7 x 13 x 2"	8.45
HTC-203	9 x 17 x 11"	9 x 15"	10 x 14 x 3"	13.15
HTC-204	12 x 20 x 12"	12 x 18"	10 x 17 x 3"	15.50
HTC-205	8 x 14 x 8"	8 x 12"	7 x 11 x 2"	7.50



HINGED TOP STANDARD TYPE

Front Panel has a rounded corner on top and is removable. Top door has a piano hinge. Constructed of #20 gauge steel. Finished in Black Wrinkle.

Cat. No.	H. W. D.	For Chassis	List Price
HTC-100	7¼ x 10½ x 6"	5½ x 9½ x 1½"	$4.80
HTC-101	7¼ x 8 x 8"	7 x 7 x 2"	4.80
HTC-102	7¼ x 10 x 8"	7 x 9 x 2"	5.50
HTC-103	7¼ x 14 x 8"	7 x 13 x 2"	6.25
HTC-104	9 x 15 x 10¾"	10 x 14 x 3"	10.25
HTC-105	12 x 18 x 12"	10 x 17 x 3"	12.00
HTC-106	7¼ x 12 x 8"	7 x 11 x 2"	6.00

All prices F.O.B., Bronx, N. Y.

PREMIER METAL PRODUCTS COMPANY

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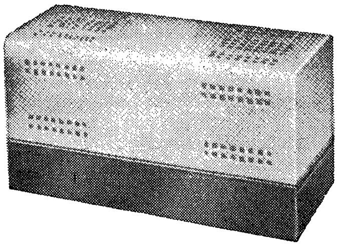
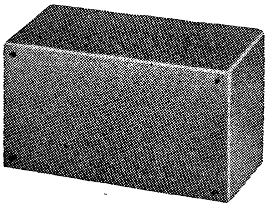
PREMIER PRECISION BUILT METAL HOUSINGS

AMPLIFIER FOUNDATION CHASSIS



Top cover has grille perforations and rounded corners. Finished in Grey Wrinkle. Chassis are constructed of one piece with corners spot-welded. Constructed of #20 gauge steel. Finished in Black Wrinkle.

Cat. No.	Size	Depth of Cover	List Price
AF-510	5 x 10 x 3"	6"	$6.25
AF-615	6 x 14 x 3"	6"	7.25
AF-717	7 x 17 x 3"	6"	8.25
AF-1012	10 x 12 x 3"	6"	8.25
AF-1017	10 x 17 x 3"	6"	9.75
AF-1317	13 x 17 x 3"	6"	11.75

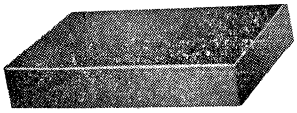


STEEL UTILITY CASES

Constructed of #20 gauge sheet steel with flanged edges, spot-welded corners, and two removable flat covers. Finished in Black Wrinkle.

Cat. No.	Size	List Price
C-442	4 x 4 x 2"	$1.25
C-453	4 x 5 x 3"	1.45
C-564	5 x 6 x 4"	1.75
C-596	5 x 9 x 6"	2.75
C-666	6 x 6 x 6"	2.00
C-8101	8 x 10 x 10"	4.50
C-8107	8 x 10 x 7"	3.70
C-1128	11 x 12 x 8"	5.00
C-1576	15 x 7¾ x 6½"	4.50
C-1597	15 x 9 x 7"	5.15
C-1276	12 x 7 x 6"	3.75

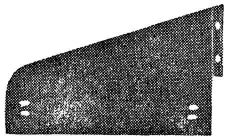
BLANK CHASSIS



Constructed from one piece of #20 gauge cold rolled steel, except those marked * which are of #16 gauge. Corners are spot-welded. Bottom edges are flanged in on four sides and punched for bottom plates. Finished in either Black Wrinkle or Zinc Plated.

Cat. No.	Size	List Price
CH-400	5½ x 9½ x 1½"	$1.30
CH-401	5 x 10 x 3"	1.80
CH-402	6 x 14 x 3"	2.10
CH-403	7 x 7 x 2"	1.50
CH-404	7 x 9 x 2"	1.80
CH-405	7 x 11 x 2"	1.85
CH-406	7 x 13 x 2"	2.00
CH-407	7 x 15 x 3"	2.40
CH-408	4 x 17 x 3"	2.15
CH-409	7 x 17 x 3"	2.60
CH-410	8 x 17 x 2"	2.40
CH-411	8 x 17 x 3"	2.60
CH-412	10 x 12 x 3"	2.50
CH-413	10 x 14 x 3"	2.65
CH-414	10 x 17 x 2"	2.65
CH-415	10 x 17 x 3"	2.75
CH-416	10 x 17 x 4"	3.40
CH-417*	11 x 17 x 2"	3.75
CH-418*	11 x 17 x 3"	4.10
CH-419	12 x 17 x 2"	2.85
CH-420	12 x 17 x 3"	3.40
CH-421	12 x 17 x 4"	3.75
CH-422*	13 x 17 x 2"	4.10
CH-423*	13 x 17 x 3"	4.75
CH-424*	13 x 17 x 4"	5.40
CH-425	7 x 11 x 3"	2.00
CH-426	5 x 7 x 2"	1.47
CH-427	8½ x 15 x 3"	2.75

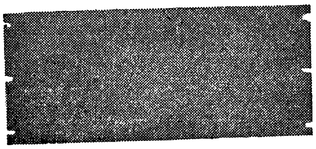
* Made from #16 gauge steel.



CHASSIS MOUNTING BRACKETS

These brackets will fit any of the above chassis because the mounting holes are drilled to match. Panels must be at least 7" high. Notched for 3" chassis. Nos. CB-810 and CB-813 are notched for 4" chassis. Finished in black enamel.

Cat No.	Dimensions	List Price
CB- 78	For 8" Base	$1.30
CB-710	For 10" Base	1.75
CB-711	For 11" Base	1.90
CB-713	For 13" Base	2.20
CB-717	For 17" Base and larger	3.40
CB-810	For 10" Base	2.60
CB-813	For 13" Base	2.75



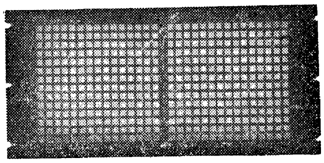
BLANK RACK PANELS—19" WIDE

For Racks with Multiple 1¼"—½" Spacings

Made of #12 Gauge Steel

Finished in either Black or Grey Wrinkle

Cat No.	Width	List Price
RP-119	1¾"	$1.10
RP-319	3½"	1.25
RP-519	5¼"	1.55
RP-719	7"	1.80
RP-819	8¾"	2.20
RP-1019	10½"	2.65
RP-1219	12¼"	3.15
RP-1419	14"	3.60
RP-1519	15¾"	4.10
RP-1719	17½"	4.50
RP-1919	19¼"	5.00
RP-2119	21"	5.50



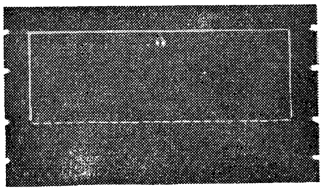
GRILLE PANELS—19" WIDE

Made of #12 Gauge Steel

Finished in either Black or Grey Wrinkle

Cat. No.	Panel Size	Grille Size	List Price
GRP-601	5¼"	3⅞ x 13⅜"	$4.40
GRP-602	7"	3⅞ x 13⅜"	4.75
GRP-603	8¾"	5⅞ x 13⅜"	5.75
GRP-604	8¾"	*3⅞ x 13⅜"	5.25
GRP-605	10½"	7⅞ x 13⅜"	6.25
GRP-606	10½"	*5⅞ x 13⅜"	5.75
GRP-607	12¼"	*7⅞ x 13⅜"	6.50

* Allows 3½" space at bottom for chassis mounting.



DOOR PANELS—19" WIDE

Made of #12 Gauge Steel

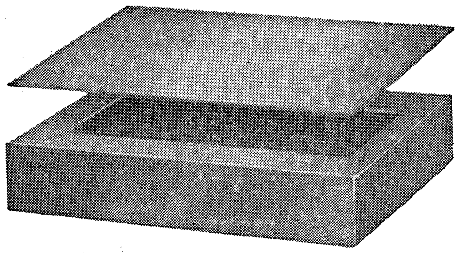
Finished in either Black or Grey Wrinkle Panels have flush hinged doors with piano hinges, and are equipped with a chrome knob and concealed snap catch. All doors are located 1" from top to allow space for chassis at bottom.

Cat. No. Black	Panel Size	Door Size	List Price
DRP-700	8¾"	4½ x 15⅜"	$7.00
DRP-701	10½"	6 x 15⅜"	7.50
DRP-702	12¼"	7½ x 15⅜"	8.25

All prices F.O.B., Bronx, N. Y.

PREMIER METAL PRODUCTS COMPANY

PREMIER PRECISION BUILT METAL HOUSINGS



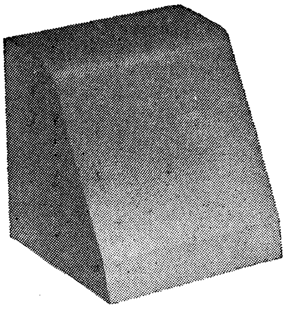
REMOVABLE TOP CHASSIS

Made of #16 Ga. Cold Rolled Steel. Top and Bottom edges flanked in on four sides. Top plate is removable. Finished in either Black Wrinkle or Zinc Plated.

Catalog No.	Size	List Price
RCH-415	10x17x3	$5.50
RCH-416	10x17x4	6.10
RCH-423	13x17x3	5.75
RCH-424	13x17x4	7.10

REPLACEMENT TOPS

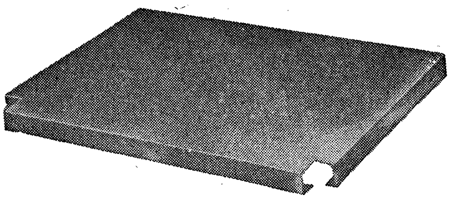
Catalog No.	Size	List Price
RTC-415	10x17	$2.10
RTC-423	13x17	2.60



SLOPING PANEL CABINETS

Made of #20 Ga. Steel with Rounded Top Corners and sloping front. Finished in Black Wrinkle.

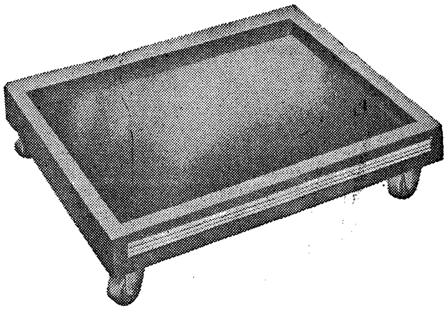
Catalog No.	W H D	List Price
SPC-1200	4 3/16 x 4 1/2 x 4 1/4	$1.70
SPC-1201	5 3/16 x 4 1/2 x 4 1/4	1.95
SPC-1202	6 3/16 x 4 1/2 x 4 1/4	2.20
SPC-1203	7 3/16 x 4 1/2 x 4 1/4	2.65



RACK SHELF

Made of one piece of #16 Ga. Cold Rolled Steel, 1" high. Holes are punched on sides for mounting to rack. Finished in Black or Gray Wrinkle.

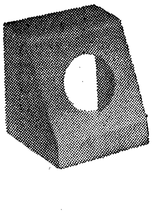
Catalog No.	Will Fit Rack No.	Shelf Size	List Price
RS-1106	All DCR Racks	12x21 9/16	$4.25
RS-1107	R, RS, DR and RM Racks	15x21 13/16	5.25
RS-1108	FD Racks	13x21 13/16	4.75



ROLLER TRUCKS FOR RACKS

Made from 1 piece of #16 Ga. Cold Rolled Steel. Supplied with 2" Dia. Hard Rubber Wheels and bolts for easy assembly. Finished in either Black or Gray Wrinkle and has a red striped Chrome moulding.

Catalog No.	Will Fit Rack No.	Inside Dimensions	List Price
RT-1100	All DCR Racks	15 3/4x22 1/4	$15.00
RT-1101	R, RS, DR, RM and FD Racks	18 3/4x22 3/4	19.00
RT-1102	RR-801	20 1/2x21 1/2	21.00



METER CASES

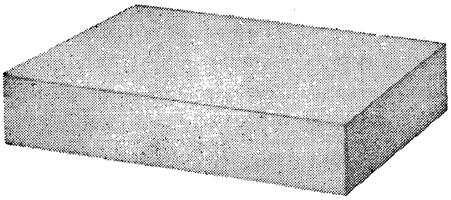
Made of #20 Ga. Steel with Rounded Top Corner and sloping fronts. Accommodates 2" or 3" Meters. Finished in Black Wrinkle.

Catalog No.	W H D	Meter Size	Hole Size	List Price
SPC-1208	4 3/16x4 1/2x4 1/4	2"	2 3/16"	$1.60
SPC-1209	4 3/16x4 1/2x4 1/4	3"	2 13/16"	1.60

All prices F.O.B., Bronx, N. Y.

PREMIER METAL PRODUCTS COMPANY

PREMIER *Aluminum* CHASSIS • PANELS • CABINETS

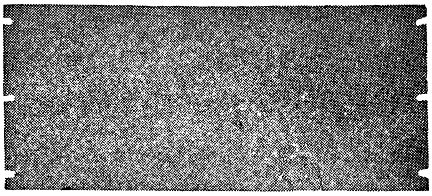


ALUMINUM BLANK CHASSIS

Constructed from one piece of #18 Ga. (.040) aluminum except those marked * which are of #16 Ga. (.051). Corners are spot-welded. Bottom edges are flanged in on four sides and punched for bottom plates. Natural aluminum finish.

Catalog No.	Size	List Price
ACH-400	5½x9½x1½"	$1.70
ACH-401	5x10x3"	2.00
ACH-402	6x14x3"	3.35
ACH-403	7x 7x2"	1.70
ACH-404	7x 9x2"	1.80
ACH-405	7x11x2"	2.00
ACH-406	7x13x2"	2.10
ACH-407	7x15x3"	3.75
ACH-408	4x17x3"	3.05
ACH-409	7x17x3"	3.70
ACH-410	8x17x2"	3.75
ACH-411	8x17x3"	3.95
ACH-412	10x12x3"	3.50
ACH-413	10x14x3"	4.45
ACH-414	10x17x2"	4.25
ACH-415	10x17x3"	4.75
ACH-416	10x17x4"	5.50
ACH-417*	11x17x2"	4.55
ACH-418*	11x17x3"	5.55
ACH-419	12x17x2"	5.00
ACH-420	12x17x3"	5.90
ACH-421	12x17x4"	6.50
ACH-422*	13x17x2"	5.25
ACH-423*	13x17x3"	6.25
ACH-424*	13x17x4"	7.15
ACH-425	7x11x3"	2.10
ACH-426	5x 7x2"	1.40
ACH-427	8½x15x3"	3.80

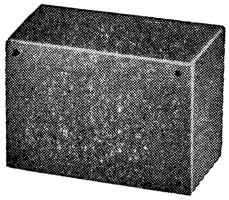
*Made from #16 gauge aluminum.



ALUMINUM BLANK RACK PANELS 19" WIDE

For racks with multiple 1¼—½ spacings. Made of ⅛" thick aluminum. Finished in either black or gray wrinkle.

Cat. No.	Width	List Price	Cat. No.	Width	List Price
ARP-119	1¾"	$1.25	ARP-1219	12¼"	$5.65
ARP-319	3½"	1.80	ARP-1419	14"	6.50
ARP-519	5¼"	2.65	ARP-1519	15¾"	7.25
ARP-719	7"	3.20	ARP-1719	17½"	8.00
ARP-819	8¾"	3.85	ARP-1019	19¼"	8.75
ARP-1019	10½"	4.85	ARP-2119	21"	9.50

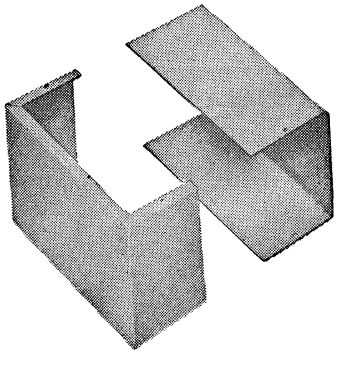


ALUMINUM UTILITY CASES

Constructed of #18 Ga. (.040) aluminum with flanged edges, spotwelded corners and two removable flat covers. Natural Aluminum finish or Gray Hammertone.

Natural Aluminum Cat. No.	List Price	Size W L H	Gray Hammertone Cat. No.	List Price
AC-442	$1.70	4x4x2	PAC-442	$1.90
AC-453	1.90	4x5x3	PAC-453	2.20
AC-596	3.70	5x9x6	PAC-596	4.20
AC-666	2.55	6x6x6	PAC-666	2.90
AC-1276	5.10	12x7x6	PAC-1276	5.65
AC-1597	7.00	15x9x7	PAC-1597	7.75

ALUMINUM MINIATURE CASES



A two piece case made of #18 Ga. (.040) aluminum. Natural Aluminum Finish or Gray Hammertone.

Natural Aluminum Cat. No.	List Price	L W H	Gray Hammertone Cat. No.	List Price
AMC-1000	$ .95	2¾x2⅛x1⅝	PMC-1000	$1.05
AMC-1001	.95	3¼x2⅛x1⅝	PMC-1001	1.05
AMC-1002	1.00	4 x2⅛x1⅝	PMC-1002	1.10
AMC-1003	1.30	4 x2¼x2¼	PMC-1003	1.45
AMC-1004	1.35	5 x2¼x2¼	PMC-1004	1.50
AMC-1005	1.55	5 x4 x3	PMC-1005	1.65
AMC-1006	1.50	5¼x3 x2⅛	PMC-1006	1.60
AMC-1007	1.90	6 x5 x4	PMC-1007	2.05
AMC-1008	2.10	7 x5 x3	PMC-1008	2.30
AMC-1009	3.15	8 x6 x3½	PMC-1009	3.35
AMC-1010	3.95	10 x6 x3½	PMC-1010	4.15
AMC-1011	4.45	12 x7 x4	PMC-1011	4.90
AMC-1012	5.25	17 x5 x4	PMC-1012	5.75
AMC-1013	1.55	10 x2 x1⅝	PMC-1013	1.65
AMC-1014	2.05	12 x2½x2¼	PMC-1014	2.25
AMC-1015	1.25	4 x2 x2¾	PMC-1015	1.60
AMC-1016	1.30	4¼x2¼x1½	PMC-1016	1.45

All prices F.O.B., Bronx, N. Y.

PREMIER METAL PRODUCTS COMPANY

CABINETS
CHASSIS

MIDDLETOWN MANUFACTURING CO.

CASES
PANELS

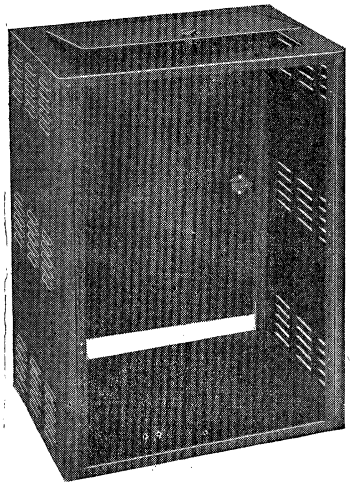
MIDDLETOWN IN CONNECTICUT

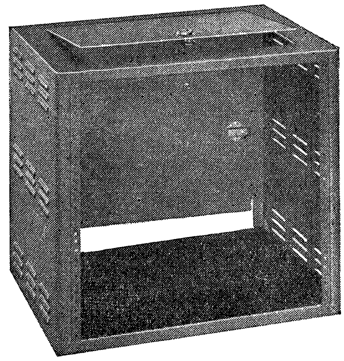
D.C. DELUXE CABINET RACKS—USE 19" RACK PANELS

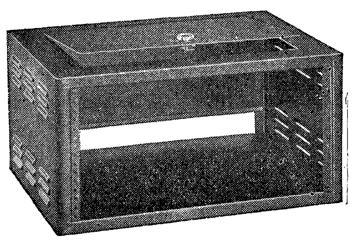
Middletown D. C. Cabinets conform to the conventional design of streamlined cabinets used by builders of amateur and commercial equipment.

FEATURES

- ★ **Constructed of heay gauge 1/16" steel, electrically welded.**
- ★ **Adequate ventilation is provided by sufficient louvres in sides, and ventilation in back.**
- ★ **Front Vertical posts rounded.**
- ★ **Flush panel mounting (recessed).**
- ★ **Drilled and tapped for 10/32" screws on universal centers.**
- ★ **Flush door in top fitted with flush snap-lock and piano hinges.**
- ★ **Black Wrinkle finish. *Grey Wrinkle if desired.***







Cat. No.		Dealer Cost
D.C. 108	Panel Size 8¾" x 19". Size of Cabinet 10½" x 21½" x 15". Single Unit	$11.64
D.C. 1412	Panel Size 12¼" x 19". Size of Cabinet 14" x 21½" x 15". Single Unit	14.19
D.C. 1514	Panel Size 14" x 19". Size of Cabinet 15¾" x 21½" x 15". Single Unit	15.84

Cat. No.		Dealer Cost
D.C. 1917	Panel Size 17½" x 19". Size of Cabinet 19¼" x 21½" x 15". Double Unit—Door Top and Back	$18.84
D.C. 2826	Panel Size 26¼" x 19". Size of Cabinet 28" x 21½" x 15". Triple Unit—Door Top and Back	22.14
D.C. 3635	Panel Size 35" x 19". .... Size of Cabinet 36¾" x 21½" x 15". Quad. Unit—Door Top and Back	24.54

BLANK STEEL CHASSIS
Heavy Duty

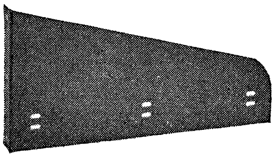
Middletown heavy duty Chassis are made from one piece of 1/16" sheet steel—Spot Welded at all four corners. Bottom edges are folded over on all four sides for additional rigidity and rilled to match bottom plates. Ends are drilled to fit standard Middletown brackets Bottom plates are supplied with these Chassis.

Stock Sizes
Black Wrinkle

Cat. No.		Dealer Cost
H.D. 8172	8 x 17 x 2"	$2.90
H.D. 8173	8 x 17 x 3"	3.15
H.D. 11172	11 x 17 x 2"	3.30
H.D. 11173	11 x 17 x 3"	3.65
H.D. 13172	13 x 17 x 2"	4.00
H.D. 13173	13 x 17 x 3"	4.40
H.D. 13174	13 x 17 x 4"	4.84

CHASSIS BRACKETS
Mounting

These brackets are for chassis listed above. Front end of the bracket is seven inches high. Finished in black wrinkle.



Cat. No.	Size	Shipping Weight	Dealer Cost
C.B. 8	For 8" Base	2 lbs.	$0.87
C.B. 11	For 11" Base	3 lbs.	1.26
C.B. 13	For 13" Base	3 lbs.	1.47

BLANK CHASSIS
Standard Type

Middletown Chassis are made from one piece of No. 20 gauge steel spot-welded at all 4 corners—bottom edges are folded over on four sides for additional rigidity and drilled to match bottom plates.

Bottom plates are drilled to match holes on flange of chassis and have pressed bumpers at corners. Material No. 20 gauge steel.

Standard Chassis
Steel Black Wrinkle

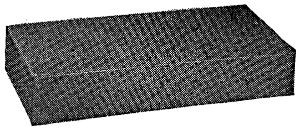
Cat. No.	Size	Dealer Cost
**B.S. 442	4x 4x2"	$0.72
**B.S. 591	5½x9½x1½"	.78
**B.S. 5103	5x10x3"	1.08
B.S. 4173	4x17x3"	1.29
B.S. 6143	6x14x3"	1.26
**B.S. 772	7x 7x2"	.90
**B.S. 792	7x 9x2"	1.08
B.S. 7112	7x11x2"	1.11
B.S. 7132	7x13x2"	1.20
B.S. 7153	7x15x3"	1.44
B.S. 7173	7x17x3"	1.56
B.S. 8172	8x17x2"	1.44
B.S. 8173	8x17x3"	1.56
B.S. 10123	10x12x3"	1.50
B.S. 10143	10x14x3"	1.59
B.S. 10172	10x17x2"	1.59
B.S. 10173	10x17x3"	1.65
*B.S. 11172	11x17x2"	2.01
*B.S. 11173	11x17x3"	2.22
B.S. 12172	12x17x2"	1.71
B.S. 12173	12x17x3"	2.04
B.S. 12174	12x17x4"	2.25
*B.S. 13172	13x17x2"	2.30
*B.S. 13173	13x17x3"	2.60
*B.S. 13174	13x17x4"	3.00

*18 ga.
**22 ga.

Aluminum Chassis

Cat. No.	Dealer Cost
†ABC 591	$1.05
†ABC 5103	1.26
‡ABC 4173	1.83
‡ABC 6143	1.98
†ABC 772	.99
†ABC 792	1.08
†ABC 7112	1.20
†ABC 7132	1.32
‡ABC 7153	2.16
‡ABC 7173	2.25
‡ABC 8172	1.98
‡ABC 8173	2.34
‡ABC 10123	1.98
‡ABC 10143	2.52
‡ABC 10172	2.40
‡ABC 10173	2.73
‡ABC 11172	2.49
‡ABC 11173	3.15
‡ABC 12172	3.00
‡ABC 12173	3.36
‡ABC 12174	3.90
‡ABC 13172	3.00
‡ABC 13173	3.54
‡ABC 13174	4.05

†18 ga.
‡16 ga.



Bottom Plates
Black Wrinkle

Cat. No.	Size	Dealer Cost
B.P. 59	5½x9½"	$0.39
B.P. 510	5x10"	.45
B.P. 417	4x17"	.57
B.P. 614	6x14"	.60
B.P. 77	7x 7"	.42
B.P. 79	7x 9"	.45
B.P. 711	7x11"	.57
B.P. 713	7x13"	.63
B.P. 715	7x15"	.69
B.P. 717	7x17"	.72
B.P. 817	8x17"	.72
B.P. 1012	10x12"	.72
B.P. 1014	10x14"	.78
B.P. 1017	10x17"	.96
B.P. 1117	11x17"	.99
B.P. 1217	12x17"	1.05
B.P. 1317	13x17"	1.14

Net

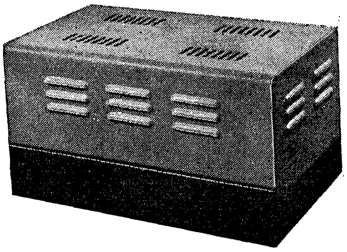
CABINETS
CHASSIS

MIDDLETOWN MANUFACTURING CO.

CASES
PANELS

MIDDLETOWN IN CONNECTICUT

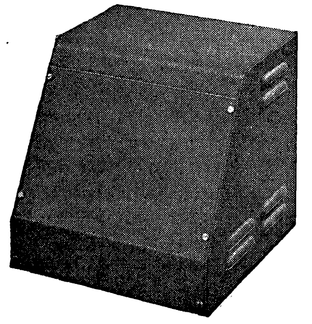
AMPLIFIER FOUNDATIONS—DeLuxe Models



This unit is designed to meet the most critical requirements. It has rounded corners, special Middletown designed louvres on all 4 sides and elongated holes on top to give maximum ventilation. Chassis are finished in Black wrinkle. Covers are finished in Grey wrinkle. Chassis are drilled for bottom plates which are listed separately. Covers all have a depth of 6″.

Cat. No.	Size	Dealer Cost
A.F.-5109	5 x 10 x 9″	$2.80
A.F.-6149	6 x 14 x 9″	3.00
A.F.-7179	7 x 17 x 9″	3.75
A.F.-10129	10 x 12 x 9″	3.75
A.F.-10179	10 x 17 x 9″	4.50
A.F.-13179	13 x 17 x 9″	5.40

SLOPING FRONT PANEL CABINETS

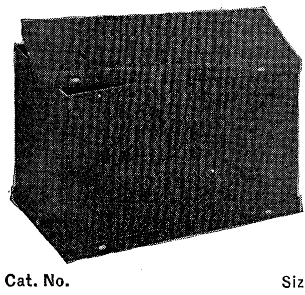


Sloping front panel cabinets have a wide application in the electronic field since they are adaptable for various uses. They are constructed of heavy gauge steel electrically spot-welded. Top corner is rounded, front panel is removable, and louvres on sides provide ventilation.

Back panel is ventilated on top and an opening is provided on the bottom so that connections can be made directly to the rear of the chassis. Finished in Grey wrinkle.

Cat. No.	H.W.D.	Chassis Size	Dealer Cost
S.F.-888	8 x 8 x 8″	7 x 7 x 2″	$3.84
S.F.-8108	8 x 10 x 8″	7 x 9 x 2″	4.26
S.F.-8128	8 x 10 x 8″	7 x 9 x 2″	4.44
S.F.-8148	8 x 14 x 8″	7 x 13 x 2″	4.59
S.F.-121812	12 x 18 x 12″	10 x 17 x 3″	8.40

STEEL UTILITY CANS



These Utility Cans are substantially made from sheet steel with spot welded reinforced corners. Tops and bottoms are removable and are flanged on all four sides. Held in place with self-tapping screws.

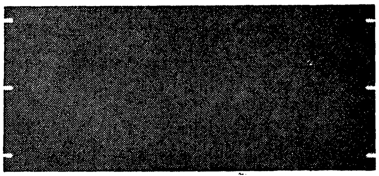
Cat. No.	Size	Weight	Dealer Cost
U.C. 565	5½ x 6 x 5½″	3 lbs.	$1.38
U.C. 596	5 x 9 x 6″	5 lbs.	1.86
U.C. 8107	8 x 10 x 7″	6 lbs.	2.70
U.C. 81010	8 x 10 x 10″	7 lbs.	3.45
U.C. 11128	11 x 12 x 8″	9 lbs.	4.35

RACK PANELS — 19" LONG
(Steel and Aluminum)

Middletown Rack Panels are offered in either ⅛″ steel or ⅛″ aluminum. They are 19″ wide and are slotted for conventional W. E. mounting. Fourteen standard sizes. Furnished in black or grey wrinkle finish.

Note: When ordering grey wrinkle, add prefix "G" to catalog number.

*Available on special order.



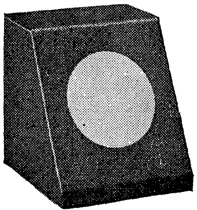
Cat. No. Steel (Blk. Wrinkle)	Dealer Cost	Height	Cat. No. Aluminum (Black Wrinkle)	Dealer Cost
R.P. 1	$0.77	1¾″	A.R.P. 1	$0.87
R.P. 3	.84	3½″	A.R.P. 3	1.20
R.P. 5	1.05	5¼″	A.R.P. 5	1.80
R.P. 7	1.20	7″	A.R.P. 7	2.16
R.P. 8	1.50	8¾″	A.R.P. 8	2.58
R.P. 10	1.68	10½″	A.R.P. 10	3.24
R.P. 12	2.10	12¼″	A.R.P. 12	3.78
R.P. 14	2.40	14″	A.R.P. 14	4.35
R.P. 15	2.70	15¾″	A.R.P. 15	4.80
R.P. 17	2.97	17½″	A.R.P. 17	5.34
R.P. 19	3.30	19¼″	A.R.P. 19	5.85
R.P. 21	3.66	21″	A.R.P. 21	6.30
R.P. 26*	……..	26¼″	A.R.P. 26*	……..
R.P. 35*	……..	35″	A.R.P. 35*	……..

METER PANELS

Middletown Meter Panels are made 5¼″ high and are made to the same specifications as our Rack Panels — are available to fit 3″ meters.

Cat. No.	Holes	Hole Size	Dealer Cost
R.P.M. 33	3	2 3/16″	$1.30
R.P.M. 35	5	2 3/16″	1.85

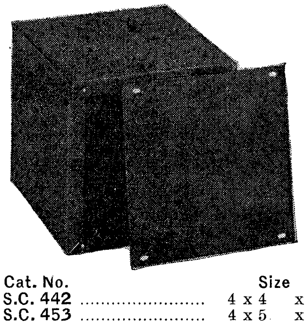
METER CASES



These cases have sloping front panel with rounded top corner which blends with streamline equipment. They are sturdily constructed from sheet steel with welded joints.

Cat. No.	Meter	Hole Size	H.W.D.	Dealer Cost
M.C. 13	Single 3″	2 13/16″	4½ x 4 x 4	$1.14
M.C. 33	3-3″ Meters	2 13/16″	4½ x 11¼ x 4	3.06

STEEL CASES — STANDARD



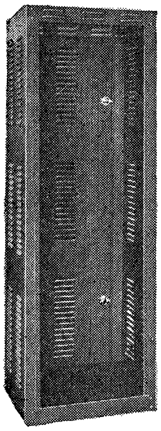
These cases are similar to our standard steel utility cans except they have flat tops and bottoms which are held in place with self tapping screws and are removable. These cases are of sturdy construction and have spot welded corners. Case has flanges on all edges. Furnished in black wrinkle.

Cat. No.	Size	Weight	Dealer Cost
S.C. 442	4 x 4 x 2 ″	2 lbs.	$0.84
S.C. 453	4 x 5 x 3 ″	3 lbs.	.96
S.C. 666	6 x 6 x 6 ″	3 lbs.	1.32
S.C. 1276	12 x 7 x 6 ″	5 lbs.	2.49
S. C. 1597	15 x 9 x 7 ″	9 lbs.	3.39
S.C. 1287	12 x 7¾ x 6½″	9 lbs.	2.88
S.C. 1576	15 x 7¾ x 6½″	11 lbs.	2.97

Net

CABINETS CHASSIS — MIDDLETOWN MANUFACTURING CO. — CASES PANELS

DE LUXE RELAY RACKS

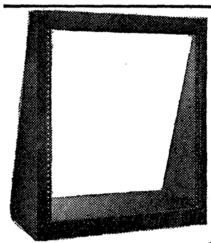


Middletown De Luxe Relay Racks are made of 16-gauge steel with ⅛″ panel supports which are recessed so that edges of panels set flush. Standard 19″ panels fit these racks. (See page J-113 for panel sizes.)
Adequate ventilation is provided by louvres in the two sides, the door and in the top at front and back. Door is hung on sturdy hinges and has snap catches. Racks come with rigid, built-in caster supports. (Casters not included in price of rack.) Furnished in either black or grey wrinkle finish. Shipped knocked down with all necessary hardware.
Rack shelves and supporting angles to fit these Relay Racks are available. Information and prices on request.

Cat. No. (Black Wrinkle)	Overall Size H	W	D	Panel Size H	W	Dealer Cost
DRR 4236	42 1/16	22	17¼	36¾	19	$32.70
DRR 4742	47 5/16	22	17¼	42	19	37.45
DRR 6661	66 9/16	22	17¼	61¼	19	48.60
DRR 8277	82 5/16	22	17¼	77	19	58.50

Note: When ordering grey wrinkle, add prefix "G" to catalog number. Dimensions in Inches.

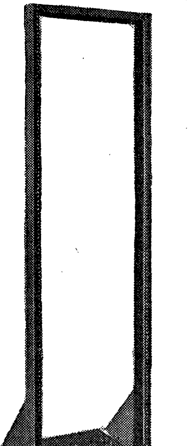
OPEN-TYPE TABLE RELAY RACKS



For table mounting of power transmitters, P. A. systems and other radio and electronic apparatus. Rack is ruggedly constructed with strong base to accommodate heavy components. Drilled and tapped for conventional 19″ wide panels which set in recess so that no edges are exposed. (See page J-113 for panel sizes.)
Shipped knocked down with necessary hardware. Black wrinkle finish.

Catalog Number	Overall Size H	W	D	Panel Space H	W	Dealer Cost
TRR 24	24	21	12	21	19	$6.60
TRR 31	31	21	12	28	19	8.25

OPEN-TYPE CHANNEL RELAY RACKS

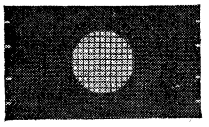


Sturdy construction with rigid supporting members and side angle braces make these racks perfectly suited to all heavy-duty assignments. Made of ⅛″ steel channels, 3″ deep, welded together with angle cross pieces of the same material. Chassis type base. Drilled and tapped to accommodate conventional 19″ panels. (See page J-113 for panel sizes.) Black wrinkle finish. Shipped knocked down with necessary hardware.

Cat. No.	Overall Size H	W	D	Panel Size H	W	Dealer Cost
OCR 35	35½	21	22	31½	19	$17.40
OCR 70	70½	21	22	66½	19	20.70

Dimensions in Inches.

SPEAKER PANELS

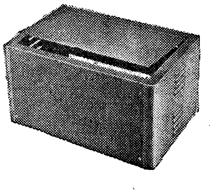


Made from ⅛″ steel, panels fit either 6″, 8″, 10″ or 12″ speakers. They are 19″ wide, slotted for standard W.E. mounting. Furnished in black or grey wrinkle finish. Opening covered with an attractive cloverleaf design steel grille.

Catalog Number (Black Wrinkle)	Panel Space H	W	Hole Diameter	Speaker Size	Dealer Cost
SP 8	8¾	19	4¾	6	$2.46
SP 10	10½	19	6½	8	3.15
SP 12	12¼	19	9	10	3.75
SP 14	14	19	11	12	4.35

Note: When ordering grey wrinkle, add prefix "G" to catalog number. Dimensions in Inches.

ROUNDED CORNER CABINETS

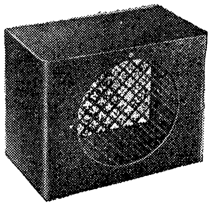


These are de luxe streamlined cabinets with front vertical corners rounded. Flush panel door, hung on full-length piano hinge, provided in top for convenient access. Ventilating louvres on sides. Opening at bottom of rear panel permits easy accessibility for leads, cables, etc. Front panel held in position with self-tapping screws. Grey wrinkle finish. Sturdily built of sheet steel.

Catalog No.	Size H	W	D	Panel Space H	W	Chassis Size D	W	H	Dealer Cost
RC 8108	8	10	8	8	8	7	7	2	$3.60
RC 8128	8	12	8	8	10	7	9	2	3.90
RC 8168	8	16	8	8	14	7	13	2	5.07
RC 91711	9	17	11	9	15	10	14	3	7.89
RC 122012	12	20	12	12	18	10	17	3	9.30

Chassis are not included unless ordered. See J-112 for chassis listings. Dimensions in Inches.

STANDARD SPEAKER CABINETS

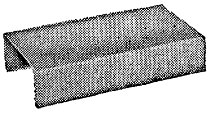


These cabinets are designed especially for permanent or portable public address systems. Made from heavy sheet steel with front vertical corners rounded for neat, streamlined appearance. Attractive cloverleaf grille. Removable back cover. Black or grey wrinkle finish.

Catalog Number (Black Wrinkle)	Cabinet Size H	W	D	Hole Diam.	Speaker Size	Dealer Cost
SS 10106	10	10	6	4¾	6″	$3.45
SS 12127	12	12	7	6½	8″	4.65
SS 14148	14	14	8	9	10″	5.55
SS 16168	16	16	8	11	12″	7.35

Note: When ordering grey wrinkle, add prefix "G" to catalog number.

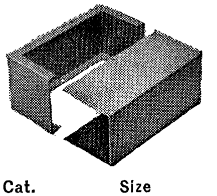
ALUMINUM MIDGET CHASSIS



These small, open-end aluminum chassis are ideal for miniature tube assemblies and all applications where space is limited. Made of prime sheet aluminum with ¼″ flange on bottom for fastening down, or attaching bottom plate. Finish is etched aluminum.

Cat. No. AMC	Size D	W	H	Dealer Cost	Cat. No. AMC	Size D	W	H	Dealer Cost
221	2⅚	2¾	1¼	$0.30	541	5¾	4⅞	1½	$0.45
131	1¾	3⅛	1	.33	431	4	3⅛	1	.36
342	3¼	4½	2	.36	441	4	4⅛	1	.39
241	2¾	4⅛	1	.36	451	4	5⅛	1	.42
341	3¾	4⅛	1½	.36	461	4	6⅛	1	.45
361	3	6⅛	1¼	.42					

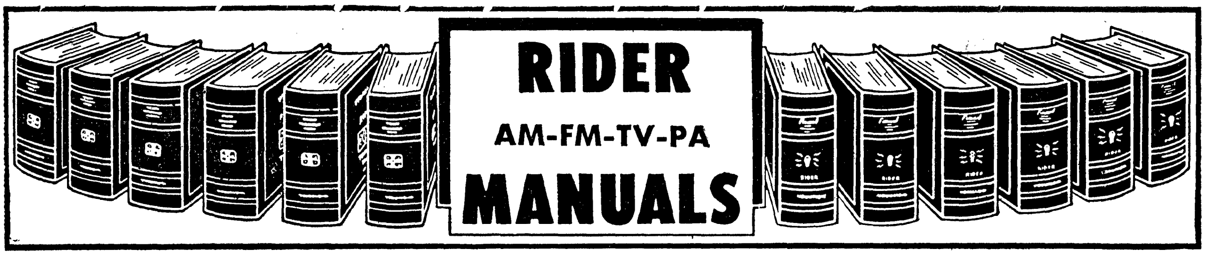
MULTI-MOUNTS



These are all-purpose boxes with an unlimited field of application in radio and electronics. Made from prime sheet aluminum. Two-piece telescoping construction, each half forming three sides. Finish is etched aluminum or grey hammer-tone.

Cat. No. MM	Size D (Etched Aluminum)	W	H	Dealer Cost	Cat. No. MM	Size H (Etched Aluminum)	W	D	Dealer Cost
122	1⅝	2¾	2⅛	$0.63	386	3½	8	6	$2.01
132	1⅝	3¼	2⅛	.63	3106	3½	10	6	2.49
142	1⅝	4	2⅛	.66	4127	4	12	7	2.94
242	2¼	4	2¼	.87	4175	4	17	5	3.45
252	2¼	5	2¼	.90	1102	1⅝	10	2	.99
354	3	5	4	.99	2122	2¼	12	2½	1.35
253	2⅛	5¼	3	.96	2420	2¾	4	2	.84
465	4	6	5	1.23	1420	1½	4¼	2¼	.87
375	3	7	5	1.38					

Note: When ordering grey hammer-tone, add prefix "GH" to catalog number. Dimensions in Inches.



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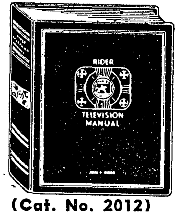
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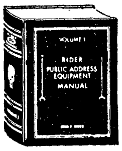
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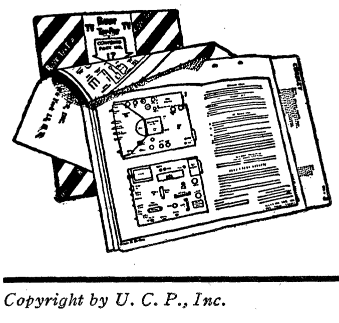

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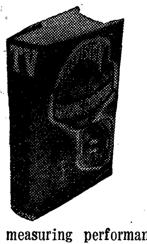

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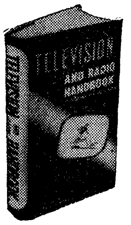

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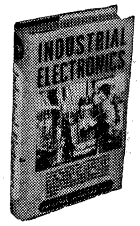

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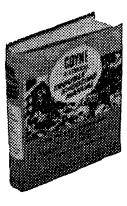

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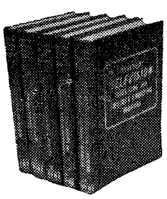

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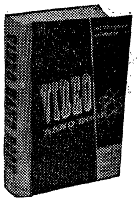

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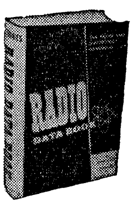

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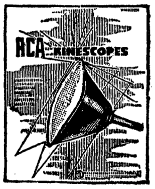

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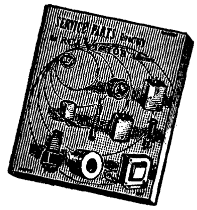

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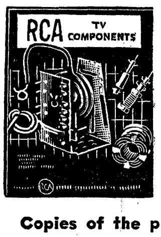

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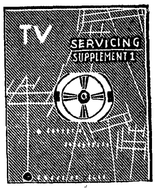

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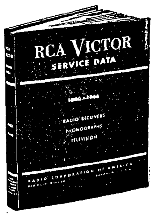

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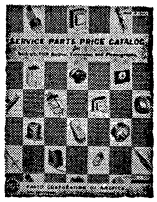

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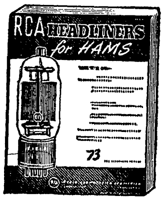

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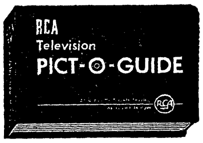

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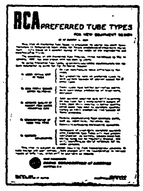

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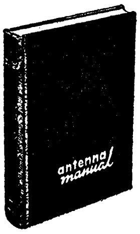

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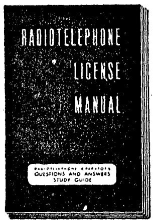

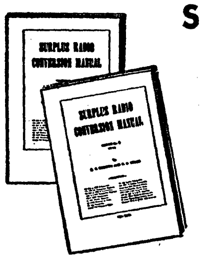
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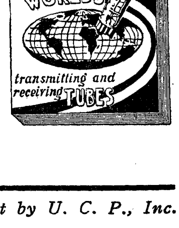

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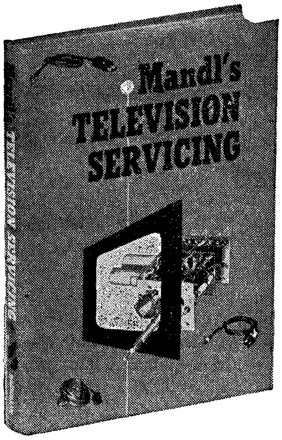

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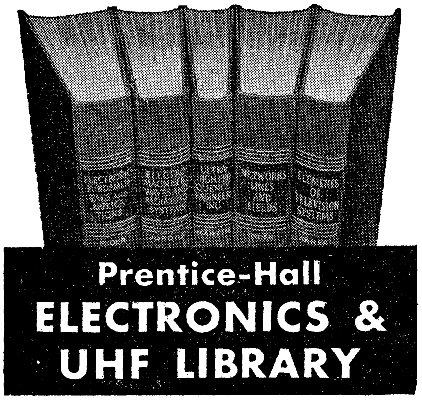

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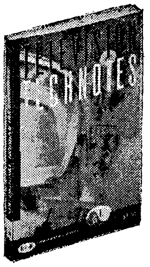

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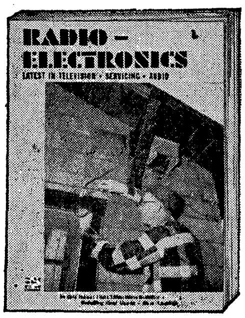

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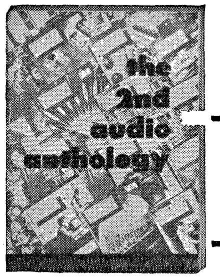

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SMALL SWITCHES, LIMIT SWITCHES, AND MAGNETIC RELAYS

SMALL SNAP-ACTION SWITCH, G-E SWITCHETTE CR1070

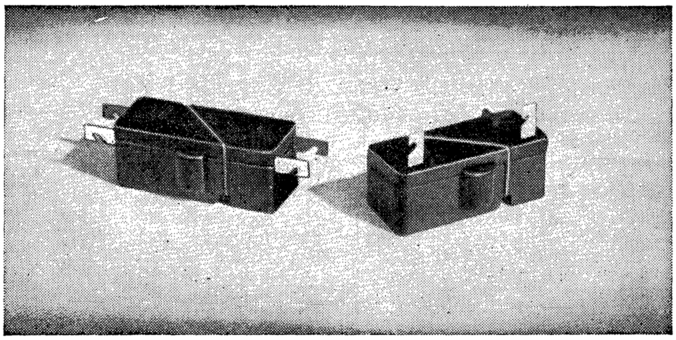
This new, lightweight switch mechanism lends itself especially to applications where space is limited and long life is required.

The Switchette is operated by movement of the spring-return button located in the housing. This button can be actuated by a lever, bellows, or other means. Snap-action, double-break-contact construction gives the G-E Switchette a high current rating and makes it suitable for applications where the vibration is severe.

FEATURES AND ADVANTAGES

1. Small (approximately 1¼ in. by ½ in. by ½ in.) and weighs only 9 grams (0.02 lb).
2. Resists vibration and corrosion.
3. Phenolic-resin operating button provides protection from live parts during operation.
4. Contact tips are 99.95 per cent pure silver.
5. Particularly suited to electronic applications because of negligible amount of contact bounce.
6. Five terminal arrangements are available, including the two shown above.
7. Wide variety of forms available; for example, three basic contact arrangements: single-circuit, normally open; single-circuit, normally closed; and two-circuit, normally open and normally closed. Also many special forms.

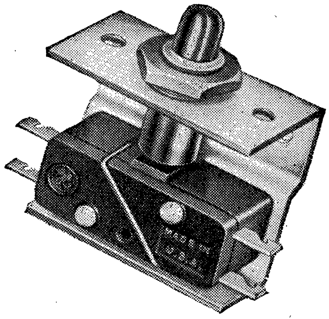
Switchettes are available in ratings up to 10 amperes at 115 or 230 volts a-c. Write for Bulletin GEC-796.



Switchettes showing two terminal arrangements

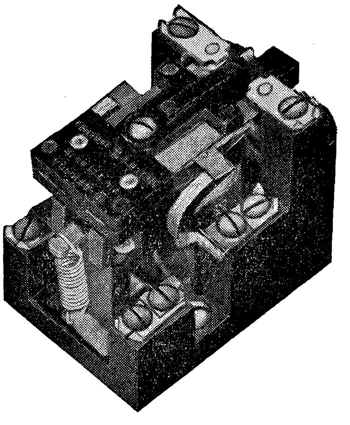
LIMIT SWITCH, CR1070-D112

This sturdy, open-type limit switch is operated by a plunger which provides $\frac{7}{32}$-inch overtravel. The contact mechanism of this device is the G-E Switchette, which can be wired to control one normally open circuit and one normally closed circuit. Rated 10 amperes at 230 volts a-c. Write your nearest G-E Apparatus Sales Office for Bulletin GEC-197.



Open-type limit switch with push-rod operation

GENERAL-PURPOSE RELAY, CR2790-E



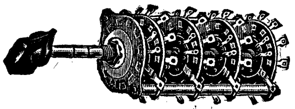
The CR2790 relay is a compact, attractively finished device for use either as a motor starter or a relaying unit. Available in either an open form or enclosed in a general-purpose or explosion-proof housing. Three contact arrangements available: single-pole, single-throw; double-pole, single-throw; and double-pole, double-throw. In the open form, all three contact arrangements use the same base, which facilitates mounting. In the enclosed form, the U-shaped cover makes wiring and servicing convenient. Rated 10 amp continuous, 110/120 volts a-c.

Applications

Control of pilot circuits in response to remote control switch or thermostat, or for direct control of small motors which have built-in thermal overload protection.

As a fractional-horsepower motor starter, or in conjunction with a magnetic switch controlling larger motors, heating or lighting circuits, and signal systems. Bulletin GEC-257.

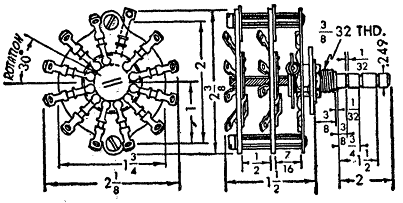
Multi-Section Rotary Switches



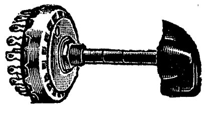
High grade, phenolic-insulated, rotary switches for radio and electronic equipment in circuits not exceeding 500 volts DC. These switches have self-wiping, silver-plated, copper alloy contacts which assure long, useful life. All models feature an adjustable stop. A 2½" mounting area is required. Mounting depth is dependent on number of sections. Switches have ¼" round shafts, 2" long, and ⅜"-32 bushings. Each switch supplied with pointer knob and mounting hardware.

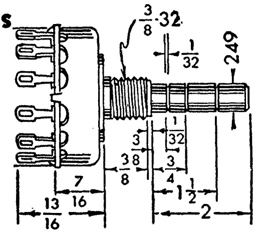
Shorting Type Catalog Number	Non-Shorting Type Cat. No.	No. of Circuits per Section or Gang	Total No. of Circuits per Switch	No. of Positions	List Price
1211L	1311L	1	1	2 to 11	$1.55
1215L*	1315L*	2	2	2 to 5	1.65
1213L*	1313L*	3	3	2 to 3	1.80
1212L*	1312L*	4	4	2 to 2	1.90
1221L	1321L	1	2	2 to 11	2.30
1225L*	1325L*	2	4	2 to 5	2.60
1223L*	1323L*	3	6	2 to 3	2.80
1222L*	1322L*	4	8	2 to 2	2.95
1231L	1331L	1	3	2 to 11	3.10
1235L*	1335L*	2	6	2 to 5	3.30
1241L	1341L	1	4	2 to 11	3.95
1245L*	1345L*	2	8	2 to 5	4.60
1251L	1351L	1	5	2 to 11	4.90
1256L	1356L	2	10	2 to 6	6.05
1261L	1361L	1	6	2 to 11	5.80
1266L	1366L	2	12	2 to 6	7.40

* These switches are provided with an "Off" position which is in addition to the greatest number of positions listed. The "Off" position precedes the other positions.



Single-Section Rotary Switches

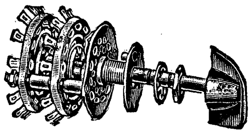




Small, compact, phenolic-insulated switches equipped with ⅜"-32 bushings, and easy-to-cut grooved shafts, ¼" diameter x 2" long. The 1¼" base styles have 30° indexing. The 1 11/16" base styles have 20° indexing and are equipped with adjustable stops.

Shorting Type Catalog Number	Non-Shorting Type Cat. No.	Number of Circuits	Number of Positions	Diameter of Base	List Price
3115J	3215J	1	5	1¼	$1.15
31112J	32112J	1	12	1¼	1.15
3122J	3222J	2	2	1¼	1.15
3123J	3223J	2	3	1¼	1.15
3126J	3226J	2	6	1¼	1.15
3134J	3234J	3	4	1¼	1.20
3142J	3242J	4	2	1¼	1.20
3143J	3243J	4	3	1¼	1.20
31117J	32117J	1	2 to 17	1 11/16	1.80
3129J	3229J	2	2 to 9	1 11/16	1.80
3136J	3236J	3	2 to 6	1 11/16	1.95
3163J	3263J	6	2 to 3	1 11/16	1.95

Ceramic Section Selector Switches

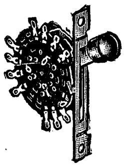


High grade, ceramic-insulated, rotary switches for use in transmitters, test and high frequency radio equipment. Supplied with silicone treated, ceramic sections and double, self-wiping, silver-plated, copper alloy contacts. All models have adjustable stops. A 2" mounting area is required. Two-section models have ½" spacing; 3-section models have 1" spacing. Equipped with ¼" round shafts, 2" long, and ⅜"-32 bushings. Pointer knob and mounting hardware included.

Catalog Number	Number of Gangs or Sections	Number of Circuits per Gang or Section	Number of Positions	List Price
172C	1	1	2 to 11	$2.25
173C*	1	2	2 to 5	2.25
174C*	1	3	2 to 3	2.25
176C	2	1	2 to 11	3.50
177C*	2	2	2 to 5	3.50
178C*	2	3	2 to 3	3.50
180C	3	1	2 to 11	5.00
181C*	3	2	2 to 5	5.00

* These switches are provided with an "Off" position which is in addition to the greatest number of positions listed. The "Off" position precedes the other positions.

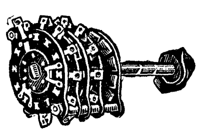
Lever Action Switches



Bat-handle design. For circuit selection in intercommunication, PA and similar equipment. 2" mounting depth behind panel required for all models. Switches of the 5000 Series have No. 8 by ¼" elongated mounting holes with 2¼" mounting centers. Switches of the 6000 and 7000 Series have No. 6 mounting holes with 1⅝" mounting centers. Provided with knob and hardware.

Shorting Type Catalog No.	Non-Shorting Type Catalog No.	Number of Poles or Circuits	Number of Positions or Contacts	List Price
Positive Indexing				
5124	5224	2	4	$1.50
6142	6242	4	2	1.25
6143	6243	4	3	1.25
Spring Return				
7122L	7222L	2	2	1.25
7123C	7223C	2	3	1.25
7142L	7242L	4	2	1.25
7143C	7243C	4	3	1.25
7162L	7262L	6	2	1.25

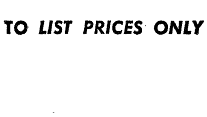
24-Position Tap Switch



For test equipment. Switches have 1 circuit and 24 positions. Phenolic insulation. Furnished with ⅜"-32 brass bushing and ¼" x 2" notched shaft. Dial plate 394, knob and mounting hardware supplied.

Catalog No. **13124L** List Price **$3.50**

Circuit-Opening Switch

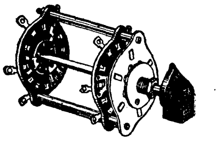


For meter and circuit switching in test equipment and small transmitters. Switches have 4 sections and 2 to 12 positions with adjustable stop. Phenolic-insulated for 500 volt DC operation. Mounting depth behind panel is 2⅛". Supplied with ¼" x 2" notched shaft and ⅜"-32 brass bushing. Pointer knob, dial plate 382, and mounting hardware included.

Catalog No. **1400L** List Price **$5.90**

"HAM," PUSH-BUTTON AND JACK SWITCHES

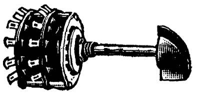
Two-Section, Five-Position "Hamswitch®"



For meter or circuit switching in transmitters. Rated at 1000 volts AC up to 1500 volts DC. Two section, 5 position. 2¼" spacing between sections. 60° indexing between positions. Adjustable stop. Nonshorting type. Supplied with ⅜"-32 bushing, ¼" x 2" notched round shaft. Pointer knob and mounting hardware furnished. Requires 3¼" mounting depth.

Catalog No. **151L** List Price **$2.75**

Two-Section, Two-Circuit, Six-Position "Hamswitch"



Coil and circuit rotary switch with 6 positions, 2 circuits and 2 sections (½" spacing) designed to short out automatically all unused positions. Ideal for test oscillator switching, band-switching or meter-switching uses. Phenolic insulated and equipped with ⅜"-32 bushing, ¼" x 2" notched round shaft and adjustable stop. Supplied with pointer knob and mounting hardware.

Catalog No. **152L** List Price **$3.25**

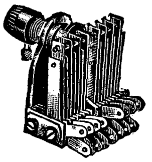
Decade Switches

Especially designed for use in the construction of capacitor and resistor decade instruments.

The unusual circuit arrangement of these switches permits real economies in the construction of precision resistor and capacitor decade assemblies since they require only 4 standard resistors or capacitors to complete a full decade of test values. Each switch is equipped with high grade phenolic insulation and heavily silvered contact members to assure excellent electrical stability. Adjustable stops are provided to permit interconnecting with other switches for multiple decade operation. One Mallory No. 366 bar knob and mounting nut furnished. Dial plates with 30 degree numeral spacing must be employed.

Catalog No. **153L** Capacitor Decade Switch List Price **$3.30**
Catalog No. **154L** Resistor Decade Switch List Price **$3.70**

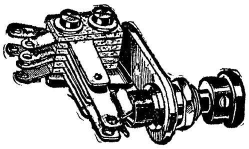
Jack Switches



Leaf-type switches actuated by rotary motion. Both types adaptable for use in such applications as laboratories, test panels and meter circuits. Standard models extend perpendicularly to panel; junior style parallel to panel. The ⅜"-32 bushing may be used in panels up to ¼" in thickness. Both types suitable for mounting in a single hole ⁷⁄₁₆" diameter. Shaft is ¼" round with suitable flat. Supplied with mounting hardware, but no knob.

	Junior Cat. No.	List Price	Circuit Arrangement
Two Position Jack Switches	**720**	**$1.10**	Single-Pole, Single-Throw
	730	**1.35**	Single-Pole, Double-Throw
	740	**1.50**	Double-Pole, Single-Throw
	745	**1.75**	Five Springs, two break and one make
	760	**1.95**	Double-Pole, Double-Throw
	733	**1.95**	Three-Pole, Single-Throw
	744	**2.55**	Four-Pole, Single-Throw
Three Position Jack Switches	**732**	**1.35**	Double-Pole, Single-Throw Center "Off" Position
	762	**1.90**	Double-Pole, Double-Throw Center "Off" Position
	763	**2.50**	Three-Pole, Double-Throw Center "Off" Position
	764	**3.10**	Four-Pole, Double-Throw Center "Off" Position

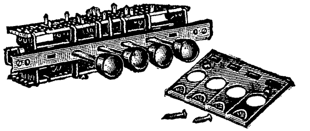
Single Push-Button Switches



Plunger-type switches for panel mounting in radio and electronic circuits. Available in a choice of 8 different circuit combinations for use in laboratories, on test panels, in meter circuits and in a wide variety of other applications. "L" indicates locking-type. Other types have spring return to normal position. Switches require ⁷⁄₁₆" mounting hole, and will fit panels up to ¼" in thickness. Mounting radius is 1⅜"; mounting depth is approximately 1¼". Switch body extends 1⁵⁄₁₆" behind panel. Supplied with polished phenolic button and mounting hardware.

Catalog No.	Circuit Arrangement	List Price
2001	SPST—Make	**$1.30**
2001L	SPST—Make	**1.30**
2002	SPST—Break	**1.30**
2002L	SPST—Break	**1.30**
2003	SPDT	**1.40**
2003L	SPDT	**1.40**
2004	DPST—Make 2	**1.60**
2004L	DPST—Make 2	**1.60**
2005	DPST—Break 2	**1.60**
2005L	DPST—Break 2	**1.60**
2006	DPDT	**1.95**
2006L	DPDT	**1.95**
2007	DP—Make 2, Break 1	**1.75**
2007L	DP—Make 2, Break 1	**1.75**
2008	DPDT—Make before Break	**2.20**
2008L	DPDT—Make before Break	**2.20**

Multiple Push-Button Switches

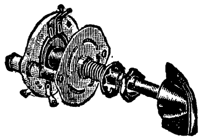


For making, breaking or transferring multiple circuits. Spacing of ⅝" between plungers. Equipped with brown knobs, escutcheon plate and window inserts.

Catalog Number	Number of Buttons	Operation Per Button	List Price
2164	4	DP Circuit Closing	**$5.25**
2166	6	DP Circuit Closing	**6.55**
2168	8	DP Circuit Closing	**7.90**
2184	4	DPDT, Make Before Break	**5.25**
2186	6	DPDT, Make Before Break	**6.55**
2188	8	DPDT, Make Before Break	**7.90**
2194*	4	DPDT, Break Before Make	**5.25**
2196*	6	DPDT, Break Before Make	**6.55**
2198*	8	DPDT, Break Before Make	**7.90**

* Non-Shorting Types

Ceramic Section "Ham Band" Switches

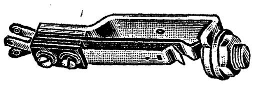


For use in transmitter plate circuits not exceeding 1000 volts DC with power up to 100 watts. Switches have 4 positions in 360° rotation with each section a single circuit. 90° indexing. All models are nonshorting. Ceramic insulation provides low losses at high frequencies. Equipped with double-contact tie points. A 2" mounting area is required. Two-section models have 1⅞" spacing, all others have 1". Switches are supplied with ¼" round shafts, 2" long, and ⅜"-32 bushings. Each switch is furnished with pointer knob and mounting hardware.

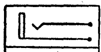
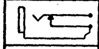
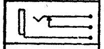
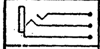
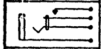
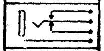
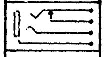
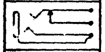
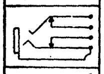
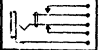
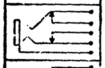
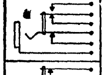
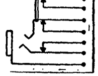
Catalog Number	Number of Gangs or Sections	Spacing Between Sections	Circuits Per Switch	List Price
161C	1		1	**$2.25**
162C	2	1⅞"	2	**3.50**
163C	3	1"	3	**5.00**
164C	4	1"	4	**6.00**
165C	5	1"	5	**7.50**

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Jacks



Metal parts on all jacks have protective plating. Fine contact surfaces provide excellent electrical conductivity. Suitable mounting hardware supplied with all jacks. LA Jacks are economy jacks similar to the SC Series (see listing this page).

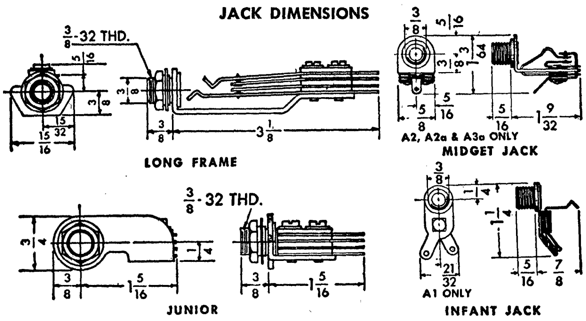
	Long Frame Cat. No.	List Price	Junior Jacks Cat. No.	List Price	Infant and Midget Jacks Cat. No.	List Price
	1	$0.65	701	$0.55	A-1	$0.30
	2	.80	702	.75	A-2	.50
	2A	.80	702A	.75	A-2A	.55
	2B	.80	702B	.75		
	3	.95	703	.85		
	3A	.95	703A	.85	A-3A	.80
	3B	.95	703B	.85		
	3C	.95	703C	.85		
	4	1.10	704	1.00		
	4A	1.10	704A	1.00		
	4B	1.10	704B	1.00		
	5	1.20	705	1.15		
	6	1.30	706	1.25		

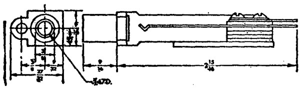
LA Series

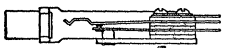
LA-1	$0.40
LA-2	.45
LA-2A	.50

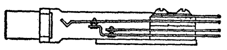
These Jacks equivalent electrically to A-1, A-2 and A-2A listed above

GJ-1 Airplane Grounding Jack—Similar to A-1 Jack except for insulation. List Price **$0.50**



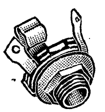


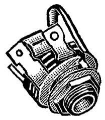


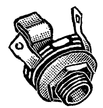


Cat. No.	Type
XP1	—(Open Circuit)
XP2B	—(Three-Circuit Microphone)
XP3B	—(Single Circuit, Make before Break)

SC Jacks and LA Jacks


SC-1A


SC-2B


LA-1

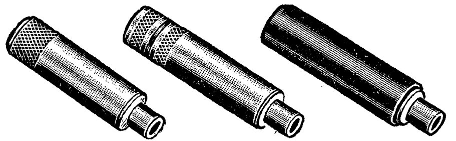
LA-2

LA-2A

Both SC Type Jacks have standard brass ⅜"-32 bushings. Mounting depth behind panel 1 1/16". LA Jacks are similar in basic design and size, but have commercial construction. Use with No. 75, 75N, 75A or 85 phone plugs.

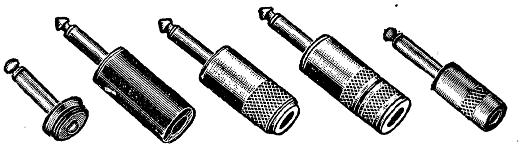
Cat. No.	Description	List Price
SC-1A Phone Jack	Commercial equivalent of military jack No. JJ-034. Same spring arrangement as No. 1 long-frame jack. Designed to receive the following plugs: Mallory No. 75, Western Electric Nos. 47A and 47B. Signal Corps Nos. PL-47, PL-48, PL-55, PL-148, PL-155, PL-125 and JAN plugs PJ-055, PJ-155, PJ-634, PJ-636, PJ-047	**$0.55**
SCA-2B	Commercial equivalent of military jack No. JJ-033. Same spring arrangement as No. 2B Long frame jack. Designed to receive the following plugs: Western Electric No. 109 and Signal Corps Nos. PL-68, PL-168, and JAN plugs PJ-068, PJ-168, and PJ-309	**.65**
LA-1	Open Circuit	**.40**
LA-2	Circuit closing	**.45**
LA-2A	Two circuits	**.50**

Extension Jacks


100N 100A 100

Cat. No.	Description	List Price
100	Two-Way Extension Jack (Fiber Shell) for No. 75 Phone Plug. Overall length 3¼".	**$1.30**
100N	Two-Way Extension Jack (Shielded One-Piece Nickel Shell) for No. 75N Phone Plug. Overall length 3 5/16".	**1.65**
100A	Two-Way Extension Jack (Shielded Two-Piece Nickel Shell) for No. 75A Phone Plug (with Built-in Cable Clamp). Overall length 3 1/16".	**2.30**

Plugs


55 75 75N 75A 85

Cat. No.	Description	List Price
55	Adapts standard microphone connector for use with conventional Jack.	**$0.45**
75	Two-Way Phone Plug with Tie-Cord Anchor (Phenolic Shell)	**.65**
75N	Two-Way Phone Plug with Tie-Cord Anchor (Shielded One-Piece Nickel Shell)	**1.00**
75A	Two-Way Phone Plug with Tie-Cord Anchor (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)	**1.65**
76	Three-Way Microphone Plug (Phenolic Shell)	**1.00**
76A	Three-Way Microphone Plug (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)	**1.95**
85	Two way miniature phone plug, shielded.	**.50**

"X" Type Jacks

Plain bushing type for telephone switchboard service. Furnished with 1 mounting nut and washer.

Cat. No.	Type	List Price
XP1	Open Circuit	**$0.90**
XP2B	3-Circuit Microphone	**1.00**
XP3B	Single Circuit—Make before Break	**1.30**

SPECIAL COMPONENTS AND MISCELLANEOUS ITEMS

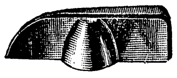
P. R. MALLORY & CO., INC. · INDIANAPOLIS

P. R. MALLORY & CO. Inc. MALLORY

Knobs

367

366


365

Catalog No.	Description	List Price
364	11/16″ Dia. Similar to 368, but with pointer at base. Black	**$0.15**
365-1	2¼″ Bar Type Knob, Black	**.25**
366-1	1¼″ Bar Type Knob, Black	**.20**
366-R-1	1¼″ Bar Type Knob, Red	**.20**
367-1	1½″ Dia. Round Knob, Black	**.25**
368-1	1⅛″ Dia. Round Knob, Black	**.20**

Mounting Nuts For Switches and Controls

A11260-2

A11260-12

232

255

Catalog Number	Description	Thread	Dimension	List Price
232	Flat Hex Mounting Nut	⅜-32	½ x 3/32	**$0.35***
255	Hex Mounting Nut	⅜-32	½ x 7/64 x 7/64 shoulder nut	**.20**
A-11260-2	Hex Mounting Nut	⅜-32	½ x 7/64 x 15/32 shoulder nut	**.30**
A-11260-12	Hex Mounting Nut	⅜-32	½ x 7/64 x 7/32 shoulder nut	**.25**

* Per 10 pieces.

Washers—For Switches and Controls

226

227

225

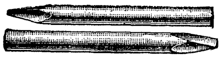
203

212

Catalog Number	Description and Dimensions	List Price
203	Extruded Washer—Fiber—¾″ O.D. x ⅜″ I.D. x 1/16″; Extruded ½″ x 1/32″. For Set See No. 212 Flat Washer	**$0.30***
212	Flat Washer—¾″ O.D. x ⅜″ I.D. x 1/32″; Phenolic	**.20***
225	Metal Washer—Nickel Finish—⅝″ O.D. x ⅜″ I.D. .040 Brass	**.20***
226	Metal Washer—Nickel Finish—⅝″ O.D. x 7/16″ I.D. .040 Brass	**.20***
227	Lock Washer—Cadmium Plated Steel—11/16″ O.D. x 25/64″ I.D.	**.20***

* Per 10 pieces.

Soldering Iron Tips

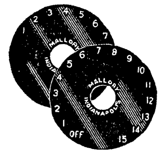


No. 311—Replacement tip for soldering irons that are turned on for short periods only. Heats quicker than No. 312, but is not as long wearing. Made of a special Mallory copper alloy long in use as a welding tip material. Nickel plated to resist corrosion. Size—⅜″ diameter, 4″ length. Plunger style with "screw driver" point.
List Price **$0.85**

↔

No. 312—Replacement tip for soldering irons that are used continuously for long periods of time. Made of a special Mallory copper alloy of great hardness and high electrical conductivity. Nickel plated to resist corrosion. Size—⅜″ diameter, 4″ length. Plunger style, with "screw driver" point.
List Price **$0.95**

Dial Plates



For Mallory Circuit Selector, Tap and All-Wave Switches.

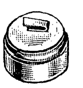
List Price **$0.20** each (all types)

Neat-appearing Dial plates with easy-to-read aluminum figures clearly etched on solid black background. Dimensions are 1 13/16″ in diameter with 7/16″ hole, with figures 7/64″ high. .020″ aluminum stock.

For all types 3100J, 3200J Switches, with 1 11/16″ base. 20 degree spacing between numerals.	For all Switch types 1200L, 1300L and ¼″ base 3100J, 3200J. 30 degree spacing between numerals.	Marking
Catalog Number	Catalog Number	
	372	1 to 2
453	**373**	1 to 3
454	**374**	1 to 4
455	**375**	1 to 5
456	**376**	1 to 6
457	**377**	1 to 7
458	**378**	1 to 8
459	**379**	1 to 9
460	**380**	1 to 10
461	**381**	1 to 11
462	**382**	1 to 12
463		1 to 13
464		1 to 14
465		1 to 15
466		1 to 16
467		1 to 17
468		1 to 18
472		Off 1 to 2
473	**383**	Off 1 to 3
474	**384**	Off 1 to 4
475	**385**	Off 1 to 5
476	**386**	Off 1 to 6
477	**387**	Off 1 to 7
478	**388**	Off 1 to 8
479	**389**	Off 1 to 9
480	**390**	Off 1 to 10
481		Off 1 to 11
482		Off 1 to 12
483		Off 1 to 13
484		Off 1 to 14
485		Off 1 to 15
486		Off 1 to 16
	***394 Special**	1 to 24
	†487 Special	1 to 5
	‡488 Special	1 to 4

* 15° Spacing Between Numerals ‡ 90° Spacing Between Numerals
† 60° Spacing Between Numerals

Mercury "A" Batteries



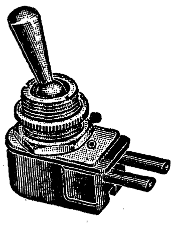
Convenient, economical and dependable cells for applications in which space factor is of prime importance. Dependent on operating conditions, will provide up to 3 or 4 times energy-volume ratio of other types of batteries. Ideal for use in portable electronic equipment, etc. Perform under wide range of adverse weather and humidity conditions. No need for rotation or rest periods. Uniform and optimum discharge voltage throughout long service life.

"A" Battery	Diam. (Inches)	Height (Inches)	Button Height (Inches)	Volume (Cu. In.)	Weight (Oz.)	Capacity (MAH)	Min. Flash Current (Amp.)
RFB300	.995	.650	....	.48	.83	1800	...
RFB400	1.210	.650	....	.75	1.3	3200	...
RM1000	.625	.650	.058	.20	.43	1000	.5
RM3000	.973	.650	.058	.50	.93	2000	.6
RM4000	1.187	.650	.058	.72	1.60	3200	1.1
RM1200	.625	1.950	.058	.60	1.40	3600	1.8
RM4010	.465	1.140*	....	.18	.40	800	...
RM6250T	.606	.225	Clip	.07	.14	200	...
RM5020	.538	1.950	.058	.44	1.05	2400	1.8

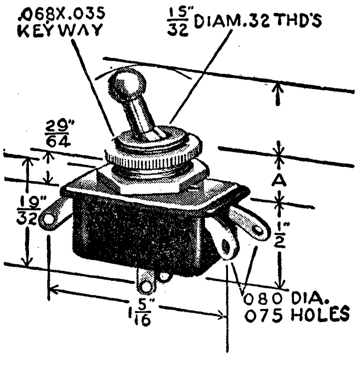
* Overall height including button height. **For List Prices, Check your nearest Mallory Distributor.**

CE Carling Electric, Inc.

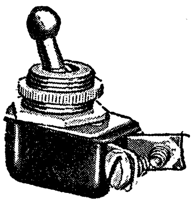
Appliance Switches ONE HOLE MOUNTING AC OR DC



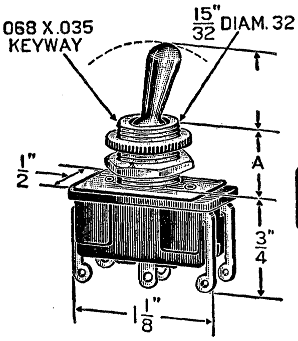
Wire Leads
Single Pole or Double Pole



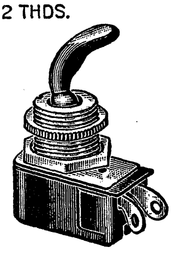
End Lugs—Double Poles
Bottom Lugs—Single Pole



Screw Terminals
Single Pole Only



Bottom Lugs—Double Poles



Trigger Bat
Momentary Only

End Lugs
Single Pole
Switches

Illustrations above show types of TOGGLES and TERMINALS available on these SWITCHES

MAINTAINED CONTACTS

NOMINAL RATING AC or DC	POLES-CIRCUIT	TYPES OF TERMINALS	CATALOG NUMBER
3 Amp—250 V. 6 Amp—125 V.T. (T Rated)	S.P.—S.T.	Lugs—End	T-110
		Lugs—Bottom	T-110-B
		Screw	T-110-S
		Wire	T-111-16
3 Amp—250 V. 6 Amp—125 V.	S.P.—S.T.	Lugs—End	110
		Lugs—Bottom	110-B
		Lugs—2 Ends	110-D
		Screw	110-S
		Wire	111-16
		Wire—2 Ends	111-D
1 Amp—250 V. 3 Amp—125 V.	S.P.—D.T.	Lugs—End	112
		Wire	112-A
	D.P.—S.T.	Lugs—End	216
		Wire	216-A
		Lugs—Bottom	216-B
	D.P.—D.T.	Lugs	316
		Wire	316-A
		Lugs—Bottom	316-B
	Two Circuit	Lugs—End	516
		Wire	516-A
		Lugs—Bottom	516-B
3 Amp—250 V. 6 Amp—125 V.	S.P.—D.T.	Lugs—End	2BB62
	D.P.—S.T.	Lugs—End	2BK62
	D.P.—D.T.	Lugs—End	2BL62
		Lugs—Bottom	2BL63
10 Amp—125 V. 5 Amp—250 V.	S.P.—S.T.	Lugs—End	160
		Wire	160-A
		Lugs—Bottom	160-B
		Screw	160-S

MOMENTARY TYPES — Stem Length 15/32" ONLY

NOMINAL RATING AC or DC	POLES-CIRCUIT	TYPES OF TERMINALS	CATALOG NUMBER
6 Amp—125 V. 3 Amp—250 V.	S.P.—S.T. Normally Open (Off) (Momentarily On)	Lugs—End	110-M-NO
		Lugs—Bottom	110-BM-NO
		Lugs—2 Ends	110-M-DNO
		Screw	110-SM-NO
		Wire	111-16M-NO
		Wire—2 Ends	111-16M-DNO
	S.P.—S.T. Normally Closed (On) (Momentarily Off)	Lugs—End	110-M-NC
		Lugs—Bottom	110-BM-NC
		Lugs—2 Ends	110-M-DNC
		Screw	110-SM-NC
		Wire	111-16M-NC
		Wire-2 Ends	111-16M-DNC
3 Amp—125 V. 1 Amp—250 V.	S.P.—D.T.	Lugs—End	112-M
		Wire	112-M-A
	D.P.—S.T. Normally Open (Off) (Momentarily On)	Lugs—End	216-M-NO
		Wire	216-M-ANO
	D.P.—S.T. Normally Closed (On) (Momentarily Off)	Lugs—End	216-M-NC
		Wire	216-M-ANC
	D.P.—D.T.	Lugs	316-M
		Lugs—Bottom	316-BM
	Two Circuit (1 On—1 Off)	Lugs—End	516-M
		Wire	516-AM
		Lugs—Bottom	516-BM
		Screw	516-SM

TOGGLE TYPE & LENGTH	BALL 3/8"	BAT 1/2"	BAT 1 1/16"	TRIGGER BAT
SUFFIX NO.	—23	—63	—73	—93

TOGGLE TYPE & LENGTH	BALL—3/8" LONG				BAT—1/2"		BAT—1 1/16"	SLOTTED (See Page 5)
STEM LENGTH (A)	1/4"	11/32"	15/32"	7/8"	11/32"	15/32"	15/32"	15/32"
SUFFIX NO.	—21	—22	—23	—25	—62	—63	—73	—42

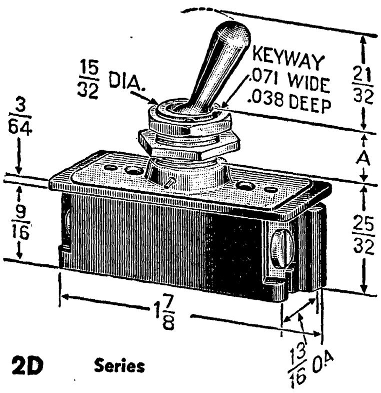
IMPORTANT—ADD correct SUFFIX NUMBER to CATALOG NUMBER to receive type TOGGLE and STEM wanted

ENTIRELY
NON-MAGNETIC
TYPES OF THESE SWITCHES
AVAILABLE—USE CATALOG PREFIX NM-

Switches shown are Underwriter's Laboratories Approved.

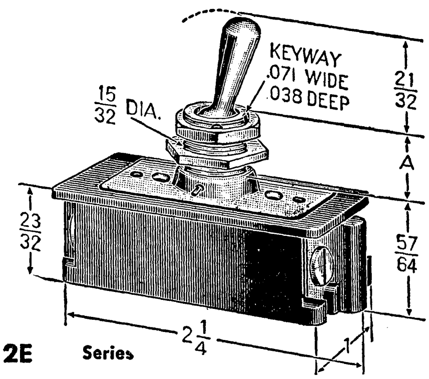
CE Carling Electric, Inc.

Appliance Switches — TOGGLE — AC or DC



15/32 DIA.
KEYWAY
.071 WIDE
.038 DEEP
21/32
3/64
A
9/16
25/32
1 7/8
13/16 OA

2D Series



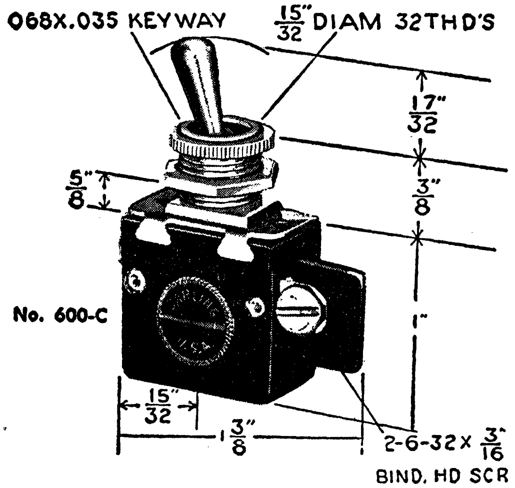
15/32 DIA.
KEYWAY
.071 WIDE
.038 DEEP
21/32
A
23/32
57/64
2 1/4
1

2E Series

NOMINAL RATING A.C. OR D.C.	POLES OR CIRCUIT	TYPE OF TERMINALS	CATALOG NUMBER
12 Amps—125 V. 6 Amps—250 V. 1 H.P. 125—250 V.	S.P.—S.T.	Screw	2DA25
		Wire Leads	2DA21
	D.P.—S.T.	Screw	2DK25
		Wire Leads	2DK21
15 Amps—125 V. 10 Amps—250 V. 1½ H.P. 125—250 V.	S.P.—S.T.	Screw	
		Wire Leads	
	D.P.—S.T.	Screw	
		Wire Leads	

CATALOG NUMBER SUFFIX
FOR TOGGLE & STEM LENGTHS
(Bat Toggle Only)

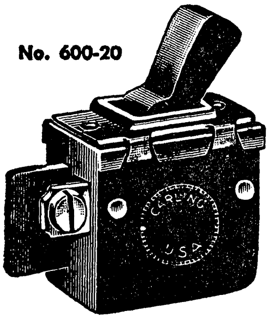
TOGGLE LENGTH	STEM LENGTH	SUFFIX NO.
21/32"	11/32"	
21/32"	15/32"	—73



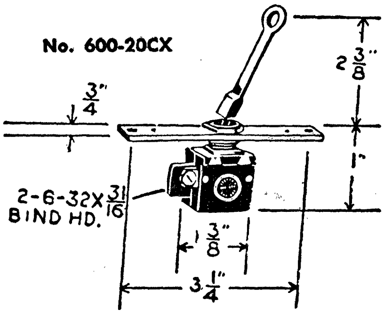
068X.035 KEYWAY
15"/32 DIAM 32THD'S
17"/32
3"/8
5"/8
1"
15"/32
1 3"/8
2-6-32X 3"/16
BIND. HD SCR

No. 600-C

No. 600-20



No. 600-20CX



2 3"/8
3"/4
1"
2-6-32X 3/16
BIND HD.
1 3"/8
3 1"/4

NOMINAL RATING A.C. OR D.C.	POLES OR CIRCUIT	TYPE OF TERMINALS	CATALOG NUMBER
20 Amps—125 V. 10 Amps—250 V. A.C.—D.C.	S.P.—S.T.	Screw	600—C 600—20 600—20CX (See Illustrations)

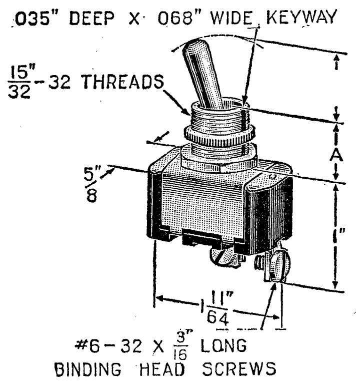
Finishes — ALL ONE HOLE MOUNTING TYPE SWITCHES

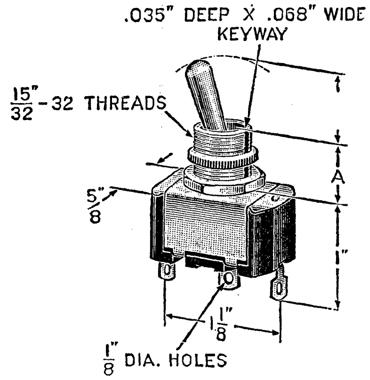
Standard Finish — Nickel Natural Brass available at No Extra Charge
Other Finishes — Chrome, Cadmium, Bronze, Black Oxide at a Slight Extra Charge.

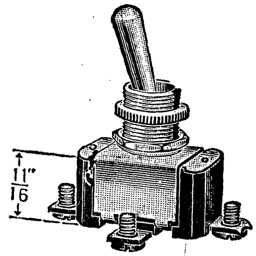
Carling Electric, Inc.

Appliance Switches — ONE HOLE MOUNTING - AC

SINGLE POLE SWITCHES


.035" DEEP X .068" WIDE KEYWAY
$\frac{15}{32}$"-32 THREADS
$\frac{5}{8}$"
A
1"
$1\frac{11}{64}$"
#6-32 X $\frac{3}{16}$" LONG BINDING HEAD SCREWS


.035" DEEP X .068" WIDE KEYWAY
$\frac{15}{32}$"-32 THREADS
$\frac{5}{8}$"
A
1"
$1\frac{1}{8}$"
$\frac{1}{8}$" DIA. HOLES

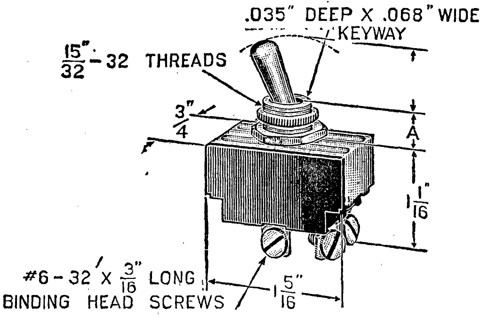


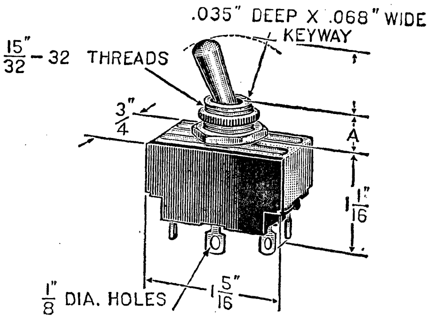
End and Side Terminals
(Lug or Screw)
Available on Special Order

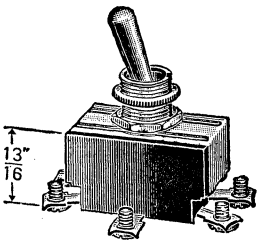
CATALOG NUMBERS				ELECTRICAL CIRCUIT CHARACTERISTICS (NOTE—Keyway Indicates "Down" Position)		
NOMINAL RATINGS						
15 Amp—125 V. A.C. 10 Amp—250 V. A.C. ¾ H.P.—115-230 V. A.C.		6 Amp—125 V. A.C. 3 Amp—250 V. A.C. ⅙ H.P.—115-230 V. A.C.				
SOLDER LUGS	SCREW TERMINALS	SOLDER LUGS	SCREW TERMINALS	UP POSITION	CENTER POSITION	DOWN POSITION
				SINGLE POLE—SINGLE THROW		
2FA53	2FA54	2FA63	2FA64	On	None	Off
6FA57	6FA58	6FA67	6FA68	On	None	Momentarily Off
6FA53	6FA54	6FA63	6FA64	Off	None	Momentarily On
				SINGLE POLE—DOUBLE THROW		
2FB53	2FB54	2FB63	2FB64	On	None	On
2FC53	2FC54	2FC63	2FC64	On	Off	On
6FB53	6FB54	6FB63	6FB64	On	None	Momentarily On
6FC53	6FC54	6FC63	6FC64	Momentarily On	Off	Momentarily On
6FC57	6FC58	6FC67	6FC68	On	Off	Momentarily On

CATALOG NUMBER SUFFIX
FOR TOGGLE and STEM LENGTHS
(Bat Toggle Only)

TOGGLE LENGTH	STEM LENGTH (A)	**SUFFIX NO.**
9/16"	11/32"	**—62**
9/16"	15/32"	**—63**
11/16"	11/32"	**—72**
11/16"	15/32"	**—73**
3"	15/32"	**—03**


.035" DEEP X .068" WIDE KEYWAY
$\frac{15}{32}$"-32 THREADS
$\frac{3}{4}$"
A
$1\frac{1}{16}$"
#6-32 X $\frac{3}{16}$" LONG BINDING HEAD SCREWS
$1\frac{5}{16}$"


.035" DEEP X .068" WIDE KEYWAY
$\frac{15}{32}$"-32 THREADS
$\frac{3}{4}$"
A
$1\frac{1}{16}$"
$\frac{1}{8}$" DIA. HOLES
$1\frac{5}{16}$"



End and Side Terminals
(Lug or Screw)
Available on Special Order

CATALOG NUMBERS				ELECTRICAL CIRCUIT CHARACTERISTICS (NOTE—Keyway Indicates "Down" Position)		
NOMINAL RATINGS						
15 Amp—125 V. A.C. 10 Amp—250 V. A.C. ½ H.P.—115-230 V. A.C.		6 Amp—125 V. A.C. 3 Amp—250 V. A.C. ⅙ H.P.—115-230 V. A.C				
SOLDER LUGS	SCREW TERMINALS	SOLDER LUGS	SCREW TERMINALS	UP POSITION	CENTER POSITION	DOWN POSITION
				DOUBLE POLE—SINGLE THROW		
2GK53	2GK54	2GK63	2GK64	On	None	Off
6GK57	6GK58	6GK67	6GK68	On	None	Momentarily Off
6GK53	6GK54	6GK63	6GK64	Off	None	Momentarily On
				DOUBLE POLE—DOUBLE THROW		
2GL53	2GL54	2GL63	2GL64	On	None	On
2GM53	2GM54	2GM63	2GM64	On	Off	On
6GL53	6GL54	6GL63	6GL64	On	None	Momentarily On
6GM53	6GM54	6GM63	6GM64	Momentarily On	Off	Momentarily On
6GM57	6GM58	6GM67	6GM68	On	Off	Momentarily On
NOMINAL RATING				PROGRESSIVE TWO CIRCUIT		
Circuit 1—⅓ H.P. 6 Amp—125-250 V. A.C. Circuit 2—½ H.P. 15 Amp—125 V. A.C. 10 Amp—250 V. A.C.		2GG53	2GG54	2 Circuits On	Circuit 1 On	Off
		6GG57	6GG58	Momentarily 2 Circuits On	Circuit 1 On	Off

DOUBLE POLE and TWO CIRCUIT SWITCHES

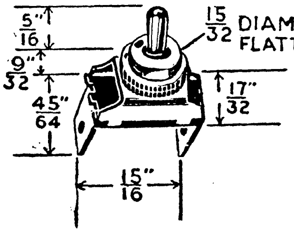
Momentary Types — Suffix 73 only.

CATALOG NUMBER SUFFIX
FOR TOGGLE and STEM LENGTHS
(Bat Toggle Only)

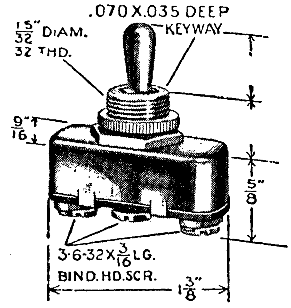
TOGGLE LENGTH	STEM LENGTH	**SUFFIX NO.**
9/16"	11/32"	**—62**
9/16"	15/32"	**—63**
11/16"	11/32"	**—72**
11/16"	15/32"	**—73**

CE *Carling Electric, Inc.*

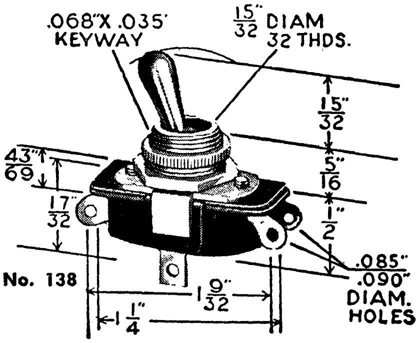
Appliance Switches — TOGGLE — A C


5"/16
9"/32
45"/64
15/32 DIAM. 32 THD'S FLATTED BUSH.
17"/32
15"/16

No. 125


.070 X.035 DEEP KEYWAY
15"/32 DIAM. 32 THD.
9"/16
5"/8
3-6-32X3/16 LG. BIND. HD. SCR.
1 3"/8

No. 126 No. 127 No. 128


.068"X .035" KEYWAY
15"/32 DIAM 32 THDS.
15"/32
5"/16
1"/2
43"/69
17"/32
.085"
.090"
DIAM. HOLES
1 9"/32
1 1"/4

No. 138

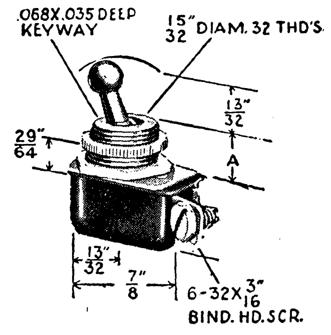
NOMINAL RATING	POLES OR CIRCUIT	CATALOG NUMBERS			STEM TYPE	CONTACTS EXTENDING FROM
		SCREW TERMINALS	SOLDER LUGS	WIRE LEADS		
3 Amp—125 V. A.C.	S.P.—S.T.	125—R 125—RS	125—RB 125—RBS	125—RA 125—RAS	(Round with Keyway)	Bottom End
		125 125—S	125—B 125—BS	125—A 125—AS	(Flatted)	Bottom End
3 Amp—125 V. A.C.	S.P.—D.T. S.P.—D.T.—Center Off	126 127	127—B	127—A	Round with Keyway	
15 Amp—125 V. A.C. 10 Amp—250 V. A.C. ½ H.P.	S.P.—S.T. S.P.—D.T. S.P.—D.T.—Center Off	128—15 126—15 127—15	128—15B 126—15B 127—15B	128—15A 126—15A 127—15A		
1 Amp—125 V. A.C.	D.P.—D.T.—Center Off		138			

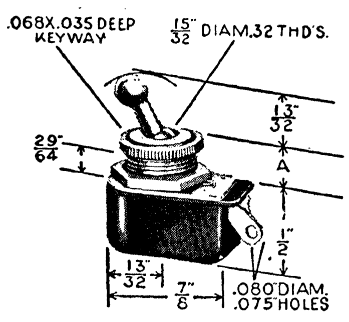
Nos. 126, 127, and 128 available with either 5/16" or 7/16" stem length.

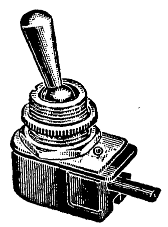
Grounding or Shorting Switches

for GASOLINE MOTORS, MAGNETO USE, or other APPLIANCES

— TOGGLE TYPE —


.068X.035 DEEP KEYWAY
15"/32 DIAM. 32 THD'S.
13"/32
A
29"/64
13"/32
7"/8
6-32X3"/16 BIND. HD. SCR.


.068X.035 DEEP KEYWAY
15"/32 DIAM. 32 THD'S.
13"/32
A
29"/64
1"/2
13"/32
7"/8
.080" DIAM.
.075" HOLES



NOMINAL RATING	POLES OR CIRCUIT	TYPE OF TERMINAL	CATALOG NUMBER
15 Amp—30 V D C. 6 Amp—125 V. 3 Amp—250 V. A.C.—D.C.	S.P.—S.T.	Screw Lug Wire Lead	110-SH 110-H 111-H
Single Terminal Type—Grounded Through Stem			

STEM LENGTH	CATALOG SUFFIX NOS.		
	TYPE OF TOGGLE		
	BALL	½" BAT	1 1/16" BAT
¼"	—21	.	.
1 1/32"	—22	—62	.
15/32"	—23	—63	—73
⅞"	—25	.	.

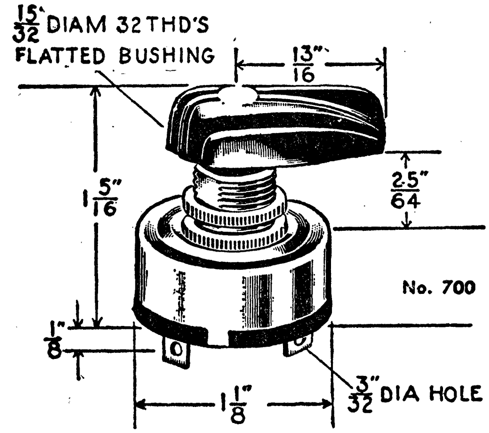
When used with Indicator plates, switch will show "OFF" when grounded.
For Double Terminal types, other switches shown on Pages 1, 2, 3, and 4 can be used. Use Prefix "SH" to such Catalog Numbers to be used for grounding purposes.

Indicator Plates (for SWITCHES Page 1, 2, 3 and 4)

Types Available: ON—OFF, HI—LO, HOT—COLD, DRY—WET, BLANK
(others made to order if ordered in sufficient quantities)

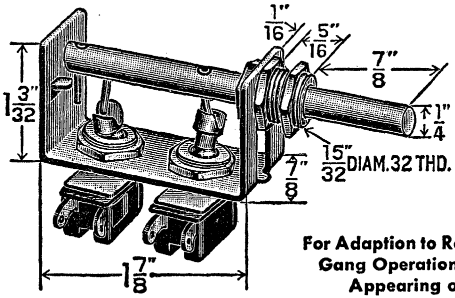
CE Carling Electric, Inc.

Appliance Switches — ROTARY


15/32 DIAM 32 THD'S
FLATTED BUSHING
13"/16
2 5"/64
1 5"/16
1"/8
1 1"/8
3"/32 DIA HOLE

No. 700

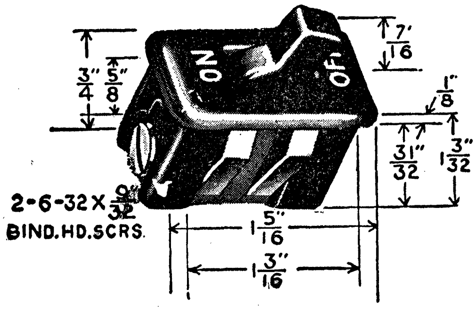
CATALOG NO. 114 (BRACKET ONLY)
2 GANG ROTARY ADAPTER


1"/16
5"/16
7"/8
1"/4
1 3"/32
7"/8
15/32 DIAM.32 THD.
1 7"/8

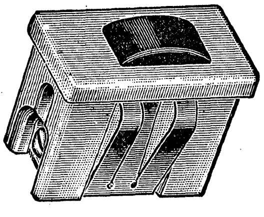
For Adaption to Rotary or Rotary Gang Operation of Switches Appearing on Page 1 (Not Momentary)

NOMINAL RATING	POLES OR CIRCUIT	OPERATION	TERMINALS	CATALOG NUMBER
4 Amp—125 V. A.C. 1 Amp—125 V. D.C.	S.P.—S.T.—2 Position	OFF—ON	LUG	**700—1**
	S.P.—S.T.—3 Position	OFF—ON—OFF	LUG	**700—5**
	S.P.—D.T.—3 Position	ON—OFF—ON	LUG	**700—6**
	S.P.—S.T.—2 Speed	OFF—ON—ON	LUG	**700—4**
	S.P.—S.T.—3 Speed	OFF—ON—ON—ON	LUG	**700**
	S.P.—D.T—2 Position	ON—ON	LUG	**700—7**

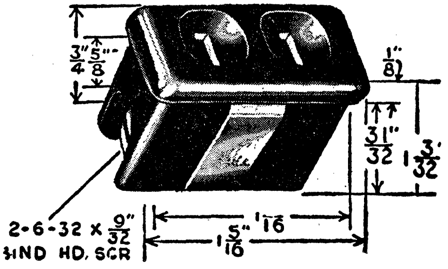
"Snap'n" Line — MATCHING — INTERCHANGEABLE


ON
OFF
7/16
3"/4
5"/8
1"/8
31"/32
1 3"/32
2-6-32X 9"/32
BIND.HD.SCRS.
1 5"/16
1 3"/16

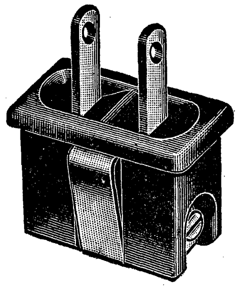
No. 215



No. 222
PILOT LIGHT


3"/4
5"/8
1"/8
31"/32
1 3/32
2-6-32 x 9"/32
BIND HD. SCR
1 5"/16
1 5"/16

No. 220



No. 221

NOMINAL RATING	ITEM	CATALOG NUMBER	
		SCREW TERMINALS	WIRE LEADS
15 Amp—125 V. A.C. 10 Amp—250 V. A.C.	S.P.—S.T. Switch	**215**	**215A**
15 Amp—125 V. 10 Amp—250 V. A.C.— D.C.	Outlet	**220**	**220A**
	Cap	**221**	**221A**
110 V. A.C.—D.C.	Pilot Light	**222**	**222A**
230 V. A.C.—D.C.	Pilot Light	**222—6**	**222-6A**

COLOR OF CASE	CATALOG SUFFIX NO.
Black White Brown Gray	**—BL** **—WH** **—BR** **—GY**
COLOR OF PILOT LIGHT LENS	**ADDITIONAL CATALOG SUFFIX NO.**
Clear Red Nylon	**—CL** **—RD** **—ML**

MOUNTING: The only provision necessary for mounting these units is a rectangular opening (1-7/32" x 21/32 ") in a .045" to .065" thick panel or base into which the unit can be snapped.

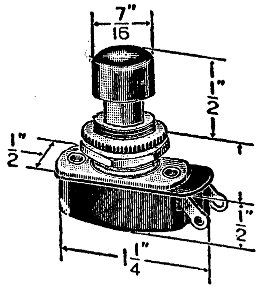
CE *Carling Electric, Inc.*

Appliance Switches MOMENTARY PUSH

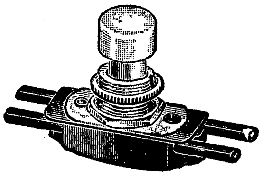
WITH INSULATING PLASTIC CAP (5/16" Stem Length ONLY)

NOMINAL RATING	POLES OR CIRCUIT	TYPE TERMINALS	CATALOG NUMBER
3 Amp 125 V. A.C.	S.P.—S.T.—Normally Open (OFF) (Momentarily ON)	Lug Wire	**16—3POFF—C** **16—3APOFF—C**
	S.P.—S.T.—Normally Closed (ON) (Momentarily OFF)	Lug* Wire*	**16—3PON—C** **16—3APON—C**
1 Amp 125 V. A.C.	S.P.—D.T.	Lug Wire	**116—P—C** **116—AP—C**
	D.P.—S.T.—Normally Open (OFF) (Momentarily ON)	Lug Wire	**216—P—OFF—C** **216—AP—OFF—C**
	D.P.—S.T.—Normally Closed (ON) (Momentarily OFF)	Lug* Wire*	**216—P—ON—C** **216—AP—ON—C**
	D.P.—D.T.	Lug	**316—P—C**
	S.P.—2 Circuit (1 On—1 Off)	Lug Wire	**516—P—C** **516—AP—C**

COLOR OF CAP	BLACK	WHITE	RED	GREEN	YELLOW	BLUE
USE CATALOG **SUFFIX NO.**	**BL**	**WH**	**RD**	**GN**	**YL**	**LU**



With Solder Lugs



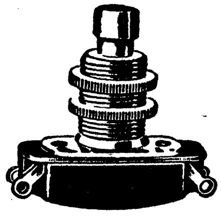
With Wire Leads

WITH ALL METAL PLUNGER

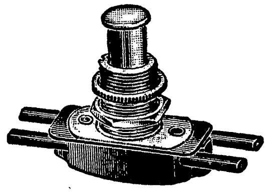
NOMINAL RATING	POLES OR CIRCUIT	TYPE TERMINALS	CATALOG NUMBER	
			STANDARD PLUNGER	WITH OVERTRAVEL
3 Amp 125 V. A.C.	S.P.—S.T.—Normally Open (OFF) (Momentarily ON)	Lug Wire	**16—3POFF** **16—3APOFF**	**16—3POFF—OV** **16—3APOFF—OV**
	S.P.—S.T.—Normally Closed (ON) (Momentarily OFF)	Lug Wire	**16—3PON** **16—3APON**	* *
1 Amp 125 V. A.C.	S.P.—D.T.	Lug Wire	**116—P** **116—AP**	**116—P—OV** **116—AP—OV**
	D.P.—S.T.—Normally Open (OFF) (Momentarily ON)	Lug Wire	**216—P—OFF** **216—AP—OFF**	**216—P—OFF—OV** **216—AP—OFF—OV**
	D.P.—S.T.—Normally Closed (ON) (Momentarily OFF)	Lug Wire	**216—P—ON** **216—AP—ON**	* *
	D.P.—D.T.	Lug	**316—P**	**316—P—OV**
	S.P.—2 Circuit (1 ON—1 OFF)	Lug Wire	**516—P** **516—AP**	**516—P—OV** **516—AP—OV**

USE CATALOG **SUFFIX**	
FOR STEM LENGTH	**NO.**
5/16"	**—2**
9/16"	**—4**

STEM LENGTH 9/16" ONLY WITH OVERTRAVEL

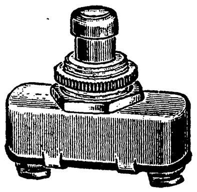


Standard Plunger
5/16" or 9/16" Stem Length



With OVERTRAVEL
9/16" Stem Length Only

NOMINAL RATING	POLES or CIRCUIT	CATALOG NUMBERS			STEM LENGTH 9/16" ONLY
		SCREW TERMINALS	SOLDER LUGS	WIRE LEADS	
10 Amp. 125–250 V. A.C.	S.P.—S.T. Normally Open (Off) S.P.—S.T. Normally Closed (On)	**172** ***170**	**172-B** ***170-B**	**172-A** ***170-A**	
CATALOG NO. 172 SWITCHES HAVE ON OVERTRAVEL OF APPROX. 1/32"					

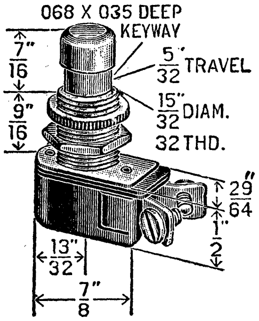


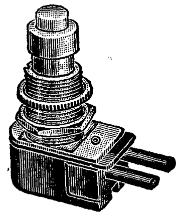
17 Series

***Note: All Normally Closed (ON) switches on this page have an OVERTRAVEL in the Open Circuit or "OFF" position.**

CE Carling Electric, Inc.

Appliance Switches PUSH — MAINTAINED CONTACTS OR MOMENTARY CONTACTS AC—DC

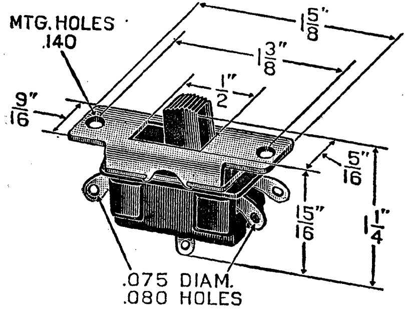

068 X 035 DEEP KEYWAY
7"/16
5"/32 TRAVEL
9"/16
15"/32 DIAM.
32 THD.
29"/64
1"/2
13"/32
7"/8

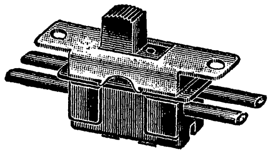


NOMINAL RATING	POLES OR CIRCUIT	TYPE TERMINALS	CATALOG NUMBERS		
			MAINTAINED CONTACTS	MOMENTARY CONTACTS	
				NORMALLY OPEN	NORMALLY CLOSED
6 Amp—125 V. 3 Amp—250 V. A.C.—D.C.	S.P.—S.T.	Lug Lug (Bottom) Screw Wire	110—P 110—BP 110—SP 111—16P	110—PM—OFF 110—PBM—OFF 110—SPM—OFF 111—PM—OFF	110—PM—ON 110—PBM—ON 110—SPM—ON 111—PM—ON
10 Amp—125 V. 5 Amp—250 V. A.C.—D.C.	S.P.—S.T.	Lug Lug (Bottom) Screw Wire	160—P 160—BP 160—SP 160—AP	None	None
3 Amp—125 V. 1 Amp—250 V. A.C.—D.C.	D.P.—S.T.	Lug Wire	216—PP 216—PPA	216—PM—OFF 216—PAM—OFF	216—PM—ON 216—PAM—ON
	S.P.—D.T.	Lug Wire	112—P 112—PA	112—PM 112—PAM	
	D.P.—D.T.	Lug Wire	316—PP 316—PPA	316—PM 316—PAM	
	2 circuit	Lug Wire	516—PP 516—PPA	516—PM 516—PAM	

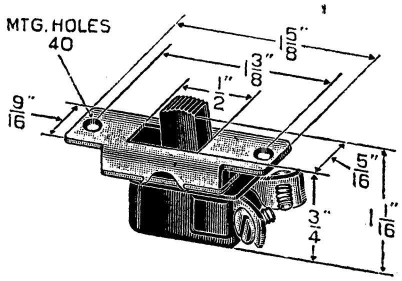
Overtravel available for Momentary Switches only—Add CATALOG SUFFIX NO. **—OV**

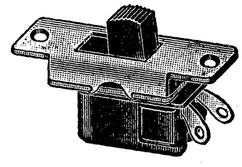
Appliance Switches SLIDE

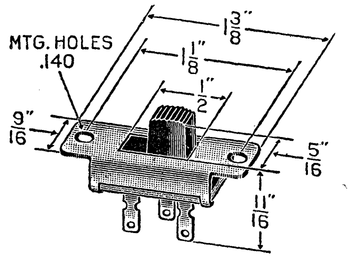

MTG. HOLES .140
1 5"/8
1 3"/8
1"/2
9"/16
5"/16
15"/16
1 1"/4
.075 DIAM.
.080 HOLES



With Wire Leads


MTG. HOLES 40
1 5"/8
1 3"/8
1"/2
9"/16
5"/16
3"/4
1 1"/16




MTG. HOLES .140
1 3"/8
1 1"/8
1"/2
9"/16
5"/16
11"/16

S6 Series

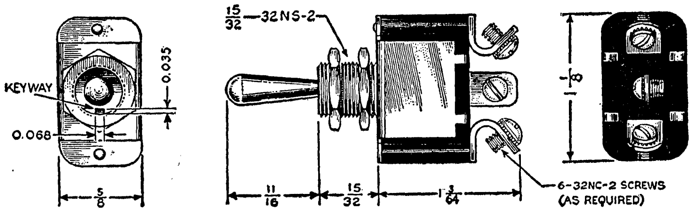
NOMINAL RATING	POLES OR CIRCUIT	TERMINALS	CATALOG NUMBER
6 Amp—125 V. 3 Amp—250 V. A.C. or D.C	S.P.—S.T.	Lugs—End Lugs—Bottom Screw Wire Leads Wire—2 Ends	S—110 S—110—B S—110—S S—111 S—111—D
3 Amp—125 V. 1 Amp—250 V. A.C. or D.C.	S.P.—D.T.	Lugs Wire	S—112 S—112—A
	D.P.—S.T.	Lugs Wire	S—216 S—216—A
	D.P.—D.T.	Lugs Wire	S—316 S—316—A
	S.P.—2 Circuit	Lugs Wire	S—516 S—516—A
4 Amp—125 V. A.C.	S.P.—S.T. S.P.—D.T.	Lugs Lugs	S60A S60B
3 Amp—125 V. A.C.	D.P.—S.T. D.P.—D.T.	Lugs Lugs	

COLOR OF SLIDE	BLACK	RED	GRAY	
USE CATALOG **SUFFIX NO.**	—BL	—RD	—GY	

Note: Due to the special nature of the switches shown in this CATALOG, they are made to order ONLY. As no stock of any type is carried on hand, therefore NO RETURNS are permitted without valid reason. Always be certain switches ordered suit the application. Samples will be furnished upon request to manufacturer. All shipments made are F.O.B. West Hartford, Conn. with no freight allowed. Terms 2% 10 days—Net 30.

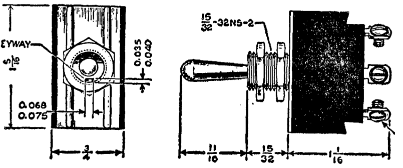
Carling Electric, Inc.

Single Pole Switches Toggle Type



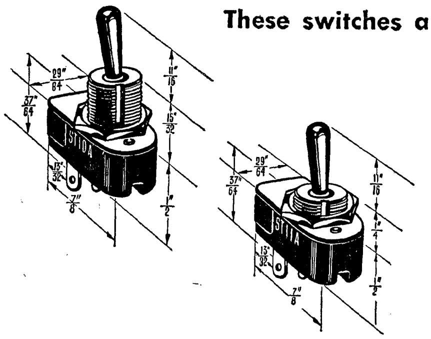
Carling Catalog Numbers							Electrical Circuit Characteristics		
Government Type Conforming to Specs.			Commercial Type—UL						
JAN		Mil	15 Amp.-125 V. AC. 10 Amp.-250 V. AC. ¾ HP-115-230 V. AC.		6 Amp.-125 V. AC. 3 Amp.-250 V. AC. ⅙ HP-115-230 V. AC.				
Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Up Position	Center Position	Down Position
							SINGLE POLE		SINGLE THROW
ST40A	ST42A	AN3021-2	2FA53	2FA54	2FA63	2FA64	On	—	Off
ST40B	ST42B	AN3021-9	6FA57	6FA58	6FA67	6FA68	On	—	Momentarily Off
ST40C	ST42C	AN3021-8	6FA53	6FA54	6FA63	6FA64	Off	—	Momentarily On
							SINGLE POLE		DOUBLE THROW
ST40D	ST42D	AN3021-3	2FB53	2FB54	2FB63	2FB64	On	—	On
ST40E	ST42E	AN3021-1	2FC53	2FC54	2FC63	2FC64	On	Off	On
ST40F	ST42F		6FB53	6FB54	6FB63	6FB64	On	—	Momentarily On
ST40G	ST42G	AN3021-7	6FC53	6FC54	6FC63	6FC64	Momentarily On	Off	Momentarily On
ST40H	ST42H	AN3021-5	6FC57	6FC58	6FC67	6FC68	On	Off	Momentarily On

Double Pole Switches Toggle Type



Carling Catalog Numbers							Electrical Circuit Characteristics		
Government Type Conforming to Specs.			Commercial Type—UL						
JAN		Mil	15 Amp.-125 V. AC. 10 Amp.-250 V. AC. ½ HP-115-230 V. AC.		6 Amp.-125 V. AC. 3 Amp.-250 V. AC. ⅙ HP-115-230 V. AC.				
Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Up Position	Center Position	Down Position
							DOUBLE POLE		SINGLE THROW
ST50K	ST52K	AN3027-2	2GK53	2GK54	2GK63	2GK64	On	—	Off
ST50L	ST52L	AN3027-4	6GK57	6GK58	6GK67	6GK68	On	—	Momentarily Off
ST50M	ST52M	AN3027-5	6GK53	6GK54	6GK63	6GK64	Off	—	Momentarily On
							DOUBLE POLE		DOUBLE THROW
ST50N	ST52N	AN3027-3	2GL53	2GL54	2GL63	2GL64	On	—	On
ST50P	ST52P	AN3027-1	2GM53	2GM54	2GM63	2GM64	On	Off	On
ST50R	ST52R	AN3027-6	6GL53	6GL54	6GL63	6GL64	On	—	Momentarily On
ST50S	ST52S	AN3027-7	6GM53	6GM54	6GM63	6GM64	Momentarily On	Off	Momentarily On
ST50T	ST52T	AN3027-8	6GM57	6GM58	6GM67	6GM68	On	Off	Momentarily On

These switches are government type approved for use in Airborne Electronics.



Single Pole Switches

Momentary Types — Suffix 73 only.

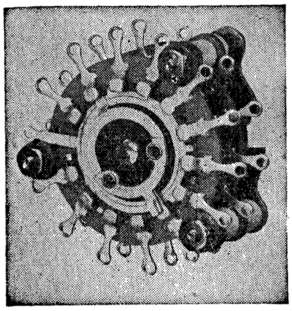
Type designation and Carling Cat. No.	Continuous current-carrying capacity	Endurance-test-current values (nominal ratings)			
		Resistive load		Inductive load	
		125 volts	250 volts	125 volts	250 volts
ST10A	3	6	3	1.5	1.5
ST11A	3	6	3	1.5	1.5

Instruments J·B·T Testers

J-B-T INSTRUMENTS, INC.

INSTRUMENT AND TESTER SWITCHES (LAMINATED)

Rotary Selector — Single and Multi-Gang — Non-Shorting and Shorting

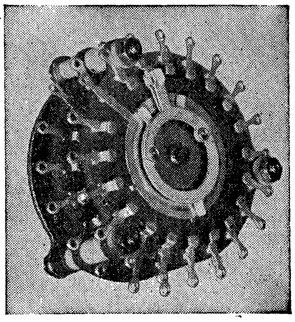

SS-14-2

JBT Instrument-type Rotary Selector Switches are used widely in quality test equipment, portable instruments, inspection setups and avionics where trouble-free, dependable performance is of major importance. Available in two basic types—14 and 20 position—the design gives extra contacts in minimum space. One to six decks.

FEATURES:

Reliability—Rigid, 3-post deck suspension, instead of the usual 2; all current carrying parts are brass or phosphor bronze, silver flashed and then heavily plated with pure silver to meet 100 hour salt spray test; ball bearing action, beryllium-copper balanced spring (SS-14); leaf-type (SS-20), and sharp detent assure positive indexing. Springs of both switches are generally replaceable without disturbing soldered connections. Laminated plastic decks and rotors selected for maximum mechanical and dielectric strength.

Exceptional Compactness—14-position switch takes 13 circuits and "off" in 2" circle; 20-position switch handles 19 circuits and "off" in 2-23/32" circle. Each deck above first adds only 5/16".


SS-20-2

Low Contact Loss—Double-grip collector arms, and large-area contacts, silver to silver, result in an average contact resistance of .007 ohms or less during the useful life of the switch.

Ample Dielectric—AC or DC; normal carrying capacity (not make-and-break), 1 amp.; maximum momentary capacity (not make-and-break), 5 amp.; maximum voltage between contacts and ground, 1000 volts R.M.S.; between decks and ground, 2000 volts R.M.S.

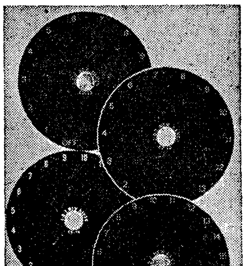
Military Variations—The following can be supplied on special order at extra cost: (a) laminated plastic, Grade LTS-E-3 or better, per Spec. JAN-P-13; (b) vacuum impregnation of rotors, decks, spacers, and ceramic spacers with approved fungicides; (c) hot tin dip on contact surfaces to be soldered, presently available in 14 positions only; (d) 14 or 20 live positions, no off (add suffix F, as SS-14-2F).

BASIC 14-POSITION: 1¼" Bar knob supplied only on individually packed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, unless otherwise specified. **Contact lugs** and common lugs positioned as shown, 13 contacts per deck. **One to six decks;** for each additional deck (or gang) add 5/16" to depth. **Continuous rotation type** supplied unless otherwise specified. **Adjustable Stop** normally is supplied on standard cataloged switches. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

BASIC 20-POSITION: 2" Bar knob supplied only on individually packed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat on shaft, unless otherwise specified. **Contact lugs** and common lugs positioned as shown, 19 contacts per deck, continuous rotation types. **One to six decks;** for each additional deck, add 5/16" to depth. Continuous rotation type supplied unless otherwise specified. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

SWITCH KIT (Laminated Phenolic)

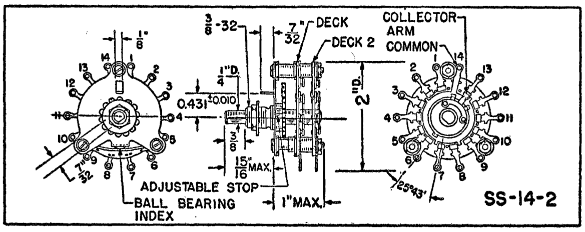
Many of the 14 and 20 position laminated switches shown on this page, plus special variations as needed, can be assembled quickly from the kit shown on an adjoining page. Designers, service engineers, laboratories, and industrial maintenance departments will especially appreciate the convenience, flexibility, and time saved.



ETCHED DIAL PLATES

For SS-14 or MS-14 Series; and for SS-20 or MS-20 Series. Dull black finish — with raised bright metal numerals. 2½" diameter.

EP-13 off thru 13	$0.21
EP-14 1 thru 14	.21
EP-19 off thru 19	.21
EP-20 1 thru 20	.21



Non-Shorting—Break before make. **Shorting**—Make before break.

LAMINATED SWITCHES, SS-14 TYPE

(14 positions; angular indexing 25° 43')

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Boxed, Includ-ing Knob
SS-14-1	14	1	1	N-S	**$1.50**
SS-14-1A*	5†	2	1	N-S	**1.55**
SS-14-1S*	14	1	1	S	**1.50**
SS-14-1CS‡*	14	1	1	CS	**1.85**
SS-14-2	14	1	2	N-S	**1.80**
SS-14-2A*	5†	2	2	N-S	**1.95**
SS-14-2S*	14	1	2	S	**1.80**
SS-14-2CS‡*	14	1	2	CS	**2.55**
SS-14-3	14	1	3	N-S	**2.25**
SS-14-3S*	14	1	3	S	**2.25**
SS-14-4	14	1	4	N-S	**2.90**
SS-14-6	14	1	6	N-S	**4.25**

*Standard items, but not regularly stocked; check with your electronic parts distributor.

†Denotes correction in former catalogs; 5 positions include 4 "live" and 1 "off".

‡Complete shorting — all contacts shorted except one in use.

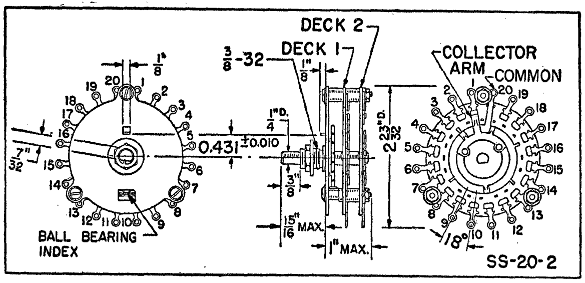
LAMINATED SWITCHES, SS-20 TYPE

(20-positions; angular indexing, 18°)

SS-20-1	20	1	1	N-S	**$1.95**
SS-20-1A*	6§	2	1	N-S	**2.00**
SS-20-1S*	20	1	1	S	**1.95**
SS-20-2	20	1	2	N-S	**2.40**
SS-20-2S*	20	1	2	S	**2.40**
SS-20-3	20	1	3	N-S	**3.25**
SS-20-4	20	1	4	N-S	**3.95**
SS-20-6	20	1	6	N-S	**5.60**

*Standard items, but not regularly stocked; check with your electronic parts distributor.

§Denotes correction in former catalogs; 6 positions include 5 "live" and 1 "off".

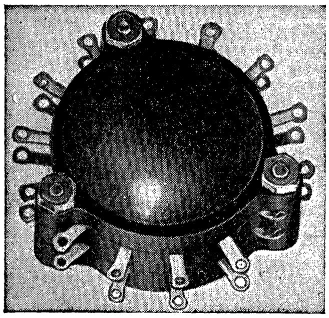


Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

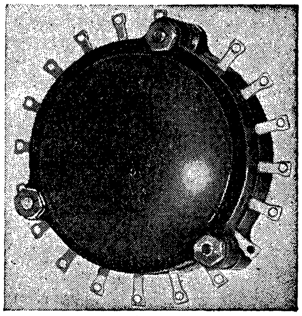
NEW-BUT PROVED-MOLDED ROTARY SELECTOR SWITCHES

Fully Enclosed — Single and Multi-Gang — Shorting and Non-Shorting



MS-14-2

- **All moving contacts enclosed — minimizes dirt and corrosion.**
- **Contact lugs permanently integrated into switch assembly.**
- **Sturdy construction with 3-post deck suspension, double grip collector arms, and rectangular drive shaft through decks for precision indexing.**
- **Interchangeable, electrically and mechanically, with J-B-T 14- and 20-position laminated switches, widely used by industry and Armed Services.**



MS-20-1

FEATURES:

For description of rigid 3-post construction; heavy pure silver plating to meet 100-hour salt-spray test; exceptional compactness; .007 ohm average contact resistance; current-carrying capacity and voltage breakdown; see adjoining page on SS-14 and SS-20 laminated switches. Besides fully enclosing all the moving contact parts, the molded switches differ from the laminated construction in the design of the detent mechanism, but both types provide the positive indexing which quickly identifies the superior quality of J-B-T switches.

BASIC 14-POSITION MOLDED (MS-14): 13 circuits and "off" per deck in 2" circle for compactness. **Molded end cover** regularly supplied on MS-14 series. **1¼" Bar knob** included with individually boxed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms hold contact lug on upper and lower surfaces; collector ring is self-wiping. **One to ten decks** add 5/16" per deck (or gang) to depth; for eleven decks and over, add ½" to depth for double indexing mechanism; add 5/32" to depth for adjustable stop mechanism. **Continuous rotation type** supplied unless adjustable stop (type MAS) is ordered or, on quantity orders, pre-set fixed stops are specified. **Panel locator** is available on quantity orders when specified; on MS-14-4 and MS-14-6, extra hex nut and longer screw are supplied for inverting supporting screw nearest common, thus converting into panel locator.

BASIC 20-POSITION MOLDED (MS-20): 19 circuits and "off" per deck in 2 23/32" circle for compactness. **Molded end cover** regularly supplied. **2" Bar knob** included with individually boxed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms and self-wiping collector ring are standard construction. **One to seven decks:** add 5/16" per deck (or gang) to depth. **Continuous rotation type** supplied; on quantity orders, pre-set fixed stops are available. **Panel locator** available on quantity orders when specified; on MS-20-4 and MS-20-6, extra hex nut and longer screw are supplied for inverting supporting screw nearest common, thus converting into panel locator.

MOLDED SWITCHES, MS-14 TYPE

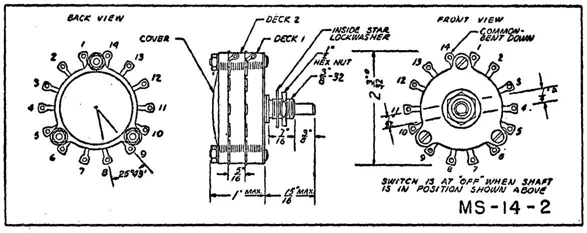
(14 positions; angular indexing 25° 43')

Continuous rotation, no stops

Non-Shorting—Break before make. **Shorting**—Make before break.

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-14-1	14	1	1	N-S	13/16"	**$1.50**
MS-14-1S*	14	1	1	S	13/16"	**1.50**
MS-14-2	14	1	2	N-S	1⅛"	**1.80**
MS-14-2S*	14	1	2	S	1⅛"	**1.80**
MS-14-3	14	1	3	N-S	1 7/16"	**2.25**
MS-14-4	14	1	4	N-S	1¾"	**2.90**
MS-14-6	14	1	6	N-S	2⅜"	**4.25**

* Standard items, but not regularly stocked; check with your electronic parts distributor.



MS-14-2

MOLDED SWITCHES, MS-20 TYPE

(20 positions; angular indexing 18°)

Continuous rotation, no stops

Non-Shorting—Break before make. **Shorting**—Make before break.

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-20-1	20	1	1	N-S	13/16"	**$1.95**
MS-20-1-6DT	2	6	1	N-S	13/16"	**2.70**
MS-20-1S*	20	1	1	S	13/16"	**1.95**
MS-20-2	20	1	2	N-S	1⅛"	**2.40**
MS-20-2-6DT	2	6	2	N-S	1⅛"	**3.90**
MS-20-2S*	20	1	2	S	1⅛"	**2.40**
MS-20-3	20	1	3	N-S	1 7/16"	**3.25**
MS-20-4	20	1	4	N-S	1¾"	**3.95**
MS-20-6	20	1	6	N-S	2⅜"	**5.60**

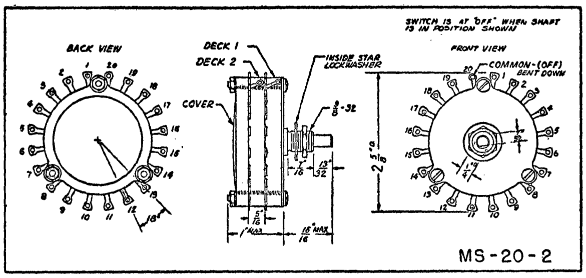
ADJUSTABLE STOP MOLDED SWITCHES, MAS-14 TYPE

(14 positions; angular indexing 25° 43')

IMPORTANT: Enclosed adjustable stop mechanism located on panel side of switch increases switch length 5/32" behind panel; decreases effective bushing length by 3/32"; and shortens shaft extending from bushing by 1/16".

Non-Shorting—Break before make. **Shorting**—Make before break.

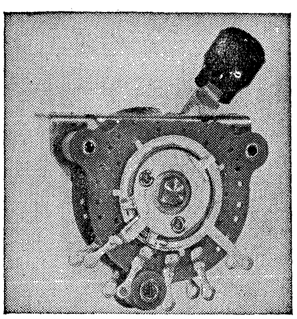
Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MAS-14-1	14	1	1	N-S	31/32"	**$1.95**
MAS-14-1S*	14	1	1	S	31/32"	**1.95**
MAS-14-2	14	1	2	N-S	1 9/32"	**2.25**
MAS-14-2S*	14	1	2	S	1 9/32"	**2.25**
MAS-14-3	14	1	3	N-S	1 19/32"	**2.70**
MAS-14-4	14	1	4	N-S	1 29/32"	**3.35**
MAS-14-6	14	1	6	N-S	2 17/32"	**4.70**



MS-20-2

LEVER ACTION SWITCHES, KITS AND SPECIAL SWITCHES

4-Position Lever Switches with Standard Mounting — New 12-Circuit Double-Pole



SS-14-1L4F-2
Two-Deck Lever-Action Switch

SPRING-RETURN TYPE. The same instrument-quality, single-deck, 3-position lever switches as above may be ordered with spring return. Lever returns to one end, giving momentary action on the other two positions. Individually boxed with 6-32 hardware.

SS-14-1L3-R, 3 live positions, no off; non-shorting $0.85

SS-14-1L3S-R, 3 live positions, no off; shorting .... .85

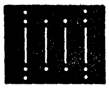
Positive Type, 3 or 4 position. These sturdy lever switches are adapted from the well known J-B-T SS-14 series rotary switches, widely specified where quality is the first consideration. Single deck lever models, not illustrated, now are built into tube checkers, inspection apparatus, communications set-ups, and hobby equipment. The new 4-position types, interchangeable except in slot length with the standard 3-position, make an excellent replacement wherever an extra circuit is needed. Mounting dimensions are given below. Holes for 4-36 screws or ⅛" rivets can be supplied on long runs involving set-up charges. Individually boxed with 6-32 mounting **hardware and KN-19 black knob,** as shown. Spacing between single deck switches: recommended ¾"; minimum, 9/16". Also, see list of available mounting plates.

Model No.	Pos. per Circuit	Circuits per Deck	No. of Decks	Shorting or Non-Shorting	Stand Cont. Locations	Length of Lever Slot	Boxed, Including Knob
SS-14-1L3	3 pos., no "off"	1	1	N-S	common at 12 contacts 9, 10, 11	15/16"	$0.75
SS-14-1L4	3 pos. & "off"	1	1	N-S	common & off at 12 contacts 9, 10, 11	1-5/16"	.85
SS-14-1L4F	4 pos., no "off"	1	1	N-S	common at 12 contacts 8, 9, 10, 11	1-5/16"	.85
SS-14-1L3S	3 pos., no "off"	1	1	S	common at 12 contacts 9, 10, 11	15/16"	.75
SS-14-1L4S	3 pos. & "off"	1	1	S	common & off at 12 contacts 9, 10, 11	1-5/16"	.85
SS-14-1L3A	3 pos., no "off"	2	1	N-S	common at 9 & 10 conts. 6, 7, 8, 12, 13, 14	15/16"	.90

TWO-DECK LEVER-ACTION SWITCHES. These new 3- or 4-position, 2-deck switches cost a bit more than conventional types, but one look shows why they are worth it, and more! They use the same strong parts, 3-pole suspension, and double-grip collector arms which feature the SS-14 laminated phenolic rotary switches on another page and the 1-deck lever switches on this page. Spacing is ⅜" between decks, the same distance as on TV twinlead wires. Excellent for centralized systems in radio, sound, intercommunication, or public address equipment. Convenient for connecting 3 or 4 single channel TV antennas to one receiver. Bracket mounting holes 1⅝" apart. Recommended spacing between switches, 15/16"; minimum spacing, 13/16". Non-shorting (break before make), positive action, individually boxed, including KN-19 knob and 6-32 hardware.

Model No.	Pos. per Circuit	Circuits per Deck	No. of Decks	Shorting or Non-Shorting	Stand Cont. Locations	Length of Lever Slot	Boxed, Including Knob
SS-14-1L3-2	3 pos., no "off"	1	2	N-S	common at 12; conts. 9, 10, 11 on decks 1 & 2	15/16"	$1.35
SS-14-1L4F-2	4 pos., no "off"	1	2	N-S	common at 12; conts. 8, 9, 10, 11 on decks 1 & 2	1-5/16"	1.45

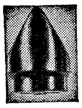
MOUNTING PLATES

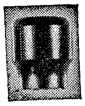


These .035" stamped steel plates in black crackle finish simplify alignment of standard 3-position, 1-deck switches (Models SS-14-1L3, SS-14-1L3-R, SS-14-1L3S, SS-14-1L3S-R, and SS-14-1L3A, using 6-32 hardware). Separation is ¾" between switches; all plates are 2⅝" high.

PL-36, ¾" long, for one switch $0.25
PL-37, 1½" long, for two switches .... .35
PL-38, 3" long, for 4 switches (Illus.) .... .40

KNOBS

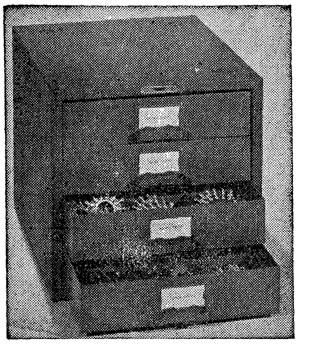




Spare Knobs of the push-on type may be purchased as follows:

KN-17, black, modern pointed design, including metal insert, shown at left (out of stock when catalog published) $0.06
KN-18, walnut, same as KN-19 .... .05
KN-19, black, round, flat-type, as shown at right and regularly supplied; no insert required .... .05

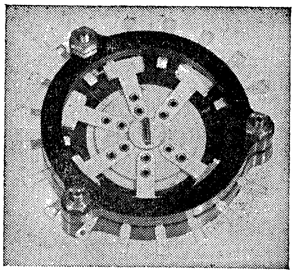
SWITCH KIT—14 and 20 POSITIONS



MODEL K-1. The instrument-quality, laminated phenolic switches described on a preceding page now are available in kit form for quick assembly. This arrangement is especially helpful to engineers, experimenters, hams, and electronic maintenance departments, for special assemblies or emergency requirements. The sturdy, 4-drawer, steel cabinet with 48 compartments contains 15 SS-14 index assemblies; 11 SS-20 index assemblies; 50 14-position decks, including non-shorting (break before make), shorting (make before break); A-type (2 circuits); CS-type (complete shorting); F-type (14 live positions); and 33 20-position decks including non-shorting, shorting; A-type (2 circuits); and F-type (20 live positions). One simple tool for pushing rotors on switch shafts is supplied with each kit. A replacement parts list is supplied for ordering refills through distributors, to keep the kit ready for instant use.

K-1 .... $76.00

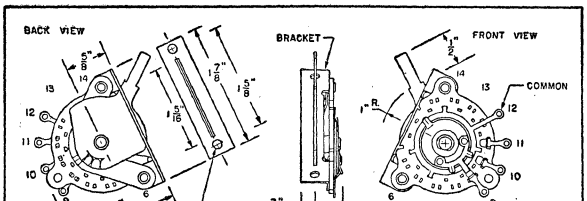
6-POLE or 12-POLE DOUBLE THROW (Molded Type)



6DT SWITCHES. Double-throw switching, 6 circuits per deck, becomes easy with this unique rotary-type molded switch. It is fully enclosed and similar in appearance to the molded MS-20 switches described on another page. The illustration at the right shows internal construction with back protective cover cut away. Circuit arrangement is designated on the metal front of the switch. Quality features include .007 ohm average contact resistance; heavy, pure-silver plating for 100-hour salt spray test; double-grip collector arms, and 3-post deck suspension. Available only in non-shorting (break before make).

2⅝" maximum diameter; one-deck, 13/16" behind panel; two-deck, 1⅛" behind panel.

MS-20-1-6DT, 6-pole, double throw (1-deck) $2.70
MS-20-2-6DT, 12-pole, double throw (2-deck) 3.90



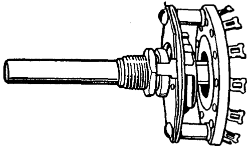
Dimension A = 13/32" on 1-deck Switches; 23/32" on 2-deck.
Non-shorting (break before make) is shown.

SWITCHES

MINIATURE ROTARY SWITCHES

PA-2000 SWITCHES **STEATITE INSULATION**

New Small Size! 1-7/16" d. gives saving of 7/16" over standard switches. One piece shaft construction for accurate indexing; adjustable stop allows selection of positions or continuous rotation; meet 50 hour salt spray tests. Available as complete switches or separate assemblies. Same ratings as the larger 2500 series switches plus excellent r.f. characteristics. Shaft 1⅞" from bushing.



MINIATURE SWITCHES WITH 30° INDEXING

Total Number Poles	Total Positions	Number Sections	Poles Per Section	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-12	1	1	—PA-2000	—PA-2001	$2.50
2	2-6	1	2	—PA-2002	—PA-2003	2.60
2	2-12	2	1	—PA-2004	—PA-2005	3.75
3	2-5	1	3	—PA-2006	—PA-2007	2.75
3	2-12	3	1	—PA-2008	—PA-2009	5.00
4	2-6	2	2	—PA-2010	—PA-2011	3.90
4	2-12	4	1	—PA-2012	—PA-2013	6.25
5	2-3	1	5	—PA-2014	—PA-2015	2.85
5	2-12	5	1	—PA-2016	—PA-2017	7.50
6	2	1	6	—PA-2018	—PA-2019	2.85
6	2-5	2	3	—PA-2020	—PA-2021	4.00
6	2-6	3	2	—PA-2022	—PA-2023	5.25
6	2-12	6	1	—PA-2024	—PA-2025	8.75
8	2-6	4	2	—PA-2026	—PA-2027	6.50
9	2-5	3	3	—PA-2028	—PA-2029	5.25
10	2-3	2	5	—PA-2030	—PA-2031	4.25
10	2-6	5	2	—PA-2032	—PA-2033	7.75
12	2	2	6	—PA-2034	—PA-2035	4.25
12	2-6	6	2	—PA-2036	—PA-2037	9.00
15	2-3	3	5	—PA-2038	—PA-2039	5.75
18	2	3	6	—PA-2040	—PA-2041	5.75

SPECIAL

1	2-10	1	1	—PA-2042	....	2.50

(1 off, 9 progressively shorting positions)

MINIATURE SWITCHES WITH 60° INDEXING

1	2-6	1	1	....	—PA-2043	2.50
2	2-6	2	1	....	—PA-2045	3.75

(1½" spacing between sections)

SEPARATE STEATI1 SECTIONS FOR MINIATURE SWITC\ 30° INDEXING

Number Poles	Number Positions	Cat. N Shortin	Cat. No. Non-Shorting	List Price
1	2-12	—PA-(	—PA-1	$1.35
2	2-6	—PA-2	—PA-3	1.35
3	2-5	—PA-4	—PA-5	1.50
5	2-3	—PA-6	—PA-7	1.50
6	2	—PA-8	—PA-9	1.50
1	2-5	—PA-10	....	1.35

(Unused contacts one side of common connected and shorted out)

1	2-11	—PA-11	—PA-18	1.35

(All unused contacts connected and shorted out)

1	2-10	—PA-12	....	1.35

(1 off, 9 progressively shorting positions)

60° INDEXING

1	2-6	....	—PA-17	1.35

SOLID SILVER CLIPS AND CONTACTS 30° INDEXING

1	2-11	—PA-16	....	2.50
2	2-5	—PA-14	....	2.50
4	2	—PA-15	....	2.50

SEPARATE INDEX ASSEMBLIES FOR MINIATURE SWITCH

Suggested No. Sections	Indexing	Rear Shaft Length	Cat. No.	List Price
1 or 2	30°	2"	—PA-300	$1.50
3 or 4	30°	4"	—PA-301	2.00
5 or 6	30°	6"	—PA-302	2.50
1 or 2	60°	2"	—PA-304	1.50
3 or 4	60°	4"	—PA-305	2.00
ADJUSTABLE STOP PLATE			—P-319	.25
INTERSECTION SHIELD			—P-320	.25

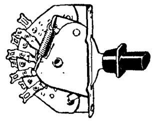
COMPLETE HARDWARE FOR MINIATURE SWITCHES AVAILABLE, SEE LATEST CENTRALAB CATALOG

KIT No. 2000—MINIATURE STEATITE SWITCHES

Kit No. 2000 of miniature switch parts is made available to meet the demand of commercial users and the armed forces for smaller units. The kit has 39 sections, 12 complete index assemblies and extensive hardware. All metal parts will withstand a salt spray test of fifty hours.

Kit No. 2000..List Price $80.00

LEVER ACTION SWITCHES

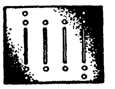


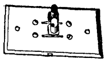
Coil spring and cam index design provides guaranteed minimum life of 150,000 switching cycles. Smooth, "clean" action. Coil type index spring easily replaceable. Mounting plates available. Furnished with black paddle-type knob (same style knob also available in red and white). Shorting—make before break. Non-shorting—break before make.

Number Poles	Number Positions	Type Indexing	Cat. No. Shorting	Cat. No. Non-Shorting
2	3	Positive	1452	1454
2	3	Spring Return	1453	1455
2	3	Positive Spring Return	1466	1467
4	2	Spring Return	1456	1457
4	2	Positive	1459	1458

List Price of above items..$1.25

MOUNTING PLATES FOR LEVER SWITCHES





TYPE A—Made of .035" die cut steel, black crackle finish. Eliminate alignment problems, provide ¾" spacing between switches. Available for 1 to 5 switch mounting. Height of all plates is 2⅝".

TYPE B—Specially furnished for mounting lever switches in electrical outlet boxes. Chrome plated wall plates will fit all standard boxes with mounting holes 3-5/16" between centers. Ideal for P.A. or Intercom installations.

MOUNTING PLATE—Type A

No. Switches	Length	Cat. No.	List Price
1	¾"	P-1755	$0.35
2	1½"	P-1756	.40
3	2¼"	P-1757	.50
4	3"	P-1758	.60
5	3¾"	P-1759	.75

WALL PLATE—Type B

No. Switches	Cat. No.	List Price
2	P-221	$0.75
1	P-222	.60

Size: 2¾" x 4½" overall.
¾" spacing between switches.

DUAL SPEAKER SWITCH MOUNTING KIT

Kit No. PK-300—Contains complete assembly for switching between dual speakers such as auto rear seat and front seat speakers including etched dial-mounting plate and complete installation instructions.

Contents:

1 Cat. No. 1484 Dual speaker switch
1 Cat. No. P-216 Mounting bracket and dial
1 Cat. No. P-197 White split knurl pointer knob
2 Self tapping sheet metal mounting screws

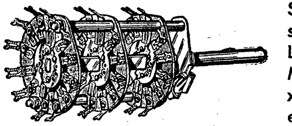
Kit No. P-300..List Price $1.50

Shorting contact—make before break.
Non-shorting contact—break before make.
Complete hardware available. See latest CRL Catalog.

SWITCHES (Cont'd)

ROTARY SELECTOR SWITCHES

1400 SERIES PHENOLIC INSULATION



Series 1400 offers compact design and quality construction. Laminated phenolic insulation. Mounting Bushings 3/8" x 32 thd. x 3/8" long. Shafts 1 7/8" from end of bushing. Positive 30° index with adjustable stop. Revisions or additions can easily be made due to availability of all parts separately (see listings under hardware switch sections). Packaged with mtg. nut, lockwasher, 1 1/4" black bar knob. Shorting—make before break. Non-shorting—break before make.

Total Poles	No. of Positions	Total Sections	Poles per Section	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2 to 6	1	1	1400	1401	$1.25
1	2 to 11	1	1	1402	1403	1.50
2	2 to 5	1	2	1404	1405	1.50
3	2 to 3	1	3	1406	1407	1.75
4	2 only	1	4	1408	1409	1.75
2	2 to 6	2	1	1410	1411	2.00
2	2 to 11	2	1	1412	1413	2.25
4	2 to 5	2	2	1414	1415	2.50
6	2 to 3	2	3	1416	1417	2.75
8	2 only	2	4	1418	1419	2.75
3	2 to 6	3	1	1420	1421	2.75
3	2 to 11	3	1	1222	1423	3.00
6	2 to 5	3	2	1424	1425	3.25
4	2 to 6	4	1	1426	1427	3.50
4	2 to 11	4	1	1428	1429	3.75
8	2 to 5	4	2	1430	1431	4.50

PHENOLIC SECTIONS ONLY — 1400 SERIES

.064" Rotor Slot.

Use with above switches or P-121, 122, 123 Index.

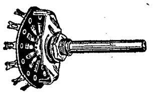
Poles	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2 to 6	A	H	$0.50
1	2 to 11	B	J	.75
2	2 to 5	C	K	.75
3	2 to 3	D	L	1.00
4	2 only	E	M	1.00
4	2 to 3	EE	—	1.50
1	2 to 5	F	—	.75
(On F section unused contacts on one side of common connected and shorted out.)				
1	2 to 10	G	—	1.00

(On G section all unused contacts connected and shorted out.)

	Each
N and P Special—Combine for resistance decade switch	$0.75
Q—Special for capacitance decade switch	.75
P-1 Special—10 pos. progressively shorting out 9 positions	1.00

(See listing of "Deluxe" sections—DD rotor slot—Page R-30)

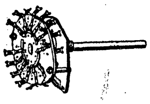
UNIVERSAL FLAT AND P.A. TYPE SWITCHES



1450 "ECONO-SWITCH"®—A 4 pole, 2 position economically designed switch which requires only 5/8" depth behind panel. Can be used as SPST and up to 4 pole, 2 position. Positive, non-shorting, leaf type index. List Price $1.00

1451 "PERMA-SWITCH"®—The famous Centralab long life coil spring switch with a minimum of 150,000 cycles. Similar in style to the 1450 switch, 4 pole 2 position. Designed for hard life and long use in test equipment and intercom use. Coil spring can be replaced without removing switch. Non-shorting, spring return index. List Price $1.75

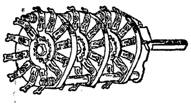
1448-1449 "ALL PURPOSE"—Intercom switches. Six pole three position, will fit practically every intercom application in use. Both units have replaceable coil spring indexing assuring 50,000 cycles minimum.



Cat. No.	List Price
1448 Spring ret. both sides	$2.25
1449 Spring ret. one side	2.25

ROTARY SELECTOR SWITCHES

2500 SERIES — STEATITE INSULATION



2500 Series Switches have highest quality (grade L-5) Steatite insulation, meet critical requirements of r.f. circuit applications. Bushing 3/8" x 32 thd. x 3/8" long. Shaft 1 7/8". Positive 30° Index with adjustable stop. Separate parts also available. Packaged with Mtg. nut, lockwasher and 1 1/4" black bar knob. Shorting—make before break. Non-Shorting—break before make.

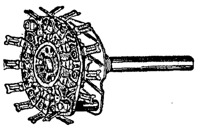
Total Poles	No. of Positions	Total Sections	Poles per Section	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2 to 6	1	1	2500	2501	$2.25
1	2 to 11	1	1	2502	2503	2.25
2	2 to 5	1	2	2504	2505	2.25
3	2 to 3	1	3	2506	2507	2.25
2	2 to 6	2	1	2510	2511	3.50
2	2 to 11	2	1	2512	2513	3.50
4	2 to 5	2	2	2514	2515	3.50
6	2 to 3	2	3	2516	2517	3.50
3	2 to 6	3	1	2520	2521	5.00
3	2 to 11	3	1	2522	2523	5.00
6	2 to 5	3	2	2524	2525	5.00

STEATITE SECTIONS ONLY FOR 2500 SERIES

Standard: .064" Rotor Slot. Use with above switches or P-121, 122, 123 Index.

Number Poles	Number Positions	Standard Shorting	Standard Non-Shorting
1	2 to 6	T	X
1	2 to 11	U	Y
2	2 to 5	R	RR
3	2 to 3	S	SS
4	2	V	Z
1	2 to 10	GG	—
(All unused contacts connected and shorted out)			
1	2 to 10	—PIS	—
(1 off—9 progressively shorting positions)			

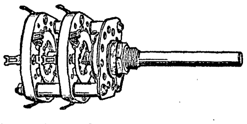
23 POSITION SELECTOR SWITCH



1443 "23 CLIPPER"®—Single pole, 23 positions, shorting type contacts. High quality "W" type construction requires only 1" behind the panel. Double wiping silver plated contacts mean low loss. Include dial plate.

List Price $3.25

STEATITE HAM-TYPE SWITCHES



90° Indexing Ham Switches will handle 15 watts and can be operated with tubes up to 1000 volts and inputs up to 150 watts. Extra heavy steatite sections and spacers assure high breakdown point. Heavily silver plated contacts. Non-shorting type switching.

Poles Per Sec.	Total Sec.	Positions	Cat. No.	List Price
1	1	2 to 4	2542	$2.25
1	2	2 to 4	2543	3.50
1	3	2 to 4	2544	4.75
1	4	2 to 4	2545	6.00
1	5	2 to 4	2546	7.25

Separate Sections

1 pole, 2 to 4 positions, non-shorting type with 4 fibre washers.

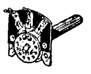
Cat. No. XX .... List $1.25

Separate Index Assemblies

For No. Section	Cat. No.	List Price
1 or 2	P-170	$1.25
3 or 4	P-171	1.75
5 or 6	P-172	2.25

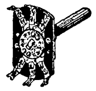
SWITCHES *(Cont'd)*

SMALL GENERAL PURPOSE SWITCHES

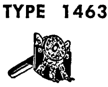


TYPE 1460—Single pole, 2 position, shorting contacts, positive index. Can be used as SPST or SPDT. For phono-radio, tone or sensitivity control. List Price $0.75

TYPE 1461—Single pole, 3 position, shorting contacts, positive index. Useful in miniature and band change, step type tone or sensitivity control, P.A. channel selector switch. List Price $0.75

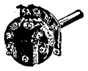


TYPE 1462—Double pole, 2 position, shorting contacts, positive index. Can be used as SPST, SPDT, DPST, DPDT—for meter reversing, P.A. channel, or switching both lines on phono-radio. List Price $0.75

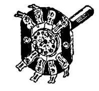


TYPE 1463—Single pole, 2 position, non-shorting contacts, spring return index. Same size as Type 1460. Useful for meter reversing or momentary intercom talk switch. Non-shorting. List Price $0.75

TYPE 1464—Double pole, 2 position, non-shorting contacts, spring return index. Same physical size as Type 1462. Can also be used as SPST, SPDT or DPST. Used as meter switch and momentary line or remote speaker return on intercoms. List Price $1.00

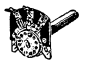


TYPE 1465—Single pole, 4 position, shorting, positive index, with SPST AC line switch attached. The selector switch has 3 active positions and "off." The line switch operates between "off" and first active selector position. Line switch is Underwriters' approved for 3 amperes at 125 volts, 1 ampere at 250 volts A.C. Type 1465 is a replacement for "on-off" step tone control switches used in many AM and FM receivers. Shaft is 2½" long from end of ¼" bushing. List Price $1.25



TYPE 1472—2 pole, 3 position, non-shorting contacts, positive index. An economical change switch for AM, FM, phono selector to amplifier in custom installations. List Price $1.00

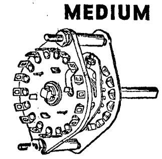
TYPE 1473—Same as 1472 except shorting contacts. List Price $1.00



TYPE 1483—Single pole, 3 position, shorting contacts, positive index. For use with dual or auxiliary rear seat auto radio speakers. Permits operation of either speaker separately or both simultaneously. List Price $0.75

TYPE 1484—Single pole, 3 position remote speaker switch. Same as Cat. No. 1483 except with ¼" bushing and 7/16" split knurl shaft. 15/16" White split knurl pointer knob, Cat. No. P-197, is furnished. List Price $0.75

MEDIUM DUTY ROTARY POWER SWITCHES



STEATITE—750 Watts at 115 Volts A.C.

An accurate, long-life unit for transmitter, power supply, and specialized application. Has positive, non-stall 20° indexing, double wiping solid silver contacts. Mounting bushing ⅜"-32 thd. x ⅜" long. 2$\frac{7}{16}$" between locating rods. With adjustable stop and dial plate.

Total Poles	Number Positions	Total Sections	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-17	1	JV-9000	JV-9001	$12.00
3	2-5	1	JV-9002	JV-9003	12.00
2	2-17	2	JV-9004	JV-9005	21.00
6	2-5	2	JV-9006	JV-9007	21.00
3	2-17	3	JV-9008	JV-9009	30.00
9	2-5	3	JV-9010	JV-9011	30.00
4	2-17	4	JV-9012	JV-9013	39.00
12	2-5	4	JV-9014	JV-9015	39.00
5	2-17	5	JV-9016	JV-9017	48.00
15	2-5	5	JV-9018	JV-9019	48.00
6	2-17	6	JV-9020	JV-9021	57.00

SECTIONS ONLY FOR JV-9000 SERIES

SHORTING

No. Poles	Positions	Cat. No.	List Price
1	2-17	KV-8	$9.00
3	2-5	KV-9	9.00

NON-SHORTING

No. Poles	Positions	Cat. No.	List Price
1	2-17	KVN-8	$9.00
3	2-5	KVN-9	9.00

INDEX ASSEMBLY ONLY FOR JV-9000 SERIES

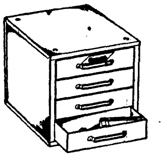
Includes shaft, tie rods, spacers, nuts and lockwashers, adjustable stop pin, 2" black bar knob and dial plate.
Cat. No. KV-7........................List Price $6.00

Dial Plates—2¾" Diameter—20° Markings

P-230	Marked 1 to 5	List Price $0.30
P-231	Marked 1 to 17	List Price $0.30

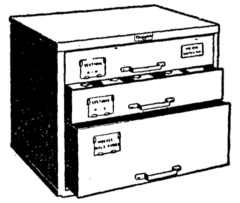
ROTARY SWITCH KITS

1500 SWITCH KIT



A four drawer cabinet containing an adequate supply of sections and indexes listed on this page to custom build two 4 section switches, two 3 section, six 1 section, one 2 section condenser decade, and one 1 section resistor decade switch. For labs, engineers, hams, and experimenters needing specialized switching arrangements. Cabinets can be replenished with stock parts. List Price $50.00

414 DELUXE SWITCH KIT — PHENOLIC



An extra large assortment of switch hardware and sections to make the widest possible assortment of phenolic switches to your needs. Contains 111 sections including 34 of the special "DD" deluxe sections listed below, 31 Index assemblies, 25 doz. spacers, 5 doz. shafts, 8 doz. tie rods, 40 dial plates, and complete hardware. Especially suited to large users of specialized switches. All kit parts may be purchased for refill from stock listings. List Price $175.00

419 DELUXE SWITCH KIT — STEATITE

Similar to the 414 Kit, but all sections are made of Centralab's high quality grade L-5 steatite ceramic, long regarded as "the best." Contains standard and special deluxe sections below. Has 81 sections, 31 Index Assemblies, 26 doz. spacers, 35 knobs, 30 dial plates and assorted hardware. This is Centralab's finest switch kit. List Price $185.00

"DD" DELUXE SWITCH PARTS

"Double-D" describes CRL's extra heavy ($\frac{3}{16}$" thick) rotor shaft switch and the corresponding hole in the section rotor. Also, deluxe switches have one-piece, positive indexing shaft and index assembly.

DELUXE SECTIONS

PHENOLIC

No. Poles	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	6	AD	HD	$0.50
1	11	BD	JD	.75
2	5	CD	KD	.75
3	3	DD	LD	1.00
4	2	ED	MD	1.00
4	3	EED	—	1.50
1	5	FD	—	.75
Unused contacts shorted out 1 side of common				
1	10	GD	—	1.00
All unused contacts shorted out				
Combine for resistance		ND		
Decade		PD	—	.75
For capacitance decade		QD	—	.75
1	10	PID	—	1.00

#1 off, 9 progressively shorting.

STEATITE

No. Poles	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	6	TD	XD	$1.35
1	11	UD	YD	1.35
2	5	RD	RRD	1.35
3	3	SD	SSD	1.35
4	2	VD	ZD	1.35
1	10	GGD	—	1.35

All unused contacts shorted out.

NSD-PSD Combine for resistance decade	1.35
QSD For capacitance decade	1.35

No. Poles	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	10	PISD	—	1.35

#1 off, 9 progressively shorting.

DELUXE INDEX ASSEMBLIES

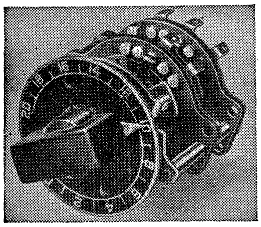
Includes all hardware to use with separate sections listed above.

Rotor Shaft Length	For No. Sections	Cat. No.	List Price
2"	1 - 3	P-270	$1.25
4"	4 - 66	P-271	1.75
8"	7 - 9	P-272	2.25

FOR OTHER SWITCH HARDWARE AND ACCESSORIES, see the latest complete Centralab catalog available at your distributor.

SWITCHES • ATTENUATORS • POTENTIOMETERS

New PRECISION INSTRUMENT SWITCH



TYPE 2A SPECIFICATIONS:

Contact res.: 1-2 milliohms.

Contact material: Silver Alloy.

Contact design: Wiping, shorting and non-shorting.

No. of contacts: 2-21 per deck single pole, 2-5 four pole.

Spacing: 15° sh., 30° non-sh.

No. of poles per deck: One to four.

No. of decks: As desired. Life: 20,000 cyc. min.

Curr. carr. cap.: 3 Amp.

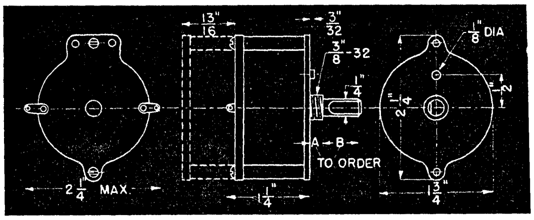
Max. oper. voltage: 120V (Will stand 2,000V between contacts and to ground.)

Insul. material: Low loss bakelite.

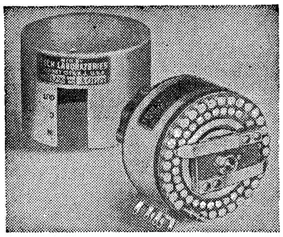
Insul. res.: 10,000 megohms to ground.

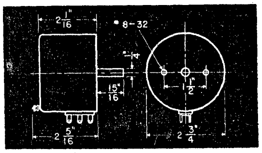
Mounting: Single hole ⅜″-32 bushing, std. length for up to ¼″ pnl. Special lengths to order. Size: 1¾″ dia.

Detent: Ball and spring.



TYPE 700 ATTENUATORS "T"-PADS

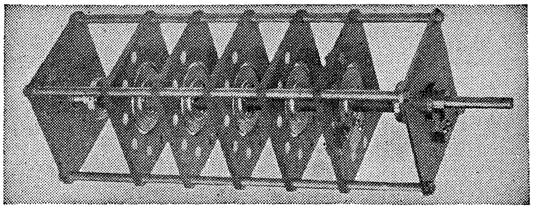




Type	Impedance	No. of Steps	Db Per Step
TA-731.5	600/600	30	1.5
TA-731	600/600	30	1
TA-722	600/600	20	2
TB-731.5	500/500	30	1.5
TB-722	500/500	20	2
TC-731.5	250/250	30	1.5
TC-722	250/250	20	2
TD-731.5	200/200	30	1.5
TD-722	200/200	20	2
TE-731.5	50/50	30	1.5
TE-722	50/50	20	2
TF-731.5	30/30	30	1.5
TF-722	30/30	20	2

TYPE 1250 R.F. SWITCHES

This switch represents a new design necessitated by the increasing demands for switches capable of withstanding higher voltages and heavier currents.



SPECIFICATIONS:

Size: Each panel 4½″ x 4½″. For depth, see table.

Insulation: Mykroy insulation good for at least 25,000V to ground, 12,500V between contacts.

Contacts: Phosphor bronze with silver plated collector ring.

Spacing: 36° std. unit has 6 position on 180°, special units to order.

Shaft: Mykroy sections with flanges so decks can be added or taken off to suit. Stainless steel shaft ⅜″ dia. on both ends, can be furnished with 4″ hand wheel.

Current Carrying Capacity: 50 Amps. max. for steady load, no load switching.

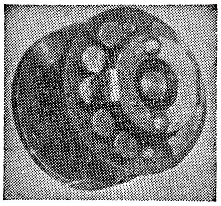
Bearing: Ball bearings at both ends.

Detent: Ball and gear detent for positive location on contacts.

Mounting Holes: For No. 10-32 screws on 3¾″ centers.

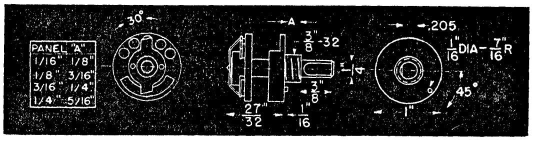
Weight: Single pole unit—4 pounds; add approximately 1 lb. for each additional deck.

New MINIATURE TAP SWITCH (2B)



The Type 2B miniature rotary tap switch is a development widely used in military and other equipment where space is at a premium.

Price Upon Request



SPECIFICATIONS:

Diameter 1″ max., up to 12 pos. shorting, 6 pos. non-shorting. Silver contacts, wiping rotors, 30° spacing single hole mounting, low loss insulation, 3A, 120V. AC.

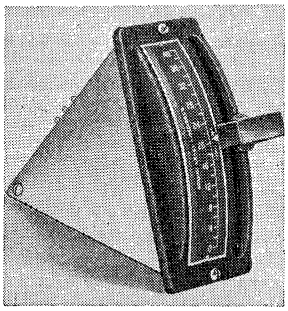
TECH LABORATORIES INC.

PALISADES PARK
NEW JERSEY

WRITE FOR NEW BULLETINS
on Gain Sets • Decade Resistors
Potentiometers • Viscosity Meters
Micro-Volters etc.

SPLICING BLOCKS· PRECISION AND VERTICAL ATTENUATORS

VERTICAL ATTENUATORS



Precision designed and manufactured to perform satisfactorily in every conceivable type of sound equipment, from the most elaborate broadcasting station to the simplest P.A. installation. Easily operated, completely shielded and dustproof. Narrow construction permits as many as seven mixers in one row on a standard 19″ rack.

SPECIFICATIONS:

Noise Level: 130-140 db. below zero level.

Range: Standard units are furnished with 20 steps at 2 db. and inf. loss (off) on last contact........22 contacts.

Circuit: Ladder "T" or potentiometer is standard, other circuits can be furnished to order.

Impedance: Standard values 30, 50, 150, 200, 250, 500 and 600 ohms for ladders, and 250,000 ohms for potentiometers.

Pilot Light Switch: Normally closed, open in off position, S.P.S.T.

Size: 2⅛″* x 5⅛″, depth 4¾″.
*(T-Pads are 2⅝″ wide.)

Insertion Loss: 2 to 5 db. depending on circuit.

Mounting: Two 6-32 screws in center line 4$\frac{13}{16}$″ c. to c. Cut hole in panel 2$\frac{1}{32}$″ x 4½″.

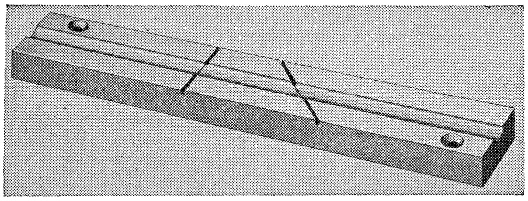
Dial: Linear, etched, easily read.

Contact Arms: Multiple laminated—wiping action.

Shielding: Electrostatic shield, dust proof.

Frequency Response: Flat to 50 kilocycles.

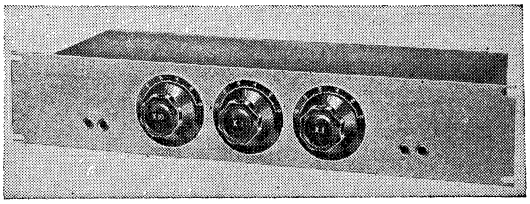
EDITALL TAPE SPLICING BLOCK



A new exclusively designed tape splicing block that can be used in conjunction with any tape recorder using standard tape. Splices can be easily and quickly made with a minimum of time and effort. Made of lifetime Duraluminum with no clips or mechanical parts to go out of order. Can be used as a separate unit or mounted as part of the tape recorder itself. Approximate overall dimensions—6½″ long x 1″ wide x ⅜″ high. Furnished with drilled and countersunk holes for easy mounting.

TYPE 850 PRECISION ATTENUATOR

With the increased demand for precision in laboratory measurement of volume levels, transmission losses, gains of amplifiers, etc., the older methods and standards have become obsolete. The present units are a complete redesign of our older precision attenuators and will serve as laboratory standards. These precision units are now furnished with jack terminals and are completely shielded. They are flat for all frequencies in the audio range and reasonably flat to 200 kc. up to 70 db. They are furnished with either rack or box mounting in gray finish.



SPECIFICATIONS:

Mounting: Type 850-AT and 850-AH, standard rack panels, 3$\frac{15}{32}$″ x 19″ x ⅛″. Type 850-B furnished with dust cover.

Switches: Multiple leaf, silver alloy blades with silver contacts. Ball type detent.

Terminals: Telephone type jacks are used for input and output connections. Solder terminals are provided on rear panels for permanent connections. Insertion of plugs into twin-jacks lifts rear terminal connections.

Type of Resistors: All resistors are non-inductively wound. Negligible phase angle.

Accuracy of Resistors: All windings are adjusted to within 0.1% of the calculated value except on very low resistance values which are adjusted to within 0.25%.

Frequency Characteristics: For "T" configuration, the frequency error is negligible up to 80 db. loss, below 50 kilocycles. Balanced "H" configuration should be used where measurements above 50 kilocycles are necessary.

NEW TYPE 850 PRECISION ATTENUATORS

Type	Mounting	Circuit	Range	Db/Step	Size Rack Panel
850-AT	Rack	"T"	111 db.	0.1	3½″x19″ Std.
850-AH	Rack	Bal. "H"	111 db.	0.1	3½″x19″ Std.
850-BT	Box	"T"	93 db.	0.1	9½″x4″x4¾″
850-BH	Box	Bal. "H"	93 db.	0.1	9¾″x4″x4¾″
850-CT	Box	"T"	111 db.	0.1	12¾″x4″x4¾″
850-CH	Box	Bal. "H"	111 db.	0.1	12¾″x4″x4¾″

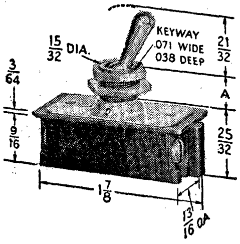
TECH LABORATORIES INC.

PALISADES PARK • NEW JERSEY

CUTLER-HAMMER SWITCHES . . .

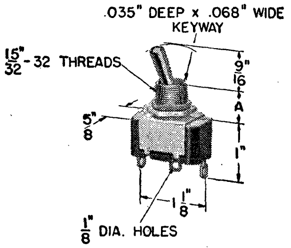
These Cutler-Hammer switches are of the one-hole mounted type, designed for convenient installation on panels, housings and other flat surfaces of machines and appliances. Experienced Cutler-Hammer engineers working closely with the eletronics and appliance manufacturers — have developed these devices to meet the requirements of every type of apparatus and every class of service.

One Hole Mounting — Commercial Applications



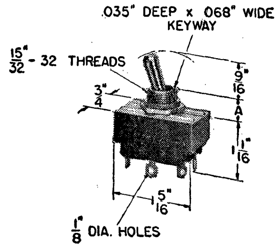
15/32 DIA.
KEYWAY .071 WIDE .038 DEEP
21/32
3/64
A
9/16
25/32
1 7/8
13/16 DIA

Cat. No. 7320 (D.P..S.T.)
Standard Duty



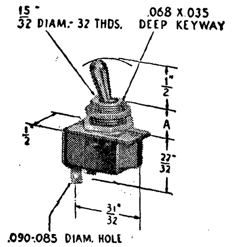
.035" DEEP x .068" WIDE KEYWAY
15/32 - 32 THREADS
9/16"
A
5/8"
1"
1 1/8"
1/8" DIA. HOLES

Cat. No. 7503 (S.P. D.T.)
Standard Duty



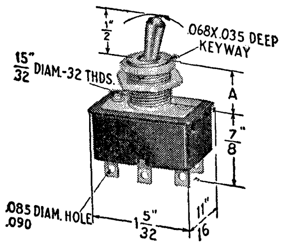
.035" DEEP x .068" WIDE KEYWAY
15/32 - 32 THREADS
3/4"
9/16"
A
1 1/16"
1 5/16"
1/8" DIA. HOLES

Cat. No. 7563 (D.P. D.T.)
Standard Duty



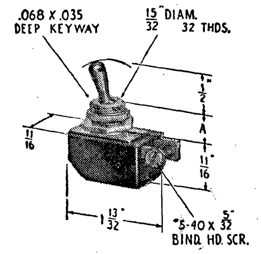
15/32 DIAM.- 32 THDS.
.068 X .035 DEEP KEYWAY
1/2"
1/2"
A
27/32"
31/32"
.090-.085 DIAM. HOLE

Cat. No. 8280 (S.P. S.T.)
Light Duty



1/2"
.068X.035 DEEP KEYWAY
15/32" DIAM.-32 THDS.
A
7/8"
.085 .090 DIAM. HOLE
1 5/32"
11/16"

Cat. No. 8363 (D.P. D.T.)
Light Duty



.068 X .035 DEEP KEYWAY
15/32" DIAM. 32 THDS.
1/2"
11/16
A
11/16"
1 13/32"
5-40 X 5/32" BIND. HD. SCR.

Cat. No. 8396 (S.P. S.T.)
Light Duty

Ratings A-c Only	Single Pole		Double Pole		Three Pole		Four Pole	Terminal	
	S.T.	D.T.	S.T.	D.T.	S.T.	D.T.	S.T.		
3 A. 125 V.	8098							L	
	8098	7141						S	
		7140 †						S	
10 A. 230 V. and 15 A. 125 V.	7500	7504	7560	7564	7610	7614		S	
	7501	7505	7561	7565	7611	7615		L	
		7503 †		7563 †		7613 †		L	
		7502 †		7562 †		7612 †		S	
10 A. 230 V.	7506		7566				7697	L	1
	7506		7566		7616		7696	S	1
	7507		7567					L	2
	7507		7567					S	2
		7508 †		7568 †				L	3
		7508 †		7568 †		7617 †		S	3
		7509 †		7569 †				L	4
		7509 †		7569 †				S	4
		7510		7570				L	5
		7510		7570		7618		S	5

Standard bushing lengths — 11/32″ and 15/32″

S — Screw Terminal L — Solder Lug.

Ratings A-c and D-c	Single Pole		Double Pole		Terminal
	S.T.	D.T.	S.T.	D.T.	
1 A. 250 V.		8282			Lugs
		8297			Screw
		8292			Wire
3 A. 250 V.	8280		8360	8363	Lugs
	8290		8361	8364	Wire
	8295		8362	8365	Screw
3 A. 250 V. and 6 A. 125 V.	8381		8370	8373	Lugs
	8391		8371	8374	Wire
	8396		8372	8375	Screw
6 A. 250 V. and 12 A. 125 V.	7321	7328	7320	8680	Screw
10 A. 250 V. and 15 A. 125 V.	7361		7360	8690	Screw

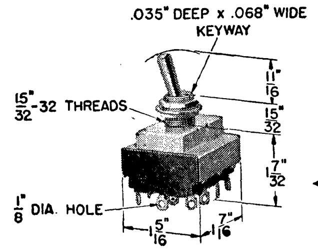
Standard bushing lengths 1/4″, 11/32″ and 15/32″

†Center Off, 1 — Normally open, 2—Normally closed, 3—Momentary one side, 4—Momentary both sides, 5—One side normally open, other, normally closed.

CUTLER-HAMMER, Inc.
1465 W. St. Paul Ave., Milwaukee 1, Wis.

. . . *for* Electronics, Radio, Small Motors

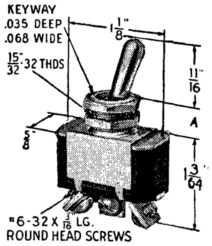
These switches are designed to meet the exacting requirements of communication and power apparatus for all branches of the government. The single pole and double pole switches are approved under specification JAN-S-23 and the four pole switches are designed to meet the same rigid requirements. Standard bushing length — 15/32".



One Hole Mounting
Aircraft Type Applications

Cat. No. 7663
(4 Pole D.T. — with Solder Lug) ←

Cat. No. 8800
(S.P., D.T. — with Screw Terminals) →



SINGLE POLE

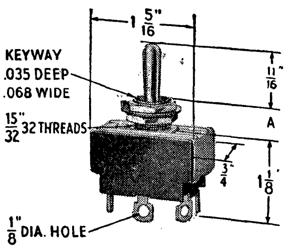
Single Pole ST No.	Single Pole Cat. No.	Terminal	Single Pole ST No.	Single Pole Cat. No.	Terminal	Lever Position
40A	8801K7	S	42A	8803K6	L	On None Off
40B	8813K6	S	42B	8819K5	L	On None Off★
40C	8811K6	S	42C	8817K5	L	Off None On★
40D	8810K6	S	42D	8816K5	L	On None On
40E	8800K7	S	42E	8802K6	L	On Off On
40F	8804K8	S	42F	8805K5	L	On None On★
40G	8812K7	S	42G	8818K5	L	On★Off On★
40H	8809K7	S	42H	8815K6	L	On Off On★

DOUBLE POLE

Double Pole ST No.	Double Pole Cat. No.	Terminal	Double Pole ST No.	Double Pole Cat. No.	Terminal	Lever Position
50K	8822K5	S	52K	8823K5	L	On None Off
50L	8828K5	S	52L	8829K5	L	On None Off★
50M	8826K5	S	52M	8827K5	L	Off None On★
50N	8824K5	S	52N	8825K5	L	On None On
50P	8820K5	S	52P	8821K5	L	On Off On
50R	8830K5	S	52R	8831K5	L	On None On★
50S	8834K1	S	52S	8835K3	L	On★Off On★
50T	8832K1	S	52T	8833K3	L	On Off On★

FOUR POLE

Four Pole Cat. No.	Terminal	Lever Position
7660K7	S	On None Off
7661K5	L	On None Off
7662K4	S	On Off On
7663K4	L	On Off On
7664K2	S	On None On
7665K3	L	On None On
7666K5	S	Off None On★
7667K5	L	Off None On★
7668K3	S	On None Off★
7669K3	L	On None Off★
7670K3	S	On Off On★
7671K3	L	On Off On★
7672K3	S	On★Off On★
7673K3	L	On★Off On★
7674K3	S	On None On★
7675K3	L	On None On★



Cat. No. 8821
(D.P., D.T. — Solder Terminal)

★Momentary contact S — Screw terminal L — Solder lug

The switches shown on these pages constitute only a partial listing of standard type Cutler-Hammer switches available. Additional data on other standard and special types may be obtained from your Cutler-Hammer electrical distributor or your nearest Cutler-Hammer sales office.

SALES OFFICES

ATLANTA, GA.	714 Spring St., N.W.
BALTIMORE 18, MD.	1115 E. 30th St.
BOSTON 15, MASS.	784 Commonwealth Ave.
BUFFALO 3, N. Y.	295 Main St.
CHARLOTTE 2, N. C.	237 Tryon St.
CHICAGO 6, ILL.	400 W. Madison St.
CINCINNATI 2, OHIO	804 Plum St.
CLEVELAND 3, OHIO	2010 E. 46th St.
COLUMBUS 9, OHIO	2700 E. Main St.
DALLAS 2, TEXAS	1331 Dragon St.
DAVENPORT, IOWA	220 Main St.
DAYTON 2, OHIO	410 W. First St.
DENVER 2, COLO.	1031 15th St.
DETROIT 3, MICH.	15427 Woodrow Wilson Ave.
FRESNO, CALIF.	2946 Michigan Ave.
GRAND RAPIDS 2, MICH.	407 Bldg. & Loan Bldg.
HOUSTON 3, TEXAS	1605 Jefferson St.
INDIANAPOLIS 5, IND.	644 E. Maple Road
LOS ANGELES 31, CALIF.	1795 Pasadena Ave.
MIDLAND, TEXAS	508 N. Main St.
MILWAUKEE 3, WIS.	536 W. Wisconsin Ave.
MINNEAPOLIS 15, MINN.	523 S. 7th St.
NEWARK 2, N. J.	155 Washington St.
NEW ORLEANS 12, LA.	833 Howard Ave.
NEW YORK 18, N. Y.	8 W. 40th St.
OMAHA, NEBR.	320 W. O. W. Bldg.
PHILADELPHIA 7, PENNA.	112 N. 12th St.
PITTSBURGH 22, PA.	355 5th Ave.
PORTLAND 4, ORE.	208 S. W. Stark St.
ROCKFORD, ILL.	1404 N. Main St.
SACRAMENTO 20, CALIF.	4840 Cabrillo Way
SAGINAW, MICH.	107 N. Franklin St.
SALT LAKE CITY 1, UTAH	165 S. First West
ST. LOUIS 3, MO.	1914 Washington Ave.
SAN FRANCISCO 7, CALIF.	2130 3rd St.
SEATTLE 4, WASH.	619 8th Ave., So.
SOUTH BEND 5, IND.	108 N. Main St.
SYRACUSE 2, N. Y.	109 S. Warren St.
TAMPA, FLA.	P. O. Box 2714
TULSA 3, OKLA.	315 So. Boulder St.
WASHINGTON 5, D. C.	1109 Investment Bldg.
YOUNGSTOWN 3, OHIO	25 E. Boardman St.

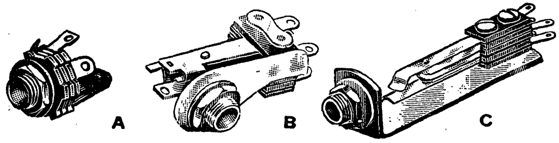
CUTLER-HAMMER, Inc.
1465 W. St. Paul Ave., Milwaukee 1, Wis.

SWITCHCRAFT INC.

CHICAGO 22, ILLINOIS

PHONE JACKS • PHONE PLUGS
SWITCHES: Push-Button . . .
Rotary and Lever Action . . .

SWITCHCRAFT PHONE JACKS



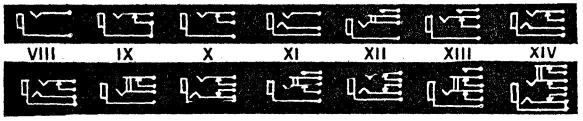
The "**Littel-Jax**" (A), features notched insulating washers mechanically interlocking springs and lugs; "V-bend" in tip spring firmly "holds" mating Plug; minimum space requirements, economical. Mounts in single 3/8" dia. hole, panels up to 5/32" thick.

No. C-11 (JJ-034) and C-12A (JJ-089) mate with No. 440 (PJ-055B) Plug; C-12B (JJ-033), S-12B and S-13B mate with No. 480 (JAN PJ-068 or W.E. No. 309) Plug. No. C-11 and C-12B have locating pins (non-turn devices). No. S-11 similar to No. 11 except .210" I.D. sleeve to mate with S-250 and S-280 Plugs. C-11 (JJ-034), C-12B (JJ-033) and C-12A (JJ-089) per JAN-J-641.

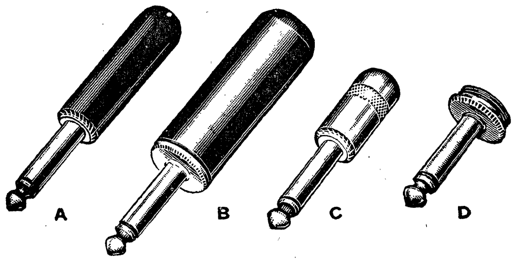
The short frame type Jack "**SF-JAX**" (B), requires minimum panel depth, mounts in single 3/8" dia. hole, panels up to 3/16" thick.

The long frame type Jack "**LF-JAX**" (C), requires minimum panel space, 3" deep, mounts in single 3/8" dia. hole, panels up to 1/4" thick.

"LITTEL-JAX"		"SF-JAX"		"LF-JAX"		
Part No.	**U. S. A. List Price**	**Part No.**	**U. S. A. List Price**	**Part No.**	**U. S. A. List Price**	**Schematic No. (See below)**
11	$0.40					
C-11	$0.60					
S-11	$0.45	21	$0.55	31	$0.65	I
		22	$0.70	32	$0.85	II
12A	$0.45					
C-12A	$0.75	22A	$0.70	32A	$0.85	III
12B	$0.55					
C-12B	$0.70					
S-12B	$0.65	22B	$0.70	32B	$0.85	IV
		23	$0.85	33	$0.95	V
		23A	$0.85	33A	$0.95	VI
13B	$0.75					
S-13B	$0.95	23B	$0.85	33B	$0.95	VII
		23C	$0.85	33C	$0.95	VIII
		23E	$0.85	33E	$0.95	IX
		24	$0.95	34	$1.10	X
		24A	$0.95	34A	$1.10	XI
		24B	$0.95	34B	$1.10	XII
		25	$1.15	35	$1.25	XIII
		26	$1.25	36	$1.40	XIV



SWITCHCRAFT PHONE PLUGS



The "**Littel-Plug**" (A), radically new, fitting standard Jacks; solder lug type features clamp terminal serving as a cable clamp and terminal—perfect for metal braid cable. Screw type terminals—no clamp. Tenite or Metal handles are 1 5/8" L., 1/2" dia. Exterior metal parts bright nickel Pl.

No.'s S-250 and S-280 have a .206 dia. sleeve; mates with S-11 and S-128 Jacks. No.'s 180 and 288 have wide insulator between sleeve and tip—makes it possible to use a 2-conductor Plug in a 3-conductor Jack.

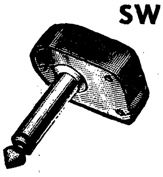
The **Standard Plugs** (B), conventional design, available both black Bakelite or metal handles 2 1/16"L. x 11/16" O.D., except No. 90 and No. 160 have metal handles 1" long. Exterior metal parts bright nickel Pl.

The "**Lug Plug**" (C), low-cost two conductor, solder lug term. Exterior metal parts bright Nickel Pl. Red or Black Tenite Handles are 1 5/8"L., 1/2" O.D. No. 380 has metal handle 1" L., bright Nickel Pl.

Plug Adapter (D) used with 2501F Connector for use with standard Jacks. For special adapters see separate listing.

Part No.	U.S.A. List Price	Plug Type	Color or Type of Handle	Description
240	$0.75	"Littel-Plug"	Black	2-conductor. Screw Term.
245	$0.75	" "	Red	" " " "
270	$1.05	" "	Metal	" " "
250	$0.70	"Littel-Plug"	Black	2-conduct. Clamp-lug Term.
255	$0.70	" "	Red	" " " " "
280	$1.00	" "	Metal	" " " " "
260	$1.20	"Littel-Plug"	Black	3-conductor. Screw Term.
290	$1.40	" "	Metal	" " " "
267	$1.05	"Littel-Plug"	Black	3-conduct. Clamp-lug Term.
269	$1.05	" "	Red	" " " " "
297	$1.30	" "	Metal	" " " " "
40	$0.70	Standard	Black	2-conductor. Screw Term.
70	$1.20	"	Metal	" " " "
160	$0.90	"	Metal	" " " "
44	$0.50	Adapter	—	" " " "
60	$1.05	Standard	Black	3-conductor. Lug Terminals
90	$1.30	"	Metal	" " " "
350	$0.55	"Lug-Plug"	Black	2-conductor. Lug Terminals
355	$0.55	" "	Red	" " " "
380	$0.70	" "	Metal	" " " "
180	$1.05	Standard	Metal	2-conductor. Screw Term
288	$1.05	"Littel-Plug"	Metal	2-cond. Clamp-lug Term.
S-250	$0.75	" "	Black	" Clamp-lug Term.
S-280	$1.00	" "	Metal	" Clamp-lug Term.

SWITCHCRAFT "FLAT PLUG"

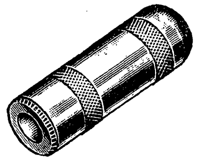


A radically new design, in both 2 and 3-conductor types. Removable Plastic Cap; terminals and body mechanically interlocked; Cover of Black or Red Tenite; one-piece tip rod; high grade insulation; terminal identification.

Ideal for theatre or church hearing-aid installations. Office dictation equipment, disc, wire or tape recorders, test equipment, etc.

Part No.	U.S.A. List Price	Color or Type of Handle	Description
220	$0.75	Black	2-conductor Screw Term.
225	$0.75	Red	" " " "
227	$0.70	Black	" " Lug. Term.
229	$0.70	Red	" " " "
230	$1.10	Black	3-conductor Screw Term.
235	$1.10	Red	" " " "
237	$1.05	Black	" " Lug. Term.
239	$1.05	Red	" " " "

SWITCHCRAFT "EXTENSION JAX"



Features a clamp type terminal providing a cable anchor. Spring tempered nickel silver springs, designed to properly "hold" mating plug. Exterior metal parts N.P.: Terminals mechanically interlock. High grade insulation. Available in 2 and 3-conductor types, solder lug or screw type terminals. Bakelite or Brightly Nickel Plated Brass handles. Mates with any standard plug.

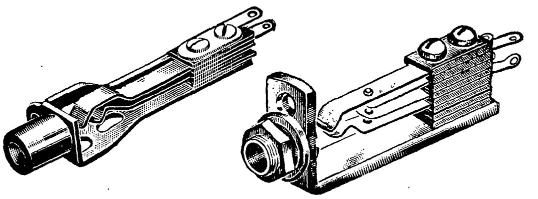
Part No.	U.S.A. List Price	Color or Type of Handle	Description
80	$1.15	Black	2-conductor. Screw Term.
88	$1.00	"	" " Lug. Term.
120	$1.55	Shielded	" " Screw Term.
128	$1.40	"	" " Lug. Term.
830	$1.55	Black	3-conductor. Screw Term.
838	$1.40	"	" " Lug. Term.
1230	$1.95	Shielded	" " Screw Term.
1238	$1.80	"	" " Lug. Term.
S-128	$1.50	"	2-cond Spec. Lug. Term.

SWITCHCRAFT INC.

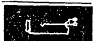
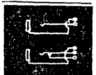
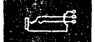
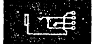
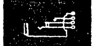
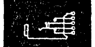
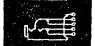
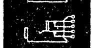
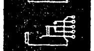
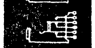
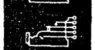
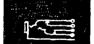
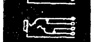
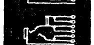
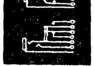
CHICAGO 22, ILLINOIS

PHONE JACKS • PHONE PLUGS
SWITCHES: Push-Button . . .
Rotary and Lever Action . . .

SWITCHCRAFT "T" & "M" JAX

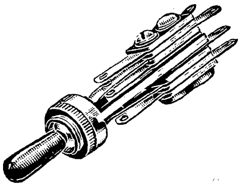


"T" JAX — Long frame, Switchboard type, designed for quality communication and military equipment.
"M" JAX — Heavy, long frame Jack, often referred to as Navy Jack, designed for industrial and military equipment requirements.
Circuits listed are standard; more complex circuits available.

"T-JAX"			
Part No.	U.S.A. List Price	Similar Jan Type No.	Schematic
T-331	$1.05	★★★ FOR JAN EQUIVALENTS REQUEST SPECIAL BULLETIN DESCRIBING MILITARY TYPES	
T-332A	$1.20		
T-332B	$1.20		
T-332C	$1.45		
T-333	$1.35		
T-334A	$1.50		
T-334B	$1.60		
T-334C	$1.50		
T-334F	$1.50		
T-335	$1.60		
T-336	$1.75		
"M-JAX"			
M-444B	$2.20		
*M-444	$2.30		
M-446	$3.50		
M-446A	$3.90		

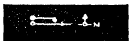
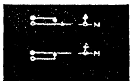
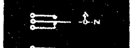
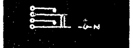
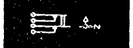
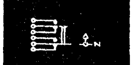
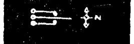
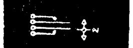
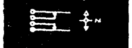
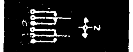
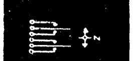
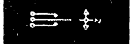
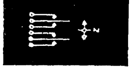
*Bushing .2085" to mate PJ-068, PJ-168 & PJ-309.

SWITCHCRAFT "LEV-R-SWITCHES"



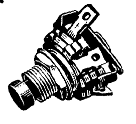
Unusually small, lever action switch, available in numerable circuits, to provide the simplest in switching design. Ideal for inter-comm. equip., test equip., model r.r. switch panels, recording equip., etc.

Mounts in single 15/32" dia. hole, panels up to 5/64" thick; Long life springs; soft, easy action — real detent action on locking types; Springs assembled into a conventional stack assembly; fine silver contacts rated at 3 amperes, 120 volts A.C., non-inductive load; other contacts available.

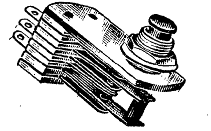
TWO-POSITION TYPE			
Part No. Non-locking	Part No. Locking	U.S.A. List Price	Schematic
3001	3001L	$1.95	
3002	3002L	$1.95	
3003	3003L	$2.25	
3004	3004L	$2.50	
3005	3005L	$2.50	
3006	3006L	$2.75	
THREE-POSITION TYPE			
3033	3033L	$2.50	
3034	3034L	$2.60	
3035	3035L	$2.60	
3036	3036L	$2.90	
3037	3037L	$2.95	
INTER-COMM. SWITCHES			
3033T		$2.50	
3037T		$2.95	

SWITCHCRAFT PUSH-BUTTON & ROTARY SWITCHES

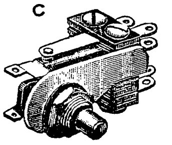
A



B



C

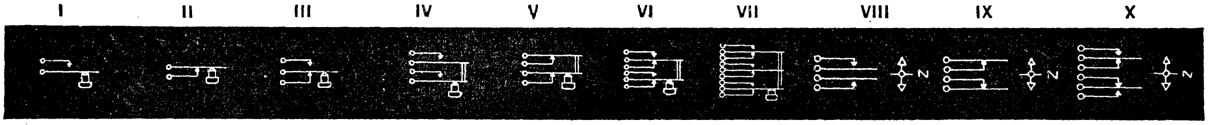


The **"Littel-Switch"** (A), available in 3 circuits, either in Red or Black one-piece Plastic Push-Button, non-locking only. Mounts in single 3/8" dia. hole, panels up to 1/4" thick. Integral contacts are standard, recommended for low current only.

The **"FF-Switch"** (B), all common circuits, one-piece Black Plastic Push-Button, non-locking only. Mounts in single 3/8" dia. hole, panels up to 1/4" thick. Fine silver contacts rated 3 amperes, 120 volts A.C., non-inductive.

The **"RS-Switch"** (C), locking and non-locking, 2- or 3- position, all common circuits. Mounts in single 3/8" dia. hole, panels up to 1/4" thick. Fine silver contacts rated 3 amperes, 120 volts A.C. (non-inductive).

"LITTEL-SWITCH"			"FF-SWITCH"		"RS-SWITCH"			Schematic Circuit
Part No. Red-Button	Part No. Black-Button	U.S.A. List Price	Part No.	U.S.A. List Price	Part No. Non-Locking	Part No. Locking	U.S.A. List Price	
101	201	$0.85	1001	$0.95	2001	2001L	$1.00	I
102	202	$0.85	1002	$0.95	2002	2002L	$1.00	II
103	203	$0.90	1003	$1.10	2003	2003L	$1.20	III
			1004	$1.20	2004	2004L	$1.25	IV
			1005	$1.20	2005	2005L	$1.25	V
			1006	$1.45	2006	2006L	$1.65	VI
			1009	$2.00				VII
					THREE-POSITION TYPES			
					2034	2034L	$1.25	VIII
					2035	2035L	$1.25	IX
					2036	2036L	$1.65	X



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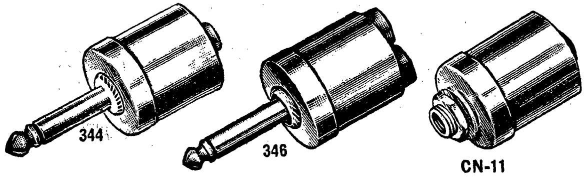
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

SWITCHCRAFT INC.

CHICAGO 22, ILLINOIS

PHONE JACKS • PHONE PLUGS
SWITCHES: Push-Button . . .
Rotary and Lever Action . . .

SWITCHCRAFT "ADAPTERS" & "SHIELDED JAX"



"ADAPTERS"—Various "Adapters" provide convenient interchange of equipment between various connector devices. Sturdy construction; brass nickel plated housing supports respective connecting devices.

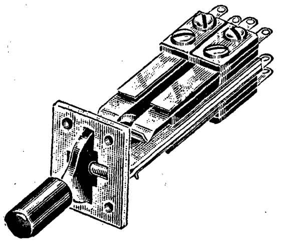
"SHIELDED JAX"—Ideal in high impedance circuits; regular "Littel-Jax" (described separately) assembled into shield.

"ADAPTERS"

Part No.	U.S.A. List Price	DESCRIPTION
332	$1.75	Phone Jack Input to Female Microphone Connector Output.
334	$1.45	Phono Jack Connector Input to Female Microphone Connector Output.
336	$1.45	Phone Jack Input to Phono Plug Connector Output.
338	$1.45	Male Microphone Connector Input to Phono Plug Connector Output.
342	$2.60	Dual-Purpose Binding Post/Banana Jack Input to Phone Plug Output.
344	$1.45	Phono Jack Connector Input to Phone Plug Output.
346	$2.15	Tip Jack Input to Phone Plug Output.

"SHIELDED JAX"

Part No.	U.S.A. List Price	DESCRIPTION
CN-11	$0.80	Open circuit, (See No. 11 "Littel-Jax").
CN-12A	$0.85	Closed circuit, (See No. 12A "Littel-Jax").
CN-12B	$0.95	Open circuit, 3 conductor (See No. 12B "Littel-Jax").
CN-13B	$1.15	Closed circuit, 3-conductor (See "Littel-Jax" No. 13B).



SWITCHCRAFT "TELEVER SWITCH"

Rugged Telephone Type Lever Switch; 3" depth behind panel; Nickel Silver springs; Cross bar Palladium contacts rated 3 amps., 120 volts A.C. (non-inductive). Nylon rollers; solder lug terminal. Insulated black knob. Chrome plated brass actuator. Standard mounting centers 1⅞" x 1¾₁₆"; usually mounted by four No. 3-48 screws (not furnished); can be assembled to escutcheon plate.

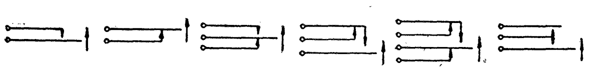
TWO POSITION TYPE

PART NUMBER Non-Locking	PART NUMBER Locking	U.S.A. LIST PRICE	CONTACT ASSEMBLY
6006	6006L	$ 5.00	2-C
6008	6008L	$ 5.60	4-A
6009	6009L	$ 6.00	3-C
60012	60012L	$ 6.80	4-C
60024	60024L	$10.00	8-C

THREE POSITION TYPE

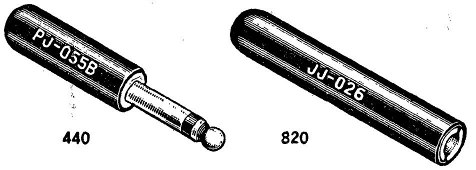
Non-Locking	Locking	U.S.A. LIST PRICE	POS. 1	POS. 2
6036	6036L	$ 5.00	1-C	1-C
6038	6038L	$ 5.60	2-A	2-A
60312	60312L	$ 6.80	2-C	2-C
60324	60324L	$10.00	4-C	4-C
530	Escutcheon Plate with 4 Mtg. Screws	$ 0.60		

BASIC CONTACT FORMS



SWITCHCRAFT "LITTEL-PLUG" AND "EXTENSION JAX"

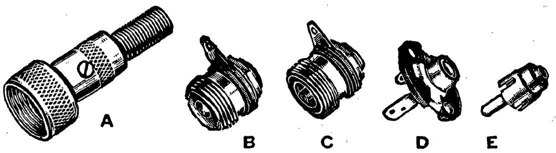
(NME TYPES)



Designed to meet exacting requirements of Industry and the Armed Services. Molded construction provides complete continuity of insulation in plugs. Jack per JAN-J-641; Plugs per JAN-P-642.

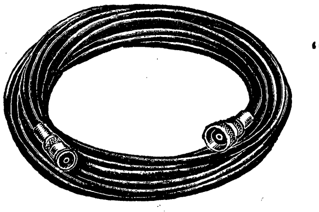
Part No.	U.S.A. List Price	DESCRIPTION
440	$1.40	2-cond.—Screw Term. Black Plastic Handle—Type PJ-055B (Old Signal Corps No. PL-55).
445	$1.40	2-cond.—Screw Term. Red Plastic Handle—Type PJ-055R.
470	$2.00	2-cond.—Screw Term. Shielded Handle—Type PJ-055M (Old Signal Corps No. PL-125).
480	$3.60	3-cond.—Screw Term. Black Plastic Handle—Type PJ-068 (Old PL-68).
820	$2.00	2-cond.—Screw Term. Black Plastic Handle—Type JJ-026 (Old Signal Corps No. JK-26).
P-1074-I	$0.85 for PKG. of 25	Strain Relief Clamp, Nickel Plate Brass.

SWITCHCRAFT "PHONO" AND "MICROPHONE" CONNECTORS



Designed for use with single conductor microphone conductor cable. Panel receptacle mounts in .385" hole.

Fig.	Part No.	U.S.A. List Price	DESCRIPTION
A	2501F	$0.60	Straight Connector, single contact, female type, coupling ring.
	2501M	$0.45	Straight Connector, single contact, male type.
B	2501MP	$0.35	Panel Connector, single contact, male type.
C	2501MPC	$0.45	Panel Connector, closed circuit, male type.
	2501R	$0.15	Coupling Ring, used with 2501M to convert to 2501F.
D	3501F	$0.15	Phono Jack—2 conductor.
E	3501M	$0.10	Phono Plug—2 conductor.



SWITCHCRAFT "CABLE ASSEMBLIES"

Twenty five foot lengths of 2- and 3-conductor plastic covered cable (Polyvinyl), shielded and multi-conductor types, terminated with popular Switchcraft "Littel-Plugs", "Extension Jax" and "Connectors".

Part No.	U.S.A. List Price	DESCRIPTION
8252	$ 6.40	2-cond. cable; No. 250 "Littel-Plug" to No. 88 "Ext. Jax".
8282	$ 6.95	2-cond. cable; No. 280 "Littel-Plug" to No. 128 "Ext. Jax".
8256	$ 7.25	2-cond. shielded cable; No. 250 "Littel-Plug" to No. 88 "Ext. Jax".
8286	$ 7.80	2-cond. shielded cable; No. 280 "Littel-Plug" to No. 128 "Ext. Jax".
8259	$ 7.80	2-cond. shielded cable; No. 2501M connector to No. 2501F connector.
8263	$10.00	3-cond. shielded cable; No. 267 "Littel-Plug" to No. 838 "Ext. Jax".
8293	$11.50	3-cond. cable; No. 297 "Littel-Plug" to No. 1238 "Extension Jax".

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

A complete line of LEVER SWITCHES by GENERAL CONTROL COMPANY

MCS A *new*, light-weight, miniature switch for instruments and communication systems. Positive lock or non-lock lever operation, various contact forms.

MCT-1 Small size, telephone-type switch for control of multiple circuits. Single-hole mounting simplifies layout and fabrication of switchboard panels.

MCT-4 Similar to MCT-1 but with two sets of four standard mounting holes. Same static shield between contact assemblies for low capacity circuits.

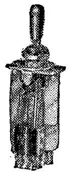
MCM Utilizes a stainless steel detent and a ball for smooth, positive lever action. Waterproof lever, rotary and angle actuators available. All parts non-corrosive.

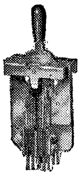
MCL A heavy-duty switch for severe, constant use in electrical controls. Low-friction assembly, rugged cam, insure smooth lever action for complex buildups.

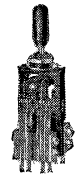
MFM A *new* switch — one neutral and four switch positions. Stainless steel detent, single hole mounting. Lock or non-lock with any contact combination.

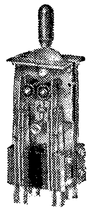
❶ FRAME TYPES

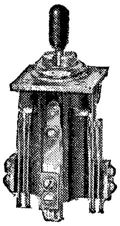
MCS


MCT-1


MCT-4


MCM


MCL


MFM

RATINGS

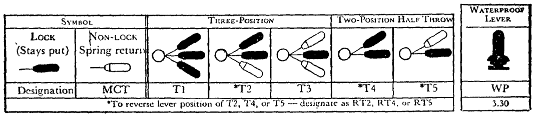
Type	*Amps.**	*High*	*Wide*	*Long***
MCS	1	⅞″	⅞″	2-1/16″
MCT-1	1	1¼″	¾″	2-5/16″
MCT-4	1	1½″	¾″	2-17/32″
MCM	5	1¼″	1¼″	2-25/32″
MCL	10	1¾″	1⅜″	3-15/16″
MFM	5	1¾″	1¾″	3″

**125 volts, 60 cycles, non-inductive.*
***From back panel to end of terminals.*

Write for data Sheet CLRM

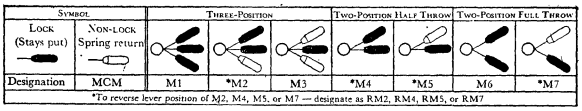
❷ LEVER OPERATION

LEVER OPERATION — MCT-1 and MCT-4

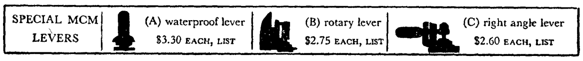


Symbol		Three-Position			Two-Position Half Throw		Waterproof Lever
Lock (Stays put)	Non-lock Spring return						
Designation	MCT	T1	*T2	T3	*T4	*T5	WP
*To reverse lever position of T2, T4, or T5 — designate as RT2, RT4, or RT5							3.30

LEVER OPERATION — MCM

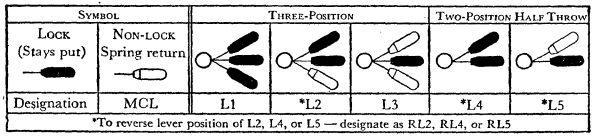


Symbol		Three-Position			Two-Position Half Throw		Two-Position Full Throw	
Lock (Stays put)	Non-lock Spring return							
Designation	MCM	M1	*M2	M3	*M4	*M5	M6	*M7
*To reverse lever position of M2, M4, M5, or M7 — designate as RM2, RM4, RM5, or RM7								



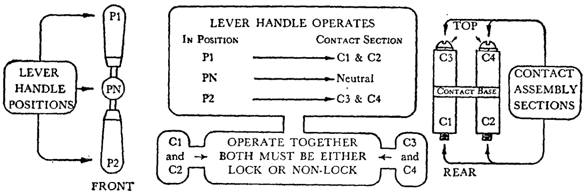
SPECIAL MCM LEVERS	(A) waterproof lever $3.30 each, list	(B) rotary lever $2.75 each, list	(C) right angle lever $2.60 each, list

LEVER OPERATION — MCL

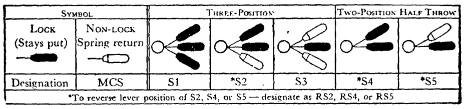


Symbol		Three-Position			Two-Position Half Throw	
Lock (Stays put)	Non-lock Spring return					
Designation	MCL	L1	*L2	L3	*L4	*L5
*To reverse lever position of L2, L4, or L5 — designate as RL2, RL4, or RL5						

CONTACT OPERATING INFORMATION — MCT, MCM, MCL

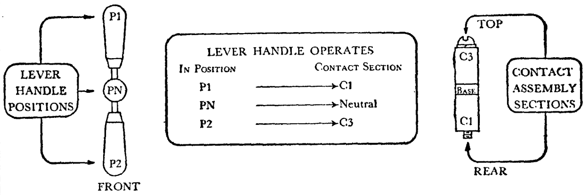

LEVER HANDLE POSITIONS
P1
PN
P2
FRONT
LEVER HANDLE OPERATES
In Position
Contact Section
P1 → C1 & C2
PN → Neutral
P2 → C3 & C4
C1 and C2 → OPERATE TOGETHER BOTH MUST BE EITHER LOCK OR NON-LOCK ← C3 and C4
TOP
C3
C4
Contact Base
C1
C2
CONTACT ASSEMBLY SECTIONS
REAR

LEVER OPERATION — MCS

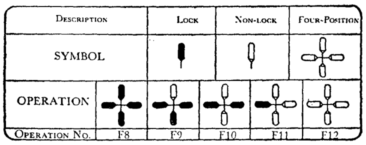


Symbol		Three-Position			Two-Position Half Throw	
Lock (Stays put)	Non-lock Spring return					
Designation	MCS	S1	*S2	S3	*S4	*S5
*To reverse lever position of S2, S4, or S5 — designate as RS2, RS4, or RS5						

CONTACT OPERATING INFORMATION — MCS

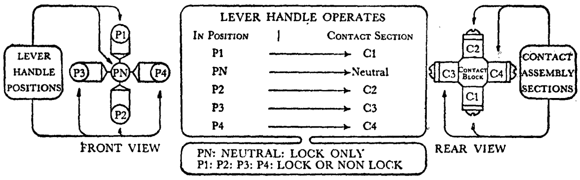

P1
LEVER HANDLE POSITIONS
PN
P2
FRONT
LEVER HANDLE OPERATES
In Position
Contact Section
P1 → C1
PN → Neutral
P2 → C3
TOP
C3
BASE
C1
CONTACT ASSEMBLY SECTIONS
REAR

LEVER OPERATION — MFM



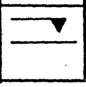
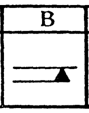
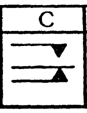
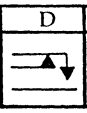
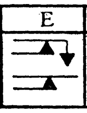
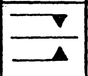
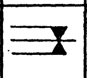
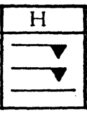
Description		Lock	Non-lock	Four-Position	
SYMBOL					
OPERATION					
Operation No.	F8	F9	F10	F11	F12

CONTACT OPERATING INFORMATION — MFM


LEVER HANDLE POSITIONS
P1
P3
PN
P4
P2
FRONT VIEW
LEVER HANDLE OPERATES
In Position
Contact Section
P1 → C1
PN → Neutral
P2 → C2
P3 → C3
P4 → C4
PN: NEUTRAL: LOCK ONLY
P1: P2: P3: P4: LOCK OR NON LOCK
C2
C3
Contact Block
C4
C1
CONTACT ASSEMBLY SECTIONS
REAR VIEW

❸ CONTACTS

To obtain list price:— add contact prices to frame price.

Frame Types and Prices	Contact Forms	A	B	C	D	E	F	G	H	O
	Circuit									No Contacts
MCS $1.35	MCS	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCT-4 $1.60	MCT-4	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCT-1 $2.00	MCT-1	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCM $3.00	MCM	.60	.60	.75	.95	1.20	.75	.75	.75	—
MCL $4.00	MCL	.95	.95	1.05	1.30	2.00	1.05	1.05	1.05	—
MFM $13.75	MFM	.60	.60	.75	.95	1.20	.75	.75	.75	—

Note: Add 20% to MCS and MCT contact prices for contacts of palladium-silver alloy.

ORDERING INFORMATION

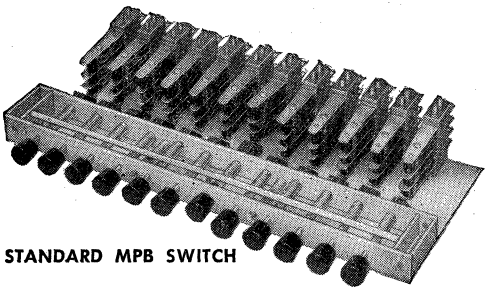
When ordering, specify:

	❶ Frame Type	❷ Lever Operation	❸ Contacts	C1 – C2 – C3 – C4	
Example:	MCM	M1		2C – O – H – O	
List Price:	$3.00	+		$1.50 + 0 + 0.75 + 0 =	$5.25

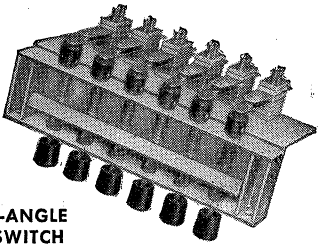
(Total List Price per Switch is obtained as shown above by adding Frame Price to Individual Contact Prices)

NOTICE: All prices and specifications subject to change without prior notice. **General Control Company, Boston 34, Mass.**

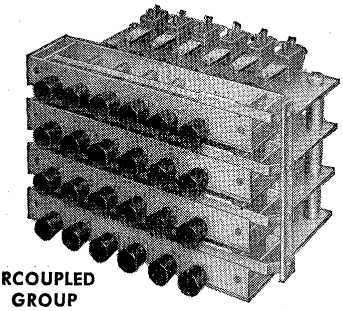
PUSH-BUTTON SWITCHES by GENERAL CONTROL COMPANY



STANDARD MPB SWITCH



RIGHT-ANGLE MPB SWITCH



INTERCOUPLED MPB GROUP

STANDARD MPB SWITCH

A complete heavy duty push-button switch with high current-handling ability. Furnished in from two to a maximum of twelve positions. Standard frame types are: (1) locking, (2) non-locking, (3) release-lock, and (4) accumulative locking with single-button release. Pure silver contacts; phosphor bronze springs. Rating: 5 amps., 125 volts a-c (non-ind.).

RIGHT-ANGLE MPB SWITCH

The right-angle MPB switch is recommended for mounting where back-of-panel depth is limited. All of the operating features of the standard MPB are incorporated in this model.

MPB GROUP—INTERCOUPLED

Standard MPB switches may be intercoupled together to provide all of the features of a single switch. In the unit shown, any one button releases *any other* button already depressed.

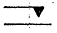
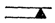
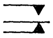
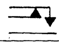
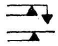
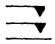
STANDARD and RIGHT-ANGLE FRAME PRICES

① FRAME TYPES		MPB-2	MPB-3	MPB-4	MPB-5	MPB-6	MPB-7	MPB-8	MPB-9	MPB-10	MPB-11	MPB-12
CONTACT POSITIONS		2	3	4	5	6	7	8	9	10	11	12
*Accumulative Lock	B-13	See note	6.70	8.65	10.60	12.55	14.50	16.45	18.40	20.35	22.30	24.85
No Two Interlock	B-14	5.50	5.95	7.40	8.85	10.30	11.75	13.20	14.65	16.10	17.55	19.60
Lock Release	B-15	5.00	5.20	6.40	7.60	8.80	10.00	11.20	12.40	13.60	14.80	16.60
Non-Lock	B-16	5.00	5.20	6.40	7.60	8.80	10.00	11.20	12.40	13.60	14.80	16.60

*Reset button requires one position in addition to standard contact positions. Reset button is on right-hand side unless otherwise specified.

*Reset button normally actuates no contacts but *can* be used to actuate *momentary* contacts if required.

CONTACTS

CONTACT FORMS		A	B	C	D	E	H	O
② Circuit								No Contacts
PRICE	*5 Amps.	.60	.60	.75	.95	1.20	.75	—
	*1 Amp.	.40	.40	.50	.60	.70	.50	—

*Ratings at 125 volts A-C, N.I.

PUSH BUTTON OPERATION

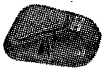
③ OPERATION	ACCUMULATIVE LOCK	NO TWO INTERLOCK	LOCK RELEASE	NON-LOCK
Description	Buttons pushed in remain locked in position until released by pushing reset button.	Only one button can be pushed in at one time, and releases any other button.	Any button pushed in releases any previously pushed in button.	Has no locking action; returns to normal position on release of finger pressure.
Designation	B-13	B-14	B-15	B-16

Write for data sheet PBRM

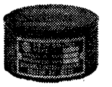
ORDERING INFORMATION

When ordering, specify:	① Frame Type Standard MPB-6 Price: $8.80	② Push Button Operation B-15 ■ ——	③ Contacts C1, C2, C3, etc. A-A-A-B-B-C +.60 +.60 +.60 +.60 +.60 +.75	④ Contact Rating 5-amperes ——	⑤ Panel Thickness ⅛″ panel ——	=$12.55

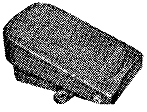
"Footrol" FOOT SWITCHES by GENERAL CONTROL COMPANY



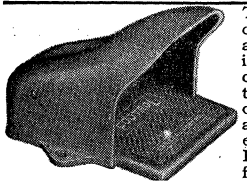
TYPE MA A new light weight foot switch with an actuating treadle built into its top to permit operation with unusually light foot pressure. A long-life SPDT "du•op" Limit Switch forms the internal switch action. Especially recommended for fast operation where minimum fatigue is important. Access to the internal "du•op" switch terminals is greatly facilitated by simply removing the front end of the casting.



TYPE MC Especially adapted for unusual applications and hard use. Easily operated for foot, knee, hand, or elbow. Non-slip-tread top may be operated at any point of its surface.



TYPE MI An ideal treadle-type foot switch, especially convenient for many applications. Inclined, non-slip tread has an adjustable throw and includes a heel rest. Two operating pressures: 5 lbs. and 10 lbs. Mounting ears are provided on each side. A BX connector is mounted in the base, and terminal access is by a removable base plate.

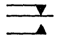
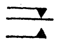
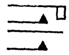
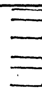


TYPE MB Heavy-duty switch, especially designed for industrial and machine tool applications where thoroughly safe, rugged, and dependable operation is required. Boot top prevents false operation.

FOOTROL®
GENERAL CONTROL

Since 1934, General Control Company has been a foremost manufacturer of Foot Switches. These are products of the highest quality; built for rugged industrial applications. The great number of GENERAL CONTROL foot switches now in everyday use throughout the world provides substantial evidence of their acceptance for all types of applications.

Write for data sheet FSRM

TYPES				CONTACT TYPES		CONTACT OPERATION
MA-3 $5.00	MC-13 $6.50	MI-23 $9.80	MB-33 $13.65	C		**Double throw Spring return** (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)
—	—	MI-25 $11.25	MB-35 $16.25	ACO-C		**First press transfers switch contacts** **Second press restores switch contacts** (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)
—	—	MI-26 $13.65	—	TS-AA		**1st half-throw closes 1st switch** **2nd half-throw closes 2nd switch** **Spring Return**
—	—	MI-27 $15.00	—	2-C		**Double pole Double throw Spring return** (TWO NORMALLY OPEN, TWO NORMALLY CLOSED)

Add $2.50 to price shown, for foot switch with heavy duty 20-ampere rating.
Add $1.65 to price shown, for foot switch with direct current rating.

NOTICE: All prices and specifications subject to change without prior notice. General Control Company, Boston 34, Mass.

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

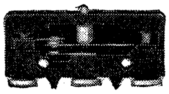
Precise LIMIT SWITCHES by GENERAL CONTROL COMPANY

PRECISE MACHINE CONTROL depends upon PRECISE LIMIT SWITCHING

LIMIT SWITCHES

These two new limit switches . . . the *spring-return* "du•op" and the *maintained alternate contact operation* "A-C-O" . . . are designed to meet the latest requirements for precise limit switching at high speed machine operation. General Control Company limit switches are compact in size, and are provided with a variety of mounting arrangements. Quality manufacturing and materials insure long life and dependable operation.

CUT-
AWAY
VIEW



COMPACT
MOLDED
HOUSING

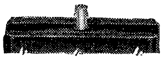
BASIC du . op SWITCH

The type DU-S "du•op" is a precise action limit switch. The centrally-located plunger acts *directly* on the wide phosphor-bronze blade to insure instantaneous contact at each point of repetitive plunger travel. Delays of pre-travel blade action are eliminated — an important factor at high switching speeds.

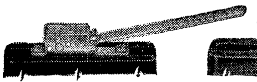
Write for Data Sheet DURM

ACTUATORS

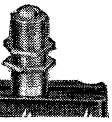
DU-S...Standard Type



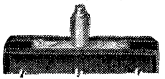
DU-O... Heavy-Duty Plunger



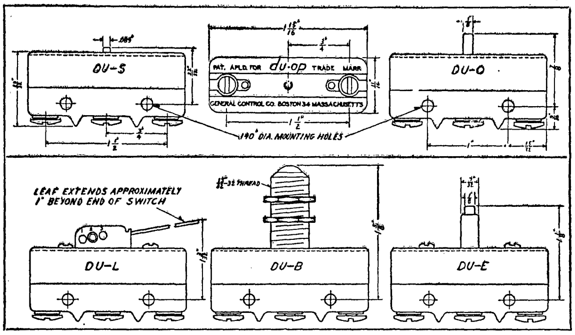
DU-L...3 Position Leaf Actuator



DU-B...Ball Actuator



DU-E...Stainless Steel Plunger

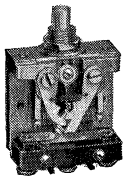

DU-S
PAT. APLD. FOR du-op TRADE MARK
GENERAL CONTROL CO. BOSTON 34 MASSACHUSETTS
.140" DIA. MOUNTING HOLES
DU-O
LEAF EXTENDS APPROXIMATELY 1" BEYOND END OF SWITCH
DU-L
DU-B
DU-E

TYPES AND PRICES	STANDARD SPDT CONTACT ARRANGEMENT	CONTACT OPERATION SPDT-S/R	ACTUATING FORCE	CONTACT GAP	ACTUATOR TRAVEL TO CLOSE CONTACT	OVER-TRAVEL
DU-S $1.90	⇄	Single Pole Double Throw Spring Return	2–6 oz.	.020"	.020"	.015"
DU-O $2.10	SPDT	SPDT-S/R	2–6 oz.	.020"	.020"	.015"
DU-L $3.80	SPDT	SPDT-S/R	① ¾–1¼ oz. ② ½– ¾ oz. ③ ¼– ½ oz.	.020"	① .250" ② .375" ③ .625"	① .218" ② .187" ③ .125"
DU-B $3.65	SPDT	SPDT-S/R	2–6 oz.	.020"	.020"	.062"
DU-E $3.50	SPDT	SPDT-S/R	2–6 oz.	.020"	.020"	.075"

LIGHTER OR HEAVIER ACTUATING FORCE SWITCHES ARE AVAILABLE.

RATINGS—20 amperes 125 volts a-c; non-inductive; 10 amperes 230 volts a-c; non-inductive

OPEN
VIEW



METAL
HOUSING
FURNISHED

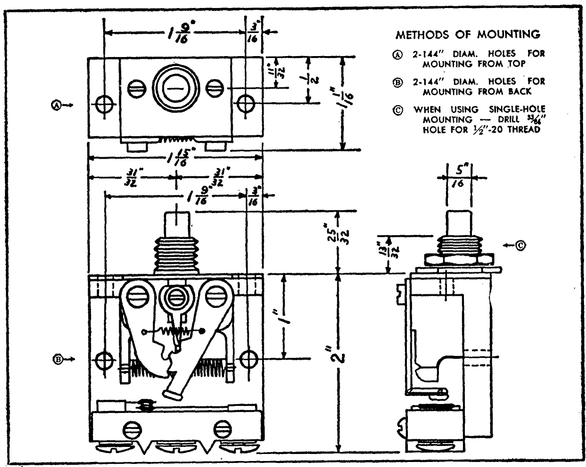
NEW A-C-O SWITCH

The type "A-C-O" is a maintained position limit switch, particularly well adapted for rugged industrial use. Operation is such that the first press of the plunger transfers the contacts, the second press restores them. Unusually fast and dependable switching is obtained from the unique cam arrangement.

Write for Data Sheet ACRM

Features of the A-C-O Switch

Dependable operation — long life
Compact size — versatile mounting
Employs "du • op" direct-acting limit switch
Standard type "C" contacts
Heavy-duty plunger
Large #8 screw terminals
"Push-push" — first press transfers, second press restores contacts
Enclosed contacts and mechanism



METHODS OF MOUNTING

Ⓐ 2-144" DIAM. HOLES FOR MOUNTING FROM TOP

Ⓑ 2-144" DIAM. HOLES FOR MOUNTING FROM BACK

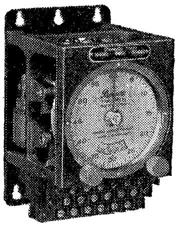
Ⓒ WHEN USING SINGLE-HOLE MOUNTING — DRILL 33/64" HOLE FOR ½"-20 THREAD

BASIC TYPE AND PRICE	STANDARD CONTACT ARRANGEMENT	MAINTAINED CONTACT OPERATION	STANDARD ACTUATING FORCE	CONTACT GAP	PLUNGER TRAVEL TO CLOSE CONTACT	OVER-TRAVEL
ACO $10.00 WITH COVER	⇄	First press transfers contact; Second press restores contact	3-4 lbs.	.020"	.218"	.113"

Ratings: 20 amps, 125 volts a-c, non-inductive

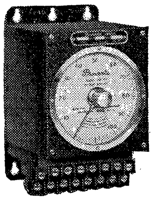
"Promatic" CONTROLS by GENERAL CONTROL COMPANY

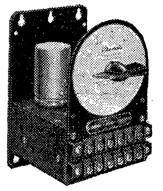
Years of experience have provided the basis for the well-rounded line of Promatic Control Equipment. Timing, counting, photo-electric control — are only a part of the design service offered by the General Control Company.



SYNCHRONOUS-MOTOR TIMERS

Promatic Synchronous-motor Timers, type SY, in time ranges from 1 second up to 24 hours, are available to match cast frame type ET timers. New patented "O"-ring clutch eliminates gears and costly maintenance problems. Time period easily adjusted, and continuously indicated on the large dial. Prices from $55.00 each, list. Write for Data Sheet SYRM.





ELECTRONIC TIMERS

Promatic Electronic Timers, type ET, to control short time periods from .060 second to 60 seconds, are available in a variety of frame types, terminal arrangements, and mountings. Double pole double throw auxiliary load contacts are rated at 10 amps, 125 volts a-c, n.i. Selection of control circuits to handle any timing application. Prices from $35.00 each, list.

ENCLOSED TYPE

Type ETB is shown above with standard detachable back plate for wall mounting. Punched with universal mounting holes.

CHASSIS MODEL

Type ETC is shown above with standard detachable back plate for wall mounting. Punched with universal mounting holes.

Write for Data Sheet ETRM

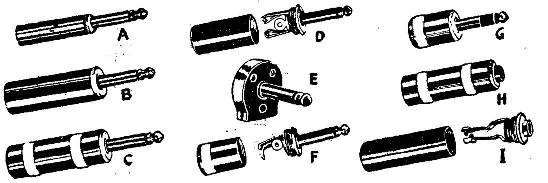
NOTICE: All prices and specifications subject to change without prior notice. **General Control Company, Boston 34, Mass.**

Electrical Controls

CARTER PARTS COMPANY

Carter PARTS COMPANY

CARTER TELEPHONE PLUGS



Tip and sleeve circuits: Fit standard 2-conductor jacks. New types now stocked for wide range of uses. For headphones, microphones, speakers, musical instruments, medical and test equipment, many others.

Molded Bakelite handles. Metal Shield handles: Bright nickel-plated, with internal 2-layer, high-quality tubular insulators, preventing short-circuits in handle.

(A) "imp" PHONE PLUG, 250 SERIES—Trend to miniaturization is reflected in the new "Imp" phone plug. All features same as standard plug but ½ size.

(B and C) CARTER TWO-CONDUCTOR PHONE PLUGS—A general-purpose type popular for years. Terminals flat with grooves for one or two tips, terminals or wires. Broad-headed knurled binding screws with screw driver slots. Handles $\frac{11}{16}$" diameter, $2\frac{1}{16}$" long.

(D) ONE-WAY PLUG. Spring-grip terminals for one pair phone tips. No set screws. Stay-cord anchor. Handles $\frac{11}{16}$" diameter, 1½" long.

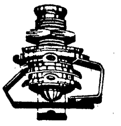
(E) TWO-CONDUCTOR FLAT PLUG—Molded black bakelite body ¼" thick, $1\frac{1}{16}$" diameter. Ideal for panel or wall-plate. Phone tips gripped by set-screws. Stay-cord anchor.

(F) TWO-CONDUCTOR PLUG SHIELDED—Designed for cords with center conductor and braided return-conductor shield. Perfect anchoring; sleeve terminal bends to clamp shield braid after soldering in $\frac{5}{32}$" hole. Shield handle $\frac{11}{16}$" diameter, 1" long.

(G) TWO-CONDUCTOR PLUG SHIELDED—Insulation 19/64" wide between tip and sleeve. Used with 3-conductor plugs short "ring" spring to sleeve; this plug leaves it open, for circuit switching. Also fits 2-conductor jacks. Shield handle $\frac{11}{16}$" diameter, 1" long.

(H and I) TWO-CONDUCTOR PORTABLE JACKS—Used on end of extension cord. Fit 2-conductor plugs. Screw terminals take one pair phone tips, terminals or wires. Shield handles have tubular insulator to prevent short circuits.

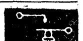
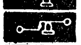
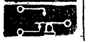
"imp" PUSHBUTTON SWITCHES



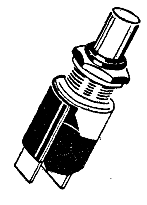
These switches are similar in general construction to the widely popular Carter "Imp" Short Jacks. Finest nickel-silver springs with integral contacts. High grade phenolic insulation. Body, nuts and washers bright nickel-plated. Red or black Kolonite 1-piece shaft and button. Springs fully insulated from the mounting bushing and shaft.

Made in three circuit arrangements:

IS-10 Series: "Make" contact, single circuit, normally open
IS-20 Series: "Break" contact, single circuit, normally closed
IS-30 Series: "Break-Make" contacts, single circuit, double throw

Description	Circuit	Contact Arrangement	Red Pushbutton Stock No.	Black Pushbutton Stock No.
One-piece combined shaft and pushbutton. Mount in ⅜" hole in panels up to 7/32" thick. Supplied with one nickel-plated hex. nut and washer.		"Single Make"	IS-11	IS-13
		"Single" Break"	IS-21	IS-23
		One "Break-Make"	IS-31	IS-33

CARTER'S "imp" PLUNGER SWITCH



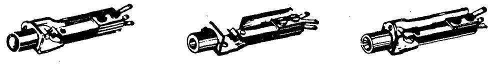
- Wiping-Rotating Action
- Minimum Arcing
- No Impact Load on Plunger
- Longer Life
- No Corroding Carbides or Oxides
- Silver Plated Contactor and Terminals

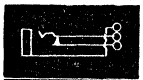
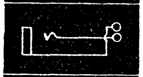
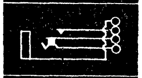
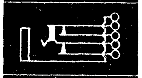
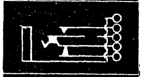
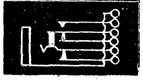
Electrical Specifications and Types Available: Carter's "imp" Plunger switch is available in a variety of styles to meet most demands for this type of a switch.

Electrical Specs: "Imp" plunger switch is designed to handle ¾ Amperes at 100-125 Volts, ¼ Amperes at 250 Volts.

CIRCUITS: "Imp" plunger switch is available in "make" or "break" when plunger is operated. "Imp" is available in both "grounded" or "ungrounded" types.

CARTER TELEPHONE JACKS

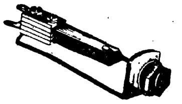


Circuit	Function	Part Numbers		
		AJ-Frame	BJ-Frame	CJ-Frame
	Break Contact on Tip Spring	AJ-181	BJ-181	CJ-181
	Open Circuit	AJ-211	BJ-211	CJ-211
	Separate Make	AJ-151	BJ-151	CJ-151
	Break Contact on Tip Spring, and Separate Break Contacts	AJ-161	BJ-161	CJ-161
	Break Contact on Tip Spring, and Separate Make Contacts	AJ-251	BJ-251	CJ-251
	Break Contact on Tip Spring, and Separate Break-Make Contacts	AJ-361	BJ-361	CJ-361

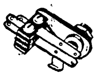
SPECIFICATIONS

CONTACTS: Zinc-silver alloy is standard. Coin silver, fine silver and others can also be supplied in production quantities. For coin slver, the last digit of part number is changed from 1 to 2. Example: AJ-182.
BUSHING: Plain brass is standard. Available with nickel-plate when specified. For nickel plated bushings, last digit of part number is changed from 1 & 2 to 3 & 4 respectively.
SPRINGS: Spring tempered phosphor bronze, nickel plated, with soldering terminals hot tinned.
INSULATION: Spacers made of natural, grade XXP laminated phenolic, wax impregnated; screw insulating tubing is polystyrene or hard rubber depending on the required length. Lifters, when used, are made of dark bone fibre, wax impregnated. The leaf insulators, when used, are made of natural fabric base laminated phenolic, wax impregnated.
FRAME: Cold rolled steel, cadmium plated.

LONG AND SHORT FRAME JACKS

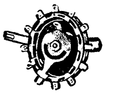


LONG JACKS . . . The original long jacks were adapted from the telephone switchboard jacks. Long rugged, phosphor-bronze springs parallel to the plug axis give precise action. These jacks take minimum panel mounting space, less than the short jacks. Supplied with nickel-plated hex. Shoulder mounting nut and nickel-plated washer.



SHORT JACKS . . . Carter short jacks are small and compact, but do a full-sized job. Depth behind the panel is cut down by placing the tempered nickel-silver springs parallel to the panel. High quality sheet bakelite and tubular ebonite insulators are used throughout—no paper or fibre used in Carter Jacks. Supplied with nickel-plated hex. mounting nut and nickel-plated washer.

Short and long jacks mount in single ⅜" hole in panels up to $\frac{5}{16}$" thick. Fit of the plug in the jack is not affected by the thickness of the panel. Fit all standard plugs in two and three conductor types. Strong bright cadmium plated steel frame. All contacts between springs are fine silver, giving minimum contact resistance.



"imp" TAP SWITCH

Bushing length ⅜" Shaft $\frac{9}{16}$" from end of bushing.

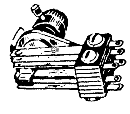
Positive snap action — strong wiping contact grounded to shaft and bushing. In operation, contact breaks between makes — non-shorting.

Stock No.	No. of Positions	Stock No.	No. of Positions
602	2	608	8
603	3	609	9
604	4	610	10
605	5	611	11
606	6	612	12
607	7		

Carter PARTS COMPANY

Electrical EPC Controls
CARTER PARTS COMPANY

CARTER JACK SWITCHES

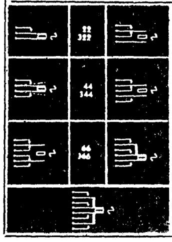


Rotary Two and Three Position
Long and Short Types

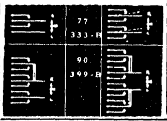
SHORT JACK SWITCHES—Similar in design to Carter short jacks, these switches are small and compact.

LONG JACK SWITCHES—Similar in design to Carter long jacks, these are full-size switches, but take less panel space than the short jack switches.

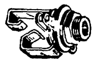
TWO POSITION SWITCHES

Circuits and Stock Nos.		Contact Arrangement	Stock Nos.	
			Long Jack Switches	Short Jack Switches
	33	Single make (SPST)	22	322
	333	Single break-make (SPDT)	33	333
	55	Two makes (DPST)	44	344
	355	One make-break, one make (1 SPDT-1 SPST) (Nor. Op.)	55	355
	660	Two break-makes (2 SPDT)	66	366
	306	Three makes (3 SPST-Normally Open)	660	306
	880 388	Four makes (4 SPST-Normally Open)	880	388

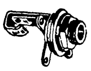
THREE POSITION SWITCHES

	88	Single pole double throw, center off	77	333-B
	366-B	Two pole double throw, center off	88	366-B
	120	Three pole double throw, center off	90	399-B
	312-B	Four pole double throw, center off	120	312-B

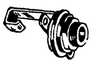
"imp" SHORT JACKS



No. 1 Open Circuit "imp" Short Jack—Has tip and sleeve circuits only. Electrical equvalent of Nos. 101 and 501.

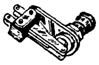


No. 2A—Closed Circuit "imp" Short Jack—Similar to No. 1, with an additional spring making contact with tip spring until plug is inserted. Electrical equivalent of Nos. 102-A and 502-A.



No. 2B Microphone "imp" Short Jack—A new 3-conductor jack, having tip, ring and sleeve circuits. Fits standard 3-circuit microphone plugs. Electrical equivalent of Nos. 102-B and 502-B.

Inquire regarding JAN Specs. Jacks and Plugs



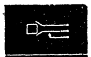
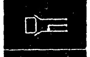
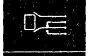
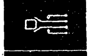
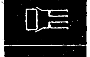
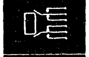
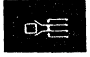
SHORT PUSHBUTTON SWITCHES

Non-Locking and Locking Types

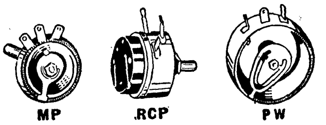
Silver contacts for minimum resistance. High-quality, nickel-silver spring. Bright cadmium-plated steel frame. Highest quality insulation used throughout.

Mount in single ⅜″ hole in panels up to $\frac{9}{32}$″ thick.

Supplied with ½″ polished black bakelite button and set-screw, 1 nickel-plated hex. mounting nut and washer.

	Stock Nos.	Contact Arrangements	Non-Locking Type	Locking Type
	422-M 422-AM	Single Make Contact	422-M	422-AM
	422-B 422-AB	Single Break Contact	422-B	422-AB
	433 433-A	Single Break-Make Contact	433	433-A
	444-M 444-AM	Two Make Contacts	444-M	444-AM
	444-B 444-AB	Two Break Contacts	444-B	444-AB
	666 666-A	Two Break-Make Contacts	666	666-A
	555 555-A	Combination Break One and Make Two Contacts	555	555-A

VARIABLE RESISTORS — Wire Wound Type



Standard Specifications

Most Carter control units are made of standard stock parts. The shaft and housing are constructed of steel, cadmium plated. Bushing and hex. nuts are brass, but can be supplied nickel-plated. Terminals are made of steel, silver-plated over copper plate. Insulating material as described for individual types. Low temperature — coefficient wire used on all units except where physical size of wire will not permit.

Stock Number		Resist. Ohms	Stock Number		Resist. Ohms
Pots.	Rheos.		Pots.	Rheos.	
MP-½	MR-½	½	MP-40	MR-40	40
MP-1	MR-1	1	MP-50	MR-50	50
MP-2	MR-2	2	MP-75	MR-75	75
MP-3	MR-3	3	MP-100	MR-100	100
MP-6	MR-6	6	MP-200	MR-200	200
MP-10	MR-10	10	MP-400	MR-400	400
MP-15	MR-15	15	MP-500	MR-500	500
MP-20	MR-20	20	MP-1000	MR-1000	1000
MP-25	MR-25	25	MP-1500	MR-1500	1500
MP-30	MR-30	30			

Type MP

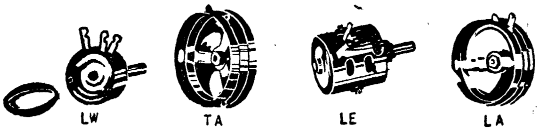
Stock No.	Value in Ohms	Stock No.	Value in Ohms
RCP-10	10	RCP-800	800
RCP-20	20	RCP-1M	1000
RCP-30	30	RCP-2M	2000
RCP-50	50	RCP-3M	3000
RCP-100	100	RCP-4M	4000
RCP-200	200	RCP-5M	5000
RCP-300	300	RCP-6M	6000
RCP-400	400	RCP-10M	10000
RCP-500	500	RCP-15M	15000
RCP-600	600		

Type RCP

Stock No.	Resist. Ohms	Stock No.	Resist. Ohms
PW-100	100	PW-1M	1000
PW-150	150	PW-2M	2000
PW-200	200	PW-3M	3000
PW-250	250	PW-5M	5000
PW-300	300	PW-7500	7500
PW-400	400	PW-10M	10000
PW-500	500	PW-20M	20000
PW-800	800	PW-50M	50000

Type PW

CARTER "T" & "L" PAD WIREWOUND ATTENUATORS



(LW) 4-WATT "L" PADS ENCLOSED SINGLE TYPE. BODY: 1$\frac{7}{16}$″ diameter, $\frac{11}{16}$″ deep. BUSHING: ⅜″ diameter, ⅜″ long. SHAFT: ¼″ diameter, 1½″ long from bushing. Mount in single ⅜″ hole.

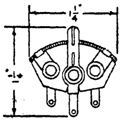
(TA) 10-WATT "T" PADS OPEN FRAME TYPE. BODY: 2$\frac{11}{16}$″ diameter, $\frac{27}{32}$″ deep. BUSHING: $\frac{7}{16}$″ diameter, ⅜″ long. SHAFT: ¼″ diameter, $\frac{7}{16}$″ long, from bushing.

(LE) 8-WATT "L" PADS ENCLOSED DUAL TYPE. BODY: 1$\frac{7}{16}$″ diameter, 1½″ deep. BUSHING: ⅜″ diameter, ⅜″ long. SHAFT: ¼″ diameter, 1½″ long, from bushing.

(LA) 15-WATT "L" PADS OPEN FRAME TYPE.

STOCK NO.	IMPEDANCE
LW/TA/LE/LA—8	8 Ohms
LW/TA/LE/LA—16	16 Ohms
LW/TA/LE/LA—50	50 Ohms
LW/TA/LE/LA—200	200 Ohms
LW/TA/LE/LA—500	500 Ohms
LW/TA/LE/LA—1000	1000 Ohms

TYPE AD ADJUSTABLE WIREWOUND RESISTOR



The Carter Type AD Resistor is an inexpensive and compact adjustable resistor capable of dissipating one watt. The arm is slotted for ease of adjustment. Its sturdy construction permits mounting either by its terminals or through the large eyelets.

Stock No.	Resist. in Ohms	Stock No.	Resist. in Ohms
AD-10	10	AD-200	200
AD-20	20	AD-250	250
AD-25	25	AD-400	400
AD-40	40	AD-500	500
AD-50	50	AD-750	750
AD-75	75	AD-1000	1000
AD-100	100	AD-2000	2000

A TRADE-MARK OF QUALITY

Potter & Brumfield

PRINCETON, INDIANA

On these pages we list a few of the relay types we class as standard.

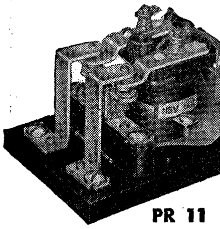
Stocks of either completed relays shown or component parts on hand assure prompt delivery. From these relays a type can be selected for almost any application.

All contact ratings given are for 115 volt 50-60 cycle, non-inductive load. All coils are baked varnish impregnated to government specifications, for protection against moisture and mechanical damage.

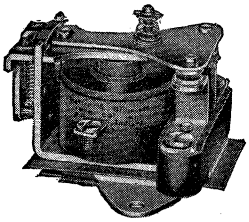
To actuate relays from 220 V. DC line use a 110 V. DC relay with a 5 watt wire-wound resistor with resistance approximately the same as the relay coil, in series with relay winding.

CONTACT LEGEND: S—Single; D—Double; P—Pole; T—Throw; N—Normally; O—Open; C—Closed; B—Break; M—Make.

PR Series—HEAVY-DUTY POWER RELAYS



PR 11



PR 3

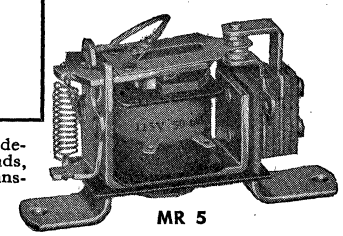
Designed for power circuits such as across-the-line, starting, up to 1 HP., heater loads up to 20 amperes, remote break-in control of transmitters, electro-plating devices, elevator controls, or any high load circuit requiring fast, positive switching. AC types operate on 10 volt amperes; DC types require 2 watts. Pure silver $\frac{5}{16}$″ dia. contacts rated (double break) 20 amperes, (single break) 15 amperes. Minimum contact pressure, 50 grams.

Dimensions: PR1, 3, 5, 7: $2\frac{11}{16}$″ x $2\frac{13}{32}$″ x $2\frac{5}{16}$″ high. Mounted with two $\frac{3}{16}$″ dia. holes on $1\frac{7}{8}$″ centers; PR11: $3\frac{3}{8}$″ x $2\frac{1}{2}$″ x $2\frac{3}{8}$″ high. Mounted with two $\frac{3}{16}$″ dia. holes on $1\frac{7}{16}$″ centers.

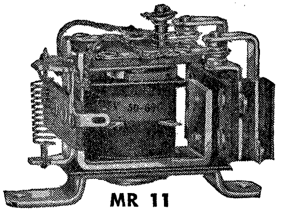
When ordering, specify coil voltage.

Contacts	A.C. RELAYS 6-12-24-115-230 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPST-NO	PR1A	$3.50	PR1D	$3.50
SPST-NO-DB	PR3A	3.60	PR3D	3.60
SPDT	PR5A	3.80	PR5D	3.80
DPST-NO	PR7A	4.25	PR7D	4.25
DPDT	PR11A	5.70	PR11D	5.70
	Add 65c for 230 V. coil.		Add 65c for 110 V. coil.	

MR Series—MEDIUM-DUTY POWER RELAYS



MR 5



MR 11

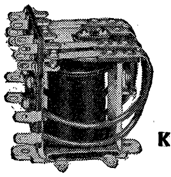
Ideal for safety and signal devices, call systems, heater loads, radio protective circuits, transmitter keying circuits, burglar alarms, photographic applications, electric sign controls, etc. Adaptable particularly to multiple panel mounting. AC types operate on 4 volt amperes and DC types on 2 watts. Pure silver contacts rated at 8 amperes. Minimum contact pressure, 25 grams.

Dimensions: Single pole units, $2\frac{31}{32}$″ x $1\frac{3}{16}$″ x $1\frac{5}{8}$″ high; double pole units, $2\frac{19}{32}$″ x $2\frac{1}{8}$″ x $1\frac{11}{16}$″ high. Mounted with two $\frac{3}{16}$″ dia. holes on $1\frac{7}{8}$″ centers.

When ordering, specify coil voltage.

Contacts	A.C. RELAYS 6-12-24-115-230 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPST-NO	MR1A	$2.25	MR1D	$2.25
SPST-NO-DB	MR3A	2.90	MR3D	2.90
SPDT	MR5A	2.40	MR5D	2.40
DPST-NO	MR7A	3.20	MR7D	3.20
DPDT	MR11A	3.65	MR11D	3.65
3PDT	MR14A	4.40	MR14D	4.40
	Add 45c for 230 V. coil.		Add 45c for 110 V. coil.	

KL Series—MULTIPLE CONTACT RELAYS



KL 17

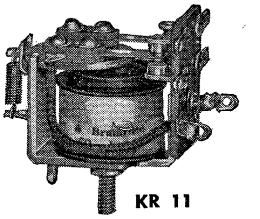
Withstand considerable shock and vibration. Longer actuating coil permits double the ampere turns, affording more power to actuate additional contacts with overall 25-gram minimum pressure. High dielectric phenolic insulation makes these relays applicable to RF or power AF switching. Terminal board similar to KR series. Coin silver contacts rated 5 amperes, 115 V AC; 28 V DC, non-inductive load.

Dimensions: KL5: $1\frac{15}{16}$″ x $1\frac{7}{32}$″ x $1\frac{7}{8}$″ high; KL11: $1\frac{15}{16}$″ x $1\frac{3}{8}$″ x $1\frac{7}{8}$″ high; KL14: $1\frac{15}{16}$″ x $1\frac{7}{16}$″ x $1\frac{7}{8}$″ high; KL17: $1\frac{15}{16}$″ x $1\frac{11}{16}$″ x $1\frac{7}{8}$″ high. Mounted with two 6-32 tapped holes on $1\frac{7}{16}$″ centers.

When ordering, specify coil voltage.

Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	KL5A	$2.95	KL5D	$2.75
DPDT	KL11A	3.40	KL11D	3.20
3PDT	KL14A	4.30	KL14D	4.00
4PDT	KL17A	5.80	KL17D	5.50
			Add 65c for 110 V. coil.	

KR Series—SMALL, LIGHT-DUTY RELAYS



KR 11

Designed for applications where size and weight are important; sturdy and efficient. Withstand high vibration and shock. High dielectric phenolic insulation makes the KR relay suitable for RF or power AF switching. Coin silver contacts rated at 5 amperes, 115 V AC; 28 V DC non-inductive load. Minimum contact pressure, 25 grams.

Dimensions: $1\frac{15}{16}$″ x $1\frac{3}{16}$″ x $1\frac{11}{16}$″ high. Mounted with single 6-32 screw.

When ordering, specify coil voltage.

Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	KR5A	$2.20	KR5D	$2.10
DPDT	KR11A	2.75	KR11D	2.65
3PDT	KR14A	3.50	KR14D	3.40
			Add 75c to above prices for 110 V. coil.	

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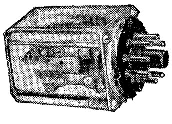


KRP 11

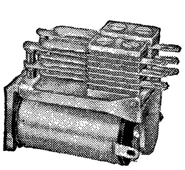
KRP—ENCLOSED KR SERIES

The KRP is the KR relay enclosed in a clear polystyrene, dust and weatherproof cover through which the actual working of the relay may be seen. Supplied with standard octal plug only. Dimensions: $1\frac{3}{8}''$ x $1\frac{3}{8}''$ x 2″ high.

When ordering, specify coil voltage.

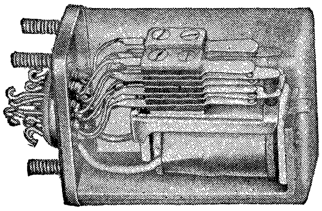
Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	KRP5A	$5.50	KRP5D	$5.40
DPDT	KRP11A	6.05	KRP11D	5.95
			Add 75c to above prices for 110 V. coil.	

MH Series—MINIATURE TELEPHONE RELAYS



MH 17

Open Dimensions:
$1\frac{17}{32}''$ x $\frac{3}{4}''$ x $1\frac{3}{8}''$ high. (4PDT)



MH 17-M

Sealed Dimensions:
$1\frac{11}{16}''$ x $1\frac{1}{32}''$ x $2\frac{5}{32}''$ high.

Smallest and most versatile of the telephone type relays. 4 form C (4PDT) $\frac{1}{8}''$ diameter pure silver contacts rated 5 A. Tinned solder terminals. Stack insulation, laminated phenolic. Vibration and shock resistance to better than 10G with minimum of 1.5 watts in coil. Coils in molded bakelite bobbin, 500 volts RMS breakdown.

The hermetically sealed version resists all environmental conditions and extends relay life indefinitely. The header is all glass with Kovar solder terminals with a minimum leakage resistance of 10,000 megohms at 50% humidity. Will stand extremely high thermal shock. Sealed relays are desiccated and evacuated at high temperature and sealed in one atmosphere of dry nitrogen, which eliminates oxidation and reduces contact arcing. Housing finish, hot tin dipped. Mounted with three 6-32 studs on $\frac{1}{2}''$ x $1\frac{1}{4}''$ centers.

Open type relays mounted with four 3-48 tapped holes on $\frac{3}{8}''$ x $\frac{3}{8}''$ centers.

When ordering, specify coil voltage and construction.

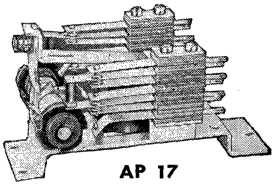
OPEN CONSTRUCTION
(4 Form C Contacts)

MH17A	6 V. 50-60 Cy.	$5.15
MH17A	24 V. 50-60 Cy.	5.30
MH17A	115 V. 50-60 Cy.	5.40
MH17D	6 V. DC	4.85
MH17D	24 V. DC	4.95

HERMETICALLY SEALED CONSTRUCTION
Solder Header—(4 Form C Contacts)

MH17AM	6 V. 50-60 Cy.	$12.45
MH17AM	24 V. 50-60 Cy.	12.55
MH17AM	115 V. 50-60 Cy.	12.65
MH17DM	6 V. DC	12.10
MH17DM	24 V. DC	12.20

AP Series—RACHET OR IMPULSE RELAYS



AP 17

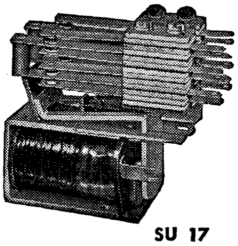
The AP series will actuate on 20 MS impulses. An ingenious stop mechanism prevents overtravel of the cam, giving accurate, positive operation on each impulse, regardless of speed. Contacts, $\frac{3}{16}''$ fine silver rated 5 amperes. Coils wound on molded bobbins; minimum breakdown: 500 volts, RMS. Phenolic cams, wear-resistant nylon pawl and rachet with pin-hinged armature for long life. Tinned solder terminals.

Dimensions: $3\frac{3}{4}''$ x $2\frac{1}{4}''$ x $2\frac{1}{4}''$ high. Mounted with three $\frac{5}{32}''$ diameter holes on $3\frac{3}{8}''$ x $\frac{7}{8}''$ centers.

When ordering, specify coil voltage.

A.C. RELAYS 6-12-24-115-230 Volts 50-60 Cy.			D.C. RELAYS 6-12-24-110 Volts	
Contacts	Type	Net	Type	Net
DPDT	AP11A	$7.50	AP11D	$7.50
4PDT	AP17A	9.00	AP17D	9.00
Add 45c for 230 V. coil			Add 65c for 110 V. coil.	

SU Series—MULTIPLE LEAF RELAYS



SU 17

Long coil provides ample power for fast, positive switching and high contact pressure. May be mounted in either vertical or horizontal position. Suitable for applications such as signal or alarm controls, remote indicators, temperature controls, overload or underload protective devices, etc. Pure silver contacts rated at 5 amperes, 115 V AC; 28 V DC non-inductive load. DC coils require 2.5 watts; AC coils, 12 V. A.

Dimensions: $2\frac{9}{16}''$ x $1\frac{7}{16}''$ x $2\frac{7}{16}''$ high. Mounted with two 6-32 tapped holes on $\frac{7}{16}''$ centers.

When ordering, specify coil voltage.

Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	SU5A	$2.35	SU5D	$2.35
DPDT	SU11A	2.95	SU11D	2.95
3PDT	SU14A	3.45	SU14D	3.45
4PDT	SU17A	4.00	SU17D	4.00
			Add 65c for 110 V. coil.	

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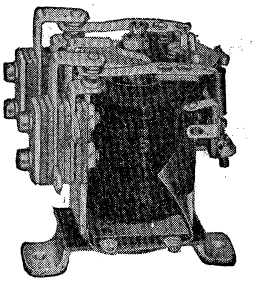
LM Series—SENSITIVE PLATE CIRCUIT RELAYS



LM 11

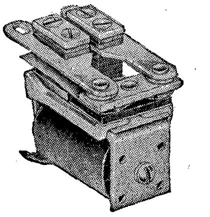
Designed to meet demand for high grade medium cost plate circuit relays in both single and double pole contact arrangements. Applicable to photo electric control, packaging, counting and other electronic circuits. Large coil permits many ampere turns for greater sensitivity. Optimum adjustment for LM5 relays: 1 MW; minimum adjustment, 15 MW. Optimum adjustment for LM11 relays: 2 MW; minimum adjustment, .7 MW. Sensitivity readjustable by tail spring nut. Fine silver, 5 ampere contacts. Minimum contact pressure, 10 grams.

Dimensions: LM5 $2\frac{3}{16}$″ x $1\frac{5}{16}$″ x $2\frac{7}{16}$″ high. Mounted with two 6-32 tapped holes on $1\frac{13}{16}$″ centers. LM11 $2\frac{3}{16}$″ x $2\frac{5}{32}$″ x $2\frac{1}{2}$″ high. Mounted with two 6-32 tapped holes on $1\frac{13}{16}$″ centers.

When ordering, specify coil resistance.

Contacts	Type	Coil Resistance	Factory Adjustment Pull in MA	Net
SPDT	LM5	2500 ohms	6.3	$2.80
SPDT	LM5	5000 ohms	4.5	2.95
SPDT	LM5	10000 ohms	3.2	3.30
DPDT	LM11	2500 ohms	9.0	4.20
DPDT	LM11	5000 ohms	6.3	4.35
DPDT	LM11	10000 ohms	4.5	4.70

MB Series—MINIATURE DC POWER CONTACTOR



Designed for very high current applications. Contacts and contact-shorting bar are $\frac{1}{4}$″ pure silver, rated 60 amperes non-inductive load at 28 V DC. Contact arrangement is 1 form X (SPST-NO-DM). The MB series contactors pull in at 75% of nominal voltage and drop out at 50%. A spring assembly equalizes the high (250 grams, minimum) contact pressure during movement of the rugged, pin-hinged armature. Contact arms are heavy brass with large, tinned solder terminals. Coils wound on molded bobbins, and varnish impregnated. Breakdown: 500 V. RMS, minimum.

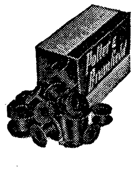
Dimensions: 1″$\frac{5}{8}$ x $\frac{13}{16}$″ x $1\frac{3}{8}$″ high. Mounted with four 3-48 tapped holes on $\frac{3}{8}$″ centers.

When ordering, specify coil voltage.

Type	Coil Voltage	Coil Resistance	Net
MB3D	6 V. DC	13.3 ohms	$6.40
MB3D	12 V. DC	62.3 ohms	6.40
MB3D	24 V. DC	245 ohms	6.40
MB3D	110 V. DC	3670 ohms	6.80

COIL BOBBIN KIT

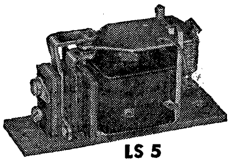
24 ASSORTED MOLDED BAKELITE BOBBINS



POTTER & BRUMFIELD's kit of 24 assorted bobbins: 3 each of 8 different sizes. Ideal for experimenters, designers, radio amateurs and especially project engineers who prefer to calculate and wind their own coils to meet specific circuit requirements. Bobbins are one piece molded, withstand 85° C. temperature rise and more than 1,000 volts RMS breakdown. Core diameters: $\frac{7}{32}$″ to $\frac{7}{16}$″; outside diameters: $\frac{21}{32}$″ to $1\frac{5}{16}$″; inside length: $\frac{1}{2}$″ to $1\frac{11}{32}$″; wall thickness: .040″. These bobbins are used in the following P & B relays: Series MR, LS, SP, FR, KR, LK, KL, PR and MH.

75AO47 Coil Bobbin Kit..**Net $1.50**

LS Series—PLATE CIRCUIT RELAYS



LS 5

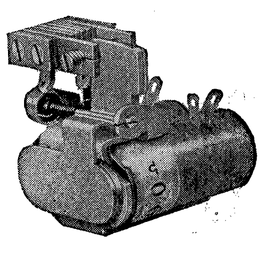
Designed for applications where size and cost are important. Optimum adjustment at 2 MW; minimum adjustment at .9 MW. Sensitivity readjustable by bending tailspring hook. Pure silver, 5 ampere, SPDT contacts. Minimum contact pressure, 10 grams.

Dimensions: $2\frac{5}{8}$″ x $1\frac{1}{4}$″ x $1\frac{5}{16}$″ high. Mounted with two $\frac{3}{16}$″ diameter holes on $2\frac{7}{32}$″ centers.

When ordering, specify coil resistance.

Contacts	Type	Coil Resistance	Factory Adjustment Pull in MA	Net
SPDT	LS5	2500 ohms	9.0	$2.25
SPDT	LS5	5000 ohms	6.3	2.35
SPDT	LS5	10000 ohms	4.5	2.55

SS Series—DC SUPER SENSITIVE RELAYS

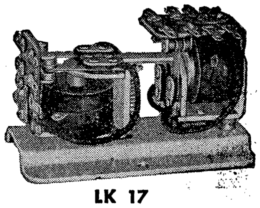


This new ultra-sensitive relay operates with 10 G vibration resistance on less than 10 MW. The armature, precision-balanced on needle-point bearings, is virtually friction free in its movement. The SS relays use dual coils connected in series. Windings are varnish impregnated to exclude moisture and prevent mechanical damage. Pure silver contacts rated at 2 amperes, 115 V AC or 28 V DC non-inductive load.

Dimensions: $1\frac{11}{16}$″ x $1\frac{5}{16}$″ x $1\frac{11}{16}$″ high. Mounted with two 6-32 tapped holes on $\frac{23}{32}$″ centers.

Type	Contacts	Coil Resistance	Max. Pull In	Net
SS5D	SPDT	10,000 ohms	1.0 MA	$9.90

LK Series—LATCHING RELAYS



LK 17

Electrical latch, electrical release that will stand 10 G vibration and 25 G shock while operating. For multiple circuit switching of power loads. Minimum contact pressure, 35 grams. Contacts $\frac{1}{8}$″ diameter fine silver, rated at 5 amperes. Coils wound on molded bakelite bobbins with 500 volts breakdown. Available open or hermetically sealed.

Dimensions: Open relay, $2\frac{29}{32}$″ x $1\frac{3}{4}$″ x $1\frac{25}{32}$″ high; sealed relay, $1\frac{13}{16}$″ x $3\frac{3}{16}$″ x $2\frac{1}{16}$″ high, plus $\frac{3}{16}$″ below chassis. Mounted with two $\frac{5}{32}$″ dia. holes on $1\frac{3}{8}$″ centers.

When ordering, specify coil voltage.

BOTH COILS SAME VOLTAGE						
4PDT	LK17A	6 V. 50-60 Cy.	$6.90	LK17D	6 V. DC	$6.75
4PDT	LK17A	12 V. 50-60 Cy,	6.90	LK17D	12 V. DC	6.75
4PDT	LK17A	24 V. 50-60 Cy.	6.90	LK17D	24 V. DC	6.75
4PDT	LK17A	115 V. 50-60 Cy.	6.90	LK17D	110 V. DC	8.25

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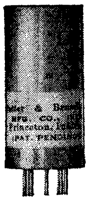
SM Series—SUPER MIDGET RELAYS



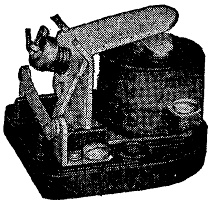
SM5-S

Sub-miniature relay fits standard miniature tube socket and hold-down shield. Sealed in deep drawn steel can; weighs less than 1 ounce. Silver-rhodium SPDT contacts rated $\frac{1}{4}$ ampere, 115 V AC; $\frac{1}{2}$ ampere, 28 V DC non-inductive load. Withstands 10 G vibration to 55 c.p.s. and passes government environment specs. Sensitivity, 75 MW. Maximum coil dissipation, 1.8 watts.

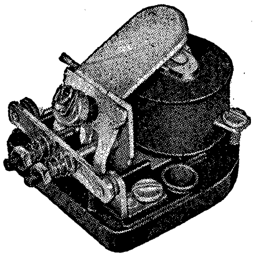
Dimensions: Maximum height, $1\frac{5}{8}$″ (above socket); maximum diameter, .755″.

SM5DS			SM5LS		
Nom. Voltage	Pull In V	Net	Coil Resistance Ohms	Pull In MA	Net
6.0	4.0	$4.35	5000	3.8	$4.85
24.0	18.0	4.35	10000	2.7	5.55

MS Series—MOTOR STARTING RELAYS VOLTAGE ACTUATED



MS 2A



MS 4A

Voltage controlled relay insures throw-out of the starting winding when motor reaches rated speed regardless of the load on the motor. May be mounted on the motor or remotely located. Ideally suited for use with hermetically sealed or explosion-proof motors that are capacitor start, induction run. Operates on back EMF of running winding.

Pull in voltage can be varied over a wide range by adjusting armature gap. Unusual design permits an exceptionally wide differential between pull in and drop out voltages. Normal adjustment for 115 volt motors is to pull in at 140 V and release at 40 V or less. For 230 V motors, pull in at 255 V and release at 80 V or less.

MS2A single break relay for capacitor start induction run motors up to 1 HP.

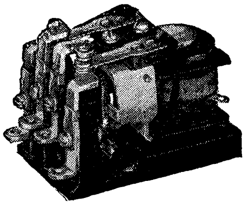
MS4A double break relay with high current contacts for capacitor start, induction run motors up to 3 HP.

Dimensions: $2\frac{3}{4}$″ x $2\frac{1}{16}$″ x $1\frac{7}{8}$″ high. Mounted with two $\frac{5}{32}$″ dia. holes on $1\frac{9}{16}$″ centers.

When ordering, specify type, coil resistance and motor-line voltage.

Type		Net
MS2A	800 ohms (for 115 volt 50-60 cycle motor)	$2.55
MS2A	2100 ohms (for 230 volt 50-60 cycle motor)	2.65
MS4A	800 ohms (for 115 volt 50-60 cycle motor)	3.75
MS4A	2100 ohms (for 230 volt 50-60 cycle motor)	3.85

SP Series—HEAVY DUTY-SHOCK PROOF RELAYS



SP 11

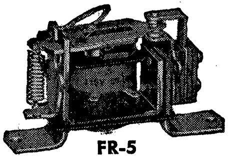
A heavy-duty relay with balanced armature construction; withstands shock and vibration and can be mounted in any position. Thick molded bakelite base and contact supports. Coils wound on molded bakelite bobbins with minimum breakdown of 500 volts, RMS. Average power for DC types, 1.5 watts; for AC types, 3 to 4 V. A. Contacts are $\frac{3}{16}$″ diameter fine silver, rated at 8 amperes on double break and 5 amperes on single break. Minimum contact pressure, 25 grams.

Dimensions: $2\frac{7}{16}$″ x $1\frac{5}{8}$″ x $1\frac{21}{32}$″ high. Mounted with two 6-32 tapped holes on $1\frac{3}{16}$″ centers.

When ordering, specify coil voltage.

Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24 Volts	
	Type	Net	Type	Net
DPDT	SP11A	$4.75	SP11D	$4.30

FR Series—PHOTO FLASH RELAYS



FR-5

Designed for photo flash units using a high voltage discharge through a gas filled tube requires a relay with extremely high voltage breakdown insulation. When the bulb is flashed, the contacts must carry an extremely high surge of current without sticking, burning or pitting. The repetitive accuracy must be as uniform as a precision built shutter on a fine camera. Unfailing positive contact is vital to synchronization of the shutter with the high voltage capacitor discharge.

The FR relay has been proven under the most severe conditions of temperature, humidity and shock. Contact material and extremely high breakdown insulation between ground and all current-carrying parts combine to give a reliable relay at economy prices. Breakdown 3,000 volts minimum between current-carrying elements and ground.

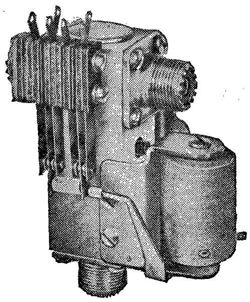
Dimensions: $2\frac{31}{32}$″ x $1\frac{3}{16}$″ x $1\frac{5}{8}$″ high. Mounted with two $\frac{5}{32}$″ diameter holes on $2\frac{5}{8}$″ centers.

When ordering, specify voltage.

Contacts	A.C. RELAYS 6 Volts 50-60 Cy.		D.C. RELAYS 2 Volts	
	Type	Net	Type	Net
SPDT	FR5A	$3.60	FR5D	$3.60
DPDT	FR11A	4.70	FR11D	4.70

Advance RELAYS

COAXIAL RELAY



Type 7204

This relay, for use with 52 ohm RG coaxial cable, has SPDT internal contacts, rated at 880 watts maximum. If desired, DPDT auxiliary contacts (as illustrated) may be had. Tests on a 52 ohm line show VSWR of 1.02:1.0 at 116 meg.

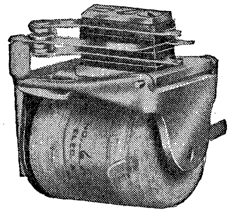
***List Prices:** (Up to 115 V A.C. or 40 V D.C.)

A.C.	D.C.		
7200	8200		$16.63
7204	8204	With auxiliary contacts	20.63

*For higher voltages up to 440 V A.C. or 240 V D.C., or for other ADVANCE Coaxial Relays, see your nearest jobber.

Size (without auxiliary contacts): 1 7/16" x 3 1/16" x 3 9/16"

MIDGET TELEPHONE RELAY



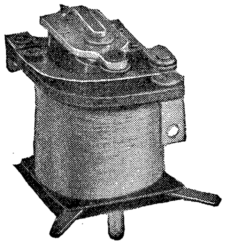
Type 5203A
"A" denotes
5-amp. contacts

This small, yet sturdy relay is offered in any contact combination from SPST to 4PDT; with ⅛", 1.5 amp. contacts, or with 3/16", 5 amp. contacts. Coils draw from .1 to 2 watts D.C. or 1 to 1½ watts A.C. List prices below are for coils up to 115 V A.C. or 1000 ohms D.C.

A.C.	D.C.		
5201	6201	SPST N. O.	$4.65
5201A	6201A	SPST N. O.	4.92
5203	6203	SPDT	4.98
5203A	6203A	SPDT	5.51
5204	6204	DPDT	5.98
5204A	6204A	DPDT	7.05

For higher voltage coils, up to 220 V A.C. or 40,000 ohms D.C., see your nearest jobber. He can also show you other ADVANCE Telephone Type Relays.

TINY MITE RELAYS
(FOR D.C. ONLY)



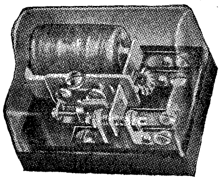
Type 003

In these tiny relays, which require less than ½ cubic inch mounting space, all switching is above ground. Contacts are rated at .35 amperes at 115 V A.C. (non-inductive). Power required is .35 to 1.5 watt. Coils are available for any D.C. voltage 1 to 80 resistances up to 10,000 ohms. Weight 10 grams. (45 relays per lb.). List prices below are for any coil up to 800 ohms (24 V D.C.). For higher resistances see your nearest jobber.

Type			List
003	SPST	N. O.	$3.52
005	DPST	N. O.	3.85
004	DPDT		4.24

Size: 13/16" x 13/16" x 9/16"
(Overall dimensions with lugs as illustrated).
If desired, can be supplied with leads.

ULTRA-SENSITIVE D.C. RELAYS



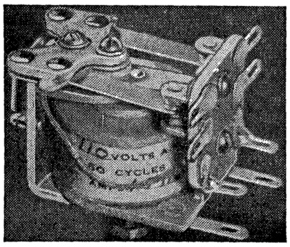
Type 1200

This relay combines many superior features — transparent plastic cover-molded Bakelite base — counter-balanced armature — high overall sensitivity . . . 5 milliwatts for positive operation — 2½ milliwatts with careful adjustment, and light contact load . . . Three adjustments with vernier screws: spring, and each contact. Contacts are SPDT, pure silver rated at 1.0 amperes at 115 V A.C. (non-inductive).
Supplied in coil resistances up to 40,000 ohms. **Be sure to specify resistance desired!**
List Prices:

Up to 2200 ohms	$10.97	8700 ohms	$11.98	30000 ohms	$17.80
3500 ohms	11.31	14000 ohms	12.64	40000 ohms	21.63
5500 ohms	11.64	20000 ohms	14.56		

Base Dimensions: 2" x 2 9/16". **Height:** 1½". **Weight:** 6¼ ounces.

MIDGET RELAY



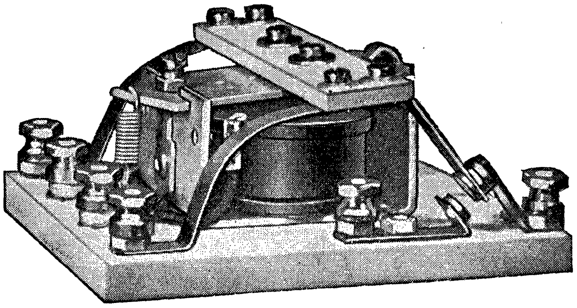
Series K1500 and K1600

Of particular interest where size and cost are factors, this new series of Midget Relays, of improved design, incorporates all of the fine construction features typical of the ADVANCE line. This unit measures only 1 13/16" x 1¼" x 1¼" high. Pure Silver contacts are used, ⅛" in diameter. 3/16" contacts rated at 5 amps are also available by adding letter A after last numeral in type number (ex: K1503AS). Standard coils are obtainable from 2 to 40 V D.C. and 1 to 115 V A.C. The following switch combinations can be supplied:

TYPE			
A.C.	D.C.	CONTACT COMBINATION	LIST PRICES
K1503S	K1603S	SPDT	$4.31
K1504	K1604	DP-DT	4.65
K1509A	K1609A	3P-DT (5 amp.)	6.92

Advance RELAYS

TRANSMITTER RELAYS


Type 400

Isolantite model Antenna Change-Over. Designed for use in Amateur Transmitters.

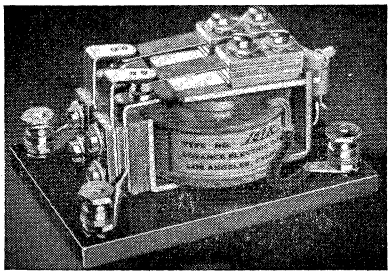
The contact system is Double Pole-Double Throw, using ¼″ Pure Silver contacts, with exceptional wiping action.

For high radio frequency control. Entirely hum-free where intended for A.C. operation, and highly efficient on D.C. supplies. All metallic parts are cadmium plated.

Standard coils are for 110V A.C. They will also be supplied for lower A.C. or D.C. voltages, or higher.

List Price **$13.17**

KEYING RELAYS

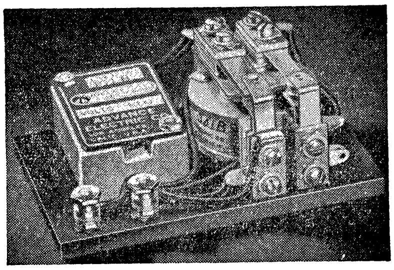

Type 101K—A.C.
Type 201K—D.C.

Designed expressly for use in Keying Circuits where it is desired to use low voltage across the key to control high voltage transmission through the Relay contacts. The heavy duty coil and strong return spring makes possible an exceptional keying speed. Two sets of ¼″ Pure Silver contacts provide a double "make" circuit for carrying high current (voltage capacity 2500 volts). The complete unit, mounted on a 3/16″ Bakelite base with binding posts for coil connections, has over-all dimensions of 3″ x 2″ x $1\frac{9}{16}$″ and is obtainable for A.C. operation to 115 volts or D.C. operation to 40 volts at standard list price. Also available in high A.C. and D.C. voltages.

List Price **$7.32**

TIME DELAY RELAYS

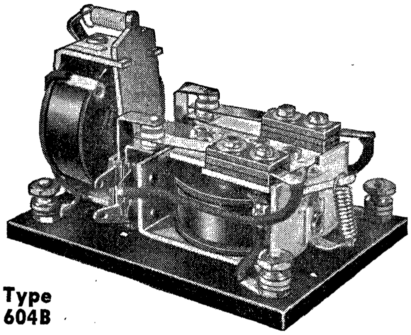
Type 304BF
Type 354BF



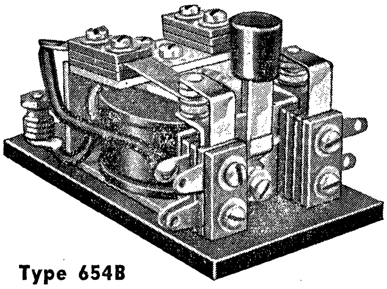
Available either with delay before make, 304BF, or delay before break, 354BF. This relay is provided with an adjustable range of 10 seconds to one minute. Recycling time is approximately 10 times the delay period. Both models are DPDT with ¼″ 10 ampere contacts (non-inductive). Available in voltages to 230 volts D.C. and 440 volts A.C. Standard price applies up to 115V A.C., or 40V D.C. Dimensions 3¾″ x 2⅝″ x $1\frac{19}{32}$″.

List Price **$15.65**

LATCHING RELAYS


Type 604B

These Relays are highly desirable for applications where it is impractical to have the holding coil in constant service. When the coil actuating the contact arrangement is momentarily energized, the armature is locked in the closed position, and may be released electrically (Type 604B) or manually (Type 654B).


Type 654B

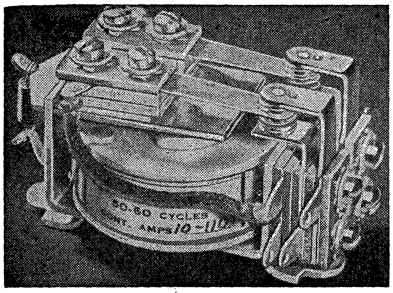
	List			List
Type 604B	$12.77	..............................Double Pole-Double Throw	Type 654B	$9.50

The above list prices are for ¼″ contacts. Rated 10 amps at 24 V D.C. or 115 V A.C. (non-ind. loads).

WHEN ORDERING RELAYS PLEASE SPECIFY THE VOLTAGE

Advance RELAYS

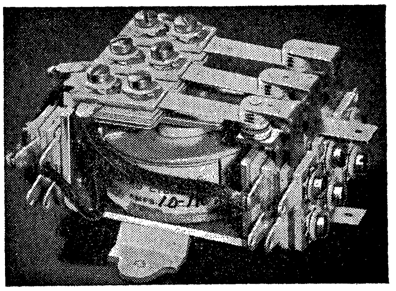
INDUSTRIAL CONTROL RELAYS



Type 964B

Designed mainly for industrial applications — air conditioning, lighting, and power transfer systems, the Type 964B Relays embody all of the rugged construction features demanded in units of this type without sacrificing the desirable qualities of the midget style. Available in DPDT and to operate on standard A.C. or D.C. voltages, please specify.

List
Type 964B—Double Pole-Double Throw $7.32

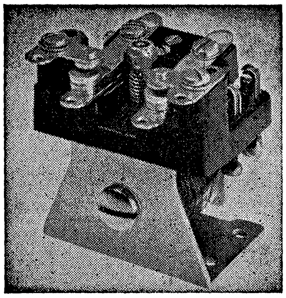


Type 979B

This three pole, double throw relay has the same general characteristics as the Type 964B except that it requires a slightly larger mounting area. Contacts are ¼″ silver, rated at 10 amperes at 115 V. A.C. non-inductive. Solder lug terminals are provided for all connections and the metal mounting bracket has two tapped holes on 2″ centers for 6-32 screws.

List
Type 979B—3PDT (Standard Voltages) $8.78

GENERAL PURPOSE RELAY

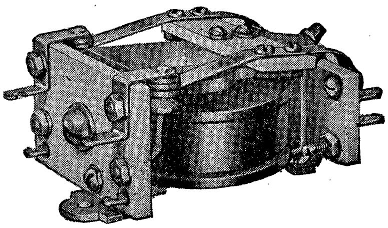


This ADVANCE relay, with molded bakelite insulation, is compact, sturdy, and all electrical connections are well spaced and easily accessible.

Contacts are ¼″ diameter pure silver, rated at 15 amps. at 115 V. A.C. or 24 V. D.C. (non-inductive.) BE SURE TO SPECIFY CORRECT TYPE NUMBER AND OPERATING VOLTAGE WHEN ORDERING. PRICES BELOW ARE FOR A.C. COILS UP TO 115 VOLTS OR D.C. COILS UP TO 40 VOLTS. This is one of the finest small relays available.

D.C.	A.C.		List
Type 9003	9103	SPDT—Double Make and Break................	$8.47
Type 9004	9104	DPDT—Single Make and Break................	8.47

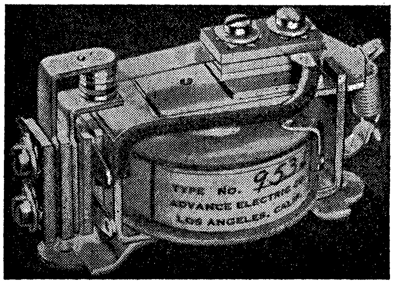
MIDGET TYPE R.F. RELAYS



Series 1000—A.C. Series 2000—D.C.

These models are sturdy, compact Double Pole - Double Throw Transmitter Relays, designed expressly for use in all types of mobile-portable communications equipment where space is at a premium. The insulation on this, as on ADVANCE Type 400's, is Isolantite. Coils are obtainable for various A.C. and D.C. voltages. These ADVANCE relays will operate in any position, consuming approximately 4 watts A.C., 2 watts D.C. Dimensions are 2¾″ x 1½″ x 1¼″.

List Price..$10.97



GENERAL PURPOSE RELAYS

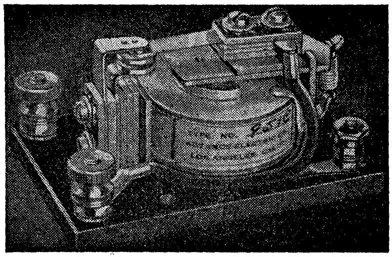
Type 953B

This relay affords maximum power and efficiency at low cost. Contacts are SPDT, rated at 10 amperes at 115V A.C. and are ¼″ pure silver. Solder lug terminals are provided and the relay is mounted on a metal bracket, same as the 964B and 979B. Coils to 40V D.C. and 115V A.C. at standard prices. For higher voltages see your favorite ADVANCE jobber.

List Price $5.12

GEN-E-MOTOR STARTING RELAY

Type 951C



An exceptionally sturdy power transfer Relay, easily capable of handling the heavy current surge encountered on "cold" starts in motor-generator systems. The contacts are 5/16″ Special alloy "Elkonite D-54" and have ample carrying capacity for the usual 200-500V converters. Heavy-duty in every phase of construction, this unit is not to be compared with the common five and ten ampere circuit controls. Base dimensions are 3″ x 2″ and each unit is complete with a braided generator-cable pig-tail and binding posts for all connections. Coils for 5½ to 32V D.C. or 1 to 115 A.C. ....**List Price $8.78**

SPECIALTIES MANUFACTURING CO.

Spemco Products

7751 HAMILTON DETROIT 2, MICH., U.S.A.

FOR THE LATEST IN DESIGN AND DEVELOPMENT, BE SURE IT'S

SPEMCO

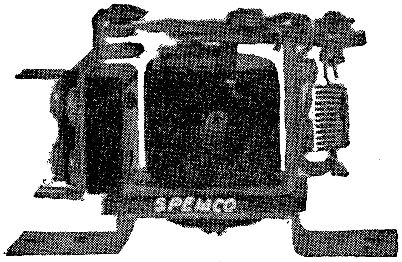
ALL-PURPOSE RELAYS

The Spemco Relays are an entirely new design from both mechanical and electrical standpoint.

These relays are not designed to meet a price but built of the highest quality material and workmanship. A trial of one of these Spemco Relays will convince you.

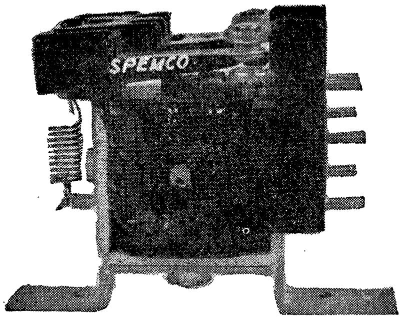
. . . . "It's Just a Relay to You, But a Reputation to Us"

S. P. D. T. SERIES 1500
S. P. D. T. SERIES 1200



2$\frac{13}{16}$″ length 1¾″ high 1⅛″ width

D. P. D. T. SERIES 1400



2$\frac{13}{16}$″ length 2$\frac{13}{16}$″ high 1¾″ width

AC

CONTACT DATA — CONTACT RATING					COIL DATA				ORDERING INFORMATION		
Contact Form	Ampere Non-Inductive*		Horse Power Single Phase		Resistance (ohms) Plus or Minus 10%	Rating Volt Amperes		Voltage	Approx. Net Weight in Ounces	Catalogue No.	Net Price
	110V	220V	110V	220V		Inrush	Sealed				
S.P.D.T.	10	5	1	1	530	7.4	6	110 V	4.8	1200	$4.15 ea.
S.P.D.T.	10	5	1	1	9.2	7.4	6	12 V	4.8	1201	4.15 ea.
S.P.D.T.	10	5	1	1	1.5	7.4	6	6 V	4.8	1202	4.15 ea.
S.P.D.T.	10	5	1	1	33	7.4	6	24 V	4.8	1203	4.15 ea.
S.P.D.T.	10	5	1	1	2150	7.4	6	220 V	4.8	1204	4.15 ea.
D.P.D.T.	10	5	1	1	500	9.8	7.2	110 V	6.5	1400	5.50 ea.
D.P.D.T.	10	5	1	1	4	9.8	7.2	12 V	6.5	1401	5.50 ea.
D.P.D.T.	10	5	1	1	16	9.8	7.2	24 V	6.5	1402	5.50 ea.
D.P.D.T.	10	5	1	1	2000	9.8	7.2	220 V	6.5	1403	5.50 ea.
D.P.D.T.	10	5	1	1	1.5	9.8	7.2	6 V	6.5	1404	5.50 ea.

DC

CONTACT DATA				COIL DATA			ORDERING INFORMATION		
Contact Form	CONTACT RATING IN AMPERES* (Non-Inductive Load)			Resistance (ohms) Plus or Minus 10%	Power in Watts (20x C)	Voltage	Approx. Net Weight in Ounces	Catalogue No.	Net Price
	24V D.C.	110V A.C.	220V A.C.						
S.P.D.T.	10	10	5	2500	1.8	—	4.5	1500	$4.15 ea.
S.P.D.T.	10	10	5	5000	1.8	—	4.5	1501	4.40 ea.
S.P.D.T.	10	10	5	10000	1.8	—	4.5	1502	4.95 ea.
D.P.D.T.	10	10	5	—	1.8	6 V	6.3	1405	5.50 ea.
D.P.D.T.	10	10	5	—	1.8	12 V	6.3	1406	5.50 ea.

*Open type rating. Enclosed rating—90% of open rating.

RELAYS DESIGNED IN ACCORDANCE WITH OUR INTERPRETATION OF UNDERWRITERS SPECIFICATIONS.

These Spemco magnetic relays can be used for remote control of electric power and lighting loads, pilot lights and audible signals. It may also be used for controlling small single phase motors, serve as circuit switching relays for machine tools, processing control, electrical interlocking systems, electronic applications, follows a "Bug" F B and many other applications too numerous to mention; however, relays serve as control devices only and do not provide motor overload or short circuit protection.

MAGNET COILS for AC Coils only. Relay coils are available for voltages ranging from 1½ to 220 volts with commercial frequencies of 25, 50 and 60 cycles. Coils are designed for continuous service and will operate safely at plus 10% or minus 15% rated voltage.

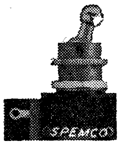
All coils are designed for 50/60 cycle service for any given voltage rating. Coils will pick up readily at 80% of rated voltage. All magnet coils are impregnated and baked.

POINTS. Fine silver to silver contacts provide long life and low contact resistance. Silver contacts never require cleaning or dressing and do not corrode, thus reducing maintenance. Substantial contact pressure assures dependable contact action even on light loads or low voltages.

All wiring terminals are accessible from the front of the relays and are so arranged that relays may be mounted on minimum centers without obstructing wiring terminals of adjacent relays. All Steel parts are plated.

THE SPEMCO LINE   H & H SWITCHES

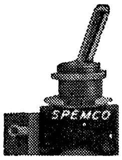
SPEMCO SWITCHES BALL LEVER TOGGLE SWITCHES



Underwriters' approved, 3 amp. 125 volts, laminated bakelite base. Nickel plated finished.

No.	Description	Sleeve	List Price
1120	SPST	15/32"	$0.80 ea.
1121	SPST	1"	1.00 ea.
1122	SPDT	15/32"	1.00 ea.
1123	SPDT	1"	1.15 ea.
1124	DPST	15/32"	1.40 ea.
1125	DPST	1"	1.65 ea.
1126	DPDT	15/32"	1.65 ea.
1127	DPDT	1"	1.80 ea.

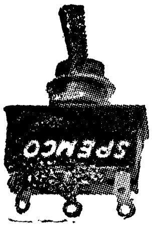
BAT LEVER TOGGLE SWITCHES



Underwriters' approved. 3 amp. 125 volts, laminated bakelite base. Nickel plated finished.

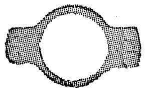
No.	Description	Sleeve	List Price
1135	SPST	13/32"	$0.80 ea.
1121-B	SPST	1"	1.00 ea.
1136	SPDT	13/32"	1.00 ea.
1123-B	SPDT	1"	1.15 ea.
1137	DPST	13/32"	1.40 ea.
1125-B	DPST	1"	1.65 ea.
1138	DPDT	13/32"	1.65 ea.
1127-B	DPDT	1"	1.80 ea.

MOLDED BAKELITE SWITCH, BAT LEVER



Underwriters' approved, 6 amp. 125 volts, 3 amp. 250 volts. Back connected, slotted sleeve.

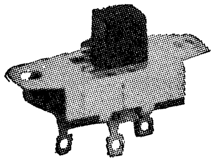
No.	Description	Sleeve	List Price
1142	SPST	15/32"	$1.15 ea.
1143	SPDT	15/32"	1.25 ea.
1144	DPST	15/32"	1.70 ea.
1145	DPDT	15/32"	2.00 ea.



ON AND OFF PLATE

No.	List Price
1132	$0.06 ea.

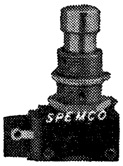
SLIDE SWITCHES



Housings are made of steel and are cadmium plated 1 13/32" long, 35/64" wide and 1⅛" mounting centers.

No.	Description	List
1180	SPST .75A-125V AC-DC	$0.31 ea.
1181	SPDT .75A-125V AC-DC	0.37 ea.
1182	DPST .50A-125V AC-DC	0.44 ea.
1183	DPDT .50A-125V AC-DC	0.55 ea.

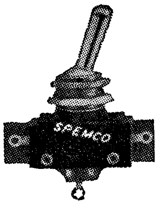
PUSH BUTTON DOUBLE ACTION SWITCH



Underwriters' approved, 3 amp. 250 volts. Press lever to make contact, press lever to break contact. Nickel plated finish.

No.	Description	Sleeve	List Price
1156	SP	17/32"	$1.65 ea.

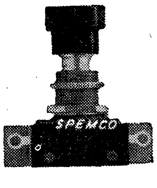
MOMENTARY BAT LEVER TOGGLE SWITCHES



Underwriters' approved, 3 amp. 125 volts, laminated bakelite base. Nickel plated finished.

No.	Description	Sleeve	List Price
1166	SPST	15/32"	$1.45 ea.
1167	SPDT	15/32"	1.55 ea.
1155	DPST	15/32"	1.90 ea.
1150	DPDT	15/32"	2.15 ea.

MOMENTARY PUSH BUTTON SWITCH

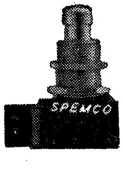


Underwriters' approved, 1 amp. 125 volts AC. Nickel plated finish. Laminated bakelite base. Single Pole, slow make and slow break, normally off, with bakelite snap-on button in red or black.

No.	Button	Sleeve	List Price
1157-A	Red	13/32"	$1.40 ea.
1157-B	Black	13/32"	1.40 ea.

Two circuit slow make and slow break, momentary switch. One circuit normally on, the other off, with snap-on plastic button, in red or black. (Pushing the button reverses the contact.)

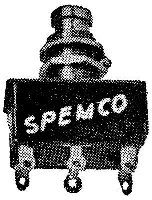
No.	Button	Sleeve	List Price
1158-A	Red	13/32"	$1.50 ea.
1158-B	Black	13/32"	1.50 ea.



Underwriters' approved, 1 amp. 125 volts AC. Momentary contact. Nickel plated finish.

No.	Description	Sleeve	List Price
1141	SP Normally ON	17/32"	$1.00 ea.
1141-A	SP Normally OFF	17/32"	1.00 ea.

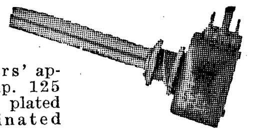
MOLDED BAKELITE MOMENTARY PUSH BUTTON SWITCH, NORMALLY OFF



Underwriters' approved, 6 amp. 125 volts, 3 amp. 250 volts. Back connected, slotted sleeve.

No.	Description	Sleeve	List Price
1146	SPST	½"	$2.00 ea.
1147	SPDT	½"	2.20 ea.
1148	DPST	½"	2.45 ea.
1149	DPDT	½"	2.70 ea.

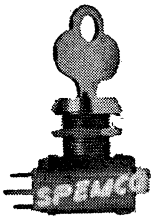
ROTARY SWITCHES



Underwriters' approved, 3 amp. 125 volts. Nickel plated finish. Laminated bakelite base.

No.	Description	Shaft	Sleeve	List Price
1128	SPST	1¼"	¼"	$1.20 ea.
1129	SPDT	1¼"	¼"	1.30 ea.
1130	DPST	1¼"	¼"	1.75 ea.
1131	DPDT	1¼"	¼"	1.95 ea.

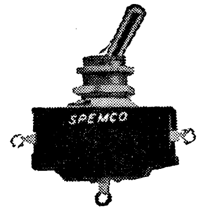
ROTO-LOCK SWITCH



Underwriters' approved, 3 amp. 250 volts.

No.	Description	Sleeve	List Price
1128-K	SPST	15/32"	$1.60 ea.
1128-KA	Key only for above		0.30 ea.

BAT LEVER TOGGLE SWITCH NEUTRAL CENTER



Underwriters' approved, 6 amp. 125 volts, either AC or DC. A 3 position switch, on-off-on. Black bakelite case.

No.	Description	Sleeve	List Price
1175	SPDT	13/32"	$2.10 ea.
1176	DPDT	13/32"	2.35 ea.

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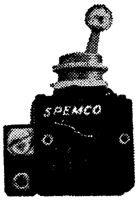
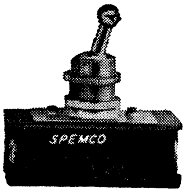
H & H SWITCHES THE SPEMCO LINE

POWER SWITCHES



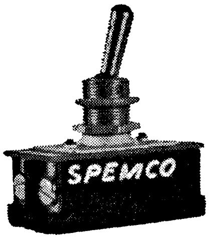
Underwriters' approved, 10 amp. 125 volts. Size of case $1\frac{1}{16}$″ long, $\frac{17}{32}$″ wide, $1\frac{5}{16}$″ high.

No.	Description	Sleeve	List Price
1133	SPST	$\frac{11}{32}$″	$1.60 ea.



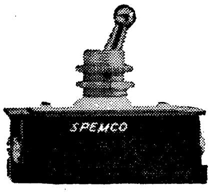
Underwriters' approved, 12 amp. 125 volts. Size of case, 1¾″ long, ¾″ wide, $\frac{25}{32}$″ high.

No.	Description	Sleeve	List Price
1159	DPST	$\frac{15}{32}$″	$1.90 ea.



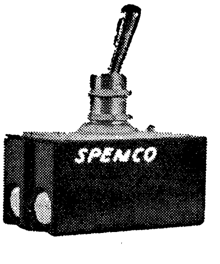
Underwriters' approved, 12 amp. 125 volts, size of case 1¾″ long, ¾″ wide, $\frac{25}{32}$″ high.

No.	Description	Sleeve	List Price
1159-B	DPST	$\frac{15}{32}$″	$1.90 ea.



Underwriters' approved, 15 amp. 125 volts. Size of case, 2″ long, 1″ wide, $\frac{25}{32}$″ high.

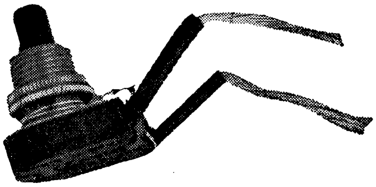
No.	Description	Sleeve	List Price
1134	DPST	$\frac{15}{32}$″	$2.85 ea.



Fully enclosed tumbler switch, 20 amp. 250 volts, 1½ horsepower, 250 volts. Size of case, 2¼″ long, 1⅛″ wide, $1\frac{5}{32}$″ high.

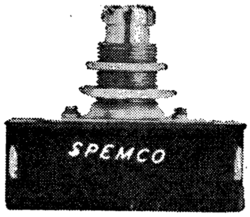
No.	Description	Sleeve	List Price
1170	DPST	$\frac{15}{32}$″	$4.75 ea.

ROTARY CANOPY SWITCH
With Fixed Plastic Handle



No.	Stem	Wire Lead	List Price
1179	$\frac{7}{16}$″	8″	$0.60 ea.

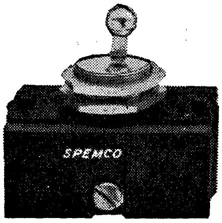
PUSH BUTTON MOMENTARY SWITCH



This switch is primarily intended as a safety switch to be used as an interlock connection on doors of dangerous high voltage devices when they are opened. Rated at 12 amp. 125 volts. 1 horsepower, 250 volt AC. Normally OFF. Size of case, 1¾″ long, ¾″ wide, $\frac{25}{32}$″ high.

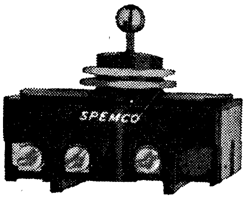
No.	Description	Sleeve	List Price
1160	DPST	$\frac{15}{32}$″	$2.70 ea.

EXTRA HEAVY DUTY SWITCHES NEUTRAL CENTER



Used in heavy current circuits, such as transmitters, power amplifiers, motors, etc. Contacts have fast "break" which reduces the tendency to arc. Rated at 10 amp. 125 volts. Size of case 2″ long, 1¼″ wide, 1″ high.

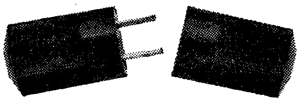
No.	Description	Sleeve	List Price
1161	DPDT	$\frac{11}{32}$″	$6.25 ea.



Size of case, $2\frac{5}{16}$″ long, 2″ wide, 1⅛″ high. Rated 10 amp. 125 volts, ½ horsepower, 115-230 volt AC.

No.	Description	Sleeve	List Price
1177	3 P DT	$\frac{13}{32}$″	$ 8.25 ea.
1178	4 P DT	$\frac{13}{32}$″	12.00 ea.

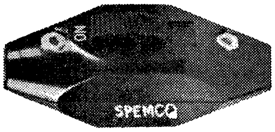
CORD CONNECTORS



Brown Bakelite Cord Connector Complete, ⅞″ O.D. x 2½″ long, 10 amps. 250 volts. End opening for wire size up to ⅝″ O.D.

No.	List
1162	$1.95 ea.

FEED THROUGH CORD SWITCH

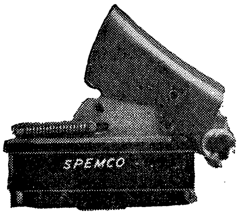


Underwriters' approved, black bakelite case sliding lever, 10 amp. 125 volts, 5 amp. 250 volts. $\frac{5}{16}$″ cord hole.

No.	Description	List
1163	SP	$1.85 ea.

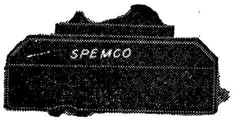
All aforementioned switches are manufactured by H. & H. for S.M.C.

PORTABLE TOOL HANDLE SWITCHES



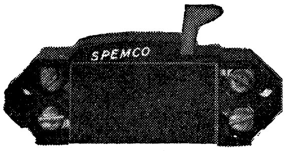
Tool handle switch, fully enclosed, normally OFF with locking latches. Rated and approved by the Underwriters' for 6 amp. 250 volts, 12 amp. 125 volts, 1 H.P. 250 volts, 1¾″ long, $\frac{25}{32}$″ wide, ⅝″ high.

No.	Description	*Net Price
1168	DPST	$1.75 ea.



Small tool switch, mechanism fully enclosed in bakelite case. Rugged construction, current carrying parts made of phosphor bronze and contacts of hard drawn copper. Contacts arranged to be wired from the back for simplicity in wiring. Approved by Underwriters' at 10 amp. 250 volts, 15 amp. 125 volts, ½ H.P. 110V-220V A.C., 2¼″ long, ⅞″ wide, $\frac{15}{16}$″ high.

No.	Description	*Net Price
1172	DP	$2.45 ea.



This switch is arranged with momentary contacts, normally OFF. Approved by the Underwriters' at 10 amp. 250 volts, 15 amp. 125 volts, 2⅞″ long, $\frac{25}{32}$″ wide, $1\frac{1}{16}$″ high.

No.	Description	*Net Price
1173	DP Trigger Lever	$2.55 ea.

All aforementioned switches are manufactured by H. & H. for S.M.C.

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*Net

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A QUALITY PRODUCT
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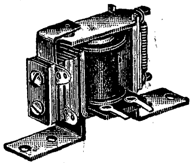
U.S.A.

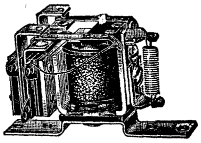
RELAYS
FOR AMATEUR AND INDUSTRIAL USES

NATIONAL ASSOCIATION RELAY MANUFACTURERS
NARM

MINIATURE RELAYS



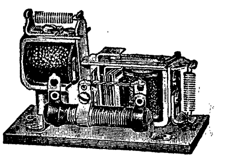
These units are very compact and are especially designed for plate circuit and general purpose control application. Overall dimensions: MR 1⅞″ x 1⅜″ x ⅞″—MRD 1⅞″ x 1⅜″ x 1¼″. Contacts are fine silver rated 5 amps at 115 V. All AC relays are free from hum and AC chatter. The MR-2 and MRD-2 have 2500 ohm coil, will pick up at 6 ma. and 12 ma. respectively. The MR-5 and MRD-5 have 5000 ohm coils, will pick up at 3 ma. and 7.5 ma. respectively. The drop out value of these relays is approximately 50% of the pick up value.



MRD

Type	A.C.	D.C.	Contacts	Net Prices
MR-2		Plate Circuit	SPDT	$2.10
MR-5		Plate Circuit	SPDT	2.40
MR-6		6 V.	SPDT	2.10
MR-7	6 V.		SPDT	2.19
MR-11	110 V.		SPDT	2.19
MRD-2		Plate Circuit	DPDT	3.60
MRD-5		Plate Circuit	DPDT	3.90
MRD-6		6 V.	DPDT	3.60
MRD-7	6 V.		DPDT	3.69
MRD-11	110 V.		DPDT	3.69

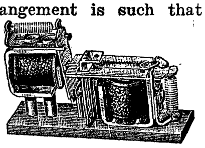
OVERLOAD RELAYS



Adjustable overload relays provide accurate and positive protection against current surges and continuous overloads. Contact arrangements SPDT using 3/16″ fine silver contacts. This allows the use of either audible or visual signal to advise of overload. All models are of the electrical reset type which allows remote control resetting of the relay. Size—3¾″ x 2″ x 1½″.

Type	Current Range	Reset Coil	Net Prices
OA-2	250–500 ma.	110 V. A.C.	$5.40
OA-5	500–1000 ma.	110 V. A.C.	5.40
OC-2	250–500 ma.	6 V. A.C.	5.40
OC-5	500–1000 ma.	6 V. A.C.	5.40
OD-2	250–500 ma.	6 V. D.C.	5.40
OD-5	500–1000 ma.	6 V. D.C.	5.40

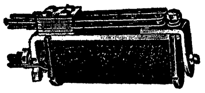
LATCHING RELAYS



These relays are employed where it is not desirable to have current continuously on the coil. The latching arrangement is such that when the relay coil is energized the armature closes and locks in a closed position by mechanical latching. An electrical impulse on the reset coil releases the armature from the latch and allows the relay to assume its initial position. 3/16″ fine silver contacts. Bakelite Base. Size—3¾″ x 2″ x ¾″.

Type	Reset Coil	Pull-in Coil	Net Prices
LEA	110 Volts A.C.	110 Volts A.C.	$4.50
LEA-6	6 Volts A.C.	6 Volts A.C.	4.50
LED	6 Volts D.C.	6 Volts D.C.	4.50

COMMUNICATION RELAYS



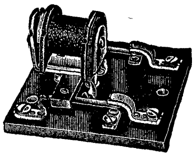
Ideally suited for use in telephone, remote control, signaling, communications circuits etc. High speed operation plus high sensitivity with high contact pressure. Contacts will handle 4 amps at 115 V. non-inductive load. Each relay has one make and one break contact sets. Size—3¾″ x 1 3/16″ x 1⅝″.

Type	Res. of Coil Ohms	Volts Pick-up	M.A. Pick-up	Net Prices
T10G	10,000	31	3.2	$4.20
T63F	6,300	24	4.0	4.20
T40F	4,000	19	5.0	4.05
T10F	1,000	10	10.0	3.75
T25E	250	5	20.0	3.45
T10E	100	3	31.6	3.45

ANTENNA CHANGE-OVER

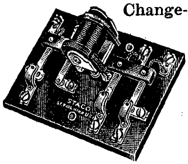
Mycalex Insulation is satisfactory for operation up to 60 MC. Triple-X insulation for operation up to 15 MC. All models use 3/16″ fine silver wiping action contacts rated at 4 amps. These relays are designed with ball-bearing armature pivot and have large contact spacing to assure minimum capacity between contact arms. The armature is designed so as to eliminate AC chatter. Size—3⅛″ x 3⅛″ x 2 3/16″.

Type	Insulation	Coil Voltage	Net Prices
ABA	TRIPLE-X	110 V. A.C.	$4.50
ABD	TRIPLE-X	6 V. D.C.	4.50
AMA	MYCALEX	110 V. A.C.	5.70
AMD	MYCALEX	6 V. D.C.	5.70



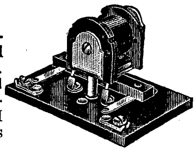
BREAK-IN RELAYS

Same type of relay as above only two additional poles are added, one normally open, one normally closed. This arrangement is perfect for PUSH-TO-TALK control. Contacts etc. identical with Antenna-Change-Over Relay. Size—4½″ x 3⅛″ x 2 3/16″.



Type	Insulation	Coil Voltage	Net Prices
BBA	TRIPLE-X	110 V. A.C.	$5.70
BBD	TRIPLE-X	6 V. D.C.	5.70
BMA	MYCALEX	110 V. A.C.	7.50
BMD	MYCALEX	6 V. D.C.	7.50

R.F. AND GENERAL PURPOSE RELAY



An excellent relay for R.F. or high voltage remote control. Contacts are 3/16″ fine silver rated 4 amps. Designed with extremely short R.F. path, Ball-bearing armature pivot. All metal parts cadmium plated. RB Series are TRIPLE-X insulated for frequencies up to 15 MC. RM series are MYCALEX insulated for frequencies up to 60 MC. Size—2¼″ x 3⅛″ x 2 3/16″.

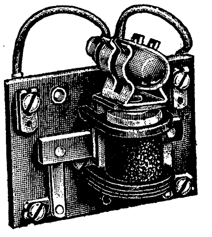
Type	Insulation	Contact Combination	Coil Voltage	Net Prices
RBA-1	TRIPLE-X	SPST (dble-break)	110 V. A.C.	$3.30
RBD-1	TRIPLE-X	SPST (dble-break)	6 V. D.C.	3.30
RMA-1	MYCALEX	SPST (dble-break)	110 V. A.C.	4.05
RMD-1	MYCALEX	SPST (dble-break)	6 V. D.C.	4.05
RBA-2	TRIPLE-X	DPST (sgle-break)	110 V. A.C.	3.45
RBD-2	TRIPLE-X	DPST (sgle-break)	6 V. D.C.	3.45
RMA-2	MYCALEX	DPST (sgle-break)	110 V. A.C.	4.65
RMD-2	MYCALEX	DPST (sgle-break)	6 V. D.C.	4.65

KEYING RELAY

Same specifications as RB Series except that the coil and return spring are faster acting. Follows a "Bug" with ease.

Type	Coil Voltage	Contacts	Net Prices
KBA	110 V. A.C.	SPST (double-break)	$3.30
KBD	6 V. D.C.	SPST (double-break)	3.30
KBA-6	6 V. A.C.	SPST (double-break)	3.30

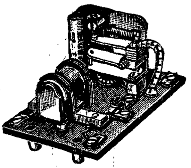
MERCURY-SWITCH RELAY



This type relay is used for controlling inductive loads and may be safely used in the presence of explosive dust, gas and vapor. This unit will safely handle a ¼ H.P. motor or its equivalent. This single pole single throw mercury relay can easily be changed from normally open to normally closed by reversing the mercury tube in the clip. In addition this relay is equipped with SPST double break 3/16″ fine silver contact sets which can be used to electricaly lock this relay, or other applications. Mounts vertically with adjusting screws. Size—3⅛″ x 2⅞″ x 3½″.

Type	Coil Voltage	Net Prices
MSA	110 V. A.C.	$4.50
MSA-6	6 V. A.C.	4.50
MSD-6	6 V. D.C.	4.50

TIME-DELAY RELAY

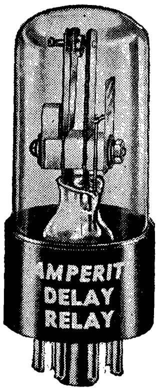


Low cost Thermostatic Time delay relays designed for transmitting and industrial use. Prevents damage to tube filaments due to application of plate current before filaments are thoroughly heated. TD-11 is equipped so that it automatically compensates for ambient temperature changes. Time delay can be adjusted by means of screwdriver. Stock models are 110 V. AC. Size—3⅛″ x 3⅛″ x 2 3/16″.

TD-11 (10-60 Sec.)—With compensator...... Net $6.00

THERMOSTATIC **AMPERITE** DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT

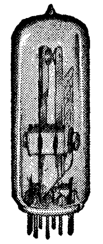


STANDARD

AMPERITE

THERMOSTATIC

DELAY RELAYS



MINIATURE

EXCLUSIVE FEATURES:

- Actuated by a heater.
- Operates on A.C., D.C., or Pulsating Current.
- Hermetically sealed, Amperite Relays are not affected by altitude, moisture or other atmospheric conditions.
- Compact, lightweight and inexpensive.

TECHNICAL CHARACTERISTICS

CIRCUITS: SPST only—Normally open or normally closed.
HEATER WATTAGE: 2 W prox.—Heaters can be operated continuously.
STANDARD CONTACT RATING: 115V.—3A A.C. (or 220V—0.5A A.C.); Maximum voltage between contacts and heater—1500V. D.C.
MINIATURE CONTACT RATING: 115V—2A A.C., other specifications same as standard.
AMBIENT TEMPERATURES: Relays are compensated for temperatures of —55° to +70° C. Tolerances given are for 20° C.
LIFE: With 115 V—1A A.C., non-inductive, at least 500,000 operations.

BASE WIRING:

Standard Radio Octal:
Prongs 2-3-heater;
Prongs 5-7-contacts.

9-Pin Miniature:
Prongs 1-6-heater; Prongs 3-4-1 contact; Prongs 8-9-2nd contact

LIST PRICE: Standard and miniature types listed........$4.00
RESALE: Standard and miniature types listed........$2.40
DELIVERY: The types shown in bold type are most popular, and usually available from stock. Other types delivered in approximately 6 weeks.

Delay-Seconds	Tolerance Seconds	NORMALLY OPEN CONTACTS						NORMALLY CLOSED CONTACTS					
		HEATER VOLTAGES						HEATER VOLTAGES					
		2.5 V.	5.0 V.	6.3 V.	12 V.	26 V. (22-30)	115 V.	2.5 V.	5.0 V.	6.3 V.	12 V.	26 V. (22-30)	115 V.
2	± 1	2N02	5N02	6N02	12N02	26N02	115N02	2C2	5C2	6C2	12C2	26C2	115C2
3	± 1	2N03	5N03	**6N03**	12N03	**26N03**	**115N03**	2C3	5C3	**6C3**	12C3	**26C3**	**115C3**
5	± 2	2N05	5N05	**6N05**	12N05	**26N05**	**115N05**	2C5	5C5	**6C5**	12C5	**26C5**	**115C5**
10	± 3	2N010	5N010	**6N010**	12N010	**26N010**	**115N010**	2C10	5C10	**6C10**	12C10	**26C10**	**115C10**
15	± 3	2N015	5N015	**6N015**	12N015	**26N015**	**115N015**	2C15	5C15	**6C15**	12C15	**26C15**	**115C15**
20	± 4	2N020	5N020	**6N020**	12N020	**26N020**	**115N020**	2C20	5C20	**6C20**	12C20	**26C20**	**115C20**
30	± 8	**2N030**	**5N030**	**6N030**	**12N030**	**26N030**	**115N030**	2C30	5C30	**6C30**	12C30	**26C30**	**115C30**
45	± 10	2N045	5N045	**6N045**	12N045	**26N045**	**115N045**	2C45	5C45	**6C45**	12C45	**26C45**	**115C45**
60	± 12	**2N060**	5N060	**6N060**	12N060	**26N060**	**115N060**	2C60	5C60	**6C60**	12C60	**26C60**	**115C60**
75	± 15	2N075	5N075	**6N075**	12N075	**26N075**	**115N075**	2C75	5C75	**6C75**	12C75	**26C75**	**115C75**
90	± 15	2N090	5N090	**6N090**	12N090	**26N090**	**115N090**	2C90	5C90	**6C90**	12C90	**26C90**	**115C90**
120	± 30	2N0120	5N0120	**6N0120**	12N0120	**26N0120**	**115N0120**	2C120	5C120	**6C120**	12C120	**26C120**	**115C120**

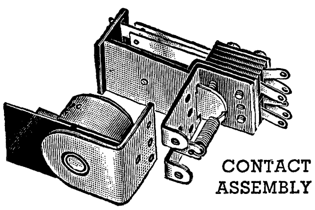
MINIATURE TYPES: Designated by letter T. (e.g. 6N05T) is available in all delays shown above bold dotted line. Delays of 2 to 90 seconds are available in both standard radio octal and 9-Pin miniature. Prices of both standard and miniature type........List—$4.00

Flashers available only in low voltage heaters 6.3 — 26 V. . . . . List — $4.00 each
Flash Rate available — pre-set at factory — 5 to 100 fpm. Dealers Cost — $2.40 each
6.3 and 26 V Heaters only

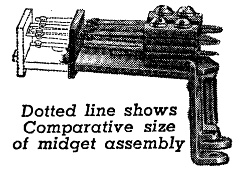
RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS

SERIES 200—INTERCHANGEABLE



Two basic parts—a coil assembly and a contact assembly—comprise this simple, yet versatile, relay. Coil assembly consists of coil and field piece. Contact assembly consists of switch blades, armature, return spring and mounting bracket. The new midget contact assembly, which is interchangeable with the standard assembly, is also available in either single pole double throw, or double pole, double throw. The standard contact assembly is 2⅞" long, 1¾" high, 1" wide. The midget assembly is 1⅝" long, 1½" high, 1" wide. The four contact assemblies can be used with any one of 13 coils to make a required relay. Contact points are rated at 8 amps., 115 volts, 60 cycles AC, non-inductive load.


Dotted line shows Comparative size of midget assembly

MIDGET CONTACT ASSEMBLY

CONTACT SWITCH ASSEMBLIES	List Price ea.
Type 200-1—Stand., with SPDT Contact Ass'bly, 8 Amps.	$2.25
Type 200-2—Stand., with DPDT Contact Ass'bly, 8 Amps.	3.05
Type 200-4—Standard, DPDT, 12.5 Amps.	3.55
Type 200-5—Four Pole, Double Throw, 8 Amps.	5.50
Type 200-M1—Midget, with SPDT Contact Ass'bly, 8 Amps.	2.20
Type 200-M2—Midget, with DPDT Contact Ass'bly, 8 Amps.	2.70
Type 200-M3—Midget, Contact Switch Parts	2.25

AC COILS*	List Price ea.
6 Volt	$2.70
12 Volt	2.70
24 Volt	2.70
115 Volt	3.40

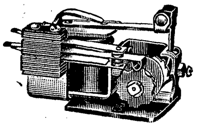
*All AC coils available in 25 and 60 cycles.

DC COILS	List Price ea.
6 Volt	$2.70
12 Volt	2.70
24 Volt	2.70
32 Volt	2.70
110 Volt	3.40
5000-D—For Current Type Operation	3.55

CONTACT PARTS KIT 200-3. Assortment of contact parts to make other switch combinations. May be used with SPDT or DPDT contact assemblies to make 3PST, 4PST, 4PDT combinations, etc. Either contact assembly takes any combination up to four pole double throw. Includes complete assembly and wiring information for all possible combinations. Complete with all necessary hardware. Shipping weight 4 oz.

List Price............**$2.25 ea.**

RC-100 REMOTE LOCKING CONTROL RELAY



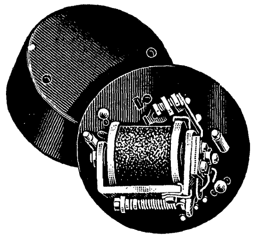
A Guardian development of the momentary impulse locking control relay. The circuit to the coil needs to be energized only long enough to close armature; contacts lock automatically. Each impulse reverses position of contacts. Standard coils operate on 115 volts, 50-60 cycles AC. Coils for other voltage and currents on specification.

Contacts, ¼" fine silver metal rated at 1500 watts at 115 volts, 60 cycle, non-inductive. Can also be used in AC primary circuits of any power supply delivering up to 1 KW. 3" long, 2⅛" wide, 1 17/32" high.

Applications—break-in control and phone to CW switching. Any circuit control where locking circuits are used.

	Shp. Wt.	List Price
RC-100-AR—(4PST)	8 oz.	**$8.70 ea.**
RC-100-BR—(3PDT) (SPDT) (DPST)	8 oz.	**9.05 ea.**

U-100 AND U-200 ADJUSTABLE UNDERLOAD RELAYS



Sensitive, precise, designed and constructed for long, trouble-free service. Relays are encased in attractive black finished metal containers, protecting them from dirt, dust and maladjustment. Normal current through the coil on the U-100 is 300 milliamperes with an adjustable range of 100 to 200 milliamperes DC. Normal current through the coil on the U-200 is 600 milliamperes with an adjustable range of 200 to 400 milliamperes. Oversize contacts of fine silver, rated for the AC primary of any power supply delivering up to 500 watts.

Radio Application—protection of class "B" audio equipment in case of class "C" load failure, also class "C" amplifier in case of excitation failure.

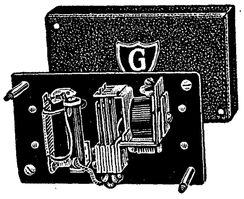
Industrial Application—Any DC circuit where it is desirable to maintain currents above a set value.

U-100 and U-200 are 3 5/16" in diameter, 2¼" high. Shipping weight 14 oz............**List Price $13.00 ea.**

T-100 AND T-110 TIME DELAY RELAYS

Standard coils operate on 115 volts, 50-60 cycles non-inductive AC. Coils available on other voltages on specification. Oversize contacts rated at 1500 watts on 115 volts, 50-60 cycles non-inductive. Can also be used in the AC primary of any power supply delivering up to 1 KW. Adjustable time delay for any period between 10 and 60 seconds.

Applications—Radio. In transmitter circuits to prevent damage of rectifiers and tube filaments by application of plate current before filaments are sufficiently heated. **Industrial.** Any control problem requiring the changing of circuits after a predetermined interval.



GUARDIAN SERIES T-110 TIME DELAY RELAY

T-100—5¼" long, 3" wide, 2¼" high. Shipping weight 1¼ lbs. Laminated construction.

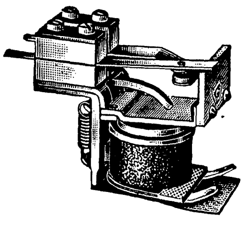
List Price............**$15.65 ea.**

The T-110 is a compact, sturdy, economical time delay relay for use in applications not requiring the capacities of the T-100. Contact capacity — 1250 watts on 115 volt, 60 cycle non-inductive AC. Can also be used in the AC primary circuit of any power supply delivering up to, and including, 1 KW. Adjustable time delay between 10 and 60 seconds.

T-110—5 5/32" long, 3 1/16" wide, 2 7/16" high. Shipping Weight 8 oz............**List Price $15.65 ea.**

RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS



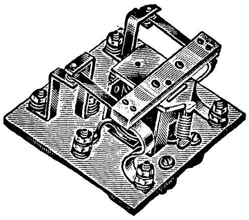
SERIES R-100
H.F. RELAY

HIGH FREQUENCY RELAYS

The Series R-100, R-100B, and A-300 Guardian Relays are primarily designed for high frequency applications. They are low-loss insulated, compact, economical and sturdily constructed. The R-100 and R-100B are AlSiMag insulated, while the A-300 is mounted on a mycalex base with mycalex contact mounting bar.

Radio Applications — Antenna changeover, break-in, high voltage keying, grid controlled rectifier keying, remote control of receiver and transmitter, and other high frequency applications.

Industrial Applications — Oven control, remote motor control, short wave therapy and diathermy, heating equipment.

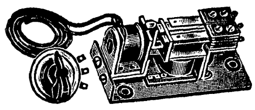


SERIES A-300
H.F. RELAY

	Length	Width	Height	Shpg. Wght. (oz.)	List Price ea.
R-100 —SPST (normally open)	2¾"	1"	2"	6	**$4.80**
R-100-B—SPST (normally closed)	2¾"	1"	2⅜"	6	**4.80**
R-100-C—SPDT	2¾"	1⅛"	2⅜"	6	**5.75**
R-100-G—DPDT	2¾"	1⅞"	2⅜"	6	**10.40**
A-300 —DPDT	3"	3"	2-1/16"	7	**11.00**

X-300-ER
ADJUSTABLE OVERLOAD RELAY

with Electrical Reset

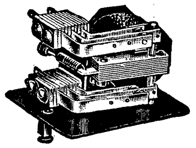


This relay offers positive, precise protection against current surges and continuous overloads — remote panel installation of the control potentiometer simplifying adjustment of relay to operate on any current value from 250 to 750 milliamperes — auxiliary contacts for pilot light indication of "overload" or "clear" position — reset relay can be operated from any convenient point. Voltage drop across overload coil is less than 10 volts at any current value. Insulation between coil and ground rated at 3000 volts.

X-300-ER—4¾" long, 1-15/16" wide, 2" high. Shipping weight 12 oz.

List Price......**$11.20 ea.**

B-100 BREAK-IN RELAY



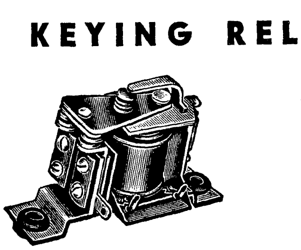
Specially designed for break-in operation on amateur transmitters. Low current drain and compact construction, plus the use of a laminated field piece and armature insuring efficient operation, make the B-100 an ideal relay for this application. Standard coil operates on 115 V., 50-60 cycle AC. Silver contacts rated at 1500 watts, 60 cycles AC non-inductive, and in AC primary circuits of any power supply delivering up to 1 KW.

B-100—2¾" long, 2⅛" high, 2¼" wide. Shipping weight 11 oz.

List Price......**$13.00 ea.**

K-320 KEYING RELAY

A standard coil operates on 6 volts AC. Coils for other voltages on specification at a minimum of 10% additional to list price. Contacts—special over-size silver. Can handle 5,000 watts on 60 cycle non-inductive 115 volts AC and in AC primary circuit of any power supply delivering up to and including 1 KW. Control capacity—up to 2,000 volts with clean make and break.

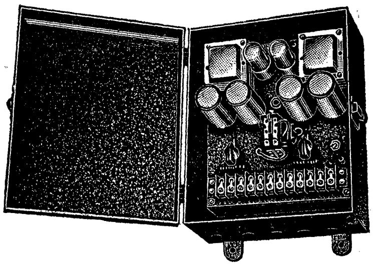


Applications—Control of filament center tap keying of any stage having up to 2,000 volts on plate; primary keying or control of power supplies up to and including 1,000 watts; and grid-controlled rectifier keying of 3,000 volt power supplies.

K-320—3" long, 1½" wide, 1-15/16" high. Shipping weight 4 oz.

List Price......**$5.45 ea.**

ELECTRONICALLY OPERATED RELAYS
MODEL 63



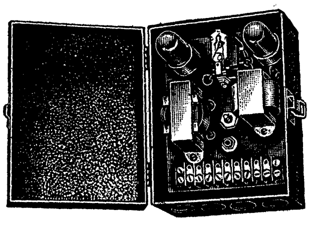
Especially designed for use with a correct combination of the standardized Worner Photo-Cell and Exciter Lamp units shown at right. However, this Electronically Operated Relay will operate also from light sources such as daylight, artificial lights, radiant energy from metallic processing, etc.

Model 63 Electronically Operated Relay is a specially engineered, highest quality unit. It enjoys wide preference as it efficiently meets exacting requirements and replaces the need of costly individually engineered equipment. Technical details on request.

ELECTRONICALLY OPERATED RELAYS

	Price, Each
Model 63, Described Above	**$100.00**
Model 63-A, combines Model 63 and Time Delay Circuit giving delay from zero to 45 seconds	**$150.00**
Model 63-B, same as Model 63 with additional amplification to operate on less active change of light	**$150.00**

ELECTRONICALLY OPERATED RELAY
MODEL 64

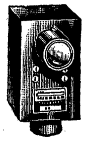


An economical unit for practically any industrial application where cost is a factor. Designed for use with a combination of standardized Worner Photo-Cell and Exciter Lamp units shown at right.

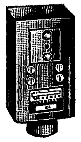
Model 64 Electronically Operated Relay......each $67.50

EXCITER LAMP & PHOTO-CELL RECEIVER UNITS

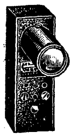
For Use With Models 63, 63-A, 63-B and 64 Electronically Operated Relays



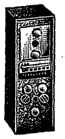
Model 33



Model 23



Model 31



Model 21

The Exciter Lamp unit is designed to project the light beam and the Photo-Cell Receiver is designed to pick up the beam and convert its light into electrical energy through the Electronically Operated Relay unit.

Model 33 Exciter Lamp is "standard" for general applications and is most generally recommended. Its light beam covers a distance from a few inches to 25 feet from Exciter Lamp to Photo-Cell. Heavy duty, cast iron unit with ½-inch conduit fittings. Gray finish.

Model 23 Photo-Cell Receiver is engineered for use with Model 33 Exciter Lamp. Same case specifications.

For use in damp surroundings, Models 33 and 23 can be made water-proof at slight additional cost.

Model 31 Exciter Lamp is "standard" where a lighter weight case is practical. Its light beam covers a distance from a few inches to 25 feet from Exciter Lamp to Photo-Cell. Case is 18 gauge steel, gray wrinkle finish. Has ½-inch knockout.

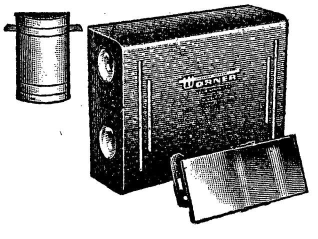
Model 21 Photo-Cell Receiver is engineered for use with Model 31 Exciter Lamp. Same case specifications.

Model No.	Description	Size, Inches	Price, Each
33	Exciter Lamp	4¼ x 2¾ x 2¾	**$13.50**
23	Photo-Cell Receiver	4¼ x 2¾ x 2¾	**19.50**
31	Exciter Lamp	6⅝ x 2 x 1¾	**11.00**
21	Photo-Cell Receiver	6⅝ x 2 x 1¾	**17.00**

FOTOLECTRIC ANNOUNCER SET

Automatically Announces the Entrance or Passing of Any Person

COMPLETE WITH MIRROR AND CHIME

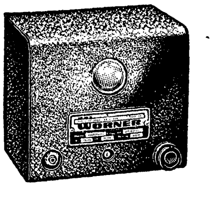


The Fotolectric Announcer is a complete three-piece set. It is designed to project a beam of light across any entrance to any room or building. Breaking of this light beam by person entering activates a pleasant chime, automatically announcing the entrant. Chime can be located wherever signal is desired.

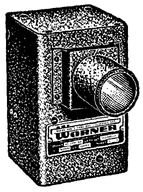
The unit has efficient grid controlled rectifier circuit which insures maximum stability. The Unit combines Exciter Lamp and sensitive Photo-Cell in metal case, size 8¼" x 6½" x 2¾", beautifully finished in gray hammerloid. Bulb has long lamp-life rating of 2000 hours. Operates on 110-120V; 50-60 cycle, A.C.

Model 61 Fotolectric Announcer, three-piece set including Unit, Mirror and Chime..........Set, each **$32.00**

MODEL 62 R & L ELECTRONICALLY OPERATED RELAY AND EXCITER LAMP SET



Model 62-R Electronically Operated Relay



Model 62-L Exciter Lamp

This "two-unit" set has specially designed Exciter Lamp Unit and an Electronically Operated Relay unit that includes the Photo-Cell Receiver, Relay and other electrical components. This combination has proved efficient for countless simple applications for distances from a few inches to 75 feet or where Relay is not required to operate in excess of 300 times a minute. Supervises efficiently on simple applications such as: Counting or sorting large objects; limit switches; start and stop operations; opening doors, etc.

Model 62 R & L "Two-Unit Set"............per set	**$85.00**
Model 62-R Electronically Operated Relay..each	**69.75**
Model 62-L Exciter Lamp..............each	**21.75**

Prices slightly higher West of Rockies

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

FOTOLECTRIC BURGLAR ALARM SYSTEMS

An invisible light beam is projected by the Exciter Lamp to the Photo-cell contained in the Electronically Operated Relay. The two units constitute the "Fotolectric Set." Sets for 150', 250', and 500' have unwanted light rejector which increases day-light range. Ranges listed are for infra-red light.

MODEL 9000 SERIES The Worner Master Control System consists of a Master Control Panel used in combination with 1, 2, 3, or 4 Fotolectric Sets. Operates alarms the user installs. May be used with foil systems, etc. Sets off alarm if wiring of Fotolectric Set is tampered with. Relays controlled by a key-switch. For 110-120V. Panels are supplied with plate relays for the number of Fotolectric Sets ordered. Should Fotolectric Sets be added later, plate relays are supplied with Fotolectric Sets ordered.

Model 9000-R Master Control Panel prevents false alarm if power fluctuates 5 volts or more. If power fails completely, the unit automatically resets supervision when power is restored. each **$74.00**

Model 9000 Master Control Panel is equipped to prevent false alarms when power fails completely ....each **$54.00**

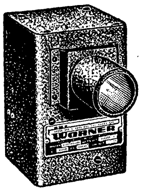
Model No.	Fotolectric Set	Range	Per Set
9100	Master Trespass Trap........	100 ft.	$ 84.00
9150	Master Trespass Trap........	150 ft.	108.00
9250	Master Trespass Trap........	250 ft.	145.00
9500	Master Trespass Trap........	500 ft.	225.00

MODEL 7000 SERIES operates with burglar alarm company's central office control, police signal or local alarm. The Relay may be connected either in series or parallel to meet circuit requirements. One or more Fotolectric Sets can be used and can be operated by an existing control panel. Can be used with foil systems, etc. For 110-120V or 24V.

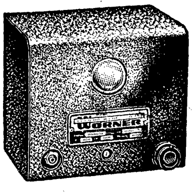
Model No.	Fotolectric Set	Range	Per Set
7100	Remote Cont. Trespass Trap..	100 ft.	$ 84.00
7150	Remote Cont. Trespass Trap..	150 ft.	108.00
7250	Remote Cont. Trespass Trap..	250 ft.	145.00
7500	Remote Cont. Trespass Trap..	500 ft.	225.00

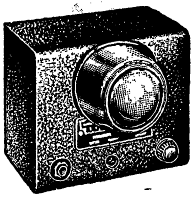
MODEL 5000 SERIES for 100' range and 150' range for interior use where a single beam is ample protection. Not intended for use with foil systems, etc. The Electronically Operated Relays of this series are equipped with lock and key. For 110V.

Model No.	Fotolectric Set	Range	Per Set
5100	Single Beam Trespass Trap....	100 ft.	$ 90.00
5150	Single Beam Trespass Trap....	150 ft.	114.00

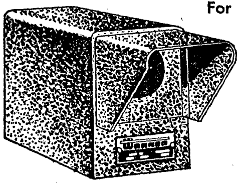


Exciter Lamp





Electronically Operated Relays
For 100' Range For 150' Range



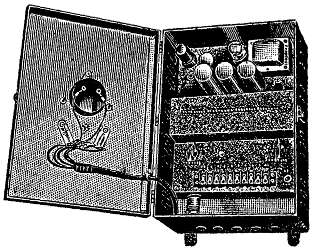
Exciter Lamps and Electronically Operated Relays for 250' and 500' ranges are externally the same and are weatherproof.

FOTOLECTRIC COMBUSTION SUPERVISOR

A three-piece set consisting of Exciter Lamp, Photo-cell Receiver and a choice of three Electronically Operated Relay units. Operates on the smoke detection principle. Dependably sets into operation the controls that maintain combustion efficiency. Fotolectric units are mounted opposite each other on the boiler breeching, so that the beam of light traverses the flow of smoke. A predetermined increase in density of smoke operates whatever alarm or automatic control equipment is used.

Electronically Operated Relay and Control Cabinets available in three models:

MODEL No. 71A — For use where no time delay is necessary. Usually used as an alarm device, and to actuate automatic combustion control equipment.



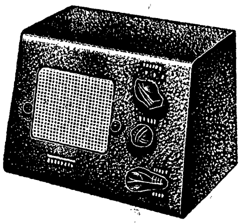
MODEL No. 71B — Equipped with input time delay circuit to prevent needless operation of control equipment from voltage drop or short puffs of smoke.

MODEL No. 71C — Same as Model 71B plus additional time delay holding circuit to continue operation of combustion control equipment for a predetermined period of time. Prevents cycling of equipment.

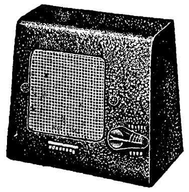
FOTOLECTRIC FIRE PROTECTION

The Worner Fan Motor Stop installed on ventilating ducts detects smoke, gives alarm, stops fan to prevent fan-driven fire to a succession of outbreaks. Approved by Underwriters Laboratories. For full details, write for Bulletin 650.

WORNER COMMUNICATING SYSTEMS



Models P-359, P-353



Model P-360

All WORNER units operate efficiently as far as 2000 feet apart. Persons at or near Sub-stations when called may answer without leaving their work, from as far away as 25 feet. "Silent feature" shuts out noise in vicinity at Station. 110 volt to 120 volt, A.C. or D.C.

MODEL P-359 Selective Master Station. Handles 1 to 5 Sub-stations. Has 3-tube amplifier. 1 watt output. Contains 5-inch speaker for maximum input without talking directly into unit. All-metal cabinet; size 9 x 6¼ x 6 inches. Finished in hammered walnut lacquer finish. ....each **$34.75**

MODEL P-353 Combination Master Station. 2 to 5 units may be used, in any combination of Masters to Masters, or Masters to Sub-stations. Contains 3-tube amplifier. ....each **$47.50**

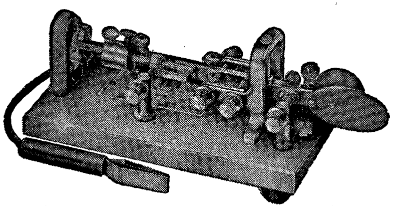
MODEL P-360 Sub-station. Has 5-inch speaker. Talk-listen switch used by Sub to originate call; not used after Master answers. All-metal cabinet; size: 7¼ x 4 x 6 inches; finished in attractive hammered walnut lacquer finish. ....each **$11.50**

Prices slightly higher West of Rockies

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

The Vibroplex

Telegraph & Wireless Transmitting Machines



Your name engraved on base, $1.50
Additional engraving, 15c per letter

New SUPER DE LUXE "PRESENTATION" VIBROPLEX

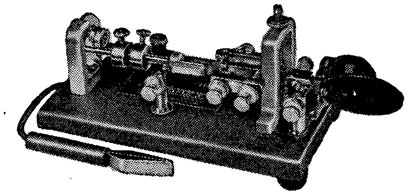
The Finest Bug Ever Built! 24K Gold-Plated Base Top, Patented Jewel Movement and Super-Speed Control!

New patented adjustable main spring affords wider range of speed than ever obtained before in semi-automatic transmitting key. Beautifully-designed with polished chromium precisioned machined parts mounted on a 24K gold-plated base top with colorful red switch knob, finger and thumb piece. This new Super-DeLuxe "Presentation" Vibroplex key at $29.95 affords a life-time of sending enjoyment. Harder than metal, the jewels in this key reduce friction, maintain smoother, easier operation and prolong life.

Amateur Net Price.. **$29.95**

THE *Improved "ORIGINAL"* VIBROPLEX

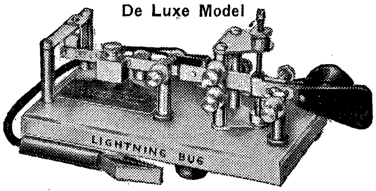
Suitable for All Classes of Transmitting work Where Speed and Perfect Morse Are Prime Essentials



This great new Vibroplex is a smooth and easy working BUG. It has won fame on land and sea for its clarity, precision and ease of manipulation. Can be slowed down to 10 words per minute or less or geared to as high rate of speed as desired. Maintains the same high quality signal at whatever speed, insuring easy reception under all conditions. Weight, 3 lbs. 8 oz. Complete with cord and wedge.

Standard—Chromium top parts, black base. Amateur Net Price........................ **$17.95**
DeLuxe—Chromium base and top parts, with jeweled movement. Amateur Net Price **22.50**

De Luxe Model

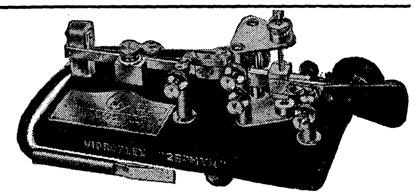


THE "LIGHTNING BUG" VIBROPLEX

High Quality Signals at All Speeds

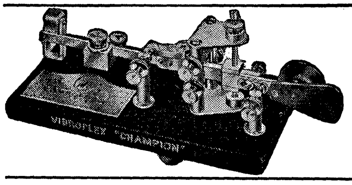
Flat pendulum model. Complete with cord and wedge. Weight 3 lbs. 8 oz.
Standard—Polished Chromium top parts, black base.
Amateur Net Price.. **$15.95**
DeLuxe—Polished Chromium base and top parts, with jeweled movement.
Amateur Net Price.. **21.50**

THE "ZEPHYR" VIBROPLEX



⅛" size contact points. Slightly smaller base. Weight 3 lbs. 2 oz. Cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price.. **$13.95**

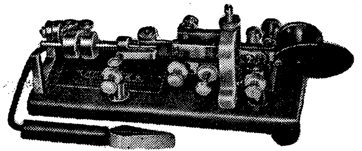


THE "CHAMPION" VIBROPLEX

Weight 3 lbs. 8 oz. Without circuit closer, cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price.. **$12.95**

THE "BLUE RACER" VIBROPLEX



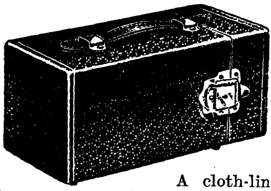
Small and Compact

Weight, 2 lbs. 8 ozs. Complete with cord and wedge.
Standard—Finish Chromium top parts, black base . . . Amateur Net Price.................. **$17.95**
DeLuxe—Polished Chromium base and top parts, with jeweled movement. Amateur Net Price.. **22.50**

NOTE: All Machines Above Available in Left Hand Models $1.00 Extra.

VIBROPLEX CARRYING CASE

Keeps the Machine Free From Dust, Dirt & Moisture — Insures Safe-keeping when Not in Use.



A cloth-lined case, finished in handsome simulated black morocco. Has lock and key.

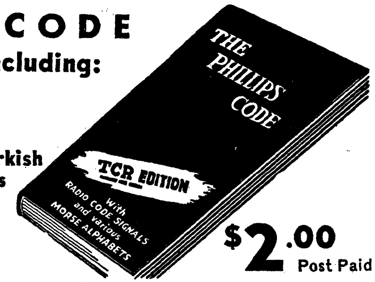
PRICE.. **$5.75**

Announcing the new edition of the

PHILLIPS CODE

SPECIAL EDITION Including:

- **Radio Code Signals**
- **International Morse**
- **American Morse**
- **Russian, Greek, Arabic, Turkish**
- **and Japanese Morse Codes**
- **World Time Chart**
- **United States Time Chart**
- **Commercial "Z" Code**
- **Aeronautical "Q" Code**



$2.00 Post Paid

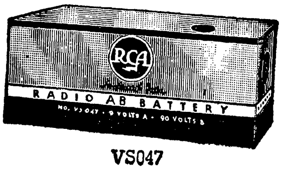
• • • • • • • RCA BATTERIES

FOR RADIOS • FLASHLIGHTS • INDUSTRIAL APPLICATIONS

SERVICING 99% OF PORTABLE AND FARM RADIO REQUIREMENTS.

RCA
EXTRA LISTENING HOURS
RADIO AB BATTERY
No. VS019 • 9 VOLTS A 90 VOLTS B

VS019



VS047

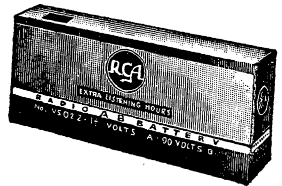
RCA
RADIO A BATTERY
No. VS067 • 4½ VOLTS

VS067

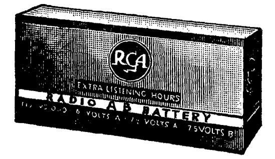
RCA
RADIO B BATTERY
No. VS013 • 45 VOLTS

VS013

RCA RADIO TRADE DISTRIBUTION MEANS REPEAT RADIO BATTERY BUSINESS FOR RADIO DEALERS AND SERVICEMEN.



VS022



VS050

THE RCA MONOGRAM ON AN ATTRACTIVE PACKAGE ASSURES CUSTOMER ACCEPTANCE.

RCA
IGNITION DRY CELL

VS006S

RCA
EXTRA LISTENING HOURS
No. VS028

VS028

PORTABLE "AB" PACKS

RCA Type	Volts	Interchangeable with			Unit Pkg.		Max. Overall Dimen.			Inv. Control Guide	Sugg'd Price Each	
		Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.		List	Dealer
VS019	7½-9-90	753	401	F6A60	1	6	9 3/16	2 23/32	4⅜	H	$5.65	$3.96
VS037	1½-90	—	417	6FA60	1	5	11⅞	1½	6 7/16	H	5.95	4.17
VS038	7½-63	—	408	G5A42	1	5	8⅝	2¾	4 1/16	L	4.50	3.15
▲VS041	1½-67½-7½	—	419	—	1	4	4 5/16	3¾	6⅜	L	5.50	3.85
VS043	1½-90	—	409	5DA60	1	5	5½	2 11/16	7⅛	L	5.50	3.85
VS046	6-75	Zenith Z675	422	G4B50	1	6	12⅝	2¾	4⅛	L	5.65	3.94
VS047	9-90	Zenith Z985	400	G6B60	1	8	13⅝	2¾	4 9/16	M	6.25	4.38
VS048	6-90	Zenith Z659	418	F4B60	1	7	10¾	2¾	5	L	5.95	4.17
VS050	6-7½-75	755	403	T5Z50	1	4	8 9/16	2 7/16	3 11/16	H	5.25	3.68
VS052	1½-61½	Philco P41A4G	423	4GA41	1	4	9⅜	2 11/16	3 7/16	L	4.50	3.15
VS053	1½-63	Philco P41A4FL	407	4GA42	1	4	9⅛	2	4¾	L	4.50	3.15
VS054	1½-90	—	410	6TA60	1	5	10	2 5/16	4 13/16	L	5.75	4.02
VS057W	7½-9-90	756	405	—	1	4	8 11/16	2 3/16	3¾	H	5.75	4.03
VS058	9-90	757	406	F6A60P	1	5	9½	2 23/32	4⅜	M	5.95	4.17
VS064	1½-90	Philco P364	425	4TZ60	1	4	7¾	2 3/16	3⅝	M	5.25	3.68

PORTABLE "A" BATTERIES

RCA Type	Volts	Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS002	Use Replacement Type VS067											
VS003	7½	687	22	G5	5	11	3⅞	2⅝	4 9/16	L	1.25	.88
VS004	1½	742	4	4F	6	8	2⅝	2⅝	4 1/16	H	1.10	.77
VS005	1½	—	12	4FL	5	7	3 13/16	1⅜	5⅝	L	1.00	.70
VS009	6	744	6	F4P1	6	8	2⅝	2⅝	4¼	L	1.10	.77
VS010	6	718	1	2F4	5	14	3⅞	2 13/16	5½	L	2.00	1.40
VS011	6	747	16	2F4L	6	17	3⅞	1 7/16	10¾	L	2.00	1.40
⧫VS035	1½	935	14	1	25	2	—	1 1/32	1 15/16	H	.125	.08125
⧫VS036	1½	950	13	2R	48	10	—	1 5/16	2⅜	H	.125	.08125
VS065	7½	717	9	C5	12	6	2 5/16	2	3 1/16	M	1.00	.70
VS067	4½	736	3	F3	6	6	4	1⅜	4⅛	H	.85	.60
VS068	6	724	2	Z4	12	3	1 5/32	1 5/32	2⅜	M	.60	.42
VS069	1½	720	18	2D	6	3	2 9/16	1 5/16	2 27/32	M	.55	.39
VS072	4½	726	19	D3	12	9	3 15/16	1 5/16	2 15/16	M	.70	.49
VS129	7½	—	8	B5	12	6	4 1/16	15/16	3	M	1.10	.77
⧫VS236	1½	964	20	210	12	5	—	1⅜	4 5/32	H	.30	.21

PORTABLE "B" BATTERIES

RCA Type	Volts	Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS012	Use Replacement Type VS013											
VS013	45	482	202	M30	6	11	3 9/16	1 13/16	5½	H	2.25	1.58
VS014	45	—	206	A30	6	10	3 7/16	2¼	4 9/16	M	2.25	1.58
VS015	22½-45	738	205	Z30	10	16	3	2¼	4	M	2.85	2.00
VS016	67½	467	200	XX45	6	5	2 23/32	1 11/32	3¾	H	2.50	1.75
VS055	45	455	201	XX30	6	3	2 21/32	31/32	3 11/16	M	1.95	1.32
VS090	90	490	204	N60	6	6	3 11/16	1⅜	3¾	H	3.25	2.28
VS216	67½	477	211	P-45	6	5	1 15/16	1	5 17/32	H	3.25	2.30
VS217	75	Philco P144	212	—	6	6	1⅞	1 15/32	6½		2.95	2.07

FARM "AB" BATTERY PACKS

RCA Type	Volts	Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS022	1½-90	759	413	17GD60	1	20	15¾	4¼	6 13/16	H	6.95	5.21
VS045	1½-90	Zenith Z28	426	18GD60	1	20	L	6.95	5.21	12 9/16	5⅜	6 13/16
VS119	7½-9-90	Philco P-326	415	S6D60	1	21	L	8.29	6.20	8¼	4½	13⅞

FARM "B" BATTERIES

RCA Type	Volts	Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS026	22½-45	487	—	2308PI	6	49	8 1/16	3 3/16	7 3/16	M	3.15	2.21

SMALL "A" AND "B" BATTERIES FOR RADIO AND HEARING AID APPLICATIONS

RCA Type	Volts	Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
**VS070	1½	Zenith Z1-S	23	TE	20	8	—	1 5/16	4 1/16	M	.30	.20
VS084	22½	412	215	U15	20	2	1 1/64	⅝	1 25/32	L	1.15	.80
VS085	30	413	209	U20	20	2	1 1/64	⅝	2 17/32	L	1.40	.96

FLASHLIGHT BATTERIES

RCA Type	Volts	Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS034	1½ (Penlite)	915	15	Z	120	4	—	37/64	2	M	.10	.065
⧫VS035	1½ (Baby)	935	14	1	25	2	—	1 1/32	1 15/16	M	.125	.08125
⧫VS036	1½	950	13	2R	48	10	—	1 5/16	2⅜	H	.125	.08125
VS073	1½ (Tinilite)	—	910	—	24	½	—	7/16	1 5/32	L	.075	.05

BATTERIES FOR INDUSTRIAL AND ELECTRONIC APPLICATIONS

RCA Type	Volts	Eveready	NEDA	Burgess	Qty.	Approx. Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS006C	1½	—	914	—	25	55	—	2⅝	6⅝	L	.80	.53
VS006S	1½ (Ignition)	6 IGN	905	6 IGN	12	26	—	2⅝	6 9/16	H	.80	.53
VS028	4½	781	714	5360	10	4	2⅜	13/16	2⅞	H	.55	.39
VS029	1½-3-4½-6-7½	773	713	5540	10	7	3 15/16	⅞	3⅛	H	1.05	.74
VS030	3-4½	X771	718	2370PI	15	11	4 1/16	1 7/16	3 1/16	L	.90	.62
VS031	3-4½-16½-22½	768	721	5156PI	5	8	4	2½	3	L	2.05	1.43
VS039	6 (Hotshot)	1462	902	4F4H	4	41	10⅜	2⅞	7⅜	M	3.50	2.35
VS040C	6 (Lantern)	409	908	F4H	10	16	2 11/16	2 11/16	4 5/16	M	.80	.54
VS040S	6 (Lantern)	—	915	F4BP	10	16	2 11/16	2 11/16	4 3/16	H	.80	.54
VS093	300	493	722	U200	1	1	2⅝	2 5/32	3 13/16	M	11.00	7.70
VS100	3	—	701	F2BP	10	8	2⅝	1⅜	4 11/16	M	.80	.56
VS101	1½	—	700	2FPB	5	4	2⅝	1⅜	4⅜	L	.80	.56
VS102	22½	763	710	4156	10	13	3⅜	2⅛	2¾	H	1.95	1.36
VS106	1½	735	900	4FH	10	13	2 11/16	2 11/16	4 3/16	H	.75	.52
VS112	22½-45	762S	709	5308	5	17	4⅛	2⅝	5 7/16	H	2.58	1.80
VS114	22½-45	—	711	Z30NX	10	17	2 31/32	1 27/32	4 15/16	H	2.80	1.95
▲VS126	22½-45	—	717	2308SC	5	43	8⅛	3¼	7 9/16	L	3.35	2.30
●VS127W	22½-45	—	716	10308SC	5	54	8	4	7⅜	M	4.25	3.10
VS130	1½-3-4½	761T	712	2370ST	10	10	3 15/16	1⅜	3	M	.95	.63
VS131	3-4½-6-9-10½-16½-22½	778	708	5156SC	5	9	4⅛	2½	3 5/16	M	2.05	1.45
▲VS132	9	—	909	D6BP	5	8	4 1/16	2 13/16	3	L	1.90	1.33
▲VS133	4½	703	706	532	10	3	2⅜	13/16	3 1/16	L	.45	.31
▲VS136	3	—	703	2F2H	5	8	2 11/16	2 11/16	4 3/16	L	1.00	.67
VS138	3	—	901	4F2H	5	14	3⅞	2 11/16	5⅞	L	1.45	1.00
VS139	7½	1562	903	4F5H	1	8	7 13/16	4	6 5/16	M	4.10	2.90
VS140	9	1662	904	4F6H	1	10	8½	4 1/16	6 7/16	L	4.85	3.40
VS157	22½-45	—	715	21308SC	5	67	8⅛	4⅝	7 11/16	L	4.50	3.35

** Exact equivalent of Ray-O-Vac PFI; slightly larger than Burgess TE and Eveready 1052P.

● Wax Coated. ▲Non-warehouse types—shipping time 2-4 weeks. ⧫Sealed-in-Steel.

Terms and conditions of sale and general information are set forth in our current applicable booklet covering sale of these products.

Inventory Control Guide: H—High-volume types. M—Medium-volume types. L—Low-volume types.

Forward all orders to your local RCA BATTERY Distributor.

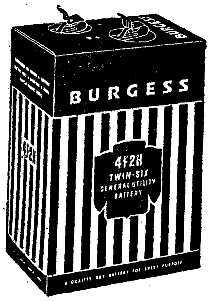
Net

BURGESS BATTERIES

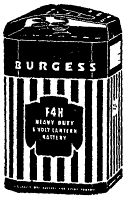
AMERICA'S MOST COMPLETE LINE OF DRY BATTERIES

BURGESS
4FH
LITTLE-SIX
GENERAL UTILITY BATTERY

4FH



4F2H



F4H

BURGESS
CHROME PROTECTED
FRESH POWER
GUARANTEED

No. 2

BURGESS
CHROME PROTECTED
FRESH POWER
GUARANTEED

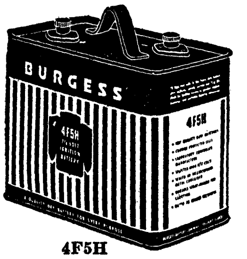
No. 1

NO. Z
CHROME PROTECTED

Z

NO. 7
CHROME PROTECTED

No. 7



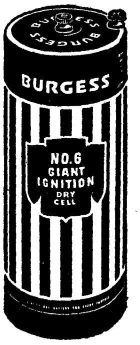
4F5H

BURGESS FLASHLIGHT & LANTERN BATTERIES

No. 1.	1½ volts.	Size, 1" x $1\frac{15}{16}$".	Standard package 12	List price, $.125
No. 2.	1½ volts.	Size, $1\frac{21}{64}$" x 2⅜".	Standard package 48	List price, .125
No. Z.	1½ volts.	Size, $\frac{35}{64}$" x $1\frac{31}{32}$".	Standard package 24	List price, .10
No. 7.	1½ volts.	Size, $\frac{13}{32}$" x 1¾".	Standard package 24	List price, .10
F4H.	6 volts.	Size, 2⅝" x 2⅝" x $3\frac{15}{16}$".	Standard package 12	List price, .80
4F2H.	3 volts.	Size, $3\frac{29}{32}$" x $2\frac{11}{16}$" x $5\frac{13}{32}$".	Standard package 8	List price, 1.45

BURGESS IGNITION BATTERIES

4FH.	1½ volts.	Size, $2\frac{9}{16}$"x$2\frac{9}{16}$"x4".	Standard package 12	List price, .80
4F2H.	3 volts.	Size, $3\frac{29}{32}$"x $2\frac{11}{16}$"x $5\frac{13}{32}$".	Standard package 8	List price, 1.45
4F4H.	6 volts.	Size, 8¼"x2¾"x$5\frac{13}{16}$"x6⅜".	Standard package 6.	List price, 3.40
4F5H.	7½ volts.	Size, $7\frac{3}{16}$"x$3\frac{31}{32}$"x$5\frac{13}{16}$"x6⅜".	Standard package 4	List price, 4.15
4F6H.	9 volts.	Size, 8½"x$3\frac{31}{32}$"x$5\frac{13}{16}$"x6⅜".	Standard package 4.	List Price, 4.85



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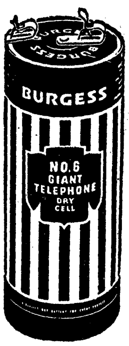


6 Tel.

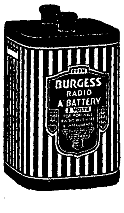
BURGESS NO. 6 LINE

No. 6 R. R. and Ind.	1½ volts.	Size 2½" Diam. 6⅝".	Standard package 12	List price, .85
No. 6 IGN.	1½ volts.	Size 2½" Diam. 6⅝".	Standard package 12	List price, .80
No. 6 TEL.	1½ volts.	Size 2½" Diam. 6⅝".	Standard package 12	List price, .75
S 461.	6 volts.	Size 10½"x 2¾"x$7\frac{13}{32}$".	Standard package 6	List price, 3.50

FOR INDUSTRIAL APPLICATIONS

BURGESS "A" BATTERIES

No. 2F2H.	3 volts.	Size, $2\frac{9}{16}$"x $2\frac{9}{16}$"x 4"x 4¾".	Standard package 5	List price, 1.00
No. 2FBP.	1½ volts.	Size, 2⅝"x $1\frac{11}{32}$"x $3\frac{31}{32}$"x$4\frac{11}{32}$".	Standard package 5	List price, .83
No. 4FH.	1½ volts.	Size $2\frac{9}{16}$"x $2\frac{9}{16}$"x $3\frac{15}{16}$"x 4¼"	Standard package 12	List price, .80
No. F2BP.	3 volts.	Size, 2⅝"x $1\frac{11}{32}$"x 4"x $4\frac{7}{16}$".	Standard package 5.	List price, .83
No. F4BP.	6 volts.	Size, $2\frac{9}{16}$"x $2\frac{9}{16}$"x $3\frac{15}{16}$"x $4\frac{3}{16}$".	Standard package 5	List price, .80
5R	1½ volts.	Size $\frac{49}{64}$" (Diam.) $2\frac{15}{64}$".	Standard Package 12	List price, .125
8R	1½ volts.	Size $1\frac{3}{32}$" (Diam.) $3\frac{15}{16}$".	Standard package 12	List price, .30
9R	1½ volts.	Size $\frac{35}{64}$" (Diam.) $1\frac{63}{64}$".	Standard package 12	List price, .15
2Z	1½ volts.	Size 1⅛"x$\frac{19}{32}$"x$1\frac{63}{64}$".	Standard package 10	List price, .30
422	3 volts.	Size $1\frac{11}{32}$"x$\frac{23}{32}$"x$2\frac{5}{16}$".	Standard package 10	List price, .40
432	4½ volts.	Size $1\frac{31}{32}$"x$\frac{21}{32}$"x2¼".	Standard package 10	List price .50
532	4½ volts.	Size $2\frac{15}{32}$"x$\frac{13}{16}$"x$2\frac{23}{32}$".	Standard package 10	List price .50



2F2H

BURGESS "B" BATTERIES

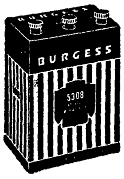
No. W30.	45 volts.	Size, $2\frac{31}{32}$"x$1\frac{7}{32}$"x3¾"x$4\frac{3}{16}$".	Standard package 6	List price, 3.00
W30PBX.	45 volts.	Size, $2\frac{15}{16}$"x$1\frac{7}{32}$"x$3\frac{19}{32}$"x4⅛".	Standard package 6	List price, 2.73
No. Z30NX.	45 volts.	Size, $2\frac{21}{32}$"x $1\frac{13}{16}$"x $4\frac{17}{32}$"x 5".	Standard package 5	List price, 2.90
K10	15 volts.	Size $1\frac{17}{32}$"x⅞"x1¼".	Standard package 20	List price, 1.00
K15	22½ volts.	Size $\frac{29}{32}$"x⅞"x1¼".	Standard package 20	List price, 1.50
K20	30 volts.	Size 1¼"x$\frac{15}{16}$"x$2\frac{23}{32}$".	Standard package 20	List price 1.75
U10	15 volts.	Size $\frac{31}{32}$"x$\frac{9}{16}$"x$1\frac{7}{16}$".	Standard package 20	List price, .95
U15	22½ volts.	Size $\frac{31}{32}$"x$\frac{9}{16}$"x$1\frac{31}{32}$".	Standard package 20	List price 1.15
U20	30 volts.	Size $\frac{31}{32}$"x$\frac{9}{16}$"x$2\frac{17}{32}$".	Standard package 20	List price 1.40
XX15	22½ volts.	Size $1\frac{11}{32}$"x$\frac{15}{16}$"x3⅞".	Standard package 24	List price 1.65
XX22	33 volts	Size $2\frac{17}{32}$"x$\frac{31}{32}$"x3⅛".	Standard package 10	List price, 1.85
XX30PI	45 volts.	Size $2\frac{17}{32}$"x$\frac{31}{32}$"x$4\frac{1}{32}$".	Standard package 24	List price 2.05

(C Batteries Continued on Next Page)

A QUALITY DRY BATTERY FOR EVERY PURPOSE

BURGESS BATTERIES

AMERICA'S MOST COMPLETE LINE OF DRY BATTERIES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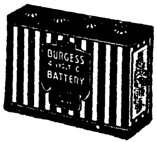
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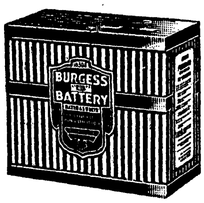
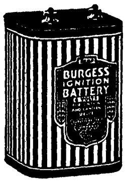

10308

2308

FOR INDUSTRIAL APPLICATIONS

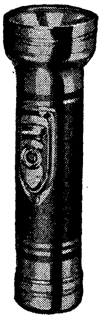
BURGESS "C" BATTERIES

No. A8BP. 12 volts. Size, 2¾"x $1\frac{23}{64}$"x $2\frac{7}{16}$"x 2¾"Standard package 3..List price, $2.25
No. B2BP. 3 volts. Size, $1\frac{13}{32}$"x $\frac{25}{32}$"x $2\frac{21}{32}$"x $2\frac{23}{32}$". Standard package 6..List price, .95
No. W5BP. 7½ volts. Size, $\frac{23}{32}$"x $2\frac{21}{32}$"x 1⅜"x $1\frac{11}{16}$".Standard package 6..List price, 1.37


F2BP

BURGESS RADIO "B" BATTERIES

No. 10308. 45 volts. Size, $8\frac{1}{32}$"x $4\frac{1}{32}$"x $7\frac{1}{16}$". Standard package 6............List price, $4.23
No. 21308. 45 volts. Size, 8⅛"x $4\frac{15}{32}$"x $7\frac{11}{32}$". Standard package 6...........List price, 4.39
No. 2308. 45 volts. Size, $8\frac{1}{32}$"x $2\frac{29}{32}$"x $7\frac{1}{16}$". Standard package 6.......... List price, 3.10
No. 5156. 22½ volts. Size, $4\frac{1}{32}$"x$2\frac{7}{16}$"x$2\frac{23}{32}$"x3¼".Standard package 10..List price, 2.06
No. 5308. 45 volts. Size, 4"x $2\frac{17}{32}$"x $5\frac{1}{16}$"x $5\frac{9}{16}$".Standard package 5...List price, 2.57

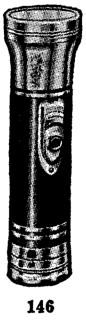

346

BURGESS RADIO "B" & "C" BATTERIES

No. 2156. 22½ volts. Size, $6\frac{21}{32}$"x $4\frac{1}{16}$"x $2\frac{21}{32}$"x $3\frac{17}{32}$". Standard package 6..List price, 2.62
No. 2370. 4½ volts. Size, $4\frac{1}{32}$"x $1\frac{13}{32}$"x $2\frac{15}{16}$"x $3\frac{5}{16}$".Standard package 5.List price, .88
No. 4156. 22½ volts. Size, $3\frac{15}{32}$"x $2\frac{1}{16}$"x $2\frac{19}{32}$"x 2⅞".Standard package 5.List price, 1.97
No. 5360. 4½ volts. Size, 2⅜"x $\frac{27}{32}$"x 2⅝"x $2\frac{15}{16}$".Standard package 5...List price, .57
No. 5540. 7½ volts. Size, 3⅞"x $\frac{27}{32}$"x $2\frac{11}{16}$"x $3\frac{1}{32}$".Standard package 5...List price, .99

BURGESS FARM RADIO "A" BATTERIES

No. 20F. 1½ volts. Size, 7⅝"x $2\frac{19}{32}$"x $6\frac{15}{16}$". Standard package 3..........List price, 4.25
No. 20F2. 3 volts. Size, 11⅜"x $3\frac{15}{16}$"x 6⅛". Standard package 1.........List price, 6.07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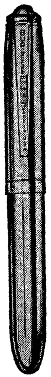

152

BURGESS QUALITY FLASHLIGHT CASES

146. 2 cell prefocused Maroon & Chrome. Standard package 6...........................List price, $1.65
152. New slim Penlight Chrome. Standard package 12...............................List price, $ .80
248. 5 cell Prefocused Chrome. Standard package 1..List price, $3.95
250. Rangefinder 2 cell focusing Chrome. Standard package 4.......................List price, $2.25
251. Zebra Light with cells. Standard package 12......................................List price, $ .79
252. 3 cell prefocused Maroon & Chrome. Standard package 1...............List price, $2.59
346. 2 cell Baby Prefocused Maroon & Chrome. Standard package 6........ List price, $1.50
350. 2 cell Tough Industrial Light. Standard package 6...................................List price $1.90

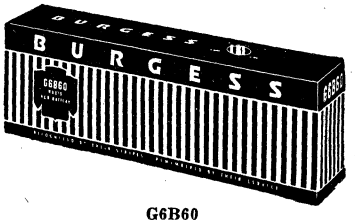
251

A QUALITY DRY BATTERY FOR EVERY PURPOSE

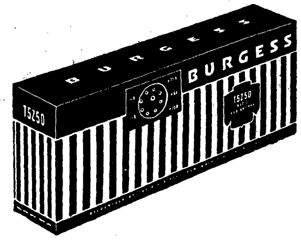
SUBJECT TO TRADE DISCOUNT

BURGESS BATTERIES

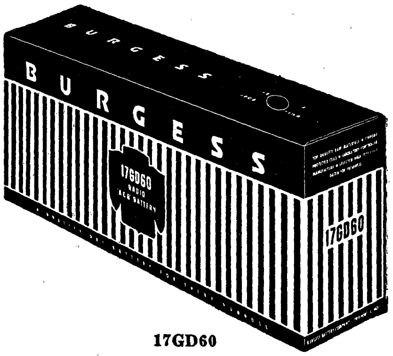
AMERICA'S MOST COMPLETE LINE OF DRY BATTERIES


BURGESS
G6B60

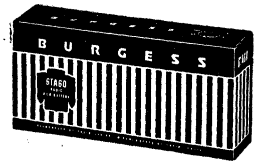
G6B60


BURGESS
T5Z50

T5Z50


BURGESS
17GD60

17GD60


BURGESS
6TA60

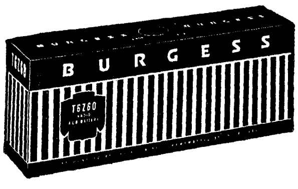
6TA60

BURGESS FARM "A & B" BATTERIES

No. 17GD60. 1½ volt "A", 90 volt "B". Size, 15⅝"x 4 5/16"x 7". Standard package 1. List price, **$6.95**

No. 4SD60. 1½ volt "A", 90 volt "B". Size 10 11/16"x 4 5/16"x 6 13/16". Standard package 1. List price, **$6.95**

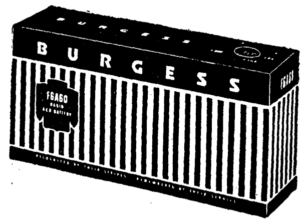
No. S6D60. 7½ volt "A", 90 volt "B". Size 9⅞"x 4⅛"x 7 3/16". Standard package 1. List price, **$8.29**


BURGESS
T6Z60

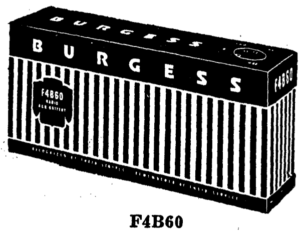
T6Z60

BURGESS PORTABLE "A" & "B" BATTERIES

No.	Voltage	Size	List Price
2TXX40.	1½A, 60B	2⅜"x 1 5/16"x 7⅛"	3.30
4GA42.	1½A, 63B	9"x 2 1/16"x 4 11/16"	4.50
6TA60.	1½A, 90B	9 15/16"x 2 7/32"x 4 13/32"	5.79
F4A50.	6A, 75B	9 1/16"x 2 11/16"x 3⅝"	5.53
F6A60.	9A, 90B	9¼"x 2¾"x 4 7/16"	5.65
F6A60P.	9A, 90B,	9 7/16"x2¾"x4 11/32"	5.90
T5Z50.	7½ A, 75B	8½"x 3 11/32"x 2⅜"	5.25
G6B60.	9A, 90B	13⅞"x 2 25/32"x 4⅝"	6.25
G6M60.	9A, 90B	10 3/16"x 3⅛"x 4 1/32"	5.95
T6Z60.	7½, 9A, 90B	2 3/16"x 9 9/16"x 3 13/16"	5.75
4TZ60.	1½A, 90B	7 13/16"x2 7/32"x3 27/32"	5.25


BURGESS
F6A60

F6A60


BURGESS
F4B60

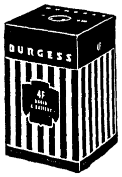
F4B60

A QUALITY DRY BATTERY FOR EVERY PURPOSE

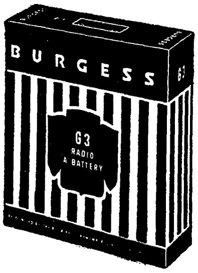
SUBJECT TO TRADE DISCOUNT

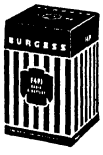
BURGESS BATTERIES

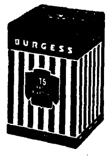
AMERICA'S MOST COMPLETE LINE OF DRY BATTERIES


4F

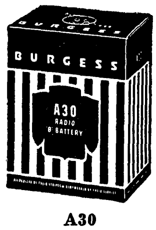
2R


G3


F4PI


T5

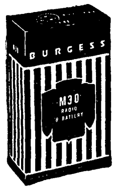
F3


A30

BURGESS PORTABLE "A" BATTERIES

No. 2F.	1½ volts.	Size, 2$\frac{17}{32}$"x 1$\frac{5}{16}$"x 4$\frac{3}{16}$".	Standard package 1	List price, $ .75
No. 2F4.	6 volts.	Size, 3$\frac{15}{16}$"x 2¾"x 5⅜".	Standard package 1	List price, 2.00
No. 2R.	1½ volts.	Size, 2$\frac{5}{16}$"x 1$\frac{5}{16}$" diameter.	Standard package 48	List price, .125
No. 4F.	1½ volts.	Size, 2$\frac{9}{16}$"x 2$\frac{9}{16}$"x 4$\frac{1}{32}$".	Standard package 6	List price, 1.05
No. 4FL.	1½ volts.	Size, 3$\frac{27}{32}$"x 1$\frac{5}{16}$"x 5$\frac{17}{32}$".	Standard package 1	List price, 1.02
No. 6F.	1½ volts.	Size, 4$\frac{1}{32}$"x 2$\frac{11}{16}$"x 4".	Standard package 3	List price, 1.50
No. 8F.	1½ volts.	Size, 3$\frac{27}{32}$"x 2$\frac{21}{32}$"x 5$\frac{7}{16}$".	Standard package 1	List price, 1.95
No. F4PI.	6 volts.	Size, 2$\frac{13}{32}$"x 2$\frac{13}{32}$"x 4$\frac{1}{16}$".	Standard package 6	List price, 1.03
No. G3.	4½ volts.	Size, 4"x 1⅜"x 4⅝".	Standard package 6	List price, .90
No. T5.	7½ volts.	Size, 2½"x 2$\frac{9}{16}$"x 3⅞".	Standard package 3	List Price, 1.38
No. D3	4½ volts.	Size, 3⅞"x 1$\frac{5}{16}$"x 2$\frac{15}{16}$".	Standard package 6	List price, .70
No. 2D	1½ volts.	Size, 2$\frac{9}{16}$"x 1$\frac{9}{32}$"x 2$\frac{31}{32}$".	Standard package 12	List price, .55
No. Z4	6 volts.	Size, 1$\frac{3}{16}$"x1$\frac{3}{16}$"x 2$\frac{7}{32}$".	Standard package 12	List price, .60
No. B5	7½ volts.	Size, 3$\frac{29}{32}$"x⅞"x2$\frac{27}{32}$".	Standard package 6	List price, 1.00
No. C5	7½ volts.	Size, 2$\frac{7}{32}$"x 1$\frac{15}{16}$"x 3$\frac{1}{32}$".	Standard package 6	List price, 1.00
No. F3	4½ volts.	Size, 4"x 1$\frac{7}{16}$"x 4⅛".	Standard package 6	List price, .83
No. 21R	1½ volts.	Size 1$\frac{21}{64}$" (diam.) 4⅛".	Standard package 24	List price, .25

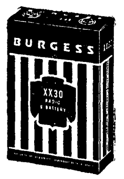
N60


M30

XX45

BURGESS PORTABLE "B" BATTERIES

No. A30.	45 volts.	Size, 3½"x 2$\frac{3}{16}$"x 4$\frac{9}{16}$".	Standard package 2	List price, 2.45
No. B30.	45 volts.	Size, 4$\frac{1}{16}$"x 2$\frac{17}{32}$"x 5$\frac{5}{16}$".	Standard package 2	List price, 2.45
No. M30.	45 volts.	Size, 3½"x 1$\frac{11}{16}$"x 5$\frac{7}{16}$".	Standard package 6	List price, 2.25
No. XX30.	45 volts.	Size, 2$\frac{19}{32}$"x $\frac{15}{16}$"x 3$\frac{21}{32}$".	Standard package 6	List price, 1.95
No. XX45.	67½ volts.	Size, 2$\frac{23}{32}$"x 1$\frac{5}{16}$"x 3$\frac{43}{64}$".	Standard package 6	List price, 2.50
No. Z30.	45 volts.	Size, 2$\frac{15}{16}$"x 2¼"x 4$\frac{1}{32}$".	Standard package 2	List price, 2.85
No. U200.	300 volts.	Size, 2¾"x 2$\frac{9}{32}$"x 3⅞".	Standard package 1	List price, 11.40
No. N60.	90 volts.	Size 3$\frac{11}{16}$"x1$\frac{9}{32}$"x3$\frac{19}{32}$".	Standard package 6	List price, 3.25
No. K45.	67½ volts.	Size 2$\frac{11}{16}$"x1$\frac{5}{16}$"x2¼".	Standard package 6	List price, 2.50
No. XX69.	103½ volts.	Size 1$\frac{11}{32}$"x1$\frac{11}{32}$"x11$\frac{23}{32}$".	Standard package 6	List price, 5.07
No. P45	67½ volts.	Size 1⅞"x$\frac{31}{32}$"x5$\frac{9}{32}$".	Standard package 6	List price, 2.95


XX30

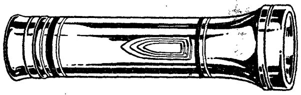
P45

·21R

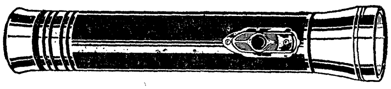
A QUALITY DRY BATTERY FOR EVERY PURPOSE

THE COMPLETE LINE OF EVEREADY FLASHLIGHTS

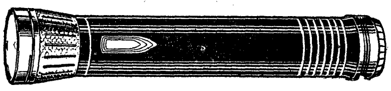
TRADE-MARK



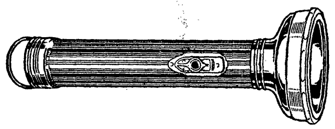
No. 2231 Two-Cell Small Automatic Spotlight. Chrome Finish with Red and Black Stripes. Removable Bottom Cap. List Price Each (without Batteries)........$1.75



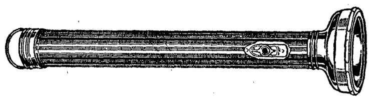
No. 2351 Three-Cell Automatic Spotlight. List Price Each (Without Batteries) $2.20



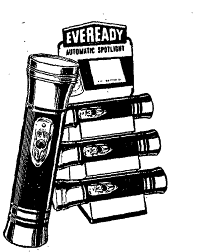
No. 4351 Three-Cell Automatic Spotlight. List Price Each (Without Batteries) $1.49



No. 2352 Three-Cell Automatic Searchlight. Heavy-Gauge Brass with durable black baked on finish and chrome fittings. Special "safety glow" lens guard Ring hanger. **List Price Each (Without Batteries)..$3.50**

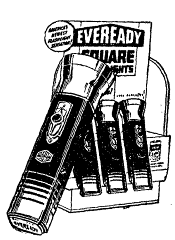


No. 2552 Five-Cell Automatic Searchlight. Same features as 2352. **List Price Each (Without Batteries)......................$3.95**


EVEREADY
AUTOMATIC SPOTLIGHT

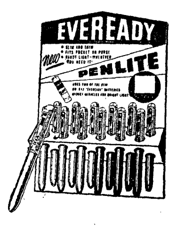
DISPLAY PACKAGE No. 25

Contains 6 No. 2251 Automatic Spotlights in black and chrome. **List Price Each (Without Batteries) $1.85**


EVEREADY
SQUARE

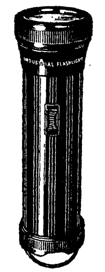
DISPLAY PACKAGE No. 72

Contains 6 No. 7251 Square Masterlite Automatic Spotlights. **List Price Each (Without Batteries) $1.95**


EVEREADY
NEW
PENLITE

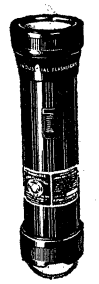
DISPLAY PACKAGE No. 21

Contains 12 No. 212 Penlites in all chrome and black and chrome. **List Price Each (Without Batteries) $ .89**



No. 1251

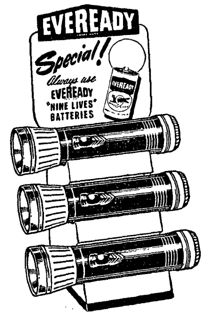
Two-Cell Prefocused Industrial Flashlight—General purpose type. **List Price Each (Without Batteries) $2.95**



No. 1259

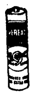
Two-Cell Prefocused Permissible Safety Flashlight.

List Price Each (Without Batteries) $5.00


EVEREADY
Special!
Always use
EVEREADY
"NINE LIVES"
BATTERIES

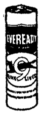
DISPLAY PACKAGE No. 42

Contains 12 "Eveready" No. 4251 Price Leader Automatic Spotlights. **List Price Each (Without Batteries) $1.14**



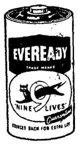
No. 912

1½ volts.
Height 1¾″
Diameter 0.4″
Weight 0.3 oz.



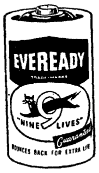
No. 915

1½ volts.
Height $1\frac{31}{32}$″
Diameter $\frac{35}{64}$″
Weight $\frac{3}{5}$ oz.


EVEREADY
"NINE LIVES"
Guaranteed
BOUNCES BACK FOR EXTRA LIFE

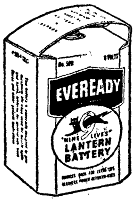
No. 935

1½ volts.
Height 2″
Diameter $1\frac{1}{64}$″
Weight $1\frac{2}{5}$ oz.


EVEREADY
"NINE LIVES"
Guaranteed
BOUNCES BACK FOR EXTRA LIFE

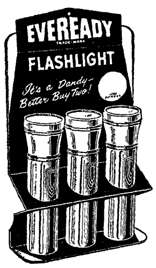
No. 950

1½ volts.
Height $2\frac{13}{32}$″
Diameter $1\frac{21}{64}$″
Weight 3 oz.


EVEREADY
"NINE LIVES"
LANTERN BATTERY

No. 509

Lantern Battery.
6 volts.
2⅝″ x 2⅝″ x $3\frac{27}{32}$″.
Weight 1 lb., 7 oz.


EVEREADY
FLASHLIGHT
It's a Dandy—Better Buy Two!

DISPLAY PACKAGE No. 53

Contains 6 No. 5251 Automatic Spotlights, brass with all chrome finish. **List Price Each (Without Batteries) $1.19**

SCHEDULE OF PRICES

Cat. No.	No. of Cells	Cell Size	List Price Each	Unit Pkg. Qty.	Weight of Unit Packages	
					Lbs.	Ozs.
912	1	K	$ .10	12	—	4
915	1	AA	.10	12	—	7
935	1	C	.125	12	1	2
950	1	D	.125	48	9	7½
Lantern Battery						
509	4	F	$0.90	12	16	8

"Eveready" Miniature Lamps for Radio Panel Service

"Eveready" No.	Bulb	Volts	Amp.	List Price
40	T-3¼	6-8	0.15	$.12
41	T-3¼	2.5	0.50	.12
44	T-3¼	6-8	0.25	.12
46	T-3¼	6-8	0.25	.12
47	T-3¼	6-8	0.15	.12
48	T-3¼	2	0.06	.16
49	T-3¼	2	0.06	.16
50	G-3½	6-8	C.P. 1	.12
1490	T-3¼	3.2	0.16	.12
1458	G-5	2.0	0.25	.15

FLASHLIGHT LENS ASSORTMENT

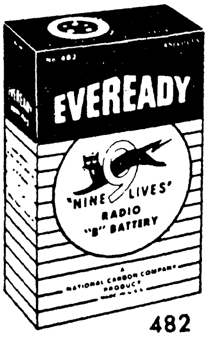
Cat. No.	Type	Unit Package Quantity
102	30 No. 53419 Spotlight Lenses for Nos. 2251, 2671, 2351, 7251, 4351 Spotlights.............................. 6 No. 53123 Spotlight Lenses for No. 2231 Baby Spotlight.............................. 4 No. 53390 Searchlight Lenses for No. 2552 Searchlight	1 Assortment

"EVEREADY" LAMPS *TWO CELL*

"Eveready" No.	Bulb	Volts	Amp.	List Price	Use with Following "Eveready Batteries"
14	G-3½	2.5	0.30	$.12	2 Nos. 935 or 950
PR-2	B-3½	2.4	0.27	.17	2 No. 950
PR-4	B-3½	2.3	0.27	.17	2 No. 935
PR-6	B-3½	2.5	0.30	.17	2 Nos. 935 or 950
222	TL-3	2.2	0.25	.13	2 No. 915
224	TL-2¾	2.15	0.22	.14	2 No. 912
THREE CELL					
13	G-3½	3.8	0.30	$.12	3 No. 950
PR-3	B-3½	3.6	0.50	.17	3 No. 950
PR-7	B-3½	3.8	0.30	.17	3 No. 950
FIVE CELL					
605	G-4½	6.0	0.50	$.15	5 No. 950
PR-12	B-3½	6.0	0.50	.17	5 No. 950

EVEREADY
TRADE-MARK
Radio Batteries

Sell the one brand your customers will always buy—"Eveready" Radio Batteries—for fast turnover, repeat sales! Famous for fine quality and quick profits, "Eveready" Radio Batteries—portable and farm packs—equip virtually every battery-type radio in use today!
Complete data describing these best-selling batteries are given on page M-8.


EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY
NATIONAL CARBON COMPANY PRODUCT

482

EVEREADY
RADIO
"A" BATTERY

746

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

467

EVEREADY
NINE LIVES

950

Most Used Battery Complement.

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

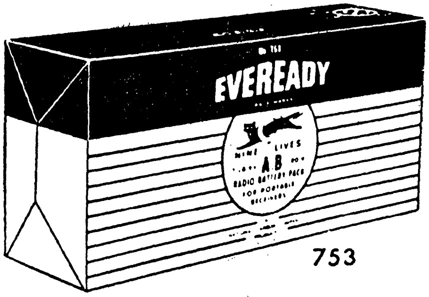
455

EVEREADY
NINE LIVES
RADIO
"A" BATTERY

717

EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY

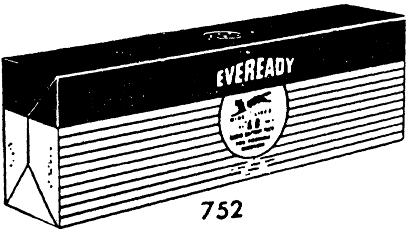
736


EVEREADY
NINE LIVES
A B
RADIO BATTERY PACK FOR PORTABLE RECEIVERS

753

EVEREADY
NINE LIVES
A B

757


EVEREADY
A B

752

EVEREADY
NINE LIVES
RADIO
"A" BATTERY

742

EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY
NATIONAL CARBON PRODUCT

726

EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY

744

EVEREADY
NINE LIVES
RADIO
"A" BATTERY
NATIONAL CARBON PRODUCT

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

964 **477** or **437**
67½ Volts 75 Volts

For "Book Type" Personal Portables . Longer Listening at Lowest Possible Price

EVEREADY
NINE LIVES
A B

759

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

490

EVEREADY
A B
RADIO BATTERY PACK

755

EVEREADY
NINE LIVES
A B
RADIO BATTERY PACK

756

EVEREADY
RADIO
"B" BATTERY

724

EVEREADY
67½ VOLTS
"NINE LIVES"
RADIO
"B" BATTERY

457

"EVEREADY" BATTERY SPECIFICATIONS

"B" BATTERIES FOR PORTABLE RECEIVERS

Catalog Number	VOLTAGE	Overall Dimensions Length	Width	Height	Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals	List Price
411	15	1 1/32″	5/8″	1 29/64″	5	5¼ oz.	4/5 oz.	Flat Contact −, +15	$0.95
412	22½	1 1/32″	5/8″	2″	5	6½ oz.	1 1/5 oz.	Flat Contact −, +22½	1.15
413	30	1 1/32″	5/8″	2 9/16″	5	8¾ oz.	1 2/5 oz.	Flat Contact −, +30	1.40
455	45	2 21/32″	1″	3 11/16″	6	3¼	7 4/5 oz.	Snap Type −, +45	1.95
457	67½	2 13/16″	1 3/8″	2½″	6	3	7 2/5 oz.	Snap Type −, +67½	2.50
467	67½	2 13/16″	1 3/8″	3 45/64″	6	4¾	12 oz.	Snap Type −, −67½	2.50
477	67½	1 29/32″	63/64″	5 7/16″	6	3 3/8 lb.	8 3/5 oz.	Snap Type −, +67½	2.35
482	45	3 19/32″	1 27/32″	5½″	6	11½	1 lb. 15 oz.	Socket −, +45	2.50
484	45	4 1/16″	2 17/32″	5 5/16″	1	2¾	2 lb. 8 oz.	Socket −, +45	3.25
490	90	3 23/32″	1 3/8″	3 45/64″	6	6½	15 oz.	Snap Type −, +90	3.25
738	45	3″	2 5/16″	4 1/8″	2	2½	1 lb. 3 2/5 oz.	Socket −, +22½, +45	3.50

"A" BATTERIES FOR PORTABLE RECEIVERS

Catalog Number	VOLTAGE	Overall Dimensions Length	Width	Height	Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals	List Price
713	7½	3 29/32″	7/8″	2 27/32″	1	7½ oz.	6¾ oz.	Socket −, +7½	$1.10
717	7½	2 7/32″	1 15/16″	3 1/32″	6	3	8 oz.	Socket −, +7½	1.00
††718	6	3 29/32″	2¾″	5 7/16″	1	2¾	2 lb. 4 oz.	Socket −, +6	2.45
720	1½	2 19/32″	1 3/8″	3 1/32″	6	2 5/8	6½ oz.	Socket −, +1½	0.65
724	6	1 7/32″	1 7/32″	2 11/32″	12	2	2½ oz.	Flashlight	0.75
726	4½	3 15/16″	1 5/16″	2 15/16″	6	4	10½ oz.	Socket −, +4½	0.75
736	4½	3 15/16″	1 5/16″	4 3/32″	6	6¼	1 lb.	Socket −, +4½	0.90
††741	1½	3 7/8″	2 11/16″	5 3/8″	1	2¾	2 lb. 10 oz.	Socket −, +1.5	2.10
742	1½	2 9/16″	2 9/16″	3 31/32″	6	8	1 lb. 5 oz.	Socket −, +1.5	1.15
††743	1½	3 13/16″	2 5/8″	4 1/32″	3	6	1 lb. 15 oz.	Socket −, +1.5	1.65
744	6	2 21/32″	2 21/32″	3 31/32″	6	8¼	1 lb. 5 oz.	Socket −, +6	1.15
††745	1½	3 7/8″	1 7/16″	10 25/32″	2	5½	2 lb. 10½ oz.	Socket −, +1.5	2.25
746	4½	3 15/16″	1 5/16″	4 21/32″	6	7¼	1 lb. 3 2/5 oz.	Socket −, +4.5	0.95
††747	6	3 7/8″	1 7/16″	10 25/32″	2	5½	2 lb. 11 oz.	Socket −, +6	2.75
†915	1½	35/64″ Diam.		1 31/32″	12	½	3/5 oz.	Flashlight	0.10
†935	1½	1 1/64″ Diam.		2″	12	1¼	1 2/5 oz.	Flashlight	0.125
†950	1½	1 21/64″ Diam.		2 27/64″	48	9½	3 oz.	Flashlight	0.125
960-P	1½	1 11/32″ Diam.		4 1/16″	1	5 oz.	5 oz.	Socket −, +1.5	0.45
964	1½	1 3/8″ Diam.		4 11/64″	12	4 lb. 8 oz.	5 9/10 oz.	Flashlight	0.30

"A-B" PACKS FOR PORTABLE RECEIVERS

Catalog Number	VOLTAGE	Overall Dimensions Length	Width	Height	Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals	List Price
729	1½ "A" 90 "B"	7 13/16″	2 7/32″	3 27/32″	1	2¾	2 lb. 7 oz.	Socket −"A" +1½ "A" −"B" +90 "B"	$5.25
752	9 "A" 90 "B"	14 1/16″	2 11/16″	4 1/16″	1	6¼	6 lb. 2 oz.	Recessed Plug −"A", +9 "A", −"B", +90 "B"	6.65
752-W	10½ "A" 90 "B"	**14 1/16″	2 11/16″	4 1/16″	1	7	6 lb. 8 oz.	Recessed Plug −"A" +10½ "A", −"B", +90 "B"	7.10
753	7½ & 9 "A" 90 "B"	9 7/32″	2 23/32″	4 5/16″	1	5	4 lb. 12 oz.	Socket −"A" +7½ "A", +9 "A" −"B", +90 "B"	6.25
754	7½ & 9 "A" 90 "B"	10 15/32″	3¼″	4″	1	6¼	6 lb. 1 oz.	Socket −"A" +7½ "A", +9 "A", −"B", +90 "B"	6.75
755	6 & 7½ "A" 75 "B"	8 9/16″	2 7/16″	3¾″	1	3¾	3 lb. 9 oz.	Socket −"A", +6 "A", +7½ "A" −"B", +75 "B"	5.50
756	7½ & 9 "A" 90 "B"	8 7/8″	2 1/8″	3 25/32″	1	3	2 lb. 14 oz.	Socket −"A" +7½ "A", +9 "A" −"B", +90 "B"	5.75
757	9 "A" 90 "B"	9 7/32″	2 23/32″	4 7/32″	1	5	4 lb. 12 oz.	Recessed Plug −"A" +9 "A" −"B" +90 "B"	6.25

"A-B" PACKS FOR HOME RECEIVERS

Catalog Number	VOLTAGE	Overall Dimensions Length	Width	Height	Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals	List Price
758	1½ "A" 90 "B"	10 11/16″	4 1/8″	6 13/16″	1	14¾	14 lb. 4 oz.	Socket −"A", +1.5 "A" −"B", +90 "B"	$7.95
759	1½ "A" 90 "B"	15 11/16″	4 5/32″	6 15/16″	1	17	15 lb. 7 oz.	Socket −"A", +1.5 "A" −"B", +90 "B"	7.95

"A" BATTERY FOR HOME RECEIVERS

Catalog Number	VOLTAGE	Overall Dimensions Length	Width	Height	Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals	List Price
††740	1½	4 19/32″	3 7/8″	7¾″	1	6¼	6 lb.	Socket −, +1.5	$5.15

"C" BATTERIES AND MISCELLANEOUS TYPES

Catalog Number	VOLTAGE	Overall Dimensions Length	Width	Height	Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals	List Price
768	22½	4 1/8″	2 17/32″	2 31/32″	1	1½	1 lb. 8½ oz.	Socket +, −3, −4½, −16½, −22½	$2.15
771	4½	3 29/32″	1 3/8″	3 1/16″	5	4½	13 oz.	Socket +, −3, −4½	1.25
773	7½	3 29/32″	7/8″	3 1/8″	5	3	9 oz.	5 Screw; 1 wire +, −1½, −3, −4½, −6, −7½	1.20
781	4½	2 15/32″	55/64″	3¼″	5	1¾	5 oz.	Screw +, −4½	0.65
762-S	45	4 7/32″	2 9/16″	6 15/32″	1	3	2 lb. 12 oz.	Screw −, +22½, +45	4.50
763	22½	3½″	2 3/32″	2 15/16″	5	4¾	14 oz.	Screw −, +22½	1.95
778	22½	4 1/8″	2 17/32″	3 7/16″	10	17	1 lb. 8 oz.	Fahnestock +, −3, −4½, −6, −9, −10½, −16½, −22½	2.45

**Exclusive of "A" Cell †Flashlight Types ††Shipped from factory only

SPECIAL TYPES FOR MISCELLANEOUS APPLICATIONS

		Length	Width	Height	Battery Height	List Price
No. 706	Ignition & Emergency Lighting	8 5/16	2 13/16	6 7/16	6 lb. 6 oz.	$3.60
No. 715	Ignition & Emergency Lighting	7¼	4 1/16	6 7/16	7 lb. 15 oz.	4.50
No. 716	Ignition & Emergency Lighting	8 37/64	4 1/16	6 7/16	9 lb.	5.25
No. 735	Model Ignition Instruments	2 5/8	2 5/8	4 9/32	1 lb. 4 oz.	0.90

EVEREADY
TRADE-MARK
Dry Batteries

Illustrated below are "Eveready" Dry Batteries, known for dependable and long service. Information describing famous "Eveready" Dry Batteries is given with each illustration.

EVEREADY
NINE LIVES
DRY CELL
No. 6
NATIONAL CARBON PRODUCT

EVEREADY
NINE LIVES
HOT SHOT
MULTIPLE BATTERY

EVEREADY
COLUMBIA
GRAY LABEL
LONG LIFE
TELEPHONE CELL
NATIONAL CARBON PRODUCT

"EVEREADY" "IGNITOR" DRY CELL NO. 6 —
For extra long life and heavy service in all Dry Cell applications. Its exceptionally high quality and recuperative powers have made the "Eveready" "Ignitor" dry cell famous for ignition, radio, bells, buzzers, electric games, toys, lanterns and other battery operated devices.

"EVEREADY" R.R. AND INDUSTRIAL NO. 6 —
Especially designed for Railroad and Industrial use where a wide range of service conditions, from extremely heavy to extremely light are encountered.

"EVEREADY" "COLUMBIA" "GRAY LABEL" TELEPHONE CELL NO. 6 — Especially designed for telephone service. Noted for its long life on light drain service.

Brand and Type	Jacket	Voltage	Overall Dimensions In Inches		Quantity in Standard Package	Approx. Wt. of Std. Pkg. in Pounds	List Price Each
			Diameter	Height			
*"Eveready" "Ignitor" No. 6	Round	1½	2⅝	6⅝	12	27	$0.90
*"Eveready" R.R. and Industrial No. 6	Round	1½	2⅝	6⅝	12	27½	0.95
**"Eveready" "Columbia" "Gray Label" Telephone Cell No. 6	Round	1½	2⅝	6⅝	12	26	0.85

**Equipped with screw terminals unless Fahnestock spring terminals are specified.*
***Equipped with Fahnestock spring terminals unless screw terminals are specified.*

"EVEREADY" "HOT SHOT" BATTERIES —
For all purposes requiring four or more dry cells in series. Particularly adapted for electric fences, gas engines (tractors, motor boats, etc.), blasting, fire and burglar alarms, gongs, bells, annunciators, signals, lights for closets, out-houses, camps, boats, searchlights, etc.

"Eveready" "Hot Shot" Batteries are composed of specially selected cells. Internal connections are securely soldered and the cells are completely insulated against accidental short circuits. Terminals are insulated.

Brand and Type	Voltage	Overall Dimensions In Inches			Quantity in Standard Package	Approx. Wt. of Std. Pkg. in Pounds	List Price Each
		Length	Width	Height			
"Eveready" No. 1461	6	10⅜	2¾	7¼	6	58¼	$3.75
"Eveready" No. 1462	6	5 5/16	5 5/16	7¼	4	39¼	3.75
"Eveready" No. 1562	7½	7⅞	5	7¼	4	50½	4.75
"Eveready" No. 1662	9	7 13/16	5¼	7¼	4	60¼	5.50

EVEREADY
NINE LIVES

EVEREADY
TRADE-MARK
NINE LIVES
MULTIPLE BATTERY
FOR EMERGENCY LIGHTS
PORTABLE LIGHTS, IGNITION, ETC.

SPECIAL TYPES FOR MISCELLANEOUS APPLICATIONS

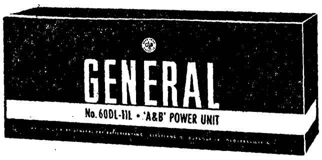
	Length	Width	Height	Battery Height	List Price
No. 706 Ignition &	8 5/16	2 13/16	6 7/16	6 lb. 6 oz.	$3.60
No. 715 Emergency	7¼	4 1/16	6 7/16	7 lb. 15 oz.	4.50
No. 716 Lighting	8 37/64	4 1/16	6 7/16	9 lb.	5.25
No. 735 Model Ignition Instruments	2⅝	2⅝	4 9/32	1 lb. 4 oz.	0.90

be sure with GENERAL DRY BATTERIES

DURO POWR · G B · PATENTED

GENERAL dry batteries contain many outstanding advancements such as extra heavy seamless extruded zinc cups, the famous paper thin separator permitting more mix and more active zinc area by utilization of the cell bottom, the curled rim lock seal which seals each cell individually. These features, found only in Generals, assure long shelf life as well as the maximum in dry battery performance.

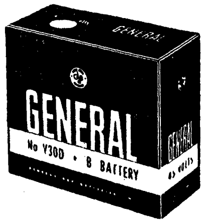
GENERAL A & B RADIO FARM PACKS



General A-B packs are made with L size cells in the A section. These cells are 40% longer than the largest conventional 1¼" diameter cell. This construction assures the perfect balance between these "A" and "B" sections for current drains established by the Radio Industry.

Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price East	Pacific Coast
60DL11L	1½-90	1	24.5	759	17GD60	AB82	$6.95	$7.10
60D12L6	9-90	1	24	—	3G6D60	AB982	8.50	8.50
60B6L	1½-90	4	39	758	—	AB85	6.45	6.45

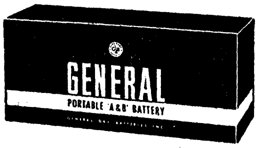
GENERAL ABC HOME RADIO BATTERIES



All cells used in General batteries are filled with active mix by loading equipment developed by General which automatically puts the right amount of mix into each cell and packs it uniformly. General home radio batteries are accepted for their uniformity, dependability and long service.

Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price East	Pacific Coast
12L1L	1½	4	34	740	20F	P9203	$4.25	$4.25
P24L2	3	1	17	X125	20F2	P9403	6.25	6.25
V30D	45	6	45	—	2308	P5233	3.15	3.15
V30F	45	6	68	—	10308	P5933	4.25	4.40
V30FL	45	3	39	—	21308	P9303	4.80	4.98
H3D	4½	10	7.5	X771	2370P1	P231W	.95	.95
H3BS	4½	10	3	781	5360	531R	.55	.55
V5B	7½	10	6.3	773	5540	551	1.10	1.10
H15B5	22½	10	15.4	768	5156P1	P5151	2.15	2.15
H15B	22½	10	15.4	778	5156SC	—	2.15	2.15
H15A	22½	10	10	763	4156	4151	1.95	1.95

GENERAL PORTABLE A & B PACKS

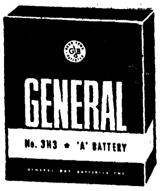


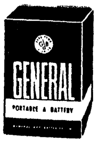
The small size cells used in portable batteries greatly reflect the benefits derived from General's patented construction. General Batteries deliver more service hours per dollar, therefore you will find them used as original equipment in more battery radios than any other brand.

Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
40N2CF	1½-60	6	8.7	—	—	—	$3.25
41A4FL	1½-61½	6	25.5	—	4GMA41	AB419	4.70
60A2L	1½-90	1	5	—	5DMA60	—	5.95
60A4L	1½-90	6	38.5	—	6FMA60	AB84	5.95
42A5G5	7½-63	6	30	—	5GMA42	AB794	5.25
60A6F6-5	7½-9-90	1	6	753	F6A60	AB994	5.65
362	7½-9-90	6	24	756	T5Z60	—	5.75
Z50B4H4	6-75	1	7	—	G4B50	AB670	5.65
Z60B6H6	9-90	1	89	752	G6B60	AB677	6.25

GENERAL PORTABLE A BATTERIES

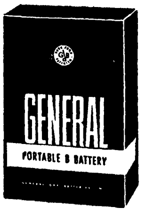
Type	Voltage	Pkge. Std.	Weight Pkg. Lbs.	Interchangeable With Eveready	Interchangeable With Burgess	Interchangeable With Ray-O-Vac	Price
D	1½ Radio A	50	12	—	—	—	$0.125
4FI	1½	6	9	742	4F	P94A	1.05
6FI	1½	6	13	743	6F	P96A	1.50
3LI	1½	6	11.4	745	4FL	P94L	1.05
3H3	4½	6	8	746	G3	P83A	.90
4F4	6	6	9	744	F4PI	P694A	1.05
8F4	6	6	17.4	718	2F4	P698A	2.00

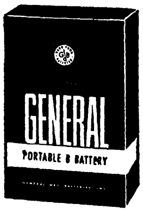




GENERAL PORTABLE B BATTERIES

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Interchangeable With Burgess	Interchangeable With Ray-O-Vac	Price
V30A	45	6	11.4	—	A30	P430	$2.25
F30A	45	6	11.4	—	A30X	BB30P	2.25
V30B	45	6	17	—	B30	P5303	2.25
V30AA	45	6	9	738	Z30	P7R30	2.85
V30AA2	45	6	9	—	Z30N	—	2.85
W30B	45	6	12	482	M30	P7830	2.25

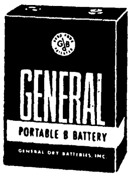


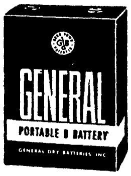


GENERAL "DuroMite" BATTERIES

New General DuroMite batteries are the finest in battery design and assembly. Thin, well-balanced flat cells are stacked like a roll of wafers. Each stack of cells sealed in its own plastic case, keeping the cells fresh until put in use. Maximum service life can be obtained from minimum of space used.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Interchangeable With Burgess	Interchangeable With Ray-O-Vac	Price
W45A	67½	12	10	467	XX45	4367	$2.50
W30A	45	12	7	455	XX30	P3A30	1.95
W60A	90	12	13.5	490	—	—	3.25





GENERAL "*FlashLite*" & LANTERN BATTERIES

The New General "*Flashlite*" cell comes to the market to fulfill the demand of practically every user. This demand is for extra long service, years of shelf life and protection against corrosion damage. The Industrial cell is recommended when light is needed frequently and for long periods.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Interchangeable With Burgess	Interchangeable With Ray-O-Vac	Price
C	1½	72	8	935	1	1LP	$0.125
D	1½	240	57	950	2	—	.125
D Industrial	1½	250	59.5	1050	#2 Ind	2111	.15
AA	1½	180	8	915	Z	7-R	.10
V4F Lantern	6	10	15.8	409	F4H	941	.80
4FB Bicycle	6	10	15.5	—	—	—	.90

GENERAL
DuroPower
FLASHLITE CELL

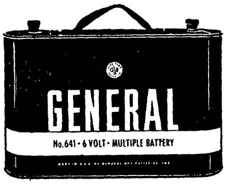
GENERAL
LANTERN BATTERY

GENERAL IGNITION & ELECTRIC FENCE BATTERIES

All General batteries are designed to use the most efficient cells available. The 641 is made with 12 L cells and this construction has proven to produce exceptional performance when used on Electric Fence controls and other ignition applications.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Interchangeable With Burgess	Interchangeable With Ray-O-Vac	Price East	Price Pacific Ct.
#6	1½	24	60	#6 Ig	—	#6 Ig	$0.80	$0.85
#6 Tele	1½	24	60	#6 Co.	—	#6 Tele	.80	.85
641 Multiple	6	6	54	1461	—	641	3.50	3.80

GENERAL
No. 6 • DRY CELL



We manufacture all types of Hearing Aid and Model Airplane batteries. Write for particulars.

GENERAL DRY BATTERIES, INC.

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FACTORIES • DUBUQUE, IA. • MEMPHIS, TENN. • TORONTO, ONT.

BRANCH OFFICES & WAREHOUSES • NEW YORK, CHICAGO, DALLAS, SAN FRANCISCO, LOS ANGELES, PORTLAND, MEMPHIS, MINNEAPOLIS

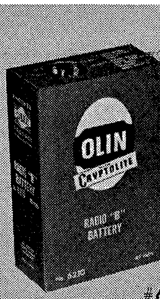
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

OLIN OLIN PORTABLE

SPECIFICATIONS

Type	Catalog Number	Voltage	Overall Dimensions In Inches L W H	Unit Package Quantity	Weight Of Unit Package In Pounds	Terminal	Suggested Price Each List	Dealer
"B" BATTERIES	922	300	2½ x 2¹⁄₁₆ x 3¹¹⁄₁₆	1	1	Pin Jacks	$11.00	$7.70
	1709	67½	1⅞ x 1 x 5⅜	6	3½	Snap Type	2.35	1.65
	1710	67½	2¾ x 1⅜ x 3¹¹⁄₁₆	6	5¼	Snap Type	2.50	1.75
	1712	67½	2¹¹⁄₁₆ x 1⁵⁄₁₆ x 2⁵⁄₁₆	6	3	Snap Type	2.50	1.75
	1713	90	3¹¹⁄₁₆ x 1⅜ x 3²³⁄₃₂	6	6	Snap Type	3.25	2.28
	1914	15	1¹⁄₁₆ x ⅝ x 1½	24	1½	Flat Contact	.95	.65
	1915	22½	1¹⁄₁₆ x ⅝ x 2	24	2	Flat Contact	1.15	.79
	1916	30	1¹⁄₁₆ x ⅝ x 2⁹⁄₁₆	24	2½	Flat Contact	1.40	.96
	5115	22½	3¹³⁄₃₂ x 1²⁹⁄₃₂ x 2¹³⁄₃₂	6	6	Screw	1.95	1.37
	6118	45	3⁷⁄₁₆ x 2³⁄₁₆ x 4⁹⁄₁₆	1	1¾	Socket	2.45	1.71
	6210	45	3½ x 1¾ x 5½	6	11	Socket	2.25	1.58
	6211	45	2⅝ x ¹⁵⁄₁₆ x 3⅝	6	3¼	Snap Type	1.95	1.32
	6218	45	4⅛ x 2⁷⁄₁₆ x 5⁹⁄₃₂	1	2¾	Socket	2.45	1.71
	6219	45	4³⁄₁₆ x 2¹⁷⁄₃₂ x 5¾	1	3	Screw	3.50	2.45
	6518 *	45	7¹⁵⁄₁₆ x 2¹⁵⁄₁₆ x 7³⁄₁₆	6	48	Socket	3.15	2.21
	6718	45	2²⁹⁄₃₂ x 2⁹⁄₃₂ x 4⅛	1	1½	Socket	2.85	2.00
"A" BATTERIES	C	1½	¹⁵⁄₁₆ Diam. x 1¹³⁄₁₆	12	1½	Flashlight	.125	.08
	D Leak Proof	1½	1¼ Diam. x 2¼	48	10	Flashlight	.15	.0975
	1511/102	1½	1¹¹⁄₃₂ Diam. x 2¹³⁄₃₂	48	11	Flashlight	.125	.08125
	2416	1½	1¹¹⁄₃₂ Diam. x 4⁵⁄₃₂	12	4¾	Flashlight	.25	.175
	2516	1½	2⁹⁄₁₆ x 1⁵⁄₁₆ x 3	6	3	Socket	.55	.39
	3816	4½	3¹⁵⁄₁₆ x 1⅜ x 4⅛	10	11	Socket	.83	.57
	4516	4½	3¹⁵⁄₁₆ x 1⁵⁄₁₆ x 2⅞	6	4	Socket	.70	.49
	4813	1½	3¹³⁄₁₆ x 1⅜ x 10¹³⁄₁₆	6	20	Socket	2.00	1.40
	4814	1½	3¹³⁄₁₆ x 2⁹⁄₁₆ x 4	6	13	Socket	1.50	1.05
	4815	6	3¹³⁄₁₆ x 1⅜ x 10¹³⁄₁₆	6	20	Socket	2.00	1.40
	4816	1½	2⁹⁄₁₆ x 2⁹⁄₁₆ x 4	10	15	Socket	1.05	.74
	4817	6	3¹³⁄₁₆ x 2¹¹⁄₁₆ x 5⁹⁄₁₆	10	30	Socket	2.00	1.40
	4819	1½	3¹¹⁄₁₆ x 2⁹⁄₁₆ x 5⅜	6	18	Socket	1.95	1.37
	4914	6	2⁹⁄₁₆ x 2⁹⁄₁₆ x 4	10	15	Socket	1.03	.73
	4918	4½	3⅞ x 1⁵⁄₁₆ x 4¹¹⁄₁₆	10	13	Socket	.90	.63
	4919	6	1⁵⁄₃₂ x 1⁵⁄₃₂ x 2¹¹⁄₃₂	12	2¼	Flat Contact	.60	.42
	5219	7½	3¹⁵⁄₁₆ x ¹³⁄₁₆ x 2²⁷⁄₃₂	6	3	Socket	1.00	.70
	5316	7½	2⁵⁄₃₂ x 1²⁷⁄₃₂ x 3	12	6	Socket	1.00	.70

OLIN
CRYPTOLITE
RADIO "B" BATTERY
No. 1710
#1710



#6210

OLIN
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RADIO "B" BATTERY
No. 6211
#6211

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RADIO "B" BATTERY
No. 1709
#1709

SIZE "D"
OLIN
LEAKPROOF
BATTERY
"D" Leakproof

Please forward your order to your Olin wholesaler

RADIO BATTERIES

SPECIFICATIONS

Type	Catalog Number	Voltage	Overall Dimensions In Inches L W H	Unit Package Quantity	Weight Of Unit Package In Pounds	Terminal	Suggested Price Each List	Suggested Price Each Dealer
"A-B" PACKS	513 **	1½ "A" 90 "B"	10⅝ x 2⅝ x 6 9/16	1	9	Socket	$6.70	$4.71
	518 ***	1½ "A" 90 "B"	15 7/16 x 4¼ x 6⅞	1	22	Socket	6.95	5.21
	611	1½ "A" 90 "B"	11 11/16 x 1 7/16 x 6 5/16	1	5	Socket	5.95	4.17
	614	7½ & 9 "A" 90 "B"	9 x 2 11/16 x 4⅛	1	6	Socket	5.65	3.96
	615	7½ & 9 "A" 90 "B"	10 5/16 x 3⅛ x 4 3/16	1	7½	Socket	5.95	4.17
	616	9 "A" 90 "B"	14 3/16 x 2⅝ x 4	1	8½	Recessed Plug	6.25	4.38
	616W	9 "A" 90 "B" Plus 1½ "A"	14 3/16 x 2⅝ x 4	1	9	Recessed Plug and Socket	6.50	4.55
	618	6 & 7½ "A" 75 "B"	8 7/16 x 2⅜ x 3 11/16	1	3¾	Socket	5.25	3.68
	619	7½ & 9 "A" 90 "B"	8 15/16 x 2 7/32 x 3⅞	1	4	Socket	5.75	4.03
	620	9 "A" 90 "B"	9 x 2 11/16 x 4⅛	1	5	Recessed Plug	5.90	4.14
	622	1½ "A" 90 "B"	9⅞ x 2⅛ x 4 13/16	1	5	Socket	5.79	4.05
	623	7½ "A" 67½ "B"	9⅜ x 2 11/16 x 4⅛	1	4¾	Socket	4.48	3.15
	624	1½ "A" 67½ "B"	9⅛ x 2 x 4¼	1	4½	Socket	4.50	3.14
"C" BATTERIES	3217	4½	2 5/16 x 13/16 x 3	10	4	Screw	.55	.39
	3516	4½	3 15/16 x 1⅜ x 3 1/16	10	8	Socket	.88	.61
	5216	22½	4 1/16 x 2 7/16 x 2⅞	10	18	Socket	2.05	1.43
	5216-8	22½	4 1/16 x 2 7/16 x 2⅞ (excluding terminals)	10	18	Fahnstock Clip	2.05	1.43
	5218	7½	3 15/16 x 15/16 x 3 (excluding terminals)	10	7	Screw	.99	.70

* "B" Battery for Farm Receivers
** "A-B" Battery Pack for Farm and Portable Receivers
*** "A-B" Battery Pack for Farm Receivers

OLIN
Kryptolite
RADIO "A-B" BATTERY

#614

OLIN
Kryptolite
RADIO "A-B" BATTERY

#622

OLIN
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RADIO "B" BATTERY

#3816

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RAY-O-VAC TRADE MARK

Custom-built dry cell batteries for every unusual power requirement

FOR INDUSTRY ARMED SERVICES LABORATORY

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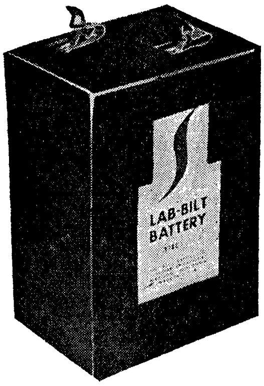
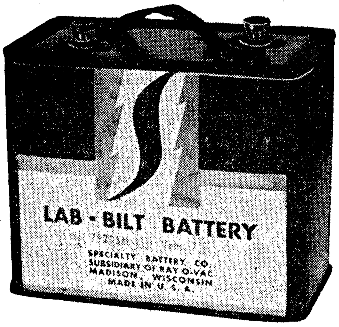
LAB-BILT BATTERY

194S



398C



7920SM

Catalog No.	Volts	Dimensions			Terminals	Std. Pkg.	Comparative Guide				List Price
		L * Overall	W battery	H* height.			Burg.	Evrdy.	RCA	Signal Corps	
					IGNITION & TELEPHONE BATTERIES						
194S	1½	2⅝	2⅝	4⅛	2 screws	10	4FH		VS106	BA35	E. $ .79
386C	3	2⅞	2⅝	5¼	2 spring clip	10					1.40
398C	3	3⅞	2 11/16	5⅞	2 spring clip	10	4F2H		VS138	BA225/U	E.1.45
489C	4½	3⅞	3⅞	5⅜	2 spring clip	10					2.15
4912C	4½	3 15/16	3 15/16	5⅞	2 spring clip	5	4F3H			BA216/U	3.50
4945C	4½	12	4	7⅛	2 spring clip	2					5.90
694T	6	2⅝	2⅝	4⅛	2 pig tails	10					1.10
6916S	6	8 9/32	2 25/32		2 screws	5	4F4H	1461		BA222/U	E. 3.40
7920SM	7½	7 3/16	4	6 5/16	2 screws	5	4F5H	1562	VS139		E. 4.05
9924SM	9	8½	4	6 5/16	2 screws	5	4F6H	1662	VS140		E. 4.65
					LIGHTING BATTERIES						
1918T	1½	6⅜	5¾	3 13/16	2 flex leads	5	18FS				$ 2.45
342	3	1 5/16	11/16	2¼	2 flat springs	20	422	750			.50
3612T	3	10⅝	8⅛	7¼	2 flex leads	1					11.00
443	4½	1 31/32	21/32	2½	2 flat springs	10	432	751		BA28	.50
453	4½	2 5/16	¾	3	2 flat springs	10	532	703	VS133		.50
9930 Special	9	7¾	4⅛	8 3/16	Plug in	1					4.90
225SN150P	225	4⅜	2 11/16	4⅛	Plug in	12					9.65

Complete catalog will be mailed on request.

RAY-O-VAC COMPANY

SPECIAL PRODUCTS DIVISION • MADISON 10, WISCONSIN

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RAY-O-VAC COMPANY

SPECIAL PRODUCTS DIVISION

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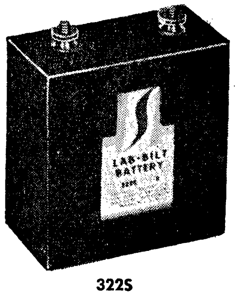
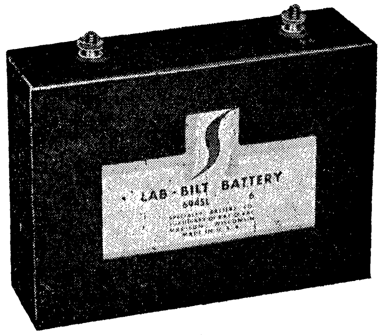


322S

394S



694SL

Catalog No.	Volts	Dimensions			Terminals	Std. Pkg.	Comparative Guide				List Price
		L * Overall	W battery	H* height.			Burg.	Evrdy.	RCA	Signal Corps	

INDUSTRIAL, ELECTRONIC AND RADIO "A" BATTERIES

Catalog No.	Volts	L	W	H*	Terminals	Std. Pkg.	Burg.	Evrdy.	RCA	Signal Corps	List Price
122P	1½	2 11/16	1⅜	2⅞	Plug in	12	20	720			$ .55
152S	1½	1 9/32	29/32	2 15/16	2 screw	5	2BBP				.88
192P	1½	2 9/16	1 15/16	4 3/32	Plug in	5	2FPI				.75
192PX	1½	2 9/16	1 15/16	4¼	Plug in	5	2F				.75
192S	1½	2 9/16	1 15/16	4 7/16	2 screws	5	2FBP		VS101	BA15A	.80
194P	1½	2⅝	2⅝	4 1/16	Plug in	6	4F	742	VS004		1.05
194PL	1½	3 13/16	1⅜	5⅝	Plug in	5	4FL	745	VS005		1.02
P98A	1½	3⅞	2 13/16	5½	Plug in	5	8F	741			1.95
322S	3	2⅝	1 5/16	3⅛	2 screws	5	D2BP				1.10
352S	3	1 19/32	29/32	2 15/32	2 screws	10	B2BP				.88
392S	3	2⅝	1⅜	4 7/16	2 screws	5	F2BP		VS100	BA205	.80
394S	3	2⅝	2⅝	4¼	2 screws	5	2F2H		VS136	3A152	.92
394SL	3	5⅛	1 5/16	4⅛	2 screws	10	2F2BP			3A164-11	1.35
423PA	4½	3 15/16	1 5/16	2 15/16	Plug in	12	D2	726	VS072		.70
P83A	4½	4	1⅜	4 11/16	Plug in	6	G3	746	VS002		.90
624C	6	5⅛	1⅜	3 9/16	2 spring clips	1					1.40
626T	6	4	2¾	2¾	2 flex leads	1					1.65
67R4	6	1 5/32	1 5/32	2 11/32	contact	24	Z4	724	VS068		.60
694P(0)	6	2⅝	2⅝	3 15/16	Plug in	5	4FPI		VS009		1.00
694PL	6	3⅞	1 7/16	5⅝	Plug in	5	F4L				1.95
694S	6	2⅝	2⅝	4⅛	2 screws	10	F4BP		VS040	3A164-10	.80
694SL	6	5⅛	1 15/16	4⅛	2 screws	5	F4X			3A4X	1.95
P698A	6	3 15/16	2¾	5 9/16	Plug in	10	2F4	718	VS010	BA203/U	2.00
698PL	6	3⅞	1 7/16	10¾	Plug in	6	2F4L	747	VS011		2.00
715P	7½	2 15/16	2	3 1/16	Plug in	12	C5	717	VS065		.98
P551	7½	3 15/16	⅞	3	Plug in	12	B5	General 5CF5	VS129		1.00
785P	7½	3⅞	2⅝	4 7/16	Plug in	5	G5	687	VS003	3A164-4	1.10
P7CD1	7½	2½	2½	3 15/16	Plug in	10	T5				1.38

INDUSTRIAL, ELECTRONIC AND RADIO "C" BATTERIES

Catalog No.	Volts	L	W	H*	Terminals	Std. Pkg.	Burg.	Evrdy.	RCA	Signal Corps	List Price
P231W	-3-4½	4 1/16	1 7/16	3 1/16	Plug in	15	2370PI	771	VS030		$ .85
231W	-1½-3-4½	3 15/16	1¼	3	4 screws	10	2370BP	761T	VS130	BA27	.85
443S	-3-4½	2 1/16	¾	2 19/32	4 screws	5	A3BPX				1.04
453S	-4½	2⅜	13/16	2⅞	2 screws	5	5360	781	VS028	BA31	.57
551	-1½-3-4½-6-7½	3 15/16	⅞	3⅛	5 screws	5	5540	773	VS029	BA34	.99
7N5S	-4½-7½	2¾	⅝	1⅜	3 screws	5	W5BP				1.40
12S48S	-1½-3-9-10½ 12	2¾	1 7/16	2¾	6 screws	3	A8BP				2.23
13S49S	13½	2 1/16	2 1/16	2⅝	2 screws	3	A9BP			BA-164-12	1.80
2215C	-18-22½	6½	4	3¾	3 spring clips	5	2156	766T	VS137		3.20
926S	9	4 1/16	2 13/16	3⅛	2 screws	5	D6BP		VS132	BA156	1.90

HEARING AID BATTERIES

Catalog No.	Volts	L	W	H*	Terminals	Std. Pkg.	Burg.	Evrdy.	RCA	Signal Corps	List Price
PF1	1½	1⅜ diam.		4	Plug in	20				BA230/U	$ .35
WE161	4½	3⅜	1 3/16	4¼	Plug in	20					1.25
22SN15P	22½	1⅝	1⅜	3	Plug in	25	ROV PN15			BA232/U	1.60
33SN22P	33	1 9/16	1⅜	3 15/16	Plug in	25	ROV PN32			BA233/U	1.80
45SN30P	45	2 1/16	1⅜	3⅞	Plug in	25	ROV PN30			BA234/U	1.98

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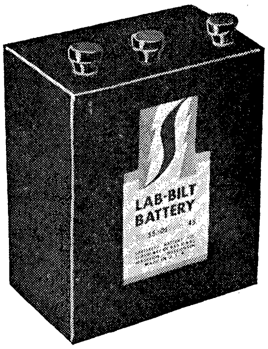

5530S

LAB-BILT BATTERY

P7R30

LAB-BILT BATTERY

8303

Catalog No.	Volts	Dimensions L * Overall	W battery	H* height.	Terminals	Std. Pkg.	Comparative Guide Burg.	Evrdy.	RCA	Signal Corps	List Price
INDUSTRIAL, ELECTRONIC AND RADIO "B" BATTERIES											
2415S	22½	3 7/16	2 1/8	2 3/4	2 screws	10	4156	763	VS102		$1.97
2515C	-3-4½-16½-22½	4 1/8	2 1/2	3 5/16	8 spring clips	5	5156SC	778	VS131	BA217/U	2.05
P5151	-3-4½-16½-22½	4	2 1/2	3	Plug in	5	5156PI	768	VS031	BA211/U	2.05
5230C	45	8 1/16	3 3/16	7 3/16	3 spring clips	5	2308SC		VS126	3A2308	2.55
5530P	45	4 1/8	2 5/8	5 5/16	Plug in	5	B30	762	VS012	BA223/U	2.45
5530S	22½ 45	4 1/8	2 5/8	5 3/8	3 screws	5	5308	762S	VS112	BA36	2.57
P7R30	22½ 45	3	2 1/4	4	Plug in	10	Z30	738	VS015	BA63	2.85
57R30S	22½ 45	2 31/32	1 27/32	4 15/16	3 screws	10	Z30NX		VS114	BA53	2.85
57R30SS	22½ 45	3 5/8	2 9/32	3 3/4	3 screws	5	Z30BP				4.45
8303	22½ 45	8 1/4	4 5/8	7 11/16	3 spring clips	5	21308SC	794	VS157		E. 4.39
P8303	22½ 45	8 1/16	4 1/2	7 7/16	Plug in	5	21308PI	General V30H			E. 4.39
5930C	22½ 45	8	4	7 3/8	3 spring clips	5	10308SC			BA26	E. 4.20
88S7R59P	88½	3 1/2	2 1/4	5 15/16	Plug in	6	Z59				6.45
0460P	90	4 7/16	3 7/16	4 7/16	Plug in	5	A60				5.00
0460T	90	8 3/32	3 15/32	2 9/16	flex leads	3				3A7890	5.30
07R60S	45 90	3 9/16	2 5/16	6 5/16	3 screws	5	Z60BP				8.40
07R60SS	45 90	3 1/2	2 7/16	6 3/8	3 screws	5	Z60X				8.40
103SN69	103½	1 11/16	1 11/16	11 25/32	contact	10	XX69				4.90
144S7R96S45	144	2 9/16	2 9/16	13 1/4	3 screws	1	Z96P				12.40
SHOT FIRING BATTERIES											
921B	3	2 5/8	1 5/16	4 1/2	Plug in	15	F2rT	704		BA204/U	$ .90
533	4½	2 3/8	13/16	3 7/16	Plug in	20	B3rT	702			.80
TIE-TAMPER BATTERIES											
698T	6	3 7/8	2 13/16	5 1/2	flex-leads	10				BA-164-7	$1.70
698TL	6	3 7/8	2 13/16	5 1/2	flex leads and lugs	10		BARCO			2.00
ELECTRIC SHAVER BATTERIES											
120S480P	120	4 3/4	2 11/16	4 1/2	Plug in	5					$5.97
135SN90P	135	3 1/16	1 1/2	7 5/8	Plug in	5					7.95
RADIO "AB" AND "ABC" PACKS											
AB944	1½A63B	9 1/8	2	4 3/4	Plug in	5	4GA42		VS053		$4.50
AB1944	1½A61½B	9 3/8	2 11/16	3 7/16	Plug in	5	4GA41		VS052		4.35
AB767	7½6A67½B	9 7/16	2 5/8	4 3/8	Plug in	5	F5M45		VS020		5.00
AB84	1½A90B	1 1/2	6 7/16	11 7/8	Plug in	5	6FA60		VS037		5.69
AB794	7½A63B	8 5/8	2 3/4	4 1/16	Plug in	5	G5A42		VS038		4.48
AB24	1½A90B	2 11/16	5 1/2	7 1/8	Plug in	5	5DA60		VS043		5.59
AB6984	6A90B	12 1/8	2 3/4	4 3/8	Plug in	5	2F4A60		VS044		6.25
AB695	6A90B	10 3/4	2 3/4	5	Plug in	5	F4B60	Zenith 659	VS048		5.95
AB194	1½A67½B7½C	4 1/4	3 7/8	6 5/8	3 screw term.	5	4FA50		VS051	BA244/U	6.25
AB64	1½A90B	9 1/4	2 5/16	4 3/4	Plug in	5	6TA60		VS054		5.79
AB111	1½A67½B	5 9/16	1 1/2	6 9/16	Plug in	5				BA49	6.89
AB304	1½A67½B7½C	4 5/16	3 3/4	6 3/8	Plug in	5		ROV AB484	VS041		6.45
AB307	7½A75B	8 9/16	3 11/16	2 7/16	Plug in	5	T5Z50	755	VS050		5.25
AB308	7½A90B	9 3/8	2 3/16	3 3/4	Plug in	6	T5Z60	Philco 361			5.80
AB313	9A90B	8 1/4	4 1/4	13 7/8	Plug in	1		General 3G6060	VS057		9.76
AB318	1½A90B4½C	3 3/16	3 31/32	7 1/16	Plug in	1				BA43	9.85
AB326	7½9A90B	8 1/4	4 1/2	13 7/8	Plug in	1		Philco P326	VS119		8.29
AB327	6A75B	8 11/16	2 5/8	3 5/8	Plug in		F4A50				5.53

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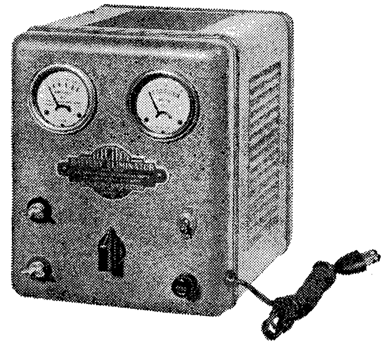
TODAY'S OUTSTANDING D. C. POWER SUPPLIES...

in performance! in reliability! in dollar-for-dollar value!

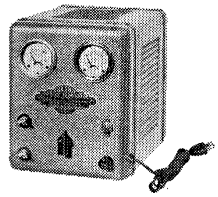
NOW AVAILABLE: Model AR 5612 and AR 4612 ELECTROX BATTERY ELIMINATORS in 6 AND 12 volt Combination! Write for Bulletin 1469.


Model AR-5

ELECTROX "MASTER" BATTERY ELIMINATOR MODEL AR-5

Newly designed ELECTROX MODEL AR-5 provides smooth, hum-free D.C. for servicing and demonstrating practically any type and size auto radio, either pushbutton or manually tuned. Delivers 6 volts D.C. with a low ripple component of approximately 2%. Output voltage is adjustable for any load current between 3 and 15 amperes, indicated by accurate, easy-to-read 0-15 ampere D.C. ammeter and 0-8 volt D.C. voltmeter.

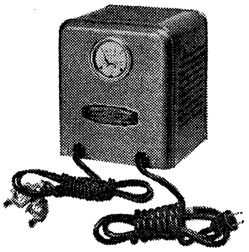
Components include Selenium rectifiers for long life and continued high efficiency, condenser, transformer and filter choke. Housed in a sturdy, handsome, compact steel case.


Model AR-4

ELECTROX "STANDARD" BATTERY ELIMINATOR MODEL AR-4

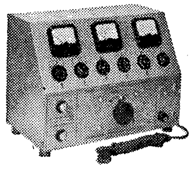
A practical, low-cost D.C. power supply constructed to the same high standards as the Model AR-5 above, except D.C. output is not adjustable. Delivers smooth, hum-free 6 volts D.C. at approximately 15 amps.

Own ELECTROX Power Supplies — they're the choice of leading service men. Described in Bulletin 1469. Write for your free copy.


Model BX-2

SCHAUER BATTERY CHARGERS

A complete line of battery chargers designed for safe recharging of storage batteries. Available in models for charging 6-volt batteries and other models for charging 12-volt batteries. Four to 20 ampere capacities. Equipped with exclusive Schauer "Charger-Guard" —an automatic corrector which acts instantly in case of an overload or short circuit. No manual resetting of the circuit breaker, and fuses are eliminated. Approved by Underwriters' Laboratories, Inc. Write for Bulletin 2469.


Model AR-6

ELECTROX VIBRATOR ANALYZER AND POWER SUPPLY MODEL AR-6

Don't gamble on auto radio vibrator performance! Protect your profits and avoid comebacks by owning the original and most reliable vibrator analyzer available today. Electrox AR-6 combines an adjustable 0-8 volt D.C. Power Supply with a Vibrator Analyzer that will thoroughly test practically all interrupter and synchronous, shunt or series-driven 6-volt vibrators. Test results are determined by *accurate meter readings* — *not* by the unreliable substitution method! See your Electrox jobber. Write for Bulletin 1469.

RECTIFIER MSCo DIVISION

SCHAUER MANUFACTURING CORP. 4513 ALPINE AVENUE CINCINNATI 36, OHIO

Mueller Electric Co.

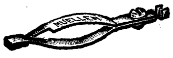
CLEVELAND, OHIO

MUELLER BATTERY AND TEST CLIPS

U.S. PATENTS: 1,521,903; 1,686,842; 1,779,442; 1,794,976; 1,965,151; 1,994,251; 1,999,613: 2,074,324; 2,136,814; 2,416,113; 2,549,589; 2,593,130

For use in making quick, temporary electrical connections. Screw connections.

WEE-PEE-WEE No. 88

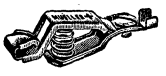


Entirely Non-ferrous. Smaller Than Ever! An extremely small clip for fine testing in radio and electrical work. Light-Weight; thin-nosed; spring-temper phosphor bronze. **Ideal for close-wound coils.** 1 11/16″ long; jaw spread 5/32″.

EACH NET..................**$0.19** **LOTS OF 10**..................**$0.13**

Use No. 93 R.F. Insulator.

No. 45 PEE WEE

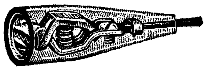


A very small test clip for radio, ignition, meter and similar work. 1½″ long. Jaw spread ⅜″. Steel, cadmium plated.

EACH NET..................**$0.07** **LOTS OF 10**..................**$0.05**

No. 45-C

Solid Copper R.F. Test Clip



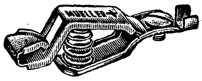
No. 45-C Clip
No. 47 Insulator

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1½″ long.

EACH NET..................**$0.11** **LOTS OF 10**..................**$0.08**

Use **No. 47** Insulator for clips 45 and 45-C.

No. 48-B



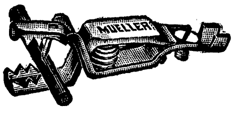
A small test and battery clip for radio use and general testing purposes. 2″ long. Jaw spread ½″. Steel, cadmium plated.

EACH NET....**$0.08** **LOTS OF 10**....**$0.055**

No. 48C—Solid Copper. Same size as 48-B.

EACH NET..................**$0.13** **LOTS OF 10**..................**$0.09**

No. 50-C Needle Clip



Solid bronze. Needle pierces insulation of wire for quick test contact. 2¼″ long.

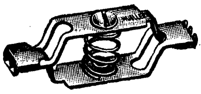
EACH NET..**$0.25** **LOTS OF 10**..**$0.18**

No. 51-C—Large crocodile clip. Same as 50-C but without needle.

EACH NET $0.19 **LOTS OF 10**..**$0.13**

Use No. **49** insulator for Clips 48-B, 48-C, 50-C and 51-C.

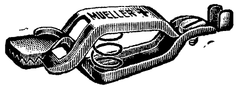
No. 22 Twin-Clip



Jaws on both ends. Great time-saver in test work. Used to hold or rack articles for display or processing. 2″ long. Steel cadmium plated.

EACH NET....**$0.10** **LOTS OF 10**....**$0.07**

No. 27



A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work 2 1/16″ long. Jaw spread ⅝″. Steel, cadmium plated.

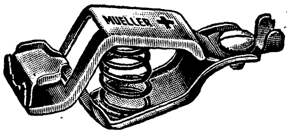
EACH NET..................**$0.11** **LOTS OF 10**..................**$0.08**

No. 27-C—Solid copper. Same size as No. 27.

EACH NET..................**$0.19** **LOTS OF 10**..................**$0.13**

Use **No. 29** Insulator for clips 27 and 27-C.

No. 24-A



A medium sized battery clip. Stands erect on battery post. Lead coated, copper shunt protects spring. 2⅞″ long. Jaw spread 1″. Steel, lead plated.

EACH NET..................**$0.16**
LOTS OF 10..................**$0.11**

No. 24-C—Solid copper. Same size as No. 24-A.

EACH NET..................**$0.28** **LOTS OF 10**..................**$0.20**

Use **No. 26** Insulator for Clips 24-A and 24-C.

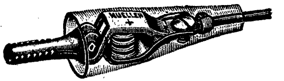
LARGER SIZES OF CLIPS

	Each Net	Lots of 10
No. 21-A—Heavy Duty Steel, lead plated, 4″ long	$0.30	$0.21
No. 21-C—100 Amp. Solid Copper, 4½″ long	.73	.51
No. 11-A—100 Amp. Steel, lead plated, 6″ long	.84	.59
No. 11-C—200 Amp. Solid Copper, 6″ long	1.40	.98
No. 33-C—300 Amp. Solid Copper, 7¾″ long	2.70	1.90

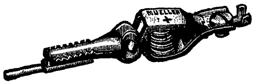
(Above furnished with lug connections.)

CROCODILE CLIPS

U.S. Patent No. 1,999,613



No. 85 or 85-C Clip with
No. 87 Insulator



No. 85-T Clip

No. 85—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Screw connection. 2⅛″ long.

EACH NET..................**$0.08** **LOTS OF 10**..................**$.055**

No. 85-C—Same as No. 85, except solid copper. A radio frequency, entirely non-ferrous test clip.

EACH NET..................**$0.14** **LOTS OF 10**..................**$0.10**

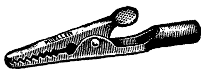
No. 85-T—New Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removable heads. 2⅝″ long.

EACH NET..................**$0.18** **LOTS OF 10**..................**$0.13**

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and Black. Cover entire clip except nose. Protect against short and shock. Help to distinguish leads.

ALLIGATOR CLIPS

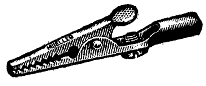
No. 60—CONVENTIONAL TYPE



Accurately made, slim jaws, fine meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2″ long.

EACH NET..................**$0.07** **LOTS OF 10**..................**$0.05**

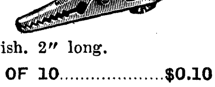
No. 60-S—SCREW CONNECTION



Eliminates necessity for soldering. Otherwise same as No. 60.

EAST NET $0.08 **LOTS OF 10 $0.55**

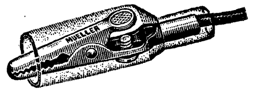
No. 60-CS—COPPER R.F. ALLIGATOR CLIP



Same as No. 60-S except made of solid copper. Has brass screw connection. Ideal for R.F. work. Will not heat up in H.F. circuits. Bright, natural copper finish. 2″ long.

EACH NET..................**$0.14** **LOTS OF 10**..................**$0.10**

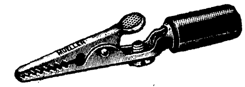
No. 62 FLEXIBLE VINYL INSULATOR



New! Red and black insulators for Alligator Clips 60S, 60CS and 60.

EACH NET..................**$0.07** **LOTS OF 10**..................**$0.05**

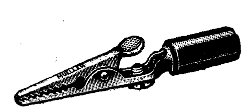
No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE



Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. 2¼″ long. Shipped half red, half black.

EACH NET..................**$0.14** **LOTS OF 10**..................**$0.10**

No. 60-CHS—COPPER ALLIGATOR CLIP WITH INSULATED HANDLE

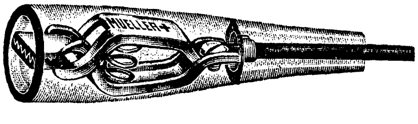


Same as No. 60-CS except equipped with red and black insulating sleeves on end. Brass screw connection, for R.F. work. 2¼″ long. Shipped half red, half black.

EACH NET..................**$0.19** **LOTS OF 10**..................**$0.13**

Mueller Electric Co.

FLEXIBLE INSULATORS FOR CLIPS



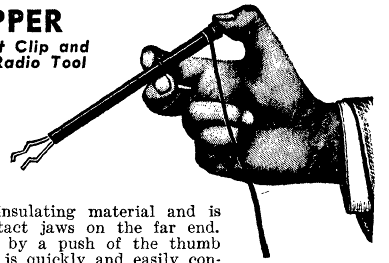
Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13	11-A, 11-C	$0.72	$0.50
23	21-A, 21-C	.39	.27
26	24-A, 24-C	.25	.18
29	27, 27-C	.17	.12
35	33-C	1.72	1.20
47	45, 45-C	.07	.05
49	48-B, 48-C, 50-C, 51-C	.10	.07
62	60S, 60CS, 60	.07	.05
87	85, 85-C, 85-T	.07	.05
93	88	.05	.035

A convenient protection against short circuit and electric shock. Packed half red and half black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly.

THE SNAPPER

A Long Insulated Test Clip and A "Triple Threat" Radio Tool

U. S. Patent
No. 2,074,324

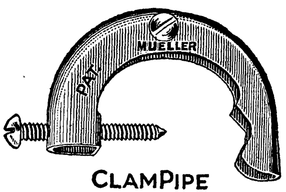


No. 99
7" Long Insulated

The long tube is of insulating material and is fitted with spring contact jaws on the far end. The jaws are operated by a push of the thumb on the near end. Wire is quickly and easily connected in a hole in the insulator knob binding post on the near end. May be used as (1) A "Deep Sea" Electric Test Clip—test contacts with ease, deep in the recesses of radio chassis with no danger of short circuits; (2) An Electric Contact Prod—clip jaws may be used to make quick prod contacts, or clip one Snapper on ground circuit and prod with another; (3) A Retriever—start small screws and nuts or pick up odds and ends that may accidentally be dropped into inaccessible places.

PRICE......$1.20 EACH Dealers' Wholesale Price, each....$0.72 Net
Snappers are generally used in pairs—1 red and 1 black.

CLAMPIPE GROUND CLAMP



CLAMPIPE
U.S. PATENT No. 1,794,976

No. 58

The exclusive patented feature of a U-shaped cross section in combination with a U-shaped clamp gives a rigidity and effectiveness to the ClamPipe that cannot be found in any other make.

The ClamPipe will not bend or lop over when applied to a pipe. The point of the large case hardened screw, cuts through rust, paint or corrosion into clean, fresh metal, insuring a good contact. The Clamp may be installed on a pipe lying flush against a wall. Will not spread open.

The best ground clamp value on the market. Applicable to pipe 3/8" to 1 3/8" outside diameter.

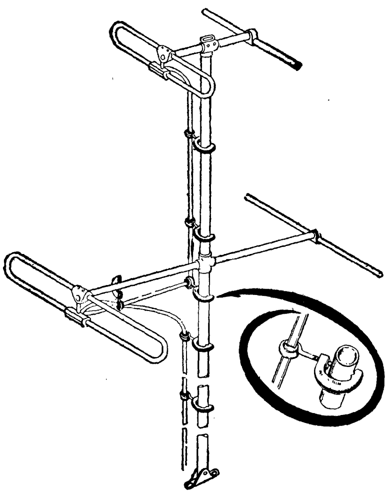
Packed 10 in a box

EACH NET....................$0.16 LOTS of 10..................$0.11

THE "TENNA-CLAMPIPE"

(ClamPipe Trade-mark Reg. U. S. & Can. Pat. Off.)

A Standoff Insulator that clamps on Quickly—Easily—almost anywhere for Television and FM Antenna Lead-Ins.



Quickly and Permanently Supports Lead-Ins

- On antenna masts & cross-arms.
- On pipes, I-beams, etc., on basement ceilings.
- On any rigid object up to 1 3/8" in diameter or thickness.

SIMPLY TURN THE SCREW-EYE BY HAND FOR A SOLID, PERMANENT GRIP.

A great time-saver — the installation man's third hand.

Consists of an assembly of the famous Mueller ClamPipe Ground Clamp and a steel screw-eye with an insulating grommet. Holds lead-in wire from 1 1/4" to 2 1/2" away from clamp. Can be applied to any antenna mast, pipe or other object up to 1 3/8" in diameter or thickness.
All metal parts are completely weatherproofed.
Insulating grommet is molded of high quality plastic having superior dielectric and non-absorptive properties. Will withstand exposure to weather.

No. 130 for all types of Flat Twin-lead.
No. 131 for all Coax Cables up to 1/2" O.D.

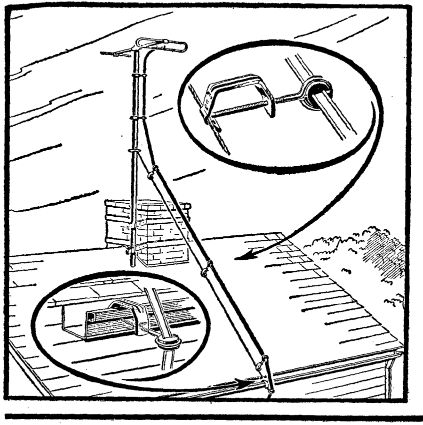
Packed 100 in a carton

EACH NET........... $0.17 LOTS OF 10..............$0.12
LOTS OF 100 .... $0.105

THE "TENNA-CLAMP"

A New 3-in-1 Stand-off Insulator Clamp!

Supports TV and FM Lead-ins on MASTS, PIPES, GUTTERS and GUY-WIRES



Has same general features and specifications as Tenna-ClamPipe described above except different type clamp channeled on end to take standard guy-wire in addition to pipes.

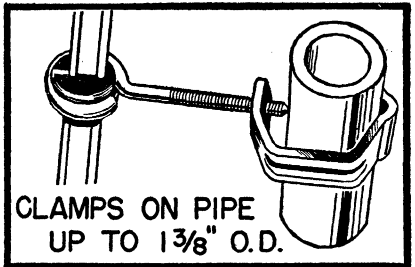
HAS THESE USEFUL FEATURES —

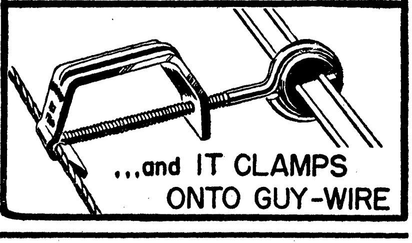
- One standard size solves many lead-in problems — far more useful than straps or wire bands.
- Brings lead-in to edge of roof — right where you want it — no more "draping" of wire across the roof.
- On those high jobs, come right down a guy-wire — and get around the gutter in the clear.

LOW PRICES!

All packed 100 in a carton

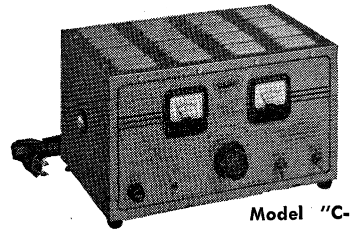
No. 135 For all types of Flat Twin-Lead.
No. 136 For Coax Cables up to 1/2" O.D.
EACH NET, $0.14 LOTS OF 10, $0.10
LOTS OF 100, $0.084





Electro ELECTRONIC EQUIPMENT

DC POWER SUPPLIES and BATTERY ELIMINATORS



Model "C-12"

TEST SERVICE 12 & 6 VOLT AUTO RADIOS

Superior Model 10 Powerstat for incremental voltage adjustment. Variable voltage for full range. Emico volt and ammeters: 0-20 volts, 0-10 amperes. Choke input type filter. Bridge type selenium rectifiers. Heavy duty transformer and choke.

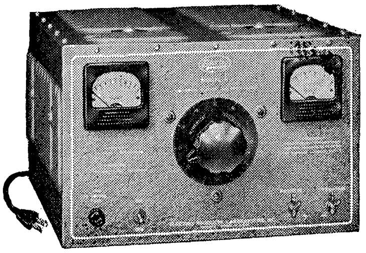
Only 3% Ripple at Full Load

NEW DC POWER SUPPLY MODEL "C-12"

0-16 Volts from 1-8 Amperes Continuous Output.

Up to 12 Amperes Intermittently.

Completely variable output makes it possible to test equipment under any voltage input condiion. Provides filtered adjustable DC voltage for testing and servicing 12 volt and 6 volt auto radios from AC lines. No connections required for change-over. Operates electronic equipment used on trucks, tanks and other mobile units; low voltage devices. Utilizes Superior Powerstat Voltage Control (Model 10) for extremely fine voltage adjustments. 110-120 Volt, 50/60 cycle AC input, 150 watts with 8 ampere 12 volt DC load. Sizes 12x7x8½". Net weight: 25 lbs.



Model "NF"

TEST, SERVICE DC EQUIPMENT FROM AC LINES

Choke input and Pi type filters with 1 choke, 2000 mfd. condenser plus 1 choke, 4000 mfd. condenser. D'Arsenval-type voltmeter 0-50 volts; ammeter 0-25 amperes, 2% accuracy. Bridge type selenium rectifiers. Superior Powerstat for incremental voltage adjustment.

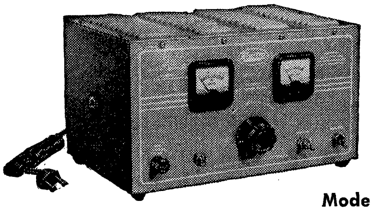
Less than 1% Ripple at Top Load

MODEL "NF" — 0-28 VOLTS, 1-15 AMPS. CONTINUOUS RATING, 25 AMPS. INTERMITTENT RATING

Serves broadest uses in industry, research and servicing. Only moderately priced Power Supply with less than 1% ripple at this output. Exclusive "EPL" selenium rectifier application increases power rating, lowers cost per ampere output. Finest components, trouble-free operation. Peak instantaneous current rating of 25 amperes (from 50/60 cycle 115 volt source). 0-36 volts up to 6 amperes. Size 14¼x14¼x9¾". Net Weight: 71 lbs.

MODEL "N". Same rating and specifications except for:

5% ripple at 10 amperes, 8% at 15 amperes, less 1 choke and 2 condensers, lower cost, net weight 65 lbs.



Model "B"

TEST, SERVICE DC EQUIPMENT FROM AC LINES

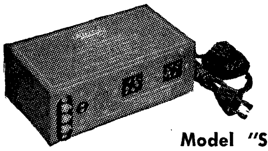
Less than 3% AC ripple or hum. Damped volt and ammeters (no wiggling). 8 Heavy-duty power tap adjustments. Voltmeter 0-10 volts 3% accuracy. Heavy duty selenium rectifiers, switch, transformer, choke and 6000 mfd. filter condenser.

MODEL "B" — 6 VOLTS, 1-20 AMPS. CONTINUOUS RATING, 35 AMPS. INTERMITTENT RATING

Tests, operates auto radios, relays, phone circuits, other low voltage devices. Conduction cooling increases rectifier power rating 1½ times, lowest cost per ampere output. Ample power to operate two auto radios at once. Peak instantaneous current rating of 35 amperes (from 50/60 cycle 115 volt source). Supplies 3 to 9 volts at other ratings. Size: 12x7x8½". Net weight: 29 lbs.

MODEL "BJ". 6 VOLTS, 1-12.5 AMPS. CONTINUOUS RATING, 25 AMPS. INTERMITTENT RATING

Same as "B" except for: lower cost; operates 1 auto radio; AC ripple less than 0.4 volts at 6 volts, 8 amperes; voltmeter 0-10 volts; ammeter 0-20 amperes 5% accuracy; 2000 mfd. filtered condenser; net weight 21 lbs.



Model "S"

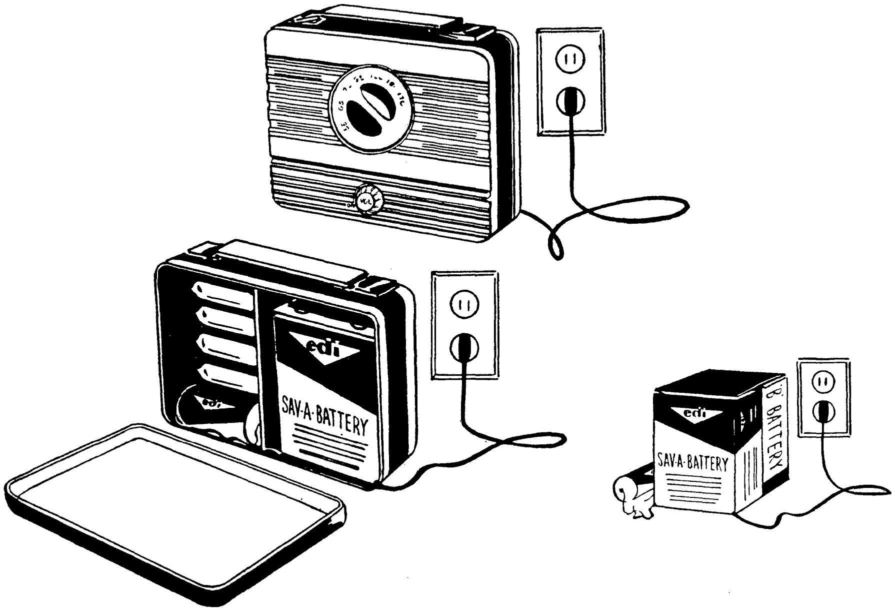
"A" Supply Output: 5-6 tubes (average) 1.4 volts at 320 ma; 4 tubes 1.4 volts at 250 ma; 4 tubes 1.4 volts at 200 ma. "B" Supply Output: 90 volts DC at 12 ma. Primary: 115 volts AC at 60 cycles. Also for 220 volt operation.

CONVERTS BATTERY RADIOS TO AC ALL-ELECTRIC

Model "S" operates 1.4 volt 4 to 6 tube battery radio from 115 volt 50/60 cycle source. Complete filtering insures hum-free silent operation. Easily fits into battery compartment of most radios. Eliminates batteries, saves money. Low operating cost, uses only 11 watts. Has on-off switch, standard plug and sockets. Cabinet: Blue Hammerloid finished steel. Size: 2⅜x3¾x6¾". Net weight: 2½ lbs.

ELECTRO PRODUCTS LABORATORIES, INC. • Pioneer Manufacturers of DC Power Supplies

NEW! ELECTRONIC POWER PACK-ECONOMIC



BATTERY ELIMINATOR, BATTERY REJUVENATOR
DEPENDABLE, CONVENIENT

SAVE-A-BATTERY	Converts your Battery Radio to a Home Radio fully electrified A-C.
SAVE-A-BATTERY	Saves your batteries at home and plays your set with A-C current.
SAVE-A-BATTERY	Rejuvenates your B Battery overnight by using SAV-A-BATTERY as a charger.
SAVE-A-BATTERY	Saves your Battery for outdoor use.
SAVE-A-BATTERY	Prolongs the life of your B Battery.
SAVE-A-BATTERY	Fits in your radio, in place of your B and A Batteries.
SAVE-A-BATTERY	Needs neither wiring nor soldering and replaces both the A and B Batteries in your radio set.
SAVE-A-BATTERY	Is guaranteed for excellent workmanship.

LIST PRICE $6.95

ELECTRONIC DEVICES, INC.

Manufacturers of Electronic Components

BROOKLYN 15, N. Y.

ATR VIBRATORS *have Ceramic Stack Spacers*

ATR Replacement Vibrator Specifications

N.S.—Non Synchronous S.—Synchronous

Frequency: 115 Cycles except as noted.

Type No.	Volt-age	Type	Base Dia.	Can Style	Dimensions	List Price
303	6	N.S.	17	J	1½" x 1⅜" x 2½"	$5.75
324	6	N.S.	1	A	1½" x 3⅛"	4.45
324A	6	N.S.	2	A	1⅝" x 3⅝"	4.45
324B	6	N.S.	1	A	1 15/16" x 3½"	4.45
324C	6	N.S.	2	A	1⅝" x 4¾"	4.45
325	6	N.S.	51	A	1½" x 2⅞"	5.75
328	6	N.S.	4	A	1½" x 3⅛"	4.45
335	6	N.S.	9	A	1⅝" x 3⅝"	4.45
337	6	N.S.	14	A	1 15/16" x 3½"	5.75
338	6	N.S.	9	C	1½" x 3⅛"	4.45
340	6	N.S.	1	A	1½" x 2⅞"	4.45
345	6	N.S.	9	A	1½" x 2⅞"	4.45
347†	6	N.S.	1	A	1½" x 3⅛"	5.75
350	6	N.S.	1	A	1¼" x 2⅜"	4.45
503	6	S.	43	A	1 15/16" x 4½"	8.30
ADAPTER	....	....	......	......	....	1.35
506	6	S.	40	A	1 15/16" x 4½"	8.30
507	6	S.	44	A	1 15/16" x 4½"	8.30
508	6	S.	42	A	1 15/16" x 4½"	8.30
520	6	S.	19	A	1½" x 3⅛"	7.00
520A	6	S.	19	A	1 15/16" x 3½"	7.00

Type No.	Volt-age	Type	Base Dia.	Can Style	Dimensions	List Price
521	6	S.	20	A	1½" x 3⅛"	$7.00
522	6	S.	21	A	1½" x 3⅛"	7.00
522A	6	S.	21	A	1 15/16" x 3½"	7.00
523	6	S.	22	A	1½" x 3⅛"	7.00
524	6	S.	23	A	1½" x 3⅛"	7.00
525	6	S.	24	A	1½" x 3⅛"	7.00
529	4	S.	21	A	1½" x 3⅛"	7.00
540	6	S.	27	A	1½" x 3⅛"	7.00
541	4	S.	19	A	1½" x 3⅛"	7.00
541A	4	S.	19	A	1 15/16" x 3½"	7.00
544‡	6	S.	28	A	1⅜" x 2⅞"	7.00
545‡	6	S.	28	A	1½" x 3⅛"	7.00
547	6	S.	29	C	1 15/16" x 3½"	7.00
550	6	S.	32	K	4⅞" x 1¾" x 1¾"	8.30
561	6	S.	24	A	1½" x 2⅞"	7.00
562	6	S.	21	A	1¼" x 3⅛"	7.00
564*	6	S.	23	A	1½" x 2⅞"	7.00
900	2	S.	52	A	1½" x 2⅞"	8.90
2324	32	N.S.	1	A	1½" x 3⅛"	6.50
2401	32	S.	22	A	1½" x 3⅛"	7.75

Recommended Substitutions for Discontinued Vibrators

Discontinued Type	Recommended Replacement
305	303
307	303 (Refer Note 1)
314	324
316	324
317	324
323	340
326	325
327	325
330	324C
332	522 (Refer Note 8)
342	325
504	503
505	503 (Plus Adapter)
531	550 (Refer Note 13)
536	524 (Refer Note 10)
537	525
543	522A (Refer Note 3)
543A	522A (Refer Note 3)
546	522 (Refer Note 6)
551	550 (Refer Note 14)
553	550 (Refer Note 11)
591	524 (Refer Note 9)
2327	2324 (Refer Note 12)
2403	2324

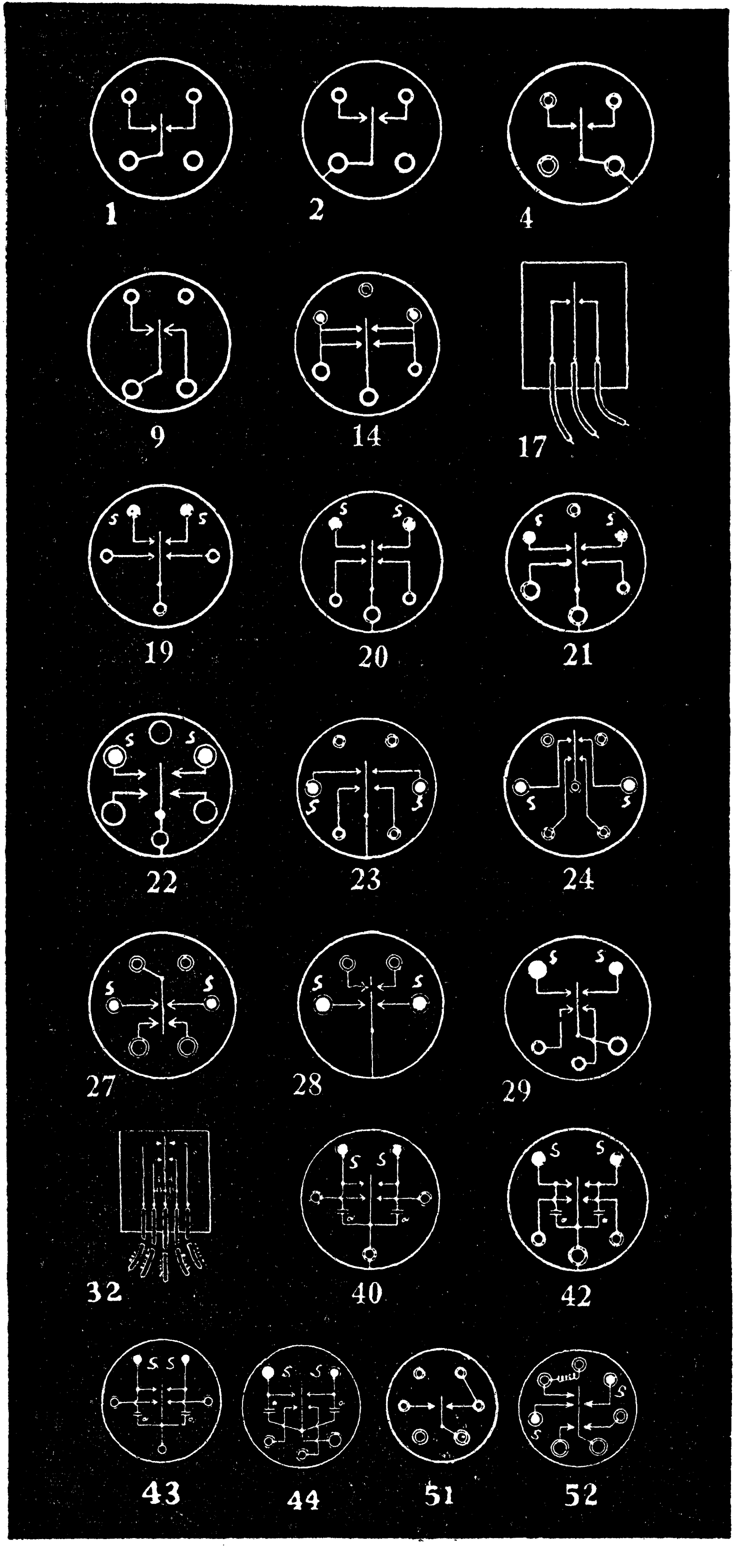
The Installation Notes listed above are shown in Section G of the ATR Vibrator Manual.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

INSIST on ATR VIBRATORS-Get the Best!!

ATR Replacement Vibrator Specifications

Base Diagrams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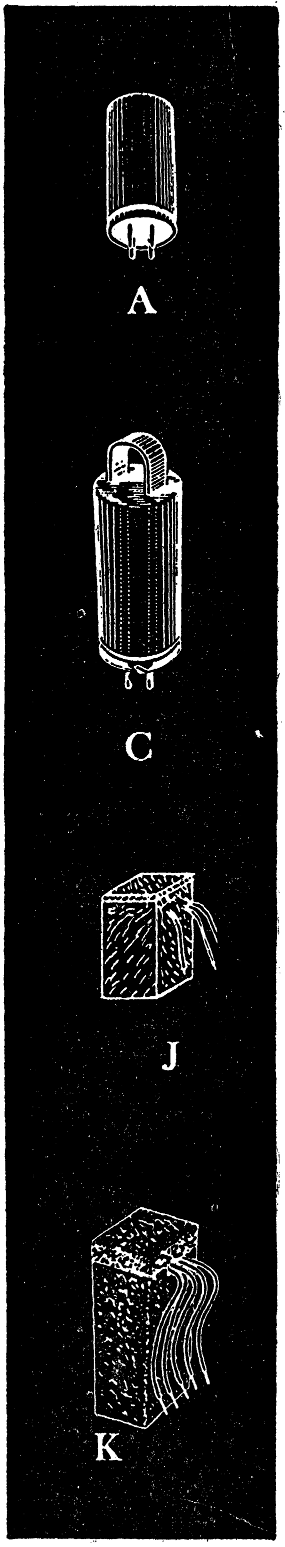
External Views



ATR • VIBRATORS • ATR

AMERICAN TELEVISION & RADIO CO.

ATR *AUTO RADIO* VIBRATORS

ATR
VIBRATOR
REPLACEMENT
TYPE 524
ATR
REPLACEMENT
A QUALITY PRODUCT
ATR VIBRATORS
FULLY GUARANTEED
THE BEST BY TEST
ATR
VIBRATOR
TYPE 524
Model 44705

ATR Manufactures a Complete Line of Auto Radio Replacement Vibrators

Ask your ATR Distributor for your Free Copy of the Latest ATR Vibrator Guide

ATR VIBRATORS

feature Ceramic Stack Spacers, and are proven units of the highest quality, engineered to perfection. They are backed by more than 22 years of vibrator design and research, development and manufacturing — *ATR Pioneered in the Vibrator Field.*

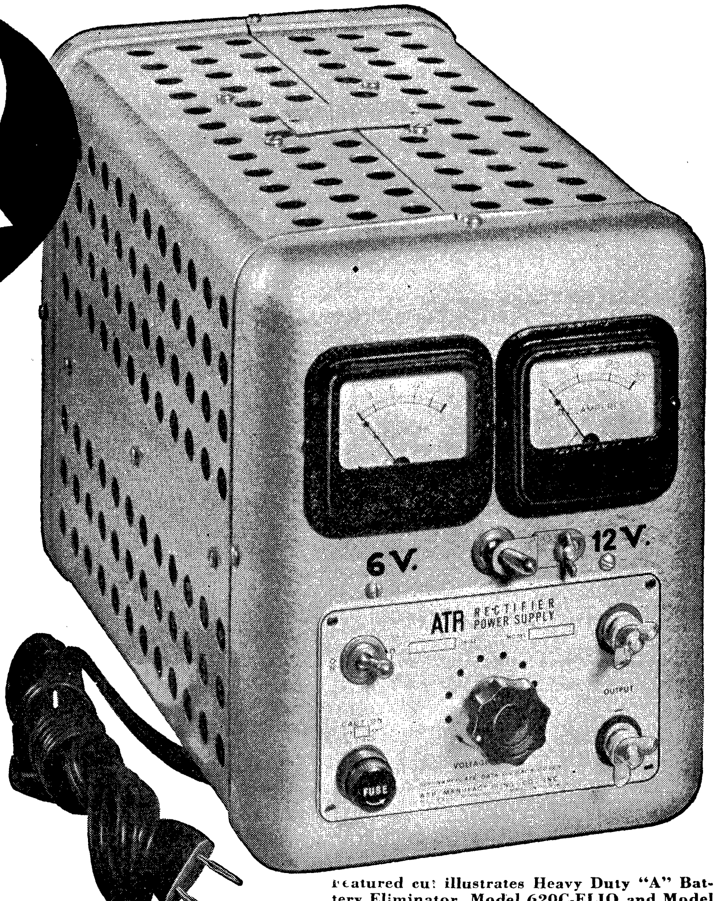
ATR VIBRATOR EQUIVALENT CHART

ATR	TYPE	SIZE	ATR LIST PRICE	E-L	MALLORY	RADIART
324	Int.	1½" x 3⅛"	$4.10	1703	294	5300
328	Int.	1½" x 3⅛"	4.10	2090	854	5331
335	Int.	1⅝" x 3⅝"	4.10	2088	852	5303
340	Int.	1½" x 2⅞"	4.10	2605	859	5301
508	Syn.	1 15/16" x 4½"	7.65	2682	273C	5425
520	Syn.	1½" x 3⅛"	6.90	2688	245	5409
522	Syn.	1½" x 3⅛"	6.90	2089	246	5411
524	Syn.	1½" x 3⅛"	6.90	2107	248	5400
525	Syn.	1½" x 3⅛"	6.90	2687	249	5406
547	Syn.	1 15/16" x 3½"	6.90	2092	716	5426

THESE 10 POPULAR ATR VIBRATORS MEET 90% OF YOUR SERVICE NEEDS

ATR • ELIMINATORS • ATR

AMERICAN TELEVISION & RADIO CO.



Featured cut illustrates Heavy Duty "A" Battery Eliminator, Model 620C-ELIQ and Model 610C-ELIC; equipped with Voltmeter, Ammeter and Voltage Control.

ATR "A" BATTERY ELIMINATORS

Specially Designed for Testing and Operating Auto Radios and D. C. Electrical Apparatus on Regular A. C. Lines, 105-125 Volts 50-60 Cycles.

- Fully Automatic and Fool-Proof.
- Eliminates Storage Batteries and Battery Chargers.
- Operates the Equipment at Maximum Efficiency at all Times.
- Delivers Filtered Direct Current at the Correct Voltage for Proper Operation.

SUGGESTED USES:

As a power supply for radio sets, aircraft instruments, relays, motors and other electrical and electronic equipments. In the laboratory, for supplying various low D. C. voltages.

Battery Eliminators may be treated as batteries in the sense that they can be connected in series for higher voltages at the same current output per unit or in parallel for the same output voltage per unit at higher currents.

Equipped with Full-Wave Dry Disc Selenium Rectifier, Assuring Noiseless, Interference-Free Operation and Extreme Long Life and Reliability.

TYPE 610-ELIC—Rated output 6 volts at 10 amperes continuous. Size 6½″ x 9⅛″ x ½″. Shipping weight, 22 lbs. Code word "SELID".
User Net Price $29.70

TYPE 610C-ELIC—Rated output 6 volts at 10 amperes continuous or 12 volts at 6 amperes continuous. Size 6½″ x 9⅛″ x 8½″. Shipping weight, 22 lbs. Appearance similar to 620C-ELIQ, above. Code word "SELIC".
User Net Price $33.50

TYPE-620C-ELIQ—Uses dual rectifiers. Size 6½″ x 12⅞″ x 8½″. Shipping weight, 33 lbs. Code word "HELIP".

RATED OUTPUT: 6 volts at 20 amperes continuous or 12 volts at 10 amperes continuous. Either output obtainable by means of simple toggle terminal switching arrangement.
User Net Price $46.95

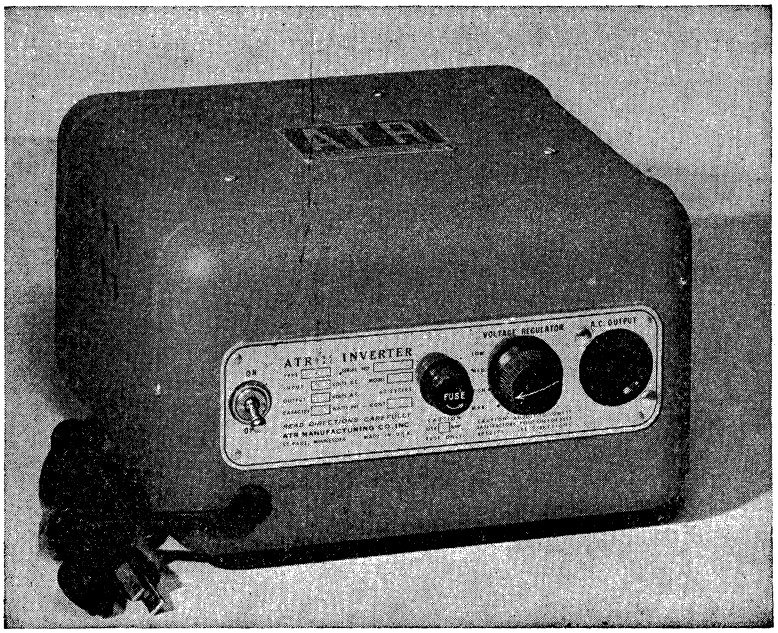
All ATR Eliminators have as standard equipment: On-Off Switch, 8-Position Voltage Control, Meter(s), Fuse Protection, Rubber Mounting Feet, 6 ft. All-Rubber Cord Set, and Cabinet of heavy gauge metal having attractive grey-hammerloid finish.

ATR RECTIFIER POWER SUPPLY

Illustrating Standard "A" Battery Eliminator, Model 610-ELIC, equipped with Voltmeter and Voltage Control.

ATR • INVERTERS • ATR

AMERICAN TELEVISION & RADIO CO.



ATR STANDARD AND HEAVY DUTY RADIO INVERTERS

Specially Designed for Operating A. C. Radios, Public Address Systems, Amplifiers, Intercom Systems, and Radio Test Equipment from D. C. Voltages in Vehicles, Ships, Trains, Planes, and in D. C. Districts.

Featured cut above illustrates all Standard ATR Radio Inverters except Types 6 and 12 RSD.

This group of ATR Inverters is especially recommended for use with A.C. radios, amplifiers, and similar electronic equipment, being exceptionally well filtered to insure interference-free radio reception. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life radio operation. All models indicated are equipped with ATR plug-in Inverter Vibrators and also with four-point voltage regulators as fully described on the reverse side. The operating efficiency is in excess of 85%. These Radio Inverters are recommended for use with loads having power factors in excess of 80%.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	Consumer Net Price
			Inter-mittent	Con-tinuous		
*6 RSD	6	110 volts	85	75	ARSDD	$39.25
*12 RSD	12	110	125	100	BRSDE	39.25
28 RSD	28	110	125	100	ORSDR	44.80
32 RSD	32	110	150	100	CRSDF	39.25
32B-RHE	32	110	200	180	DRHEG	62.50
50 RSD	50	110	150	100	ERSDH	51.10
110 RSD	110	110	250	150	GRSDJ	39.25
110C-RSD	110	110/220	250	150	JRSDM	51.10
220 RSD	220	110	250	150	LRSDO	44.80
220A-RSD	220	110/220	250	150	MRSDP	51.10

Radio frequency interference completely suppressed.

Any of the above type Inverters are available with 220 volt A.C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D.C. Inverter having a 220 volt A.C. output is desired, this would be ordered as Type 110S covered by code word, "GRSDT".

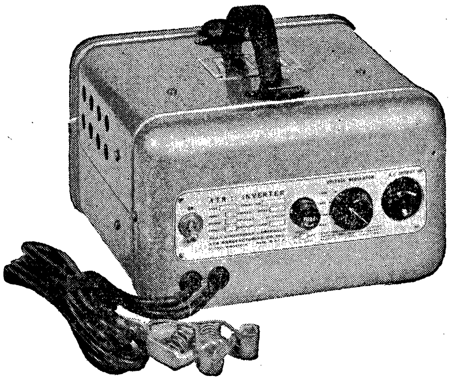
ATR Standard RSD and Heavy Duty RHE Radio Inverters are housed in attractively finished grey-hammerloid metal cabinets.

Dimensions of Standard RSD Model Radio Inverters, 8⅜" x 9" x 5¼"; Shipping weight, 19 lbs.

Dimensions of Heavy Duty RHE Model Radio Inverters, 6½" x 11⅛" x 8½"; Shipping weight, 30 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.

*Available with leather carrying handle at $1.00 additional — optional.



Illustrating Types 6 and 12 RSD Standard Radio Inverters only.

Leather Handle as Shown Optional.

TRADE DISCOUNT APPLIES

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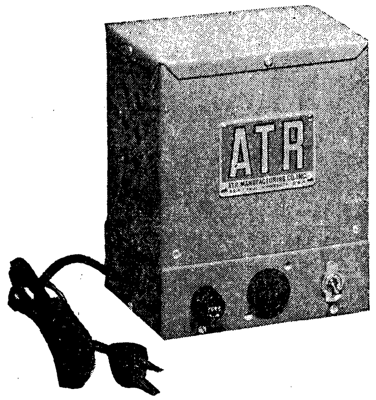

Featured cut illustrates all LIF Low Power Inverters except Types 6 and 12 LIF.

ATR Low Power INVERTERS

For Operating Small A. C. Motors, Electric Razors, Radios, and Devices of Approximately 35 watts Consumption from 6, 12, 28, 32, 110, and 220 volt D. C. Lines.

This line of ATR Low Power Inverters was specially brought out to meet the insistent demand for a good, low power, inexpensive Inverter for operating phonograph and other A.C. motors and a host of small A.C. devices from D.C. voltage sources. These Inverters operate at an efficiency in excess of 90% and are designed for operation of loads having a power factor as low as 60%. They are ruggedly built and powered by a special ATR six-contact plug-in Inverter Vibrator utilizing four ¼" diameter tungsten power contacts and two silver alloy driver contacts.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D. C. volts	A.C. Output 60 cycles	Output Wattage		Code Word	Consumer Net Price
			Intermittent	Continuous		
6 LIF	6	110 volts	40	35	ALIFM	$25.55
12 LIF	12	110	50	35	BLIFN	25.55
28 LIF	28	110	50	35	GLIFS	28.70
32 LIF	32	110	50	35	CLIFO	28.70
110 LIF	110	110	75	50	DLIFP	25.55
220 LIF	220	110	75	50	ELIFQ	28.70

Radio frequency interference suppressed.

Any of the above type Low Power Inverters are available with 220 volt A. C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D. C. Low Power Inverter having a 220 volt A. C. output is desired, this would be ordered as Type 110S-LIF covered by code word, "DLIFT".

Dimensions, 5⅜" x 4" x 6⅝"; shipping weight, 8 lbs.

Replacement Vibrators for any of the above Low Power Inverters are available. Be sure to mention the type number as well as model number when ordering. Consult Inverter Vibrator Guide.

ATR STANDARD AND HEAVY DUTY ‡ INDUSTRIAL INVERTERS

For Operating A. C. Motors, Electronic Apparatus, Electrical Testing Equipment, and A. C. Electrical Appliances from D. C. Lines.

These units are specially designed for applications as indicated, permitting the use of standard A.C. equipment on D.C. lines. These Inverters operate at an efficiency in excess of 80% and are carefully built and equipped to give the longest possible life and operating satisfaction. All models indicated are equipped with an ATR plug-in Inverter Vibrator of new design and construction, insuring increased long life and reliable service. These Inverters also come equipped with four-point voltage regulators, which make possible the correct voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. These Industrial Inverters are recommended for use with loads having power factors as low as 60%, and as low as 50% for the "P" Inverters indicated. These Inverters should not be used with Neon signs.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D.C. volts	A.C. Output 60 cycles	Output Wattage		Code Word	Consumer Net Price
			Intermittent	Continuous		
6 ISQ-F*	6	110 volts	85	75	AISGD	$49.95
12 ISQ-F*	12	110	125	100	BISGE	49.95
28 ISQ-F	28	110	125	100	LISGN	55.55
32 ISQ-F	32	110	150	100	CISGE	49.95
32P*-ISQ-F	32	110	150	125	DISGF	61.80
32B-IHR-F	32	110	200	180	EIHGG	73.25
110 ISQ-F	110	110	250	150	FISGH	49.95
110P*-ISQ-F	110	110	250	150	GISGI	61.80
110A-IHR-F	110	110	325	250	HIHGJ	67.70
110B-IHR-F	110	110	500	350	IIHGK	75.55
220 ISQ-F	220	110	250	150	JISGI	55.55
220P*-ISQ-F	220	110	300	150	KISGM	61.95

Illustrating Heavy Duty Models Radio and Industrial Inverters except types 6 and 12. Types 6 and 12 Industrial Inverters are illustrated by small cut on page M-34.

‡Radio frequency interference suppressed.

Any of the above type Inverters are available with 220 volt A. C. output at slightly higher prices. In ordering, follow similar directions given above.

ATR Standard and Heavy Duty Industrial Inverters are housed in attractively finished grey-hammerloid metal cabinets.

Dimensions of Standard Model Industrial Inverters, 8⅜" x 9" x 5¼". Shipping weight, 19 lbs.

Dimensions of Heavy Duty Industrial Inverters, 6½" x 11⅛" x 8½"; shipping weight, 30 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.

*"P" Inverters are corrected for loads having power factors as low as 50%.

*Available with leather carrying handle at $1.00 additional — optional.

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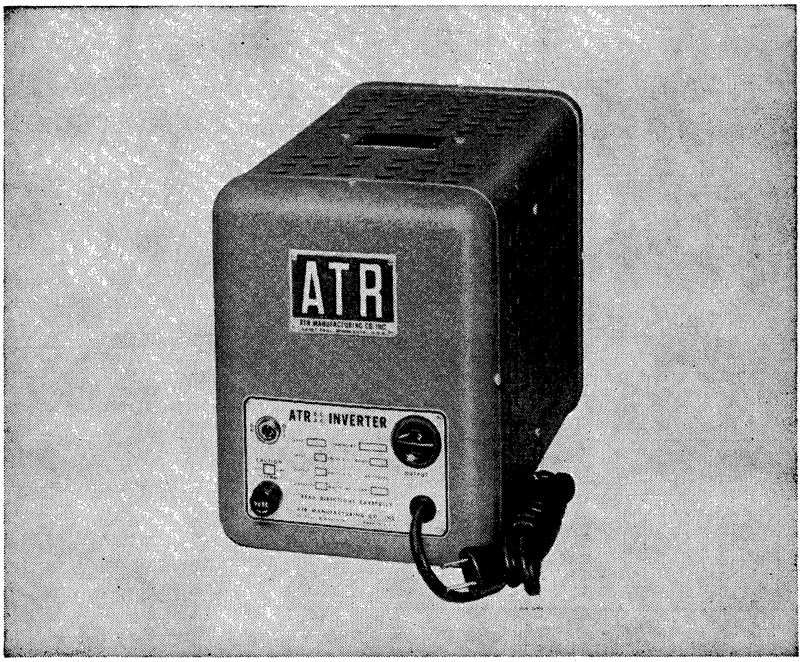

Featured cut illustrates all ATR SUPER HEAVY DUTY Types except Types 6 and 12-HSG.

ATR SUPER HEAVY DUTY RADIO INVERTERS

Specially Designed for Operating Large A.C. Radios, Public Address Systems, Tape Recorders, Amplifiers, Intercall Systems, and Radio Transmitters from D.C. Voltages in Vehicles, Ships, Trains, Planes, and in D.C. Districts.

This group of ATR Inverters is especially recommended for use with large A.C. radios, amplifiers, and similar electronic equipment, being exceptionally well filtered to insure interference-free operation. With ATR Inverters, the need for special equipment is eliminated. They are designed for long-life operation. All models indicated are equipped with ATR twenty-contact plug-in Inverter Vibrators and also with four-point voltage regulators which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. High operating efficiency is provided. These Radio Inverters are recommended for use with loads having power factors in excess of 80%.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	Consumer Net Price
			Intermittent	Continuous		
6-HSG*	6	110 Volts	175	150	AHSGD	$89.30
12-HSG*	12	110	250	200	BHSGE	89.30
28-HSG	28	110	250	200	OHSGR	103.60
32-HSG	32	110	325	225	CHSGF	89.30
110-HSG	110	110	600	400	GHSGJ	89.30
220-HSG	220	110	500	300	LHSGO	103.60

Radio frequency interference completely suppressed.

Any of the above type Inverters are available with 220 volt A.C. output at prices slightly higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D.C. Inverter having a 220 volt A.C. output is desired, this would be ordered as Type 110S-HSG covered by code word, "GHSGT".

ATR Super Heavy Duty Inverters are housed in attractively finished grey-hammerloid metal cabinets.

Dimensions of all Super Heavy Duty Inverters, 6½" x 12⅞" x 8½"; Shipping weight, 36 lbs.

For correct replacement vibrator consult Inverter Vibrator Guide.

*Available with leather carrying handle at $1.00 additional — optional.

Illustrating Types 6 and 12-HSG SUPER HEAVY DUTY INVERTERS only.

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AMERICAN TELEVISION & RADIO CO.

ATR STANDARD AND HEAVY DUTY TELEVISION INVERTERS

ATR DC-AC INVERTER
FUSE
A.C. OUTPUT

Featured cut above illustrates Model 110AT-RHE. See other Catalog Sheets for other Inverter illustrations.

Specially Designed and Carefully Adjusted for Operating Television Receivers from D.C. Voltages in Vehicles, Ships, Trains, Planes, and D.C. Districts. Suitable for Use with All Types of Electronic Equipment where Precise Output Frequency Is Required.

This group of ATR Inverters has been selected from the ATR line of Standard and Heavy Duty Radio Inverters and Super Heavy Duty Inverters and have specially adjusted ATR Vibrators installed in them to provide the precisely adjusted output power frequency required for the operation of Television Sets. They are exceptionally well filtered to insure interference-free reception. They are equipped with four-point voltage regulators. The operating efficiency is in excess of 85%. They are recommended for use with loads having power factors in excess of 80%.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	Consumer Net Price
			Inter-mittent	Con-tinuous		
*6T-HSG	6	110 Volts	175	150	THSGD	$96.45
*12T-HSG	12	110	250	200	THSGE	96.45
28T-HSG	28	110	250	200	THSGO	110.75
32BT-RHE	32	110	200	180	TRHEG	66.40
32T-HSG	32	110	325	225	THSGF	96.45
110T-RSD	110	110	250	150	TRSDJ	43.20
110AT-RHE	110	110	325	250	TRHEK	56.95
110BT-RHE	110	110	500	350	TRHEL	75.55
110T-HSG	110	110	600	400	THSOJ	96.45
220T-RSD	220	110	250	150	TRSDO	48.75
220T-HSG	220	110	500	300	THSGO	110.75

ATR Standard (RSD), Heavy Duty (RHE), and Super-Heavy Duty (HSG) Television Inverters are housed in attractively finished grey-hammerloid metal cabinets.

Dimensions of Standard (RSD) Model Television Inverters, 8⅜″ x 9″ x 5¼″; Shipping weight, 19 lbs.

Dimensions of Heavy Duty (RHE) Model Television Inverters, 6½″ x 11⅛″ x 8½″; Shipping weight, 30 lbs.

Dimensions of Super Heavy Duty (HSG) Model Television Inverters, 6½″ x 12⅞″ x 8½″; Shipping weight, 36 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.

*Available with leather carrying handle at $1.00 additional — optional.

VIBRATORS AND VIBRAPACK® POWER SUPPLIES

MALLORY P.R. MALLORY & CO. Inc.

P. R. MALLORY & CO., INC. · INDIANAPOLIS

MALLORY
VIBRATOR
FOR USE ON
6 VOLT BATTERY

Vibrators

Mallory Vibrators are engineered to exacting specifications. Their superior action is a result of more than 20 years' research. Pure, natural rubber liners deaden sound and assure quiet operation. Special, tough-spring steel eliminates reed breakage. Heavy framing insures correct and exact alignment. Extra size and quality of contact points assure longer life. Each Mallory Vibrator is tested individually for correct output, starting voltage and wave form.

Cat. No.	Volt	Type	Base Dia.	Size	List Price
222	6	Syn.	20	4⅞ x 1¹³⁄₁₆ x 1⅞	$9.15
▲245	6	Syn.	21	1½ x 3¼	7.70
▲245A	6	Syn.	21	1¹⁵⁄₁₆ x 3½	7.70
245C	6	Syn.	28	1½ x 3¼	7.70
▲246	6	Syn.	38	1½ x 3¼	7.70
247	6	Syn.	46	1½ x 3¼	7.70
▲248	6	Syn.	44	1½ x 3¼	7.70
G248	12	Syn.	44	1½ x 3¼	8.55
▲249	6	Syn.	32	1½ x 3¼	7.70
270B	6	Syn.	23	2 x 4½	9.15
271HD	6	Syn.	24	2 x 4½	9.15
273C	6	Syn.	29	2 x 4½	9.15
273D	6	Syn.	31	2 x 4½	9.15
292	6	Int.	3	1½ x 2⁷⁄₁₆ x 1⅜	6.35
294	6	Int.	8	1½ x 3¼	4.90
▲F294	32	Int.	8	1½ x 3¼	7.15
298	6	Int.	51	1½ x 2⅞	6.35
505P	6	Int.	8	1¹⁵⁄₁₆ x 3½	4.90
506P	6	Int.	36	1¹⁵⁄₁₆ x 3½	6.35
509P	6	Int.	8	1½ x 2⅞	4.15
716	6	Syn.	30	1¹⁵⁄₁₆ x 3½	7.70
▲725C*	6	Syn.	32	1½ x 3¼	8.55
▲G725C*	12	Syn.	32	1½ x 3¼	9.95
742	6	Syn.	32	1½ x 2⅞	7.70
743	6	Syn.	38	1¼ x 3¼	7.70
748	6	Syn.	44	1½ x 2⅞	7.70
▲G749C*	12	Syn.	21	1½ x 3¼	9.95
W759	4	Syn.	21	1½ x 2⅞	8.25
▲825C*	6	Int.	8	1½ x 3¼	6.90
▲826C*	6	Int.	8	1½ x 3¼	6.35
▲F826C*	32	Int.	8	1½ x 3¼	7.70
▲G826C*	12	Int.	8	1½ x 3¼	7.70
839	6	Int.	8	1½ x 3¼	6.35
854	6	Int.	11	1½ x 3¼	4.90
▲859	6	Int.	8	1½ x 2⅞	4.70
W859	4	Int.	8	1½ x 2⅞	4.90
860	6	Int.	14	1½ x 3¼	4.90
870	6	Int.	14	1½ x 2⅞	4.90
G874	12	Int.	55	1½ x 3¼	4.90
903M	6	Int.	8	1½ x 2⅞	4.15
953W	6	Syn.	16	1½ x 3⁵⁄₁₆	7.70
954	6	Syn.	39	1½ x 3	7.70
▲1100	6	Int.	8	1⁵⁄₁₆ x 2⅜	4.90
▲1501	6	Int.	53	1½ x 2⅞	6.35
▲G1501	12	Int.	53	1½ x 2⅞	6.90
T4002	2	Syn.	52	1½ x 2⅛ x 1½	10.70
T4003	2	Syn.	50	1⁵⁄₁₆ x 2⅛	9.80
4501	6	Int.	53	1½ x 2⅞	6.35
4502	6	Int.	54	1½ x 2⅞	6.90
4546	6	Syn.	38	1½ x 3¼	7.70
4548	6	Syn.	44	1½ x 3¼	7.70
4549	6	Syn.	32	1½ x 3¼	7.70
GC7†	Ground Cup				.45
AR-1	Adapter				1.50
■SK-1	Socket Kit				1.25

Int.—Interrupter Syn.—Synchronous

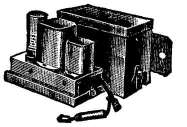
▲ Use only these types in design of new equipment. Other types are for replacement purposes only.

* Hermetically Sealed Construction.

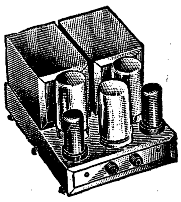
† A grounding cup for 1½″ diameter vibrators which makes a low r.f. ground connection between vibrator can and power supply chassis.

■ Five special sockets for Practical Vibrator Tester. Supplied as complete kit only.

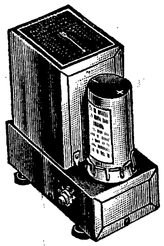
Vibrapacks



VP-540



VP-555H
VP-557



VP-552
VP-G556

Mallory Vibrapacks are the ideal vibrator power supplies designed to provide at low cost, dependable, high-voltage, direct current from low-voltage, storage batteries. Mallory Vibrapacks offer high efficiency, dependability, low maintenance cost and long life because of years of field testing. Added features are; light weight, compactness and simplicity of installation.

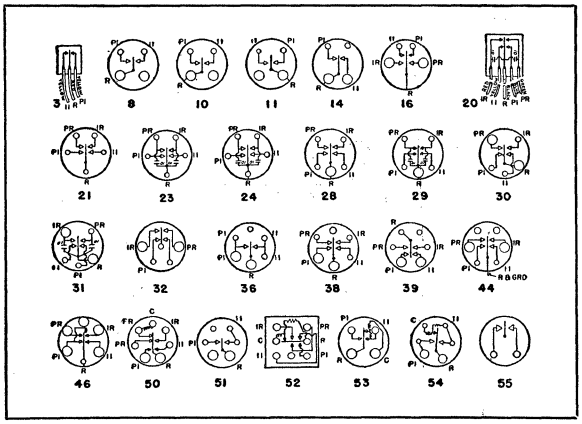
Catalog Number	Nominal Operating Voltage	Nominal Output Voltage	Maximum Output Current	Type	List Price
VP-540*	6.3	250	60 ma.	Self-Rectifying	$33.00
VP-551	6.3	125–150 175–200	100 ma.	Self-Rectifying	24.20
VP-552†	6.3	225–250 275–300	100 ma.	Self-Rectifying	28.90
VP-553	6.3	125–150 175–200	100 ma.	Tube Rectifier	26.95
VP-554†	6.3	225–250 275–300	100 ma.	Tube Rectifier	31.65
VP-555†	6.3	300	200 ma.	Tube Rectifier	57.20
VP-557†	6.3	400	150 ma.	Tube Rectifier	57.20
VP-G556	12.6	225–250 275–300	100 ma.	Self-Rectifying	31.65
VP-F558	32.	225–250 275–300	100 ma.	Tube Rectifier	34.40

* Includes complete audio filter.

† Maximum ratings are for mobile transmitter service. For continuous duty with radio receivers where longer vibrator life is essential. Reduces maximum output watts ratings to 75% of listed values.

● Use the Mallory 12VT1D Vibrator Checker for direct readings on "good-bad" conditions of doubtful vibrators. For complete description and illustration of the 12VT1D see page 3, Mallory Rectifier and Power Supply section, this catalog.

Vibrator Base Diagrams

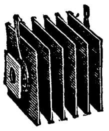


R=Reed PR=Pull Rectifier IR=Inertia Rectifier FR=Frame
PI=Pull Interrupter II=Inertia Interrupter C=Coil

RECTIFIER STACKS

Selenium Rectifier Stacks

Mallory Selenium stacks are conservatively rated to provide long dependable service and good voltage regulation at high efficiency. Rectification is immediate—no warm-up period is required. 5-volt average drop across stack results in cooler operation.



Recommended Minimum Capacity in Mfd.

Rectifier Stack Cat. No.	AC Input: Volts R.M.S.				DC MA. Cont.	Approx. DC Volts	Min. Series Resistor In Ohms R1	Full-Wave Doubler and Half-Wave		Series Capacitor Half-Wave Doubler		Approx. Dimensions In Inches			List Price
	Capacitive Load		Resistive and Inductive Load												
	Design	Max.	Design	Max.				Mfd. C1	Volts WV DC	Mfd. C2	Volts WV DC	A*	B*	C*	
8S35	117	130	200	220	35	120	47	30	150	40	150	⅜	.67	⅝	**$1.15**
6S65	117	130	200	220	65	125	22	30	150	40	150	⅜	1	⅝	**1.35**
6S75	117	130	200	220	75	125	22	40	150	50	150	⅜	1	13/16	**1.55**
6S100	117	130	200	220	100	125	22	50	150	80	150	⅜	1¼	13/16	**1.90**
6S100A	117	130	200	220	100	125	22	50	150	80	150	⅜	1	1	**1.90**
6S150	117	130	200	220	150	125	15	80	150	150	150	⅜	1¼	1	**2.25**
6S200	117	130	200	220	200	125	5	100	150	150	150	⅜	1.6	1	**2.70**
6S250	117	130	200	220	250	125	5	150	150	200	150	⅜	1.6	1¼	**3.00**
6S300	117	130	200	220	300	125	5	150	150	250	150	⅜	1.6	1⅞	**3.05**
6S350	117	130	200	220	350	125	5	250	150	300	150	⅜	2	1¼	**3.45**
6S450	117	130	200	220	450	125	5	300	150	400	150	⅜	2	1⅞	**4.30**
8S75	150	160	245	270	75	160	22	40	250	50	250	⅜	1	1	**2.20**
8S100	150	160	245	270	100	160	22	50	250	80	250	⅜	1¼	1	**3.05**
8S200	150	160	245	270	200	160	5	100	250	150	250	⅜	1.6	1 3/16	**3.35**
8S450	150	160	245	270	450	160	5	300	250	400	250	⅜	2	2½	**4.25**

A*—Terminal Extension Beyond Plate. B*—Dimension of Plate. C*—Overall Length.

Chart of Replacement Magnesium-Copper Sulfide Rectifier Stacks

New Catalog Number	List Price	Maximum AC Volts (Normal Line)		Approx. DC Volts			Max. DC† Amperes		Approximate Overall Dimensions in Inches		
		No Load	Full Load	Inductive Load	Resistive Load	Capacitive-Battery Load	Continuous Duty §	Intermittent Duty	Length	Width	Height
IB4R	**$2.40**	3.6	3.2	1.5	1.7	2.5	1.5	5.0	1	9/16	⅞
IB8R	**2.85**	7.2	6.4	3.1	3.4	5.1	1.5	5.0	1⅜	9/16	⅞
IB12R	**3.25**	10.8	9.7	4.8	5.2	7.8	1.3	5.0	1¾	9/16	⅞
IB12L5	**5.85**	10.8	9.7	4.5	5.0	7.6	4.5	15.0	2½	2⅛	2⅝
IB12C1J	**6.55**	10.8	9.8	4.6	5.1	7.7	3.2	24	2¾	1¼	1⅝
IB12C3	**6.80**	10.8	9.7	4.5	5.0	7.6	4.5	24	2¾	1¾	2⅛
IB12C5	**7.40**	10.8	9.7	4.5	5.0	7.6	5.3	24.0	3	2⅛	2⅝
F16C3	**8.85**	14.4	13.0	6.1	6.8	10.2	3.9	24	3	1¾	2⅛
IF16CB7M	**10.20**	14.4	12.8	5.9	6.6	9.9	6.0	24	3	2½	3 3/16
IS16CB7	**10.20**	14.4	12.8	5.9	6.6	9.9	6.0	24	3¾	2½	3
IS16B7	**11.25**	14.4	12.8	5.8	6.5	9.8	8.3	24	5½	2½	3
IS16B9	**12.80**	14.4	12.7	5.7	6.4	9.7	11.6	24	5½	3½	4¼
F20C7	**12.75**	18.0	16.2	7.6	8.4	12.6	4.8	24	4⅜	2½	3 3/16
IS24C7J	**12.60**	21.6	19.4	9.0	10.1	15.1	4.0	24	4¾	2½	3 3/16
IS24B9	**17.95**	21.6	19.1	8.5	9.6	14.4	11.0	24	7½	3½	4¼
IS28C7J	**15.30**	25.2	22.7	10.7	11.7	17.8	4.3	24	6	2½	3
F16HIP	**7.05**	14.4	13.1	6.3	7.0	10.4	2.2	24	2¼	1¼	2
F20HIP	**8.65**	18.0	16.4	7.9	8.7	13.0	2.0	24	2¾	1¼	2
F24HIP	**10.30**	21.6	19.7	9.6	10.4	15.7	1.9	24	3	1¼	2
F28HIP	**11.90**	25.2	23.0	11.2	12.2	18.4	1.7	24	3¼	1¼	2
F32HIP	**13.55**	28.8	26.2	12.8	14.0	21.0	1.6	24	3¾	1¼	2

NOTE: All rectifiers are single phase, full wave, bridge type.

Mounting Prefix: IB=Insulated Bolt; F=Grounded Foot; IF=Insulated Foot; IS=Insulated Stud.

P suffix designates reverse polarity stacking. Center terminal is DC positive.

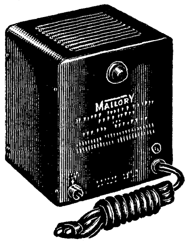
J suffix designates universal construction with loose mounting feet for foot, bolt or stud mounting replacement.

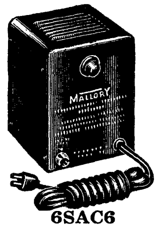
† To determine AC Amps: Multiply the DC amps by the following factors: Inductive load by 1.1; resistive load by 1.2; capacitive load by 1.4.

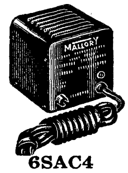
§ Ratings given are for resistive and inductive loads. To determine the Max. continuous DC amp. rating for capacitive and battery loads multiply these ratings by 0.82.

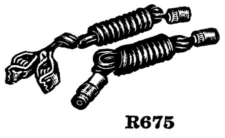
Rectifier Battery Chargers— Power Supplies

Mallory Automotive, Marine and Aviation Battery Chargers provide convenient, efficient and economical charging of any storage battery used in automobiles, buses, trucks, tractors, taxicabs, small boats, airplanes and on the farm. Taper charging (an automatically decreasing charging rate) is designed into all Mallory chargers to prevent damage to battery plates and to insure maximum battery life. These chargers also are ideal for charging any 6 or 12-volt storage battery used in industrial, engineering and research laboratories.


6SAC10


6SAC6

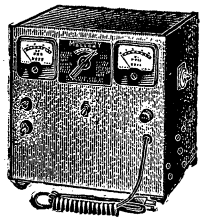

6SAC4


R670
R675

Mallory Charger Model Number	Nominal Battery DC Volts	Maximum Charging Rate DC Amps.	Tapered Rate DC Amps.	Maximum Continuous DC Amps. as Power Supply	DC Output Termination	Type of Charging Indicator	Approx. Overall Dimensions in Inches			Approx. Shipping Wt. in Pounds	List Price
							Height	Width	Depth		
6SAC4*	6	4	2	3	Universal	None	4⅝	4¼	4⅜	5¼	**$16.95**
6SAC6*	6	6	4	5	Universal	Light	6⅞	4⅞	4¾	6	**19.95**
6SAC10*	6	10	7	8	Universal	Light	7⅞	6½	5¾	9	**29.95**
6SAC20	6	20	15	16	6′ Clips	Meter	9⅛	6½	5¾	15½	**44.95**
6AC75	6	75 (fast)	60	60	8′ Clamps	Meter	15	7½	6½	34	**109.50**
		10 (slow)	9	10							
12SAC5*	12	5	3	4	Universal	Light	7⅞	6½	5¾	9	**29.95**
12AC60D	6	80 (fast)	60	80							
	and	15 (slow)	8	8-25	8′ Clamps	Meter	15	7½	6½	38	**149.50**
	12	40 (fast)	30	40							
		7 (slow)	3	3-12							

* These chargers are equipped with a Universal DC Output Socket. No DC Cable Assemblies are packaged with Charger. Purchase either R670 or R675 Cable Assembly.

Mallory 6RS25 Heavy Duty Six Volt DC Power Supply



The Mallory 6RS25 6 volt, 25 ampere rectifier type power supply is designed to replace storage battery-charger combinations for bench testing medium power 2-way mobile-phone equipment. It may also be utilized for non-radio uses requiring well-filtered low voltage DC in the 25 ampere range. Heavy sheet-steel housing makes it adaptable for use in garages as mobile radio bench equipment.

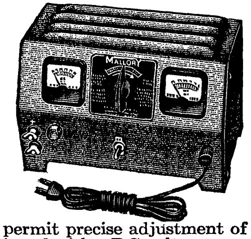
The 6RS25 operates from a standard 115 volt 60 cycle source to supply DC voltage from 0 to 8 volts at continuous or variable loads of 0 to 25 amperes. Intermittently, it will supply a maximum of 40 amperes at 6 volts.

An adjustable variable control allows quick selection of any voltage from 0 to 8 at 0 to 25 amperes. Three capacitors totaling 30,000 mfd. filter the output to less than 1 volt ripple and suppress RF and power line interference. A 0-10 volt DC voltmeter and a 0–40 ampere DC ammeter are included.

Conduction cooling of the full-wave Selenium Rectifier Cells, automatic overloading protection, and a self resetting circuit breaker insure long life.

Overall dimensions—11″ high, 10½″ wide, 8¾″ deep. Shipping weight—26 lbs. Catalog No. **6RS25** **$74.50** Net

Mallory 12RS6D Bench Power Supply

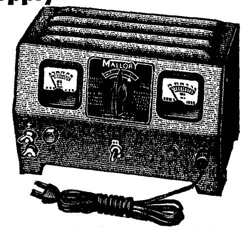


The Mallory 12RS6D is a dual purpose bench power supply designed for use on the radio service bench for operating conventional 6 and 12 volt automobile and truck radio sets. Fully AC-operated from the 115V/60 cycle line, the 12RS6D supplies rectified and filtered DC in either of 2 ranges. Range "A" supplies 0 to 16 volts at 6 amperes continuously, or 12 amperes intermittently. Range "B" supplies 0 to 8 volts at 10 amperes; or 20 amperes intermittently. Both ranges are infinitely variable from zero to maximum output to permit precise adjustment of bench test voltages. The 12RS6D is equipped with a DC voltmeter, a DC ammeter, infinitely variable voltage control, a range switch, an on-off toggle switch, automatic overload protection, primary fuse and rubber-covered line cord and plug. The rectifying system employs a full-wave metallic rectifier. The cabinet is sheet steel finished in blue enamel and measures 6¾″ high, 10⅜″ wide and 5½″ deep. Shipping weight approximately 8 lbs. Catalog No. **12RS6D** **$39.95** Net

Mallory 12RS5 Bench Power Supply

Similar to above, but provides single output range of 0-16 volts at 5 amperes. Catalog No. **12RS5** **$34.95** Net

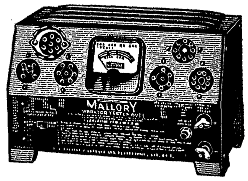
Mallory 6RS10 Bench Power Supply



The Mallory 6RS10 6 volt power supply has been designed as a convenient source of DC current wherever 115 volt AC current is available. It is particularly suited for testing of automobile radio sets and has ample power to operate those with electrical tuning mechanisms. DC voltage is continuously variable from 0 to 8 volts. The unit may be safely operated continuously at 10 amperes and intermittently at 20 amperes. A 10,000 mfd. capacitor is employed as an efficient filter. Full-wave rectification is obtained from a conservatively rated Mallory Magnesium-Copper Sulfide Rectifier Stack.

The power supply is fully equipped with a 0-20 ampere DC ammeter, a 0–10 volt DC voltmeter, a self resetting circuit breaker in the DC line, a switch and fuse in the AC line, and a six foot AC cord. Overall dimensions: 6¾″ wide, and 5½″ deep. Shipping weight approx. 13 lbs. Catalog No. **6RS10** **$36.75** Net

Mallory Vibrator Testers

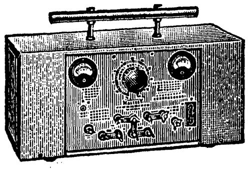


The Mallory Vibrator Testers have been designed as companion units to the famous Mallory Service Bench Rectopower® Supplies 6RS10, 6RS25-1, 12RS5, 12RS6D or 12RS14D (acting as variable power supplies) to test directly, without adapters, most of the popular vibrators and all of the 6 volt passenger car radio vibrators used since 1940. Either 6X5 or 0Z4 rectifier tubes may be plugged into the front panel, thus permitting interrupter vibrators to be tested in conjunction with the rectifier tube with which they normally work in the equipment. Defective vibrators or rectifiers can readily be determined by the substitution method. Self rectifying vibrators are tested by removing the rectifier tube. Either shunt or separate drive vibrators can be tested of any frequency from 100 to 250 cycles. The condition of the vibrator being tested may be read directly from the "good-bad" meter scale. Shipping weight approximately 8 lbs.

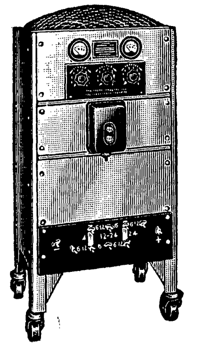
Model **6VT1**—for 6-volt vibrators only **$29.50** Net
Model **12VT1D**—for either 6-volt or 12-volt vibrators **$34.95** Net

Catalog Number	Accessories	List Price
R670	Polarized Battery Clip D.C. Cord Assembly for 6SAC4, 6SAC6, 6SAC10 and 12SAC5.	**$1.95**
R675	Universal Cigarette Lighter Plug D.C. Cord Assembly for 6SAC4, 6SAC6, 6SAC10 and 12SAC5	**2.25**
R652	Polarized Dash Receptacle and Plug Assembly	**1.80**
R655	Cigarette Lighter Plug only	**1.50**
R653	Extra Battery Clip	**.25**
R654	Automatic Timer Control	**7.50**

Mallory VA Series Rectopower® Rectifier DC Power Supplies



VA400
VA800



VA1500
VA3000
VA4500
VA6000

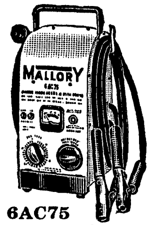
Seven models are contained in the line of general utility filtered rectifier DC power supplies for designing, building, testing and repairing electrical and electronic equipment for the automotive, aviation and military equipment industries. The models may also be used for battery charging and electrolytic processes such as plating, anodizing, electrocleaning and electropolishing. These units incorporate voltmeter, ammeter, isolating-type transformer and many other features which make them desirable for production or laboratory use.

The four independent filtered output circuits may be paralleled, series-paralleled, seriesed, used independently or connected in several different combinations to provide simultaneous outputs as required. Delivery information and more detailed specifications on special Rectostarters® for aircraft engine starting and industrial electric truck battery charging, may be had by writing to P. R. Mallory & Co., Inc., Box 1558, Indianapolis, Ind.

MODEL	VA400	VA800	VA1500	VA3000	VA4500	VA6000
AC Input						
Volts ± 10%	115	208–230 or 115	208–230 or 460	208–230 or 460	208–230 or 460	208–230 or 460
Phase*	1	1	3	3	3	3
Cycles	60	60	60	60	60	60
KVA	1.2	2.4	3.0	6.0	9.0	12.0
DC Output Rating						
Max. Amperes at Nominal Volts of different Circuit Combinations.	Amps.	Amps.	Amps.	Amps.	Amps.	Amps.
6 volts (all paralleled)	50	100	200	400	600	800
12 (series-paralleled)	25	50	100	200	300	400
24 (all seriesed)	12½	25	50	100	150	200
DC Output Adjustment						
Voltage Adjustment Range at Max. Rated Ampere Output.	Volts	Volts	Volts	Volts	Volts	Volts
6 volt nominal	0– 8	0– 8	4– 8	4– 8	4– 8	4– 8
12 volt nominal	0–16	0–16	8–16	8–16	8–16	8–16
24 volt nominal	0–32	0–32	16–32	16–32	16–32	16–32
Number of Voltage Controls	1	1	1	1	1	1
Number of Voltage Control Positions	Infinite	Infinite	28	28	28	28
DC Output Ripple—At Rated Output Less Than	2%	2%	2%	2%	2%	2%
DC Output Regulation						
From 0 to Rated Amps. at Max. DC Volts and Constant AC Volts	15%	15%	25%	25%	25%	25%
Overall Dimensions—Width	22	25½	25½	25½	25½	25½
Depth	9	12½	19	19	19	19
Height	14	15½	55	55	55	55
Weight in Pounds—Net	90	175	300	370	415	480
Shipping	95	175	415	485	530	600
List Price	**$345.00**	**$545.00**	**$740.00**	**$900.00**	**$995.00**	**$1100.00**

* 25 and 50 cycle Rectopower supplies are available at additional cost.

Mallory Six and Twelve Volt Fast Chargers —Unfiltered DC Power Supplies



6AC75
12AC60D

Mallory Fast Chargers, designed in extremely compact form, provide the advantages of portability with high-charging currents. Light weight, small size, perfect balance and a convenient carrying-handle make them ideal for one man to transport directly to the job for most efficient operation. Suitable for use wherever a reliable source of 6 volt, high amperage power is required, such as: garages, filling stations, parking lots, electrical service shops, schools and testing laboratories. The portability of these units provides many advantages over the conventional stationary or semi-fixed type supply.

Despite their small overall size, these Mallory Fast Chargers are ruggedly constructed with full-size components. Heavy duty, metallic rectifiers, connected in full-wave circuits, are cooled automatically by means of built-in, electrically-operated fans, assuring long life and effective service under the most severe conditions. Strong sheet-metal cabinets offer adequate protection against accidental damage. A tough, white enamel finish not only adds to the appearance of these units but also protects the metal cabinet from rust and corrosion.

Operating refinements found in Mallory Fast Chargers, usually omitted in conventional fast chargers, permit both fast or slow charging rates by the throwing of a panel switch. Three rates of fast charge and three rates of slow charge may be selected by means of a positive acting, rotary panel switch. A panel-controlled, synchronous motor, timer mechanism with a range of from 1 through 57 minutes in increments of 1 minute is a standard part of these units. When pre-set, this timer automatically disconnects the charger from the 115V/60 cycle line at a predetermined time up to a maximum of 57 minutes. A switch is included to disconnect the timer motor for continuous operation when using the charger as a power supply.

All Mallory Fast Chargers are equipped with: easy-to-read 2¼″ ammeters to indicate charging rates; abrasion-resistant, rubber-covered, 6-foot, AC-line cords; and heavy-duty, 2-conductor, 12-foot, rubber-covered cables to which large copper battery clamps are attached. Each charger is equipped with racks to accommodate the power cables when not in use. Cabinet dimensions are: 7¼″ x 6½″ x 15″. AC input is 115V/60 cycles, single phase, for both models.

Model 6AC75 is rated at 75 amperes with a minimum DC voltage of 6 when used as a fast charger on a 3-cell battery. An output of 60 amperes at the same voltage may be obtained when using this model as an unfiltered power supply.

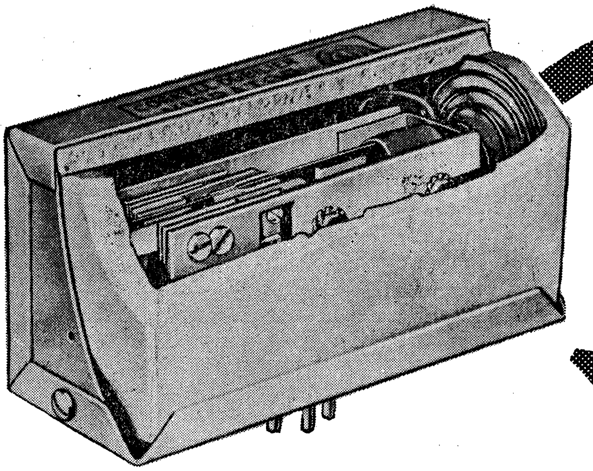
Catalog No. **6AC75**	**$109.50** Net

Model 12AC60D has a dual range output selected by means of a panel switch. Range A: 6 volts DC at 90 amperes when employed for battery fast charging and 65 amperes at 6 volts when employed as an unfiltered power supply. Range B: 12 volts DC at 60 amperes for battery fast charging and 45 amperes at 12 volts when employed as an unfiltered power supply.

Catalog No. **12AC60D**	**$149.50** Net

CORNELL DUBILIER

CAPACITORS — ROTATORS — VIBRATORS — AUTO ANTENNAS — TV ANTENNAS — POWER SUPPLIES



C-D *Heavy Duty* REPLACEMENT VIBRATORS

Catalog No.	Voltage	Frequency in Cycles	Dimensions L. W. H.	List Price
6VB6	6	60	5 9/16 x 2 5/32 x 2 9/16	$12.25
110VB6	110	60	5 9/16 x 2 5/32 x 2 9/16	12.25
110VLGH	110	60	4½ x 1-15/16 Diam.	14.10
330**	12	60	5 9/16 x 2 5/32 x 2 9/16	12.25
390**	12	90	5 5/16 x 2 23/32 x 3⅜	17.10
425**	6	60	4 11/16 x 2 3/16 Diam.	12.25
426**	6	60	5 9/16 x 2 5/32 x 2 9/16	12.25
427	6	60	4 11/16 x 2 3/16 Diam.	12.25
490	6	60	5 15/16 x 2 23/32 x 3⅜	17.10
491	6	60	5⅜ x 2 5/32 x 2 9/16	17.10
1057**	6	120	5 9/16 x 2 5/32 x 2 9/16	12.25
1083**	110	60	5 5/16 x 2 23/32 x 3⅜	17.10
1315	110	60	5 9/16 x 2 5/32 x 2 9/16	12.25
1315H	110	60	5 15/16 x 2 5/32 x 2 9/16	14.10
1506	32	60	5 5/16 x 2 23/32 x 3⅜	17.10
1640***	110	60	5 9/16 x 2 5/32 x 2 9/16	14.55
1684**	6	120	5 9/16 x 2 5/32 x 2 9/16	21.35
1823**†	6	180	3⅛ x 1½ Diam.	9.70
2117	12	100	5 15/16 x 2 23/32 x 3⅜	21.35
2507	45*	60	2⅞ x 1½ Diam.	8.65
2522	45*	60	2⅞ x 1½ Diam.	8.65
2639	6	60	5 15/16 x 2 23/32 x 3⅜	17.10
2641	24	60	5 1/16 x 2⅛ x 2 1/16	15.35
2989	32	60	5 9/16 x 2 5/32 x 2 9/16	12.25
3047	12	60	5 15/16 x 2 23/32 x 3⅜	17.10
3077*	110	60	5 9/16 x 2 5/32 x 2 9/16	14.55
3077V	Use 1315H			
3079	110	60	5 5/16 x 2 23/32 x 3⅜	19.40
3087	12	60	5 9/16 x 2 5/32 x 2 9/16	12.25
3103	6	60	5 9/16 x 2 5/32 x 2 9/16	12.25
3217**	32	90	2 5/32 x 5 9/16 x 2 9/16	15.35
4123	6	60	5 15/16 x 2 23/32 x 3⅜	17.10
11028	110	60	5 9/16 x 2 5/32 x 2 9/16	12.25
11030**	110	60	5 9/16 x 2 5/32 x 2 9/16	15.35
11032**	115	60	2 23/32 x 5 15/16 x 3⅜	21.35
32171	32	60	5 9/16 x 2 5/32 x 2 9/16	12.25

C-D "POWERCON" - REPLACEMENT VIBRATORS

For Model No.	Use Vibrator No.
6R5	3103
6R10	4123
12R8	3087
12RU15	3047
32R8	2989
32RU15	2989
110PA5	2522
110PB5	2522
110R10	1315
110R15	1315
110RT15	1315H
110T22	110VL6H
110RT35	3079
110WR15A	1315
110WR15B	1315

*For operation on 115 volts DC, connect a 2200 ohm resistor in series with the coil.
**Available only on Special Order.
***Denotes adjustable frequency vibrator. Use 1000 ohm variable resistor in coil circuit.
● Refer to C-D Catalogs No. 410 & VC for detailed applications and specifications.
†Now known as Type 5513.

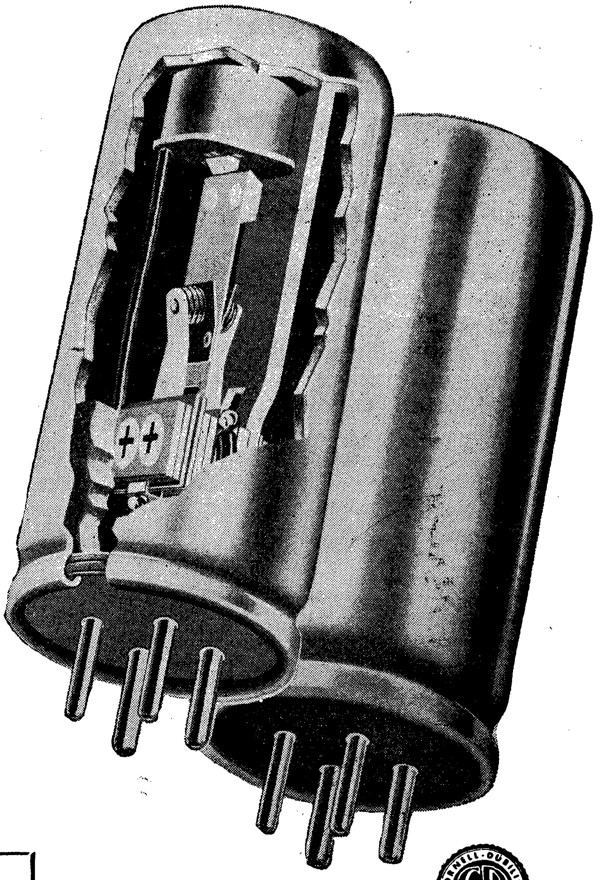
RAILROAD Converter VIBRATORS

Catalog No.	Voltage	Frequency in Cycles	Dimensions L. W. H.	Net Price	Use in C-D Railroad Converter Model No.
12VG6H	12	60	5 15/16 x 2 23/32 x 3⅜	$9.90	3212A
32VF6H	32	60	5 15/16 x 2 23/32 x 3⅜	9.90	3232 and 3248
64VF6H	64	60	5 15/16 x 2 23/32 x 3⅜	9.90	3264
64VG6H	64	60	5 15/16 x 2 23/32 x 3⅜	9.90	3128
110VF6H	110	60	5 15/16 x 2 23/32 x 3⅜	9.90	3210

WARNING: Always check the Buffer Capacitors before installing a new vibrator: Failure to do so will void the guarantee. Always use C-D Buffer Capacitors for replacement.
Prices Subject to Change Without Notice.

CORNELL DUBILIER

*CORNELL-DUBILIER
AUTO RADIO
VIBRATORS



FEATURES

- C-D designed electronic micrometric equipment removes guesswork in contact point setting and assures consistent high quality.
- Exclusive C-D pole piece design and armature weight results in a perfectly-balanced unit with greater efficiency.
- Exclusive C-D base mounting results in a full floating unit. That's why C-D vibrators last longer.
- Unit completely enclosed in new floating sock—an exclusive with C-D vibrators. Eliminates usual difficulties found in other vibrators.
- New stack design will take peak voltages of even 4,200 volts with no damage to vibrator.

Mr. Serviceman: Always have these types on hand. They constitute 88% of all your demand in the ratio shown.

5300	22%	5323P	4%	5400	3%
5301	5%	5326P	11%	5425	3%
5303	5%	5335	9%	5426	7%
5314	4%	5342	10%	5406	2%
5320P	3%				

NEW 12 VOLT SERIES

Type No.	List Price	Used In
6326	$5.50	Philco - Chrysler
6330	4.90	Oldsmobile - Buick Cadillac - GMC Truck
6370	4.70	Autronic Eye

* Refer to C-D Cat.-VC for detailed applications and specifications.

5300 SERIES Standard Automotive and Household **Non-Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price
5300	$4.70	5314	$4.90	5333	$4.90
5300-32	7.15	5320	4.90	5335	4.90
5301	4.70	5321	4.90	5342	4.15
5303	4.90	5323	4.15	5343	6.35
5304	6.35	5326	4.15	5363	6.35
5307	4.90	5328-32	9.15	5366	6.35
5308	6.35	5331	4.90	5367-32	7.70
5309	4.90			5370	4.90

5400 SERIES Standard Automotive and Household **Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5400	$7.70	5411	$7.70	5429	$9.15	5440	$8.55
5404	7.70	5413	7.70	5431-4	8.55	5443	7.70
5406	7.70	5413-4	7.70	5434	7.70	5443-32	8.55
5407	7.70	5416	9.15	5435	7.70	5454	7.70
5408	7.70	5421	7.70	5435-4	7.70	5463	9.15
5409	7.70	5422	8.55	5436	7.70	5464	9.15
5409-4	7.70	5425	9.15	5437	7.70	5468-2	10.70
5410	7.70	5426	7.70	5438	7.70	5469-2	9.80

5500 SERIES Special Application **Non-Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price
5503-12	$7.70	5511-12	$7.70	5516	$6.90
5504	6.35	5513-12	7.70	5517-12	7.70
5506	7.15	5514-4	7.70	5518	6.90
5510	7.15	5515	6.90	5519	4.90
				5560	8.55

5600 SERIES Special Application **Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5604	$9.15	5607-12	$9.95	5610-12	$8.55	5616-12	$9.95
5605	8.55	5607-32	9.95	5614-12	8.55	5620	7.70
5605-12	9.95	5609-12	9.95	5615-12	8.55	5621	6.90
5605-32	9.95	5610	7.70	5615-24	8.55	5622	8.55
5607	8.55			5616	8.55	5623	7.70

WARNING: Always check the Buffer Capacitors before installing a new vibrator: Failure to do so will void the guarantee. Always use C-D Buffer Capacitors for replacement. Prices Subject to Change Without Notice.

For CD "POWERCON" Battery Charger see page M-36

CORNELL DUBILIER

Low Cost
Easy Installation
Long Life

C-D POWERCONS

for DC to AC or AC to DC Power Conversion

Here is an assortment of converters that are outstanding for their dependable operation, their low initial cost and their simple, economical installation. A complete line for every purpose.

SUBSIDIARY

POWERCON
VIBRATOR CONVERTER

110 VOLT 60 CYCLE OUTPUT FROM DC INPUT

Model No.	Applications	DC Input Volts	Output - Watts Cont.	Output - Watts Int.	Size	Weight Lbs.	List Price
6R5	Automobile, Bus, Truck, Airplane, Marine & other General Uses: Mobile, Portable, Stationary	6	50	55	6¾ x 7¾ x 5⅞	12	$ 48.25
6R10		6	100	125	7 x 12⅝ x 7½	19	68.45
12R8		12	80	120	6¾ x 7¾ x 5⅞	12	48.25
12RU15		12	150	200	7 x 12⅝ x 7½	22	90.80
32R8	Farm, Marine, Railroad, etc.	32	80	100	6¼ x 7⅝ x 5⅞	13¼	55.80
32RU15		32	150	200	6⅜ x 12⅜ x 7½	22¼	84.55
110PA5	Record Players—Automatic & Manual	110	50	Volt-Amperes	3¾ x 6¼ x 2¾	2	17.20
110PB5		110	50	Volt-Amperes	3¾ x 6¼ x 2¾	2	19.50
110R10	Radio and Business Machines	110	100	150	6⅜ x 7¾ x 5¼	10½	45.95
110RA15		110	150	250	6¾ x 7¾ x 5⅞	13½	56.10
110RT15	Especially Designed for Television—Adjustable Frequency Control	110	150	250	6⅞ x 12¼ x 7½	16¾	74.75
110T22		110	225	250	6 x 8¾ x 7¼	17½	78.85
110RT35		110	350	500	7½ x 14 x 8⅝	40½	143.50
110WR15A	Wire or Tape Recorders	110	150	200	6⅞ x 12¼ x 7½	22½	76.50
110WR15B	Wire or Tape Recorders (Phantom switch)	110	150	200	6⅞ x 12¼ x 7½	21	90.75

HIGH-VOLTAGE DC OUTPUT — from 6-Volt DC Input

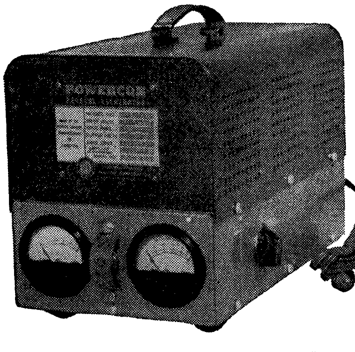
Model No.	Applications	Input Volts	Output Power (Continuous, Max.)	Type	List Price
6DS2	Operation of Mobile Transmitters, Receivers, and similar equipment from 6-volt Battery. 12-volt units are available on special order.)	6vDC	250vDC at 60ma., or 180vDC at 40ma.—15 watts	Synch.	$35.65
6DS3		6vDC	300, 275, 250 or 225vDC at 100ma.—30 watts	Synch.	39.10
6DR3		6vDC	300, 275, 250 or 225vDC at 100ma.—30 watts	Rect. Tube	41.40
6DRA6		6vDC	300vDC at 200ma.—60 watts	Rect. Tube	59.80
6DRB6		6vDC	400vDC at 150ma.—60 watts	Rect. Tube	59.80

BATTERY ELIMINATOR "POWERCON" BATTERY CHARGER

Here is the ideal, compact, efficient unit for testing and demonstrating auto radios. SMOOTH DC POWER, 6 or 12 volts from the 110 volt 60 cycle AC line.

Model No.	Output	Watts	Size	Wt. Lbs.
6BE10	6V DC @ 10A	60	7 x 8¼ x 7¼	14½
110BA12	6V DC @ 20A or 12V DC @ 10A	120	7⅝ x 13 x 8½	24½

Model 6BE10 — Net Price $36.75 Model 110BA12 — Net Price $59.01

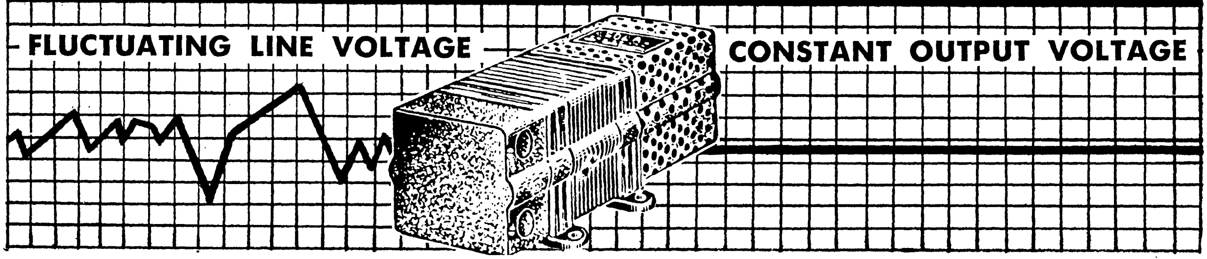


PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

SOLA *Constant Voltage* TRANSFORMERS

SOLA Electric Co. • Chicago 50, Ill.



Automatic Instantaneous Voltage Regulation

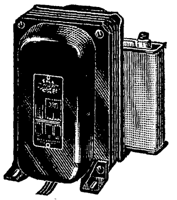
SOLA Constant Voltage Transformers are static magnetic voltage regulators. They are designed to provide a constant output voltage which is unaffected by changes in input voltage. You will find, listed in the following pages, the widest range of ratings and types available from stock offered by any manufacturer.

In addition, CUSTOM DESIGNED UNITS can be manufactured in capacities from 1 V.A. to 25,000 V.A., to suit your individual specifications. When ordered in substantial quantities, they cost only slightly more than standard units of the same general size. Often, time and money can be saved by direct use or modification of a regulator from the several hundred special designs on file. Custom designs can include: SPECIAL VOLTAGE RATIOS, SPECIAL FREQUENCIES, COMPENSATION FOR FREQUENCY VARIATION, MULTIPLE OUTPUT VOLTAGES, THREE-PHASE SERVICE, and MILITARY SPECIFICATIONS.

SOLA Constant Voltage Transformers have eight distinct advantages over regulators which depend solely upon saturation of core materials for their regulating action, or electronic type regulators:

1. Response time, 1.5 cycles or less.
2. No moving or renewable parts . . . no manual adjustments.
3. Completely automatic continuous regulation.
4. Self-protecting against short circuits.
5. Current limiting characteristic protects load equipment from excessive fault currents.
6. Can often be substituted for conventional non-regulating transformers.
7. Relatively compact.
8. Provide isolation between input and output circuits.

For complete operational data write for Bulletin L-CV-142



CONSTANT VOLTAGE TRANSFORMER FOR PLATE AND FILAMENT SUPPLY

TYPE CVE

A single, compact source of filament and plate supply voltages . . . regulated to within ±3% or less with line voltage variations of 100-130 volts. Supplied with separate capacitor.

ELECTRICAL AND MECHANICAL SPECIFICATIONS: Input 100-130 v, 60 cycle

Catalog Number	Cap. V.A.	D.C. Input Volts to Filter	FILAMENT WINDINGS		OVERALL DIMENSIONS IN INCHES			Shipping Weight
			6.3v	5.0v	Length	Width	Height	
7105	42	275v D.C. @ 50 M.A.	2.5 amps C.T.	2.0 amps	4 13/16	3⅛	3 3/16	5½
7106	75	385v D.C. @ 110 M.A.	3.0 amps C.T.	2.0 amps	4 13/16	3⅛	3 15/16	8¾
7107	210	380v D.C. @ 250 M.A.	#1: 4.0 amps #2: 8.0 amps unregulated	3.0 amps	7	4½	4⅞	19

DATA ON STANDARD "CV" AND OTHER TYPES ON FOLLOWING PAGES

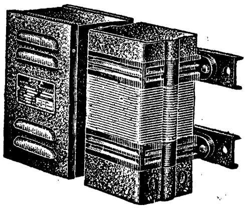
SPECIALIZED STANDARD TYPES

SOLA
ELECTRIC CO.

TYPES

ELECTRICAL and MECHANICAL SPECIFICATIONS

CONSTANT VOLTAGE TRANSFORMER WITH HARMONIC FILTER TYPE CVH



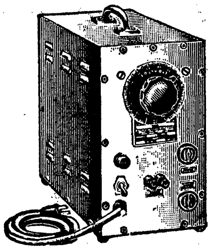
Incorporates harmonic neutralizer circuit . . . ±1% regulated . . . less than 3% harmonic distortion.

All models — Input 95-125 v, Output 115 v

Cat. No.	Cap. V.A.	DIMENSIONS IN INCHES A	B	C	E	F	Ship'g Wght.
5002	30	4 3/16	11⅜	4½	2 5/16	10⅜	27
5003	60	4 3/16	11¾	4½	2 5/16	10¾	35
5004	120	7⅛	11	5⅞	6½	8¾	45
5005	250	8½	16⅞	6¼	3½	15⅜	60
5006	500	10¼	16⅞	6¼	5¼	15⅜	70
5008	1000	14⅛	21¼	8¾	6¾	20	160
5010	2000	20 1/16	26¼	11¼	12¼	24¼	320

Transformers of catalog numbers 5002, 5003 and 5004 are now equipped with a primary cord and a secondary receptacle output for convenience in the laboratory. All other transformers are manufactured with knockout boxes.

ADJUSTABLE . . . REGULATED . . . A.C. VOLTAGE SUPPLY With Harmonic Filter TYPE CVL

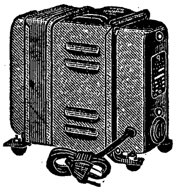


One outlet regulated ±1% and adjustable from 0 to 130 volts. One outlet for fixed value 115 volts regulated ±1%. Total harmonic distortion less than 3%. Regulating response 1.5 cycles or less. Self-protecting against short circuit. Portable for use in shop or laboratory.

Input 95-125 v; Output No. 1, 115 v; Output No. 2, 0-130 v

Cat. No.	Cap. V.A.	DIMENSIONS IN INCHES A	B	C	Ship'g Wght.
50105	250	12⅝	7½	12⅝	50
50106	500	13⅝	7½	14⅜	70

CONSTANT VOLTAGE TRANSFORMER FOR TELEVISION RECEIVERS TYPE CVA



Voltage regulation for home TV Receivers eliminates flicker and distortion due to line voltage variations. Moderate price . . . plug-in type . . . regulation ±3% or less.

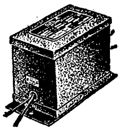
Input 95-130 v, Nominal Output Value in 115-120 v range.

Cat. No.	Cap. V.A.	DIMENSIONS IN INCHES A	B	C	Ship'g Wght.
7201	180	7¼	8⅛	4½	19
7202	300	7¼	9⅛	4½	26

DIMENSIONS —
A: Overall Length; B: Overall Width; C: Overall Height; E & F: Mounting Dimensions

ILLUSTRATIONS FOR STANDARD TYPE "CV" UNITS ON RIGHT HAND PAGE

TYPE 1



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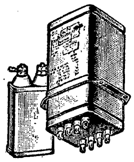

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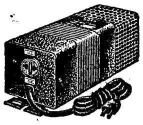

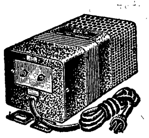

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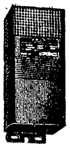
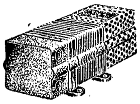


TYPE 22

TYPE 3



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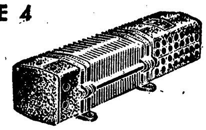

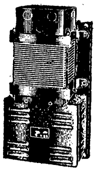

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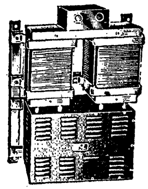


TYPE 6

SOLA Electric Co. • Chicago 50, Ill.

STANDARD TYPE "CV"

SOLA *Constant Voltage* TRANSFORMERS

ELECTRICAL AND MECHANICAL SPECIFICATIONS

60 CYCLE, SINGLE PHASE

Catalog Number	Output Capacity in VA	VOLTAGE		Dimensions in Inches					Approx. Shipping Weight
		Input Range	±1% Regulated Output	A	B	C	E	F	
TYPE 1									
30488	15	95-125	6.0	5 11/16	2⅝	3 7/16	5 1/16	....	6
30492	15	95-125	6.3	5 11/16	2⅝	3 7/16	5 1/16	....	6
30498	15	95-125	115.0	5 11/16	2⅝	3 7/16	5 1/16	....	6
TYPE 12									
301002	15	95-125	6.3	5 5/16	3½	2¼	3	1½	2½
301003	15	95-125	115.0	5 5/16	3½	2¼	3	1½	2½
TYPE 2									
30804	30	95-125	115.0	8 9/16	4 3/16	4⅜	7 13/16	2⅜	12
30805	60	95-125	115.0	8 13/16	4 3/16	4⅜	8 1/16	2⅜	13
30806	120	95-125	115.0	9 11/16	4 3/16	4⅜	8 15/16	2⅜	17
30888	150	95-125	115.0	10 3/16	4 3/16	4⅜	9 7/16	2⅜	19
TYPE 21									
30881	25	95-125	6.3	8 7/16	4 3/16	4⅜	7 1/16	2⅜	12
30882	50	95-125	6.3	8 13/16	4 3/16	4⅜	8 1/16	2⅜	13
TYPE 22									
30885	60	95-125	115.0	10 5/16	4 3/16	4⅜	9 9/16	2⅜	13
30886	120	95-125	115.0	11 3/16	4 3/16	4⅜	10 7/16	2⅜	19
TYPE 3									
30807	250	95-125	115.0	11⅝	6 15/16	5⅝	3¼	6⅛	30
30M807	250	190-250	115.0	11⅝	6 15/16	5⅝	3¼	6⅛	30
30808	500	95-125	115.0	14½	6 15/16	5⅝	5	6⅛	40
30M808	500	190-250	115.0	14½	6 15/16	5⅝	5	6⅛	40
TYPE 4									
30809	1000	95-125	115.0	19⅛	9½	7⅞	6¾	8½	115
30M809	1000	190-250	115.0	19⅛	9½	7⅞	6¾	8½	115
30811	2000	95-125	115.0	31⅛	9½	7⅞	12¼	8½	205
30M811	2000	190-250	115.0	31⅛	9½	7⅞	12¼	8½	205
30968	2000	190-250	230.0	31⅛	9½	7⅞	12¼	8½	205
TYPE 5									
301706	3000	95-190—125-250	115.0	27 11/16	16¼	12	14¼	23⅛	350
301707	3000	190-380—250-500	230.0	27 11/16	16¼	12	14¼	23⅛	350
301704	4000	95-190—125-250	115.0	32 11/16	16¼	12	14¼	28⅛	440
301702	5000	95-190—125-250	115.0	39 1/16	16¼	12	14¼	34½	525
301703	5000	190-380—250-500	230.0	39 1/16	16¼	12	14¼	34½	525
TYPE 6									
301700	10,000	190/380-250/500	115.0	48	35¼	9⅝	38⅞	33¼	1025
301701	10,000	190/380-250/500	230.0	48	35¼	9⅝	38⅞	33¼	1025

DIMENSIONS — A: Overall Length; B: Overall Width; C: Overall Height; E & F: Mounting Dimensions

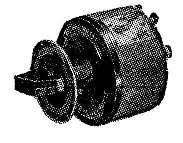
SOLA Electric Co. • Chicago 50, Ill.

THE SUPERIOR ELECTRIC CO. . . .

Including a Complete Line of **POWERSTAT**

VARIABLE TRANSFORMERS

from 150 VA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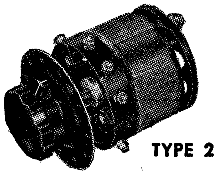
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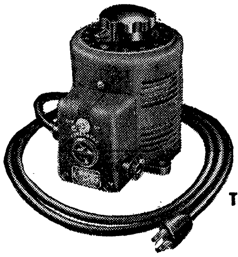
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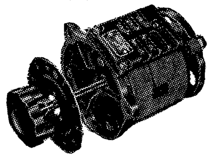
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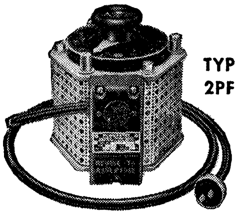
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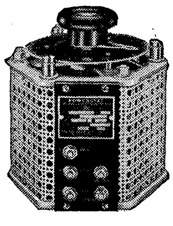
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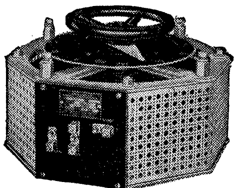
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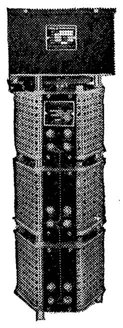
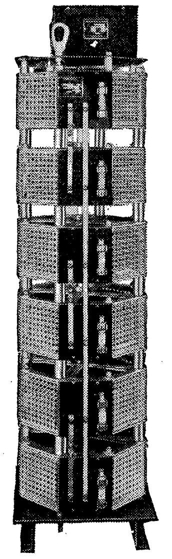

TYPE MZ1126-3Y


TYPE MW1156-6

Line Volt.	Output Volt.	Max. Output Amp.	Output KVA	Frequency	Type	Approximate Net Wt. (Lbs.)	Approximate Shipp. Wt. (Lbs.)	**Standard Motor Speeds
120	0-132	1.25	0.165	‡60	*10	1.8	3	....
115	0-135	3.0	0.4	‡60	*20	4	6	....
	0-135	7.5	1.0	50/60	*116U	10	11	....
	0-135	7.5	1.0	50/60	116	11	12	....
	0-135	7.5	1.0	50/60	3PF116	11	12	....
	0-135	7.5	1.0	50/60	3TF116	11	12	....
	0-135	15.0	2.0	50/60	1126	21	25	W,X,Y,Z
	0-135	15.0	2.0	50/60	F1126	21	25	W,X,Y,Z
	0-135	30.0	4.0	50/60	1126-2P	48	55	W,X,Y,Z
	0-135	45.0	6.1	50/60	1156	73	80	W,X,Y,Z
	0-135	45.0	6.1	50/60	F1156	74	81	W,X,Y,Z
	0-135	90.0	12.1	50/60	1156-2P	150	170	W,X,Y,Z
	0-135	135.0	18.2	50/60	1156-3P	225	295	W,X,Y,Z
	0-135	180.0	24.3	50/60	1156-4P	330	420	W,X,Y
	0-135	270.0	36.4	50/60	1156-6P	500	600	W,X,Y
230	0-270	3.0	0.81	50/60	*216U	10	11	....
	0-270	3.0	0.81	50/60	216	11	12	....
	0-270	3.0	0.81	50/60	3PF216	11	12	....
	0-270	3.0	0.81	50/60	3TF216	11	12	....
	0-270	7.5	2.0	50/60	*116U-2S	17	22	....
	0-270	7.5	2.0	50/60	*116-2S	18	23	....
	0-270	9.0	2.4	50/60	1226	25	29	W,X,Y,Z
	0-270	9.0	2.4	50/60	F1226	25	29	W,X,Y,Z
	0-270	15.0	4.0	50/60	1126-2S	45	52	W,X,Y,Z
	0-270	28.0	7.5	50/60	1256	73	80	W,X,Y,Z
	0-270	28.0	7.5	50/60	F1256	74	80	W,X,Y,Z
	0-270	45.0	12.1	50/60	1156-2S	144	164	W,X,Y,Z
	0-270	56.0	15.1	50/60	1256-2P	150	170	W,X,Y,Z
	0-270	84.0	22.7	50/60	1256-3P	225	295	W,X,Y,Z
	0-270	112.0	30.2	50/60	1256-4P	330	420	W,X,Y
	0-270	168.0	45.3	50/60	1256-6P	500	600	W,X,Y
460	0-540	3.0	1.6	50/60	216U-2S	17	22	....
	0-540	3.0	1.6	50/60	216-2S	18	23	....
	0-540	9.0	4.9	50/60	1226-2S	53	60	W,X,Y,Z
	0-540	28.0	15.1	50/60	1256-2S	144	164	W,X,Y,Z
	0-540	56.0	30.2	50/60	1256-4PS	330	420	W,X,Y
	0-540	84.0	45.3	50/60	1256-6PS	500	600	W,X,Y
Three Phase								
115	0-135	3.0	0.7	‡60	*20-2D	9	15	....
	0-135	7.5	1.8	50/60	*116U-2D	17	22	....
	0-135	7.5	1.8	50/60	*116-2D	18	23	....
	0-135	15.0	3.5	50/60	1126-2D	45	52	W,X,Y,Z
	0-135	45.0	10.5	50/60	1156-2D	144	164	W,X,Y,Z
	0-135	90.0	21.0	50/60	1156-4D	320	410	W,X,Y
	0-135	135.0	31.6	50/60	1156-6D	490	590	W,X,Y
230	0-230	3.0	1.2	60	20L-3Y	15	24	....
	0-270	3.0	1.4	50/60	*216U-2D	17	22	....
	0-270	3.0	1.4	50/60	*216-2D	18	23	....
	0-270	7.5	3.5	‡60	*116U-3Y	26	36	....
	0-270	7.5	3.5	‡60	*116-3Y	27	37	....
	0-270	9.0	4.2	50/60	1226-2D	53	60	W,X,Y,Z
	0-270	15.0	7.0	‡60	1126-3Y	65	75	W,X,Y,Z
	0-270	28.0	13.1	50/60	1256-2D	144	164	W,X,Y,Z
	0-230	45.0	17.9	50/60	1156L-3Y	215	280	W,X,Y,Z
	0-270	56.0	26.2	50/60	1256-4D	320	410	W,X,Y
	0-270	84.0	39.3	50/60	1256-6D	490	590	W,X,Y
	0-230	90.0	35.8	50/60	1156L-6Y	500	600	W,X,Y
460	0-540	3.0	2.8	‡60	*216U-3Y	26	36	....
	0-540	3.0	2.8	‡60	216-3Y	27	37	....
	0-540	9.0	8.4	‡60	1226-3Y	76	86	W,X,Y,Z
	0-540	28.0	26.2	‡60	1256-3Y	215	280	W,X,Y,Z
	0-540	56.0	52.5	‡60	1256-6Y	500	600	W,X,Y

* These units are supplied with an "L" terminal which allows connecting in the field to limit the output voltage to the applied voltage. If "L" type connection is required on other models, the "L" must be included in the type number when ordering.

‡ When these POWERSTATS are "L" connected so that the output voltage does not exceed the applied voltage, the frequency range is 50/60 cycles.

** When a motor-drive is required, prefix the letter "M" together with the speed designation letter to the type number. Z — 6 seconds, Y — 14 seconds, X — 19 seconds and W — 45 seconds for full range travel. Since the driving motors are frequency sensitive, be sure to specify whether 50 or 60 cycles is required. Only manually-operated unit weights are listed. For motor-drives add 10, 11 and 14 pounds to the 116-216, 1126-1226 and 1156-1256 types, respectively.

FOR COMPLETE INFORMATION,
SEND FOR POWERSTAT BULLETIN P553G

One Source for Voltage Control Equipment

to provide A CONTINUOUSLY-ADJUSTABLE SOURCE OF A-C VOLTAGE

to 100 KVA

EFFICIENT • ACCURATE • DEPENDABLE

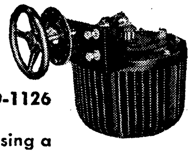
POWERSTAT variable transformers are autotransformers of toroidal core design with a movable brush tap which is rotated to deliver any desired output voltage from zero to, or above, line voltage. Glass smooth commutator surfaces and advanced winding techniques assure smooth operation and permit adjustment to a fraction of a volt. Other important features include: excellent regulation, high efficiency, conservative ratings, zero waveform distortion and rugged mechanical construction.

A wide range of standard POWERSTAT variable transformers are available for 115, 230 and 460 volt, single and three phase operation. Both manually-operated and motor-driven types are offered. The rating chart lists some of the most-called-for standard POWERSTATS. Others — specifically designed to customer requirements — are available to fulfill each application. Consult us about your specific needs.

STANDARD TYPES for VARIED APPLICATIONS

POWERSTAT VARIABLE TRANSFORMERS FOR

OIL-COOLED OPERATION

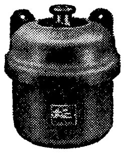


TYPE O-1126

By immersing a POWERSTAT in transformer oil, the rating above normal air operation is increased and duty in a corrosive atmosphere is possible. A standard line is offered in various ratings and sizes.

EXPLOSIVE ATMOSPHERES

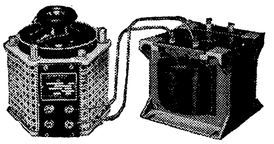
TYPE X-1126



To provide safe operation in hazardous areas where a small arc or spark could cause an explosion, explosion-proof POWERSTATS are available. Standard models are approved by Underwriters' Laboratories for Class 1, Group D service.

HIGH CURRENT NEEDS LIMITED OUTPUT RANGE

TYPE 2106LC



Relatively large amounts of power can be controlled by a small POWERSTAT when used in conjunction with a fixed-ratio transformer. This combination is known as a POWERSTAT Line Corrector. It can be used to correct line voltage variations to maintain a specified output voltage and to supply a limited output voltage range. A multitude of ratings are available.

WRITE TO **THE SUPERIOR ELECTRIC CO.**

53 MAE AVENUE, BRISTOL, CONNECTICUT

THE SUPERIOR ELECTRIC CO. . . .

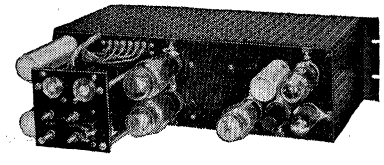
STABILINE

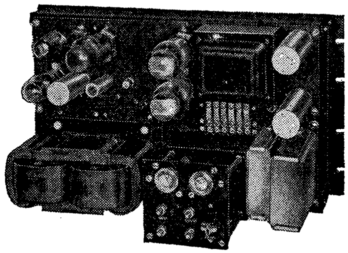
AUTOMATIC VOLTAGE REGULATORS

TO MAINTAIN CONSTANT OUTPUT VOLTAGE

MADE IN 2 DISTINCT TYPES

TO MEET EACH NEED


TYPE IE51002R


TYPE IE5101R

TYPE IE (INSTANTANEOUS ELECTRONIC)

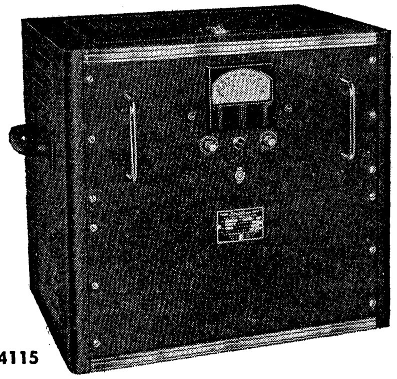
for the most exacting control

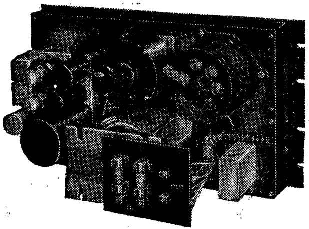
Type IE is completely electronic in operation with no moving parts. Providing instantaneous correction, it is ideal for laboratories, test lines, as a component of other equipment . . . and everywhere that the most exacting voltage control is required. At no load, full load or any intermediate stage, constant output voltage is maintained regardless of line fluctuations. The output voltage is held to within ±0.1 volts of nominal for wide line variations and within ±0.15 volts of nominal for any load current or load power factor change from .5 lagging to .9 leading. Waveform distortion never exceeds 3%. Standard types are listed below. Consult us about your specific requirements.

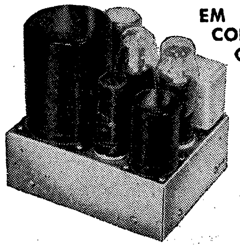
TYPE EM (ELECTRO MECHANICAL)

for large industrial loads . . . for applications requiring zero waveform distortion and high efficiency

Type EM is an electro-mechanical device with a very sensitive detector controlling a motor-driven POWERSTAT variable transformer and auxiliary transformer. While not instantaneous, Type EM corrects faster than most other automatic voltage regulators. Highly efficient in operation, it finds widest application in controlling large industrial loads and also in electronic equipment where zero waveform distortion is essential. Features include: complete insensitivity to the magnitude and power factor of the load, no effect on system power factor, no critical adjustments and adjustable output voltage. Standard types listed below.


TYPE EM4115


TYPE EM4102R


EM CONTROL CIRCUIT

RATINGS TYPE IE

Input Voltage Range	Output Voltage Range	Frequency In Cycles	Load Range In Amperes	Load Power Factor Range	Rated Output KVA	Type
95-135	110-120	60 ± 10%	0 - 2.2	.5 lagging to .9 leading	0.25	IE51002
95-135	110-120	60 ± 10%	0 - 2.2		0.25	IE51002R
95-135	110-120	60 ± 10%	0 - 4.5		0.5	IE51005
95-135	110-120	60 ± 10%	0 - 4.5		0.5	IE51005R
95-135	110-120	50 ± 10%	0 - 4.5		0.5	IEL51005
95-135	110-120	50 ± 10%	0 - 4.5		0.5	IEL51005R
195-255	220-240	50 ± 10%	0 - 2.2		0.5	IEL52005
195-255	220-240	50 ± 10%	0 - 2.2		0.5	IEL52005R
95-135	110-120	60 ± 10%	0 - 8.5		1.0	IE5101
95-135	110-120	60 ± 10%	0 - 8.5		1.0	IE5101R
95-135	110-120	50 ± 10%	0 - 8.5		1.0	IEL5101
95-135	110-120	50 ± 10%	0 - 8.5		1.0	IEL5101R
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201R
95-135	110-120	60 ± 10%	0 - 22.0		2.5	IE5102
95-135	110-120	60 ± 10%	0 - 22.0		2.5	IE5102R
195-255	220-240	60 ± 10%	0 - 11.0		2.5	IE5202
195-255	220-240	60 ± 10%	0 - 11.0		2.5	IE5202R
195-255	220-240	50 ± 10%	0 - 11.0		2.5	IEL5202
195-255	220-240	50 ± 10%	0 - 11.0		2.5	IEL5202R
95-135	110-120	60 ± 10%	0 - 43.5		5.0	IE5105
195-255	220-240	60 ± 10%	0 - 22.0		5.0	IE5205

RATINGS TYPE EM

Nominal Output Voltage	Input Voltage Range	Output Voltage Range	Output Current (Amperes)	Output KVA	Type
Single Phase					
115	95-135	110-120	17.5	2.0	EM4102
			52.0	6.0	EM4106
			130.0	15.0	EM4115
230	195-255	220-240	32.5	7.5	EM4207
			120.0	27.5	EM4228
460	400-520	420-460	15.0	6.6	EM4407
			40.0	17.6	EM4418
Three Phase					
230	195-255	220-240	25.0	10.0	EM6210Y
			38.0	15.0	EM6215Y
			50.0	20.0	EM6220Y
			113.0	45.0	EM6245Y
			175.0	70.0	EM6270D
460	400-520	420-460	16.0	12.5	EM6412Y
			22.0	17.5	EM6417Y
			33.0	25.0	EM6425Y
			66.0	50.0	EM6450Y
			100.0	75.0	EM6475Y
	420-500	420-460	131.0	100.0	EM64100Y

FOR COMPLETE INFORMATION, SEND FOR STABILINE BULLETIN S351

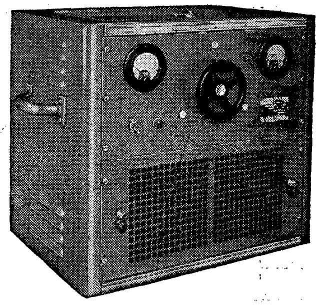
One Source for Voltage Control Equipment

VARICELL D-C POWER SUPPLIES

A VARIABLE RANGE OF STABILIZED AND REGULATED D-C VOLTAGES FROM AN A-C SOURCE

The ideal source of low d-c voltages, the VARICELL is simply plugged into any convenient, single phase a-c outlet supplying a nominal 115 volts at 60 cycles and it is ready to operate. Turning the handwheel provides any desired output voltage from 0 to 30 volts. Its load rating is 15 amperes. Any setting is unaffected by changes in line or load current. For any setting from 6 to 30 volts, R.M.S. ripple voltage never exceeds 0.1 volts, and stabilization and regulation is ±0.25 volts.

TYPE 13015



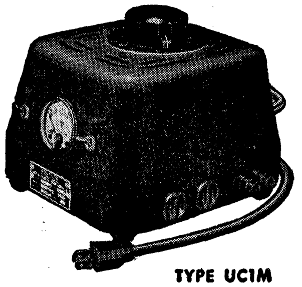
FOR COMPLETE INFORMATION, SEND FOR VARICELL BULLETIN V1051

VOLTBOX A-C POWER SUPPLIES

A COMPACT, PORTABLE SOURCE OF VARIABLE A-C VOLTAGE

This is a handy instrument widely used in chemical, physical, electrical and other laboratories and in inspection, testing and plant maintenance departments. It eliminates the need for collecting a variable transformer, voltmeter and connection leads when tests involve variable a-c voltages. All necessary components are housed in a compact, aluminum case. By turning the "On-Off" switch to "On"; snapping the line-load switch to "Load" and rotating the knob; the desired voltage is available at the output receptacles and binding posts. Ratings are available to meet every requirement.

FOR COMPLETE INFORMATION, SEND FOR BULLETIN P553G



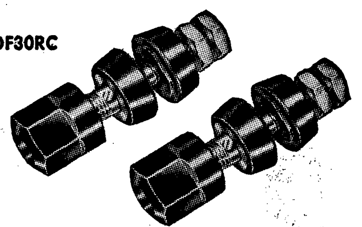
TYPE UC1M

SUPERIOR 5-WAY BINDING POSTS

This versatile binding post offers 5 different methods of connection . . . permanent clamping, spade lug, clip-lead, banana plug, or looping and clamping. Ruggedly built of the finest materials it provides complete insulation, a current capacity of 30 amperes and a working voltage of 1,000 volts. Two available colors, red and black, provide circuit identification where required.

WRITE FOR BULLETIN BP652 DESCRIBING THE 5-WAY BINDING POSTS

TYPE DF30RC



TYPE DF30BC

SUPERIOR ELECTRIC — SPECIALISTS IN VOLTAGE CONTROL

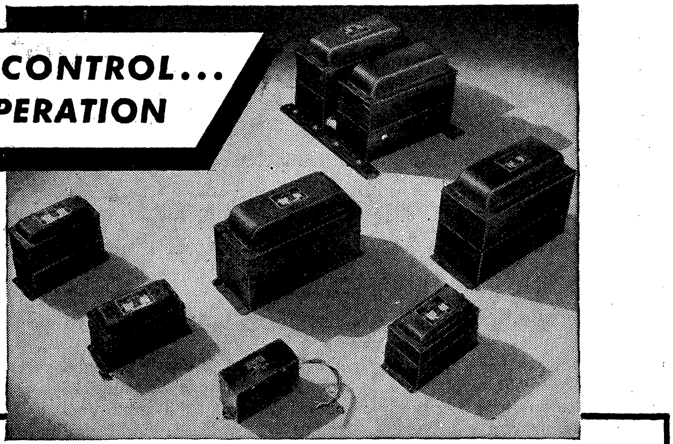
Thoroughly familiar with every type of voltage control problem, The Superior Electric Company is well qualified to help with your specific requirements. We will be glad to recommend standard equipment exactly suited to your needs — or to engineer special types or new designs for unusual applications.

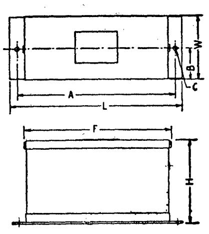
WRITE TO *THE SUPERIOR ELECTRIC CO.*
53 MAE AVENUE, BRISTOL, CONNECTICUT

FOR POSITIVE VOLTAGE CONTROL... DEPENDABLE, ACCURATE OPERATION

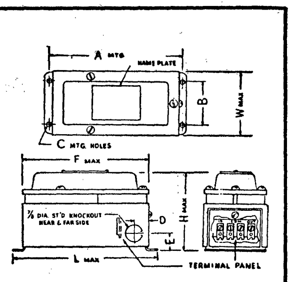
RAYTHEON

VOLTAGE STABILIZERS

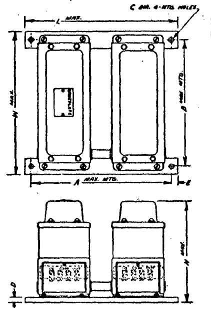




STYLE F



STYLE E



Catalog No. VR-6116

CATALOG NO.	OUTPUT CAP. WATTS	STYLE	DIMENSIONS IN INCHES									NET WEIGHT LBS.
			OVERALL			MOUNTING			LOCATIONS			
			L	W	H	A	B	C	D	E	F	
VR-6110	15	F	6¼	2½	3	5 11/16	1¼	¼ dia.	5/16	3/16	5 3/16	4
VR-6101*	30	E	7½	3⅜	4⅛	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	5
VR-6111	30	E	7½	3⅜	4⅛	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	5
VR-6112	60	E	7½	3⅜	4 9/16	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	8
VR-6113	120	E	7½	3⅜	5 15/16	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	14
VR-6114	250	E	12⅜	5	7⅝	11 9/16	3½	9/32x1 1/32	⅞	1	11 1/16	25
VR-6115	500	E	12⅜	5	9⅛	11 9/16	3½	9/32x1 1/32	⅞	1	11 1/16	45
VR-6116	1000	H	14 1/16	13 3/16	9⅝	12⅞	11 9/16	7/16	½	9/16		92
VR-6117	2000	H	36¼	14⅝	10⅛	34	12 3/16	9/16 dia.				200

*Output 6.0 or 7.5 volts stabilized to ± ½%.

Style E Models, VR-6101 to VR-6113 inclusive, available with cord and plug; specify by adding "CP" to catalog number. For accessory cord, plug and mounting plate on Model VR-6114 and VR-6115, specify "Assembly 51-590G2".

TESTS PROVE 10 POINTS OF RAYTHEON SUPERIORITY

1. Deliver accurate AC voltage within ±½%
2. Stabilize output with more precision
3. Regulate better at full load
4. Hold up better under overload
5. Better no-load to full-load regulation
6. Accept wider input voltage range
7. Less voltage change as units heat up
8. Less change in output as frequencies fluctuate
9. Smaller, lighter, more compact; no moving parts
10. Cost less to operate

RAYTHEON®
Excellence in Electronics

THE complete line of Raytheon Voltage Stabilizers is available through 114 authorized distributors. All models operate on input of 95 to 130 volt, 60 cycle, single phase current. They are produced in a wide range of catalog types rated from 15 to 2000 watts as outlined in table above. Each model compensates for widely varying input (±15%) within 1/20 of a second, maintains voltage within ±½% of rated output. Special custom-built units, in ratings from 5 to 10,000 watts, are also available to meet special needs; write for complete information.

RAYTHEON
MANUFACTURING COMPANY
EQUIPMENT SALES DIVISION

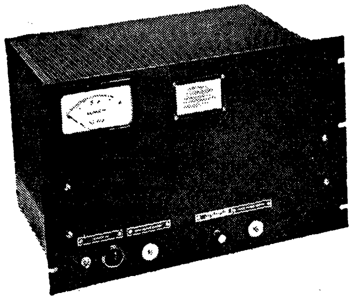
DEPT. 6270-RM, WALTHAM 54, MASSACHUSETTS

DISTRICT OFFICES: BOSTON, NEW YORK, CLEVELAND, CHICAGO, NEW ORLEANS, LOS ANGELES (WILMINGTON), SAN FRANCISCO, SEATTLE
INTERNATIONAL DIVISION: 19 RECTOR ST., NEW YORK CITY

RAYTHEON PRODUCTS INCLUDE:

MARINERS PATHFINDER* radar; FATHOMETER* Echo Depth Sounders; Marine radiotelephones; WELDPOWER* welders; Voltage stabilizers (regulators); Transformers; RectiChargeR* battery chargers; RectiFilteR* battery eliminators; Sonic oscillators for laboratory research; Standard control knobs; Electronic calculators and computers; Television receivers; Radio, television, subminiature and special purpose tubes; MICROTHERM* diathermy and other electronic equipment. *Reg. U. S. Pat. Off.

SPELLMAN HIGH VOLTAGE POWER SUPPLIES



MODEL LAB-40

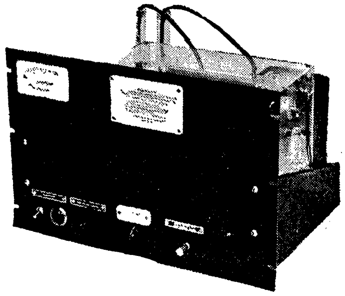
CONTINUOUSLY VARIABLE REGULATED 25 to 40KV DC POWER SUPPLY

Unit has a 4 to 6 KV focus tap for use with flying spot kinescope recording tubes, etc. Regulations of 0.5% at 1 milliampere. Available either with locking controls or standard knob.

With meter
Less Meter
$620 Net
$545 Net

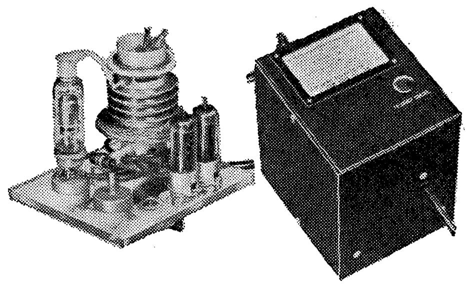
MODEL LAB-30PN

REVERSIBLE POLARITY — CONTINUOUSLY VARIABLE 1 to 30 KV



Regulated DC Power Supply with regulations of 0.5% at 1 milliampere. Up to 2 milliamperes may be drawn from 20 KV down. This 16 tube unit is of the RF type consisting of a separate oscillator and buffer feeding the power oscillator into a doubler rectifier. Regulations accomplished through feed-back into a DC amplifier plus simultaneous output control of the buffer. Polarity reversible from front panel. Standard Rack Model — 19″ wide x 12″ high x 13″ deep. Standard Bench Model — 21″ wide x 14″ high x 15″ deep. **With Meter $670 Net**
Less Meter $595 Net

MODEL LAB-30 is a positive polarity output regulated High Voltage DC Power Supply with same electrical characteristics and dimensions as the LAB-30PN................**With Meter $570 Net**
Less Meter $495 Net



MODEL 4575

4½ KV POWER SUPPLY

This compact, well designed, ruggedly built DC supply has an output voltage of 4½ KV at 1 milliampere. By varying the DC input the output voltage can be varied from approx. 1 KV to 7½ KV. Dimensions: 5⅝″ high x 5″ deep x 4¼″ wide.

Less low voltage DC supply ....**$32.50 Net**

MODEL 2040

40 KV DC POWER SUPPLY

Available with either positive or negative 40 KV output. Voltage range of approx. 15 to 40 KV. The 15 to 40 KV variance in voltage is controlled through a knob on the front panel. If required for TV use, a voltage output of approx. 4 to 6 KV is available through a tap. Voltages supplied through a 4 ft. HV Safety Cable. Specify desired polarity when ordering............**$136.90 Net**

MODEL PN-30R

REVERSIBLE POLARITY CONTINUOUSLY VARIABLE 1-30 KV UNREGULATED DC POWER SUPPLY

A light, compact unit in wide use for insulation testing, precipators and laboratory research. Polarity reversible from front panel. Current output — approx. 2 milliamperes at 20 KV; 250 microamperes at 30 KV. Input — 110V AC 60 cycles ....**$205 Net**

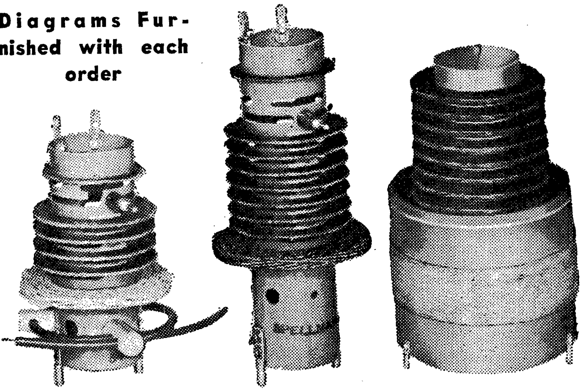
MODEL RG-30M

CONTINUOUSLY VARIABLE 15-30 KV REGULATED DC POWER SUPPLY

A high grade supply which incorporates a voltage tap in the range of 4 to 6 KV for use with 5WP15, 5TP4 and flying spot tubes. Regulations better than .5% at 1 milliampere. In wide use for theatre and transcription recording systems.....**$310 Net**

HIGH VOLTAGE RF STEP-UP COILS

Diagrams Furnished with each order



5 KV

Secondary Height	3½″
Secondary Windings consisting of 4 Pie Windings	1¾″
Primary Diameter	2¼″

Secondary Voltage Output	5 KV
Secondary Current	2 Milliamperes
Approx. Frequency	175 KC
	$4.80 Net

10-15 KV

Secondary Height	5¼″
Secondary Windings consisting of 7 Pie Windings	1¾″
Diameter	2½″

Secondary Voltage Output	10-15 KV
Secondary Current	2 Milliamperes
Approx. Frequency	175 KC
	$12.00 Net

35 KV

Secondary Height	7″
Secondary Windings consisting of 10 Pie Windings	3″ dia.
Primary (separate from secondary)	
Height	4″
Diameter	4¼″

Secondary Voltage Output	35 Kilovolts
Secondary Current	5 Milliamperes
Approx. Frequency	70 KC
	$42.00 Net

25 KV—Same as 35 KV except Secondary Height .... 6″
$36.00 Net

RF FILAMENT TRANSFORMERS

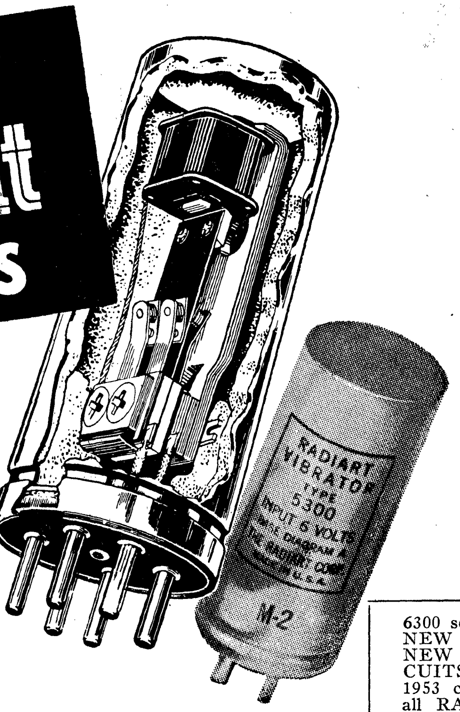
A self-resonant auto transformer for use with type 1B3 Rectifier tube. Will operate with Spellman HV coils **$1.50**
TUNING PADDER for Filament Transformer **0.58**

SPELLMAN TELEVISION CO., INC.
3029 WEBSTER AVENUE
BRONX, N. Y. Kingsbridge 7-0306

THE RADIART CORPORATION
CLEVELAND 2, OHIO

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

RADIART Seal-Vent RED SEAL VIBRATORS



NOW — with the RADIART SEAL VENT, the vibrator is sealed BEFORE it is used — and VENTED after it is put into use. The RED SEAL rubber-faced bakelite plug prevents formation of an insulating film on the contacts. Heat generated when the vibrator is put into service melts the wax out of the sealed vent-hole and permits air circulation . . . FOR LONGER LIFE AND EVEN GREATER PERFORMANCE!

The Radiart Vibrator Guide is the Standard of the Industry — Ask your jobber for your copy today!

There are many reasons for the nation-wide preference for Radiart Vibrators! One is the absolutely complete selection of types manufactured . . . there is a CORRECT Radiart replacement vibrator for most every need, to original specifications. In addition, the precision engineering behind the design of each type is backed up by highest standards of manufacture that assure peak performance . . . always!

6300 series vibrator types are the NEW standard vibrators for the NEW 12 VOLT AUTO CIRCUITS on many of the new 1953 cars. They are stocked by all RADIART distributors who carry a complete line.

6326	$5.50
6330	4.90
6370	4.70

5300 SERIES vibrator types are Standard Automotive and Household Non-Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

Type No.	Price	Type No.	Price	Type No.	Price
5300	$4.70	5314	$4.90	5342	4.15
5300-32	7.15	5320	4.90	5343	6.35
5301	4.70	5321	4.90	5363	6.35
5303	4.90	5323	4.15	5366	6.35
5304	6.35	5326	4.15	5370	4.90
5307	4.90	5331	4.90		
5308	6.35	5333	4.90		
5309	4.90	5335	$4.90		

5400 SERIES vibrator types are Standard Automotive and Household Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price
5400	$7.70	5413	7.70	5435	7.70	5468-2	10.70
5404	7.70	5416	9.15	5435-4	7.70	5469-2	9.80
5406	7.70	5421	7.70	5437	7.70		
5407	7.70	5422	8.55	5438	7.70		
5408	7.70	5425	9.15	5440	$8.55		
5409	7.70	5426	7.70	5454	7.70		
5410	7.70	5429	$9.15	5463	9.15		
5411	$7.70	5431-4	8.55	5464	9.15		

5500 SERIES vibrator types are Special Application Non-Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

5503-12	$7.70	5513	$9.70	5517-12	$7.70
5504	6.35	5513-12	7.70	5518	6.90
5506	7.15	5514-4	7.70	5519	4.90
5510	7.15	5515	6.90	5560	8.55
5511-12	7.70	5516	6.90		

5600 SERIES vibrator types are Special Application Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

5604	$9.15	5607-12	$9.95	5614-12	$8.55	5620	$7.70
5605	8.55	5607-32	9.95	5615-12	8.55	5620S	7.70
5605-12	9.95	5609-12	9.95	5615-24	8.55	5621	6.90
5605-32	9.95	5610	7.70	5616	8.55	5622	8.55
5607	8.55	5610-12	8.55	5616-12	9.95	5622S	8.55
						5623	7.70

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

THE RADIART CORPORATION
CLEVELAND 2, OHIO

★ ROTATORS
★ VIBRATORS
★ AUTO AERIALS
★ TV ANTENNAS
★ POWER SUPPLIES

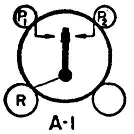
VIBRATOR BASE DIAGRAM CROSS INDEX

A—A hot line into vibrator.
B—By-pass for driving point.
C—External coil lead in shunt vibrator.
P_1—Primary contact, usually, but not necessarily connected to the magnet coil in shunt vibrators.
PP_1—Dual primary contact, closed when P_1 is closed.

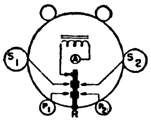
Radiart Type No.	Base Diagram	Voltage	Frequency	Max. Load	Dia.*	Height
5300	A-1	6	115	6	1½	3⅛
5300-32	A-1	32	115	1.4	1½	3⅛
5301	A-1	6	115	6	1½	2⅞
5303	F-1	6	115	6	1⅝	3 9/16
5304	I	6	115	6	1¼	3⅛
5307	A-1	6	150	6	1½	3⅛
5308	E	6	115	6	1½	3⅛
5309	C-1	6	115	6	1½	2½
5314	A-1	6	115	6	1¼	2⅜
5320	A-1	6	115	6	1 15/16	3½
5321	A-1	6	115	6	1⅝	3 9/16
5323	A-1	6	115	6	1⅝	4¾
5326	A-1	6	115	6	1½	2⅞
5331	C-1	6	115	6	1½	3⅛
5333	F-1	6	115	6	1½	3⅛
5335	F-1	6	115	6	1½	2⅞
5342	A-1	6	115	6	1½	2⅞
5343	B	6	115	6	1 15/16	4½
5363	LEADS	6	115	4	—	—
5366	R-1	6	115	6	1½	2⅞
5370	A-1	6	115	6	1½	3⅛
5400	AB-1	6	115	6	1½	3⅛
5404	AH-1	6	130	6	1½	3⅛
5406	AD-1	6	115	6	1½	3⅛
5407	AB-1	6	180	5	1½	3⅛
5408	AB-1	6	140	6	1½	2⅞
5409	K-1	6	115	6	1½	3⅛
5410	O-1	6	115	6	1½	3⅛
5411	V-1	6	115	6	1½	3⅛
5413	K-1	6	115	6	1 15/16	3¼
5416	K-2	6	115	6	1 15/16	4½
5421	V-1	6	115	6	1 15/16	3½
5422	AE-1	6	115	5	1½	3⅛
5425	O-2	6	115	6	1 15/16	4½
5426	P-1	6	115	6	1 15/16	3½
5429	P-3	6	115	6	1 15/16	4½
5431-4	AG	4	115	5	1½	3⅛
5435	V-1	6	115	6	1⅜	3⅛
5435-4	V-1	4	115	6	1⅜	3⅛
5437	AB-1	6	180	5	1⅜	2¾
5438	AB-1	6	140	6	1½	3⅛
5440	AB-1	6	115	6	1 15/16	4½
5454	AD-1	6	115	6	1½	2⅞
5463	LEADS	6	115	6	—	—
5464	AI-1	6	115	6	1 15/16	4½
5468-2	AM	2	115	2	1½ sq.	2⅛
5469-2	AN	2	115	2	1 5/16	2⅛
5503-12	A-1	12	115	6	1½	3⅛
5504	V-1	6	115	6	1 15/16	3½
5506	D	6	115	10	1½	3⅛
5510	OA-1	6	115	10	1½	3⅛
5511-12	OB-1	12	115	6	1½	3⅛
5513	AK	6	180	5	1½	3⅛
5513-12	AK	12	180	3	1½	3⅛
5514-4	A-1	4	180	5	1½	2⅞
5514-12	A-1	12	180	3	1½	2⅞
5515	A-1	6	115	9	1½	3⅛
5516	A-1	6	115	9	1½	3⅛
5517-12	V-1	12	180	3	1½	3⅛
5518	V-1	6	115	10	1½	2⅞
5519	A-1	6	115	6	1½	2⅞
5560	A-2	6	60	5	1½	3⅛
5604	K-2	6	115	6	1 15/16	4½
5605	AD-1	6	115	10	1½	3⅛
5605-12	AD-1	12	115	6	1½	3⅛
5605-32	AD-1	32	115	2.5	1½	3⅛
5607	AJ	6	180	5	1⅜	2¾
5607-12	AJ	12	180	3	1⅜	2¾
5609-12	K-1	12	115	3	1½	3⅛
5610	V-1	6	115	6	1¼	3⅛
5610-12	V-1	12	115	3	1¼	3⅛
5614-12	AD-1	12	115	4	1½	2⅞
5615-12	V-1	12	180	3	1½	2⅝
5615-24	V-1	24	180	1.4	1½	2⅝
5616	AJ	6	180	5	1½	2⅞
5616-12	AJ	12	180	3	1½	2⅞
5620	AB-1	6	115	6	1½	2⅞
5620S	AB-3	6	100	6	1½	2⅞
5621	V-1	6	115	10	1½	2⅞
5622	AE-1	6	115	5	1½	2⅞
5622S	AE-2	6	100	5	1½	2⅞
5623	AD-1	6	115	6	1½	2⅞
6326	A-1	12	115	4	1½	2⅞
6330	DA	12	115	4	1½	3⅛
6370	A-1	12	115	4	1½	3⅛

Symbols Used in Vibrator Base Diagrams

P_2—Primary contact, may be the magnet coil connection instead of P_1.
PP_2—Dual primary contact, closed when P_2 is closed.
R—Vibrating reed in single-reed vibrators.
RP—Primary vibrating reed in split-reed vibrators.
RS—Secondary vibrating reed in split-reed vibrators.
S_1—Secondary contact, closed when P_1 is closed.
S_2—Secondary contact, closed when P_2 is closed.
* All dimensions given are in inches.
† For further information see Vibrator type in Radiart Replacement Guide.



A-1



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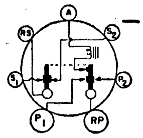
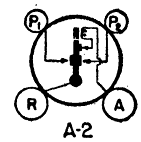

A
RS
S2
S1
P2
P1
RP
AE-2



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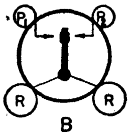

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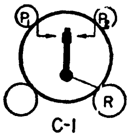
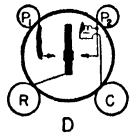


C-1



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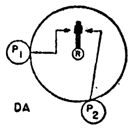

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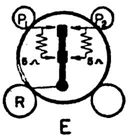

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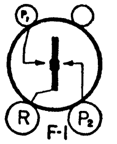
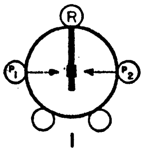


F-1



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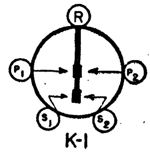
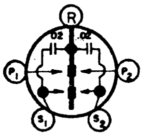
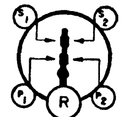
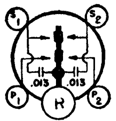


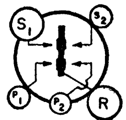
K-1


R
.02
.02
P1
P2
S1
S2
K-2

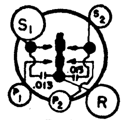


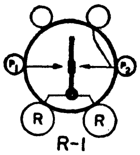
O-1


S1
S2
.013
.013
P1
R
P2
O-2

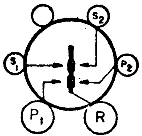


P-1


S1
S2
.013
.013
P1
P2
R
P-3



R-1



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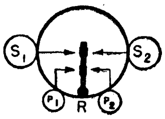
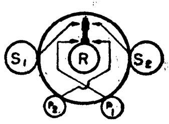
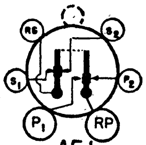
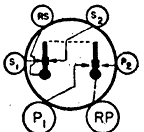


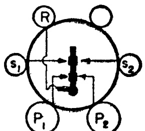
AB-1



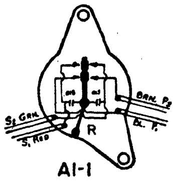
AD-1

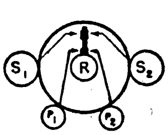

RS
S2
S1
P2
P1
RP
AE-1


RS
S2
S1
P2
P1
RP
AG

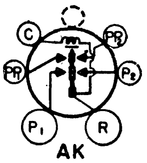


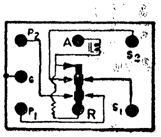
AH-1


S2 GRN.
S1 RED
BAN. P2
R
BL. P1
AI-1



AJ


C
PR
PR
P2
P1
R
AK


P2
A
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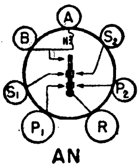
C
P1
R
S1
AM


A
B
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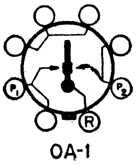
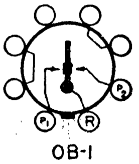
S1
P2
P1
R
AN



OA-1



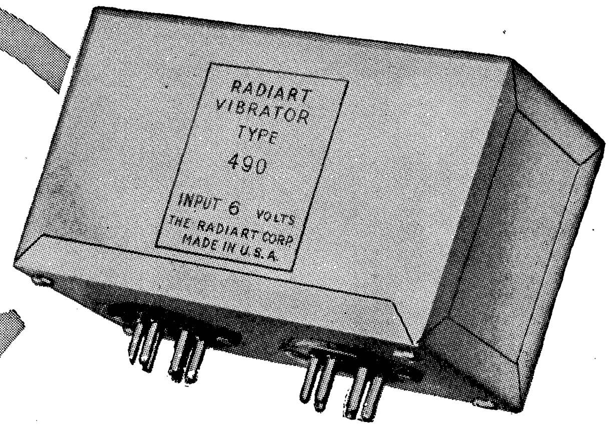
OB-1

Dotted pin on AE-1 and AK units furnished at our option

THE **RADIART** CORPORATION
CLEVELAND 2, OHIO

- ★ ROTATORS
- ★ VIBRATORS
- ★ AUTO AERIALS
- ★ TV ANTENNAS
- ★ POWER SUPPLIES

RADIART
Heavy Duty
REPLACEMENT
VIBRATORS



As in the standard "RED SEAL" line of replacement vibrators, the RADIART HEAVY DUTY Replacement Vibrators offer a complete selection for every standard need. Quality construction and superb performance featuring long life make this heavy duty line the "Standard of Comparison".

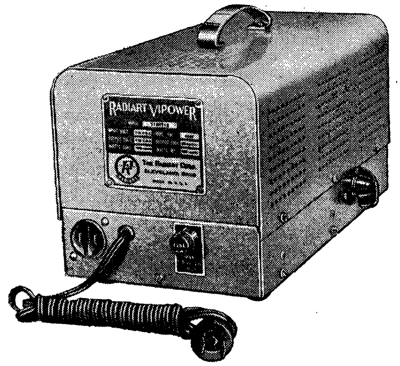
MODEL NO.	VOLTAGE	FREQ. CYCLES	TYPE	CONTAINER	USED IN
6VB6	6	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
110VB6	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
427	6	60	H-D Single	2 3/16 x 4 11/16	
490	6	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	
491	6	60	H-D Tandem	5 3/8 x 2 5/32 x 2 9/16	
1057	6	120	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
1083	110	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	110WR15A 110WR15B 110R10 110R15
1315	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	110RT25
1315H	110	60	H-D Single	5 15/16 x 2 5/32 x 2 9/16	
1506	32	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	
1684**	6	120	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
2507	45*	60	Polarity Changer	1½ x 2⅞	
2522	45*	60	Polarity Changer	1½ x 2⅞	110PA5 110PB5
2639	6	60	H-D Tandem	5 15/16 x 2 23/32 x 3 3/8	
2989	32	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	32R8 32RU15
3047	12	60	H-D Tandem	5 15/16 x 2 23/32 x 3 3/8	12RU15
3077***	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	110RT15
3079	110	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	110RT35
3087	12	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	12R8
3103	6	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	6R5
4123	6	60	H-D Tandem	5 15/16 x 2 23/32 x 3 3/8	6R10
11028	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
32171	32	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	

* For operation on 115 volts DC, connect a 2200 ohm resistor in series with the coil.
** Available only on Special Order.
*** Denotes adjustable frequency vibrator.

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION
CLEVELAND 2, OHIO

DC TO AC CONVERTERS



The RADIART line of converters is complete and furnishes 110 volt 60 cycle AC current from 6, 12, 32, or 110 volt direct current sources. Vibrator powered, they are completely dependable . . . easily installed and fit most any requirement. The RADIART name plate on each converter is your assurance of long life and outstanding performance.

110 VOLT 60 CYCLE OUTPUT:

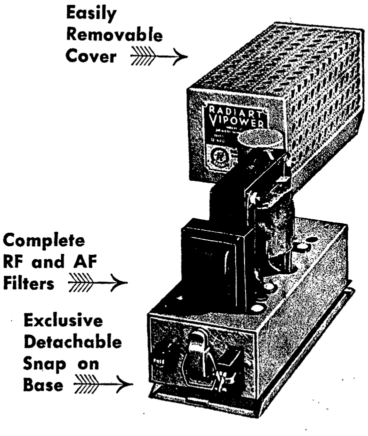
Model No.	Application	DC Input Volts	Output Watts	Size	Weight Lbs.
6R5	Automotive	6	50	6¾ x 7¾ x 5⅞	12
6R10		6	100	7 x 12⅝ x 7½	19
6WR12	Wire Recorder	6	125	8¼ x 15 x 8½	35
12R8	Marine-Craft, Busses and Trailers	12	80	6¾ x 7¾ x 5⅞	12
12RU15		12	150	7 x 12⅝ x 12½	22
32R8	Farm and Marine	32	80	6¼ x 7⅝ x 5⅞	13¼
32RU15		32	150	6⅜ x 12⅜ x 7½	22¼
110PA5	Phonograph Motors	110	50VA	3¾ x 6¼ x 2¾	2
110PB5		110	50VA	3¾ x 6¼ x 2¾	2
110R10		110	100	6⅜ x 7¾ x 5¼	10½
110RA15	Radio and Business Machines	110	150	6¾ x 7¾ x 5⅞	14
110RT15		110	150	6⅞ x 12¼ x 7½	16¾
110RT22		110	225	8¾ x 6 x 7¼	17½
110RT35		110	350	7½ x 14 x 8⅝	40½
110WR15A	Wire Recorders	110	150	6⅞ x 12¼ x 7½	16¾
110WR15B		110	150	6⅞ x 12¼ x 7½	16¾

Super RADIART VIPOWERS

Vipower Model	DC Input Volts (Nominal	DC Output Volts (Nominal)	Output Mills.	Type
451	6	250	60	Self-rectifying
451-12	12	180	40	
452	6	300*	100	Self-rectifying
452-12	12	300*	100	
453	6	300*	100	OZ4A Rectifier
453-12	12	300*	100	
454	6	300	200	Two OZ4A Rectifiers
455-12	12	400	150	Two 6X5GT Rectifiers
455	6	400	150	

* NOTE: — Tapped at 275V, 250V, 225V.
12 volt models available on special order at slightly higher prices.

RADIART vibrator power supplies top the field. Complete RF and AF filtering is built into each unit. No extra filter accessories are required. Easily installed with the exclusive Snap-on base plate that allows instant removal of the entire chassis by opening one snaplatch.



JAMES

Angle Drive VIBRATORS

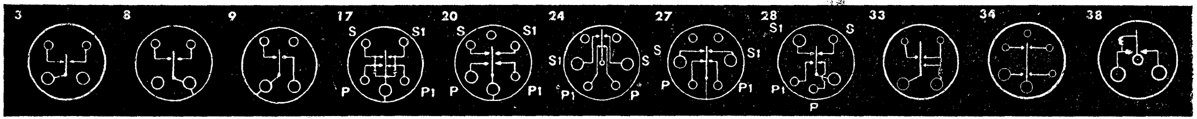
JAMES *vibrators*, the engineers standard, are designed for the more difficult applications. Featuring "Angle Drive", ceramic spacers, dynamic contact wiping and other JAMES exclusive patented designs. These components are demanded by critical service engineers.

AUTO REPLACEMENT

JAMES	TYPE	CAN	DIA.	DESCRIPTION	MALLORY	RADIART
J2S	Intr.	1½ x 3⅛	3	4 prong std. — Medium height	294	5300
J2SP	”	1½ x 2⅞	3	4 prong std. — Short height	859	5301
J2SF	”	1½ x 2⅞	3	4 prong std. — Philco	509P	5326
J2SM	”	1½ x 2⅞	3	4 prong std. — Motorola	903M	5342
12J7	”	1½ x 2⅞	38	3 prong-12 volt — GM	—	—
J8S	”	1½ x 3⅛	8	4 prong std. — special wiring	854	5331
J9	”	1½ x 3⅛	9	Delco base, large can	852	5303
J9SA	”	1½ x 2⅞	9	Delco base, small can	870	5335
J21	”	1 5/16 x 2⅜	3	4 prong std. small can, Ford	1100	5314
J54	Syn.	1¾ x 4½	17	Large can, Pontiac	273C	5425
J66	”	1 15/16 x 3½	28	Large can, with handle, Buick	716	5426

COMMUNICATIONS

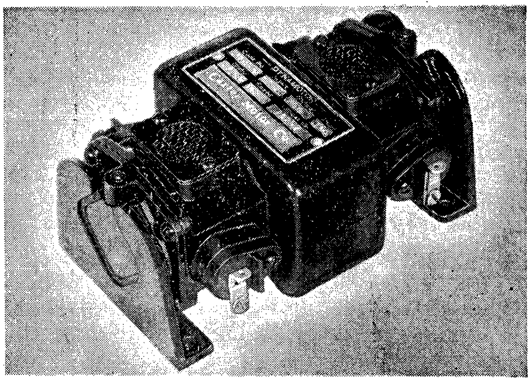
JAMES	TYPE	CAN	DIA.	DESCRIPTION
J22	Intr.	1½ x 3⅛	3	8 contact, heavy duty, Motorola, Link receiver service.
J23	”	1½ x 2⅞	33	Heavy duty for transmitter service, Motorola, Link.
J24	”	1½ x 2⅞	34	6 prong, 8 contact, Motorola Unichannel, Bendix.
J58	Syn.	1½ x 3⅛	20	6 prong, Karr.
J63	”	1½ x 3⅛	24	Reversible, Link, RCA.
J65M	”	1½ x 3⅛	27	Reversible, Motorola.
J73	”	1½ x 3⅛	24	General Electric.



QUIET — DEPENDABLE — LONG LIFE

Magmotor Carter *Genemotor*

THE CARTER MAGMOTOR FOR POLICE - TAXICAB - MARINE AND AIRCRAFT RADIO RECEIVERS GEOPHYSICAL AND RESEARCH ELECTRONIC EQUIPMENT



5⅝" x 3-11/16" x 2½" HIGH, WEIGHT 4¾ LBS.

Furnished with Rigid Mounting.
Shock Mounting Illustrated, $1.00 List Extra.

Code No.	*DC Input Volts*	*DC Input Amps*	*DC Output Volts*	*DC Output MA*	*Duty*	*List Price*
MV1865	5.5	5	180	65	Con.	$53.00
MC2190	32	1	210	90	Con.	$55.00
MD2190	115	.4	210	90	Con.	$56.00
MA2550	6	4.3	250	50	Con.	$55.00
MV280	5.5	5.8	200	80	Con.	$54.00
MA265	6	5.4	250	65	Con.	$56.00
MA251	6	8	250	100	Con.	$56.50
MB251	12	3.8	250	100	Con.	$57.50
MJ251	28	1.5	250	100	Con.	$57.50
MBS2525S	12	8	250	250	Int.	$67.00
MA301	6	9.5	300	100	Con.	$57.00
MB301	12	4.6	300	100	Con.	$58.00
MA351	6	10.3	350	100	Con.	$58.00
MVS3215	5.5	18.5	325	150	Int.	$58.00
MAS320	6	19	300	200	Int.	$60.00
MVS415	5.5	19	400	150	Int.	$61.50
MBS415	12	8.5	400	150	Int.	$61.50

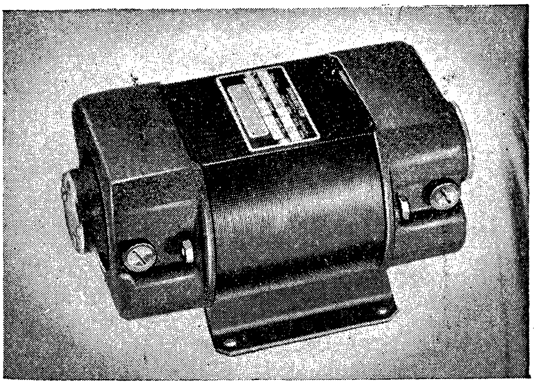
AC AND DC GENERATORS—

The Magmotor is available on special order for AC output up to 220 volts at 120 cycles. DC output up to 400 volts 30 watts continuous, 50 intermittent, depending upon armature speed.

EXTENDED SHAFTS—

Available on all Magmotor models add "S" to end of code number and $5.00 to list.

THE ORIGINAL CARTER GENEMOTOR FOR POLICE - TAXICAB - MARINE AND SMALL AIRCRAFT MOBILE COMMUNICATIONS



3" FRAME—7⅛" x 4⅛" x 3½" HIGH, WEIGHT 10 LBS.

Code No.	*DC Input Volts*	*DC Input Amps*	*DC Output Volts*	*DC Output MA*	*Duty*	*List Price*
325A	6	21	300	250	Con.	$65.00
420A	6.0	23.4	400	200	Con.	$65.00
420V	5.5	25	400	200	Con.	$66.00
425BS	12.0	12.8	400	225	Int.	$67.00
450AS	6.0	28	400	250	Int.	$67.00
4037AS	6.0	41	400	375	Int.	$71.40
4228VS	5.5	35	420	280	Int.	$67.73
4228VSC	5.8	33	420	280	Int.	$69.30
4228BSC	11.8	17	420	280	Int.	$69.30
520AS	6.0	28	500	200	Int.	$67.00
520VS	5.5	31	500	200	Int.	$68.00
5925AS	6.0	42	590	250	Int.	$73.50
617V	5.5	30	600	170	Int.	$68.00
620AS	6.0	29.5	600	200	Int.	$69.50
624VS	5.5	46	600	240	Int.	$71.19
624BS	12	18	600	240	Int.	$71.19
650AS	6.0	39.0	600	250	Int.	$71.19
6030BSM	12	23	600	300	Int.	$72.45
6040BSM	12	28	600	400	Int.	$74.55
6040CSM	32	10.5	600	400	Int.	$74.55
6050DSM	115	4	600	500	Int.	$77.70
2" Frame—6⅛" x 4⅛" x 3½" high, weight 8 lbs.						
3515VB	5.5	18.0	350	150	Con.	$60.00
415VB	5.5	20.0	400	150	Con.	$61.00
415AB	6.0	18.2	400	150	Con.	$60.00
1½" Frame—5⁹⁄₁₆" x 4⅛" x 3½" high, weight 7 lbs.						
210AB	6	6	200	100	Con.	$54.00
251AB	6	7.9	250	100	Con.	$55.50
351AB	6	10.9	350	100	Con.	$57.00

MANY OTHER STANDARD INPUT AND OUTPUT RATINGS AVAILABLE.

FILTERS — STARTING RELAYS

FILTERS—

Any of the above Carter Genemotors or Magmotors can be furnished with complete filter mounted in metal box mounted below unit. Add "X" to end of code number and following prices. 1½" and 2" Frame Genemotor models and Magmotors, $26.00 list, 3" Frame Genemotor Models, $28.00 list.

STARTING RELAYS—

Heavy Duty solenoid contactor starting relays are available for 5.5, 6, 12, 24, 28, 32 and 115 volt DC input. Add "R" to end of code number and $8.00 to list price (Relay draws 1.3 amps at 6 volts). Seldom required on low power Magmotors.

DUTY RATINGS

Intermittent duty shall be considered 10 seconds on 20 seconds off. Continuous duty is considered 24 hours per day.

INPUT VOLTAGES—

Any Carter Genemotor or Magmotor can be supplied for special input voltages other than 6 volts. For 5.5, 12, 24, 28, 32 or 64 volt input add $2.50 to list. For 115 volt DC input add $3.50 to list.

LINE-O-LIFE* BRUSHES—

All Carter products equipped with exclusive "LINE-O-LIFE" Brushes. Takes guess work out of brush replacements.

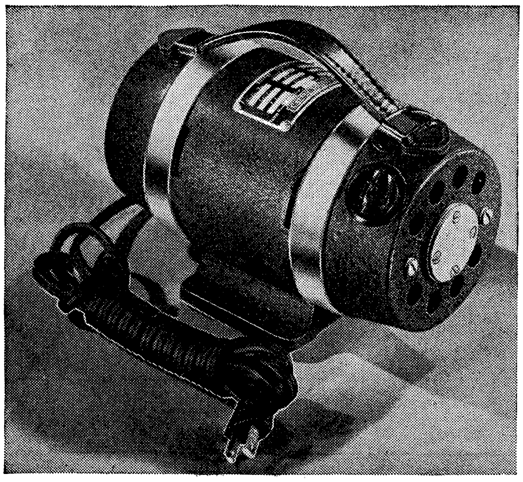
*TRADE MARK REG.

See replacement parts reference chart page for other special models, parts and prices.

Carter *Super Converter*

The oldest name in Rotary Power Supplies for Mobile Radio

CARTER SUPER CONVERTER—Changes DC to AC for Amplifiers - Radios - High Power Factor equipment



Carter Super Converter, Less Filter, 8¼" Long, 4½" Wide, 5" High, Weight 13 lbs.

Wherever DC to AC Conversion is necessary, the Carter Super Converter provides an efficient and reliable source of AC power. Standard models are designed for high power factor, non-inductive AC loads such as amplifiers, radio receivers, (requires filtered converter), etc. Ball bearing equipped, 3600 RPM. CAUTION: Standard Super Converters will not satisfactorily operate inductive loads such as AC motors, low power factor transformers, etc.

Manually operated frequency controlled Converters available on special order. Maintain 60 cycle output with a + or — 10% input voltage fluctuation.

Special custom-matched Converters are also available for Wire and Tape Recorders, Sound Projectors, Television Receivers, etc. See Carter Selector Chart

HEAVY DUTY SUPER CONVERTER

10¼" long, 4½" wide, 5" high, weight 19 lbs.

Overall efficiency 60% AC voltage regulation 25%.

Code No.	DC Input Volts	Amps	AC Output 60 cy. Volts	(Watts)	Type Duty	List Price
K1020C	230	1.3	115	200	Con.	$97.50
K1025C	230	1.6	115	250	Con.	$102.50
D1020C	115	2.6	115	200	Con.	$87.50
D1025C	115	3.2	115	250	Con.	$92.50
H1020C	64	4.8	115	200	Con.	$90.00
H1025C	64	5.3	115	250	Con.	$95.00
C1020C	32	10	115	200	Con.	$90.00
C1025C	32	12	115	250	Con.	$95.00
J1020C	28	12	115	200	Con.	$90.00
J1025C	28	14	115	250	Con.	$95.00
E1020C	24	15	115	200	Con.	$90.00
E1025C	24	19	115	250	Con.	$95.00
B1020C	12	30	115	200	Con.	$90.00
B1025C	12	34	115	250	Con.	$95.00

OUTSTANDING FEATURES

SMALL SIZE—Smallest Rotary Converter. Lightweight.

CARRYING HANDLE

Easier to carry, no more "juggling" with a hot unit.

OUTPUT RECEPTACLE—Convenient plug in AC outlet.

ARMATURE

Double wound, insulated ungrounded winding. Built-in cooling fan.

BALL BEARINGS

Sealed ball bearings require no lubrication or attention.

SPECIFICATIONS

Carter Super Converter, 40 to 150 watts models 8¼" long, 4½" wide, 5" high, weight 13 lbs. High power factor, 85 to 100%. Less filter.

Code No.	DC Input Volts	DC Input Amps.	AC Output 60 cy. Volts	AC Output 60 cy. Volt-Amps (Watts)	Type Duty	List Price
K1040C	230	.36	115	40	Con.	$80.00
K1060C	230	.5	115	60	Con.	$81.00
K1080C	230	.6	115	80	Con.	$81.50
K1010C	230	.8	115	100	Con.	$82.00
K1015C	230	1.	115	150	Con.	$85.00
D1040C	115	.7	115	40	Con.	$70.00
D1060C	115	1	115	60	Con.	$71.00
D1080C	115	1.1	115	80	Con	$71.50
D1010C	115	1.7	115	100	Con.	$72.00
D1015C	115	2.0	115	150	Con.	$75.00
H1040C	64	1.5	115	40	Con.	$71.00
H1060C	64	2	115	60	Con.	$72.00
H1080C	64	2.2	115	80	Con.	$72.50
H1010C	64	2.5	115	100	Con.	$73.00
H1015C	64	3.4	115	150	Con.	$76.00
C1040C	32	3	115	40	Con.	$71.00
C1060C	32	4	115	60	Con.	$72.00
C1080C	32	5	115	80	Con.	$72.50
C1010C	32	5.5	115	100	Con.	$73.00
C1015C	32	7.4	115	150	Con.	$76.00
J1040C	28	3	115	40	Con.	$71.00
J1060C	28	4	115	60	Con.	$72.00
J1080C	28	5.2	115	80	Con.	$72.50
J1010C	28	7	115	100	Con.	$73.00
J1015C	28	9	115	150	Con.	$76.00
E1040C	24	3.5	115	40	Con.	$71.00
E1060C	24	4.3	115	60	Con.	$72.00
E1080C	24	6	115	80	Con.	$72.50
E1010C	24	8.3	115	100	Con.	$73.00
E1015C	24	10	115	150	Con.	$76.00
B1040C	12	8	115	40	Con.	$71.00
B1060C	12	10	115	60	Con.	$72.00
B1080C	12	14	115	80	Con.	$72.50
B1010C	12	15	115	100	Con.	$73.00
B1015C	12	23	115	150	Con.	$76.00
A1040C	6	15	115	40	Con.	$71.00
A1060C	6	19	115	60	Con.	$72.00
A1080C	6	25	115	80	Con.	$72.50
A1010C	6	27	115	100	Con.	$73.00
A1015C	6	40	115	150	Con.	$76.00

FILTERS—Available on all Super Converters. Eliminates Converter noise on most frequencies from 560 KC to 54 MC. Filter mounted in cast aluminum housing below Converter. Add "X" to Code Number and $25.00 to list.

FREQUENCY CONTROL—Manually operated frequency control available on all models. Complete with vibrating reed meter, and rheostat control in aluminum housing. Add $60.00 to list.

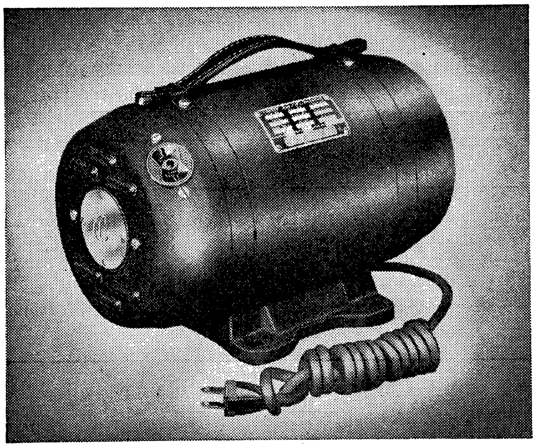
FOR LOW COST—"Change-a-Cycle" Frequency Control, add "A" to end of Code No. and $10.00 to list.

VOLTAGE-FREQUENCY—Add $5.00 to list for 50 cycle output. Add $10.00 to list for 230 volt D.C. input.

See Carter Selector Chart for Wire and Tape recorder, Television receivers, etc., recommended Converters.

New Carter Custom Converters

CUSTOM CONVERTER 300-400-500 WATT, 115 V. 60 CYCLE AC OUTPUT



The Custom is the latest addition to the Carter line of small DC to AC rotary converters. Created to meet the demands for a compact and highly efficient two pole rotary converter, the Custom has been designed especially for amplifiers, office business machine, marine and mobile communications and high quality tape recorder requirements.

The Custom is the only small rotary converter manufactured in recent years that has been expressly created to incorporate in its design all of the new materials and technical improvements developed in the past few years.

HIGH POWER FACTOR—85 TO 100% LESS FILTER

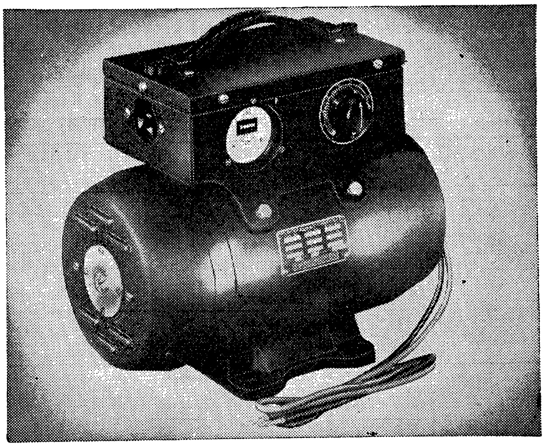
Cast aluminum base with rubber feet supplied, as illustrated.
Average efficiency, 60% all models listed less filter single phase output only.
Regulation approximately 20% from no load to full load.

300 watt, 11⅝" long, 6 11/16" wide, 10½" high — Weight 38 lbs.
400 and 500 watt, 12⅝" long, 6 11/16" wide, 10½" high — Weight 44 lbs.

	Code No.	*DC Input Volts*	*DC Input Amps.*	*AC Output 60 Cy. Volts*	*AC Output 60 Cy. Watts*	*Type Duty*	*Temp. Rise°C*	*List Price*
230 Volt	K1030CP	230	2.3	115	300	Con.	50°	$190.00
	K1040CP	230	2.8	115	400	Con.	50°	$220.00
	K1050CP	230	3.5	115	500	Con.	50°	$225.00
115 Volt	D1030CP	115	4.6	115	300	Con.	50°	$180.00
	D1040CP	115	5.6	115	400	Con.	50°	$210.00
	D1050CP	115	7	115	500	Con.	50°	$215.00
64 Volt	H1030CP	64	8.2	115	300	Con.	50°	$183.50
	H1040CP	64	10	115	400	Con.	50°	$213.50
	H1050CP	64	12.5	115	500	Con.	50°	$218.50
32 Volt	C1030CP	32	19	115	300	Con.	50°	$183.50
	C1040CP	32	21	115	400	Con.	50°	$213.50
	C1050CP	32	25	115	500	Con.	50°	$218.50
28 Volt	J1030CP	28	20	115	300	Con.	50°	$183.50
	J1040CP	28	24	115	400	Con.	50°	$213.50
	J1050CP	28	28	115	500	Con.	50°	$218.50
24 Volt	E1030CP	24	22	115	300	Con.	50°	$183.50
	E1040CP	24	28	115	400	Con.	50°	$213.50
	E1050CP	24	33	115	500	Con.	50°	$218.50
12 Volt	B1030CP	12	45	115	300	Con.	50°	$185.00

300 Watt Largest Continuous Duty Output Available for 12 Volt Input.

FREQUENCY CONTROLLED CUSTOM FOR PROFESSIONAL AND BROADCAST TAPE RECORDING



The new Custom Converter with manual frequency control has been developed to provide a portable DC to AC power source for professional and broadcast tape recorders, heavy duty electronic measuring devices, and Tape recorder-AC motor driven camera combinations. Now for the first time, sufficient frequency constant AC power is available to operate this type of equipment from DC lines or battery source.

The rheostat control and the frequency meter are mounted in the attractive aluminum housing. A noise filter is also available in the same housing, although it is not usually necessary for operating recorders, amplifiers or other audio devices. Filtering is required when radios or other RF circuits are operated from the converter.

Convenient recessed DC male plug is furnished for 32, 64, 115 and 230 volt DC input models. 12, 24 and 28 models are equipped with heavy stranded input leads for battery connections, as shown. A flush AC mounted receptacle is supplied on all models for quick AC connections. The sturdy carrying handle allows the converter to be moved immediately after its operation, a life-saver for taping remote broadcasts.

Each model must be designed to properly match the power factor, voltage, frequency, and load requirements. Any of the Custom models can be furnished with frequency control. Model listed below has been laboratory tested and is matched to provide perfect operation. Kindly send your special requirement to the factory for prompt and careful consideration.

Frequency Controlled Custom Converters

Recorder Model	CUSTOM CONVERTER MODEL		
Ampex 400A-401A	12V	28V	115V
Magnecord	BR1021CP	JR1021CP	DR1021CP
Binaural	**$255.00**	**$255.00**	**$255.00**

300 watt with Frequency Control, 11⅝" long, 6 11/16" wide, 10¼" high, Weight 44 lbs.
400 and 500 watt, 12⅝" long, 6 11/16" wide, 10¼" high — Weight 54 lbs.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Carter Selector Chart

Carter Custom-Matched Converters for Popular Wire and Tape Recorders - Sound Projectors - Phono Motors - Television

Whenever DC to AC Rotary Converters are used to power wire and tape recorders or other similar recording equipment, the Converter AC output frequency and Converter Power Factor must be perfectly matched to the recorder load to assure proper recording and play back performance. Most wire and tape recorders are of medium Power Factor design, approximately 70%. Standard high power factor (85 to 100%) Rotary Converters therefore *will not operate* the recorders properly as this type Converter will produce higher AC voltage and frequency because of the inductive recorder load. It is imperative therefore, only factory-tested and recommended Converters be selected for wire and tape recorder operation.

The equipment listed below has been laboratory-tested and the correct Carter Converter recommended for each model. Use this chart for your recorder Converter requirements. If the equipment is not listed on the chart, please write to the factory and information will be supplied, if available.

WIRE AND TAPE RECORDER CONVERTERS 70% P.F.

EQUIPMENT MAKE & MODEL		CARTER CONVERTER MODEL AND DC INPUT 6 Volt	12 Volt	115 Volt	Size and Weight
60 WATT	**Air King 750, Ampro 730-731** **Crescent H22A1, Knight Wire** **Web-Cor 80-180-228-18** **Wilcox-Gay 8-U-12, Wireway** **Edison Voicewriter and VP (for 115 V. DC only)** **Dictorel**	A1060CW (29 amps drain) **$72.00**	B1060CW (14 amp drain) **$72.00**	D1060CW (1 amp drain) **$71.00**	8¼" L, 4½" W, 5" H Wt. 13 lbs.
WITH FILTER	**Pentron 748 and C-2** **Wiretone MR-6**	A1060CWX (29 amps) **$97.00**	B1060CWX (14 amps) **$97.00**	D1060CWX (1 amp) **$96.00**	8¼" L, 4½" W, 7½" H Wt. 15 lbs.
80 WATT	**Bell Record-O-Fone RT50-RT65B** **Crestwood CP201, Dukane** **Eicor 1000-15-115, Gray Audograph** **General Industries Foundation Unit*** **Knight Tape, Peirce 55B** **Masco D37, LD37, DC37** **Pentron T-3, 9T3, 9T3C—RCA** **Revere T-100, T-500 Sales-O-Matic LR-1** **Tape Master Foundation Unit**** **Web-Cor 210-1** **Wilcox-Gay 1-C-10, 2-C-10, 3F10**	A1080CW (31 amps drain) **$72.50**	B1080CW (15 amps drain) **$72.50**	D1080CW (1.5 amps drain) **$71.50**	8¼" L, 4½" W, 5" H Wt. 13 lbs.
WITH FILTER	**Revere TR-200, TR-600** **Masco LD37R** **Ultratone PT-9**	A1080CWX **$97.50**	B1080CWX **$97.50**	D1080CWX **$96.50**	8¼" L, 4½" W, 7½" H Wt. 15 lbs.
		(These Converters equipped with filter to operate radio section also)			
130 WATT	**Brush BK411-414** **BK-442-BK443P**	A1090CW4 (35 amps drain) **$82.00**	B1090CW4 (17 amps drain) **$82.00**	D1010CW (2 amps drain) **$72.00**	
	Berlant Concertone Model 1401, 1501 **Brush BK401-403** **Crescent H19A1, Revere T-700** **Magnecord PT6-PT6-JA-PT63-Voyager** **Peirce 260-265-270—Reelest** **Webster Racine, Ekotape 101-109-111**	A1010CW4 (35 amps drain) **$84.00**	B1010CW4 (17 amps drain) **$84.00**	D1010CW (2 amps drain) **$72.00**	6 & 12 Volt 10¼" L, 4½" W, 5" H Wt. 18 lbs. 115 Volt 8¼" L, 4½" W, 5" H Wt. 13 lbs.
210 WATT	**Ampex 400A-401A, Magnecord Binaural**	6 Volt not recommended	B1021CP **$180.00**	D1021CP **$180.00**	11⅝" L, 6$\frac{1}{16}$" W, 7¼" H Wt. 38 lbs.

*Including average recorder amplifier
**Including Preamplifier only

SOUND PROJECTORS AND PHONO MOTOR CONVERTERS

Ampro Premier 20 & 30, Bell & Howell No. 179, DeVry Super No. 16, Victor Lite Weight*, Victor Triumph No. 60*, Victor Sonomaster*, General Industries RM4, Green Flier Dual Speed……………………**D1015C**……………………**$75.00**

*Victor Animatograph Co.

CONVERTER OPERATES SOUND AMPLIFIER ONLY, NOT PROJECTOR LAMP OR MOTOR.
WILL NOT OPERATE PROJECTORS FROM BATTERY INPUT. 115 OR 230 VOLT D.C. INPUT ONLY

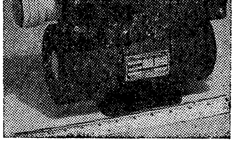
CARTER TELEVISION CONVERTERS

	6 V.	12 V.		28 V.		115 V.	
100 to 130 WATTS	A1013CT	B1013CT	**$86.00**	J1013CT	**$86.00**	D1013CT	**$84.00**
130 to 160 WATTS (some 17" - 20" - 21" models)	**$86.00**	B1016CT	**93.50**	J1013CT	**93.50**	D1013CT	**89.00**
160 to 190 WATTS (most 17" to 21" models)	Not Available for 6 V.	B1019CT	**95.00**	J1019CT	**95.00**	D1019CT	**93.00**
190 to 250 WATTS (larger sets)		B1025CPT	**190.00**	J1025CPT	**190.00**	D1025CPT	**188.00**
250 to 300 WATTS (larger sets)		B1030CPT	**195.00**	J1030CPT	**195.00**	D1030CPT	**193.00**

★ Other Carter Products ★

SUPER-DYNAMOTOR

For aircraft, marine, police and railroad communications. Input voltages range from 5.5 v. DC to 115 v. DC . . . outputs from 400 v. to 1000 v. DC. Specified by leading airlines, marine, and mobile radio manufacturers. Size 8¼" x 4½". Weight 11¾ lbs.



INDUCTOR ALTERNATOR

Provides mobile high frequency AC power (400 to 800 cycles), up to 150 watts, from DC source. Perfect for aircraft, geophysical, Government and laboratory research. Can also supply up to 400 v. DC plate voltage if necessary.

Carter
C CONVERTERS
Carter
DYNAMOTOR
POWER SUPPLIES
Carter Motor Co

Write for Catalogs

Carter Replacement Parts Reference Chart

The oldest name in Rotary Power Supplies for Mobile Radio

REPLACEMENT PARTS REFERENCE CHART

Use this handy chart for ordering the correct CARTER Replacement Dynamotor or Replacement parts. All parts guaranteed to conform to original manufacturer's specifications.

Mfg. Model No.	*Frequency*	*Carter Model No.*	*List Price*	*Carter Armature No.*	*Armature List Price*	*Input Brushes & List Per Set*	*Output Brushes & List Per Set*	*Ball Bearings & List Per Each*
Doolittle								
PFY-2 PFY-2A PFY-3 PFY-3A	30-40 MC-FM	4726VS	$69.00	233-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
PFY-12	152-162 MC-FM	4726VS	$69.00	233-2	$30.00	No. 7 $1.20	No. 2 80c	
Federal								
FT-125-B-25AZ	152-162 MC-FM	4037AS	$71.40	179-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
FT-110-25AZ	30-44 MC-FM	5915AS	$63.00	252-2	$30.00	No. 7 $1.20	No. 2 80c	
FT-110-50AZ	30-44 MC-FM	5925AS	$73.50	261-2	$30.00	No. 7 $1.20	No. 2 80c	
General Electric								
MC202	152-162 MC-FM	MVS415 Transmitter	$61.50	360-4	$27.25	No. 18 $1.20	No. 9 80c	37KVL $2.50
		MA251 Receiver	$56.50	300-6	$26.00	No. 23 $1.20	No. 9 80c	
MC-1 MC-2	30-44 MC-FM	617V	$68.00	279-2	$30.00	No. 7 $1.20	No. 2 80c	
MC-3	30-44 MC-FM	624VS	$71.19	309-2	$30.00	No. 7 $1.20	No. 2 80c	
Harvey								
505 506	30-44 MC-FM	620VS	$70.00	307-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
542	152-162 MC-FM	620VS	$70.00	307-2	$30.00	No. 7 $1.20	No. 2 80c	
Kaar								
FM50X	30-44 MC-FM	6175VS early model	$69.00	278-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
		530VS late model	$70.00					
FM100X	1600-6000 KC	VSF820	$98.00	360-2	$40.00	No. 30 $1.20	No. 14 80c	38KVL $2.50
PTL-46X		VSF820	$98.00	360-2	$40.00	No. 30 $1.20	No. 14 80c	
FM-175X	152-162 MC-FM	4232VS	$69.83	231-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
Mobile Communications (Taxi-Talkie)								
MFM-25-150	150-170 MC-FM	450AS	$67.00	175-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
MFM-25-150B	150-170 MC-FM	520AS	$67.00	208-2	$30.00	No. 7 $1.20	No. 2 80c	
Motorola								
P8050	30-44 MC-FM	617V	$68.00	279-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
P8051	30-44 MC-FM	624VS	$71.19	309-2	$30.00	No. 7 $1.20	No. 2 80c	
P8051	30-44 MC-FM	VSF630	$91.00	276-2	$40.00	No. 30—$1.20	No. 14 80c	38KVL $2.50
P8661		VSF6237M	$95.00	301-2	$40.00	No. 25—$1.20		
P8317	152-162 MC-FM	4228VS	$67.73	207-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
P8431		4228VSC	$69.30	195-2	$30.00			
RCA								
M1-7771A	30-44 MC-FM	6175VS	$69.00	278-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
M1-31514	152-162 MC-FM	3732VS	$69.30	176-2	$30.00	No. 7 $1.20	No. 2 80c	
M1-7772A	30-44 MC-FM	VSF627	$90.00	274-2	$40.00	No. 30 $1.20	No. 14 80c	38KVL $2.50
Radio Specialties Mfg. Co.								
1096-1-1		520AS	$67.00	208-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
1114-1147		520VS	$68.00	231-2	30.00			
Wilcox Electric								
358A	152-162 MC-FM	4228VS	$67.73	207-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50

CARTER MOTOR COMPANY • CHICAGO 47, ILL.

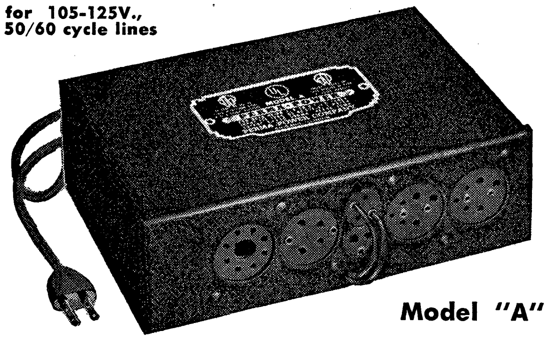
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

"Manufacturers of
electronic equipment
since 1928"

Perma-Power®

Battery Eliminators

for 105-125V., 50/60 cycle lines



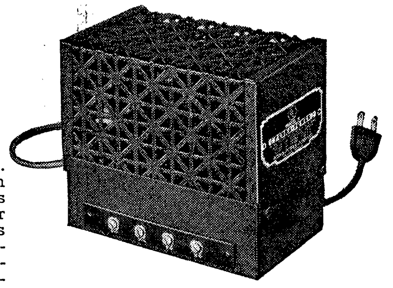
Model "A"

For 1½ volt radios with 4, 5 or 6 tubes. Designed to give constant power from varying line voltages. Maintains rated output under varying tube loads. Universal sockets for all battery plugs. Fits in back of battery radios as well as battery compartments of most portables.

Provides: "A" 1.45 Volts D.C. at 200 to 350 M.A.
"B" 90 Volts D.C. at 13 M.A.
2⅛" x 4½" x 6¾" — 4 lbs.

Suggested List $18.95

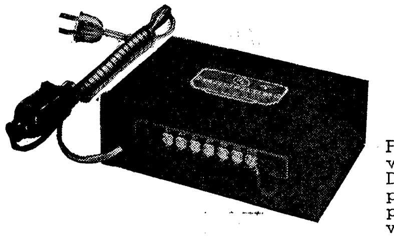
Model "B" Battery Eliminator



For 6-volt radios. Designed with separate outputs for the vibrator and the filaments eliminating vibrator disturbance assuring high fidelity radio performance. Often used as a trickle battery charger.

Provides: Two isolated sources of 6 Volts D.C. at 1½ amps, or when connected in parallel—3 amps.
3⅝" x 6⅛" x 5½" — 7 lbs.

Suggested List $23.45



Model "E" Battery Eliminator

For 2 volt radios with 4 to 8 tubes. Designed to supply "A" and "B" power under varying line voltages and loads. Provides hum-free operation without distortion or "motor boating". Fits in back of battery radios as well as battery compartments of most portables.

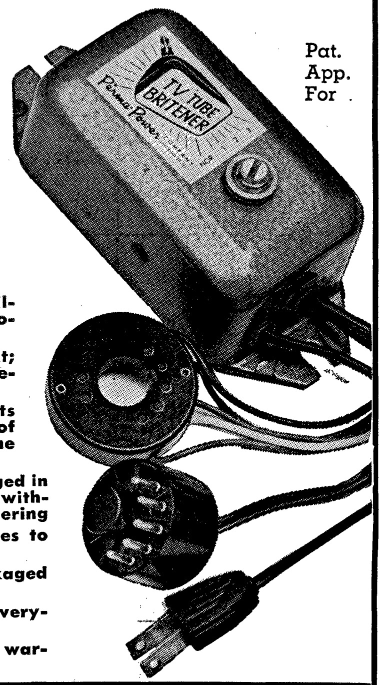
Provides: "A" 2 Volts D.C. at 750 M.A.
"B" 135 Volts D.C. at 25 M.A. tapped at 112 v, 90 v and 67 v.
2¼" x 4⅞" x 6-13/16" — 4 lbs.

Suggested List $20.75

UL APPROVED WITH 3 YEAR GUARANTEE!

add increased brilliance to any TV picture tube.

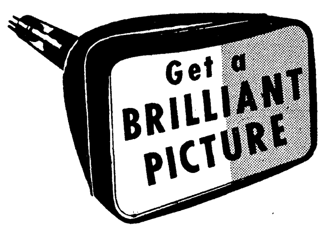
"TV TUBE BRITENER"



Pat. App. For

Suggested List $9.75

- **Prolongs tube brilliance; fully automatic**
- **Isolates filament; relieves cathode-filament shorts.**
- **Works on all sets and all makes of sets with only one model**
- **Permanently plugged in into television set without wiring or soldering**
- **Less than 3 minutes to install**
- **Made to sell; packaged to sell**
- **Producing sales everywhere**
- **Standard R.M.A. warranty**



Suggested List $3.45

- **Brings out lost sharpness and detail**
- **Just plug it in and picture brightens**
- **Automatic . . . no switching or wiring**
- **NOW . . . all sets will have normal pictures easily and quickly**
- **Low price . . . many sales**

NOW . . . in seconds have brighter television pictures, by easily installing C-BRITE. Designed for sets with parallel-wired filaments with magnetic or electrostatic focus tubes of any size, using the duo-decal base.

Perma-Power® CO., CHICAGO 25, ILLINOIS
Telephone: UPtown 8-6121

"Manufacturers of electronic equipment since 1928"

Perma-Power®

TV VOLTAGE REGULATOR

Perma-Power
Voltage Regulator

STOCK NO. D-101

Suggested List Price $6.75

Engineered and designed to insure maximum performance of any television set by returning full height and width of picture when low line voltage distorts picture.

- **Reduces tube failures — increases set sensitivity**
- **Eliminates intermittent sync and oscillator drift caused by low line voltage**
- **300 watt rating . . . ample for most requirements on line voltage from 90 to 135 volts**
- **Automatically operated . . . turns on and off with set or appliance**
- **Selector switch permits boosting or lowering of voltage**
- **Simple external plug-in . . . 10 second installation aids over the counter sales**
- **Reduces low line or high line hazards to electrical equipment**

Envelope stuffers available without charge

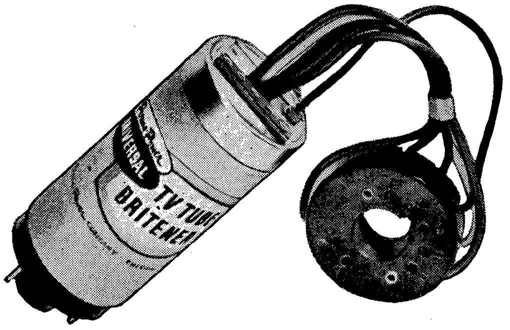
Perma-Power

UNIVERSAL TV TUBE BRITENER

STOCK NO. C-301

Suggested List Price

$4.45

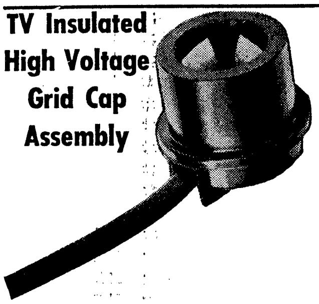


Here is engineering at its peak! Use this unit for sets with parallel-wired or series wired filaments; relieves cathode-filament short problems.

ONE UNIT FOR ALL SETS . . . AND TO RELIEVE CATHODE-FILAMENT SHORTS.

Isolation type transformer gives normal 6.3V to filament to relieve cathode-filament short problems or 7.8V to increase cathode emission and restore lost brightness. Simple switch allows quick selection . . . unique design allows operation as constant voltage (parallel wired sets) or constant current (series wired sets) transformer.

TV Insulated High Voltage Grid Cap Assembly



Black bakelite cap with molded corona guard . . . 10" — 20KV dual wall polyethylene lead for ¼" or ⅜" caps.

STOCK NO. M-101 — ¼" cap . . . ***Suggested list*** **40c**

STOCK NO. M-102 — ⅜" cap . . . ***Suggested list*** **40c**

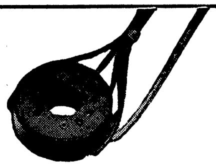
TV High Voltage Spring Clip Assembly

Heavy tension spring clip, tin-plated . . . 10" — 20KV dual wall polyethylene lead for ¼" or ⅜" caps.

STOCK NO. M-103 — ¼" cap . . . ***Suggested list*** **40c**

STOCK NO. M-104 — ⅜" cap . . . ***Suggested list*** **40c**

TV Replacement Socket



Our Perma-Power U.L. socket with 5 or 6 leads . . . 20" long, #22 U.L. wire . . . RMA colors.

STOCK NO. L-501 — five 20" leads . . . ***Suggested list*** **90c**

STOCK NO. L-601 — six 20" leads . . . ***Suggested list*** **$1.00**

TV Tube Extension

Similar to Replacement Socket, but with 48" leads and the 6MI tube base. Use for set to good tube, or tube to good set.

STOCK NO. L-604 — six 48" leads . . . ***Suggested list*** **$2.15**

Perma-Power® CO., CHICAGO 25, ILLINOIS

Telephone: UPtown 8-6121

DYNAMOTORS *Gothard* CONVERTERS

Springfield, Illinois

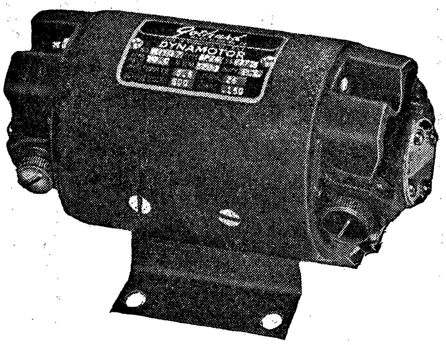
GOTHARD DYNAMOTORS

The GOTHARD Model "GP-26" is especially designed and built for Mobile Transmitter applications, intermittent duty. Length 7¼", Diam. 3½", Height 4", Weight 8¼ lbs.

INPUT		OUTPUT			Approx.	App.
Volts	Amps.	Volts	MA	Watts	Effic.	Reg.
5.6	24	400	200	80	60%	17%
5.6	26	600	150	90	61%	18%
5.6	29	400	250	100	61%	19%
5.6	31	620	170	105	61%	20%
5.6	33	500	225	112	61%	21%
5.6	34	420	280	118	62%	22%
6.0	40	400	375	150	63%	25%

Prices upon request. Submit your special requirements to our engineers.

Also supplied for 12, 14, 24, 28, or 32 Volt input
For continuous duty applications, Models GP-12, GP-17 and GP-26 cover wattage ratings from 20 to 80 Watts. Input voltages 6, 12, 24, or 32.
GP-12: Length 5¾", Diam. 3½", Height 4", Weight 5¼ lbs.
GP-17: Length 6¼", Diam. 3½", Height 4", Weight 6 lbs.
GP Models have steel mounting bases; width 4 5/16".



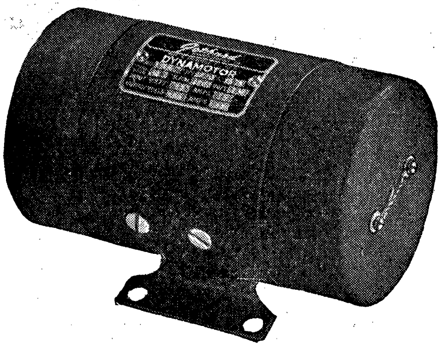
MODEL "GP-26" DYNAMOTOR

GOTHARD AIRCRAFT DYNAMOTORS

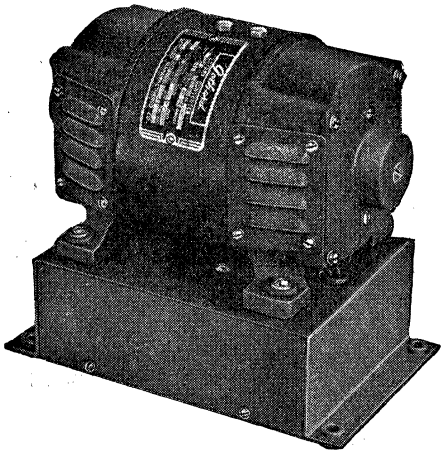
Frame	INPUT		OUTPUT				
Size	Volts	Amps.	Volts	MA	Length	Diam.	Weight
DS-12	12	2.6	250	60	4¾"	2¾"	2⅞"
DS-17	12	3.6	250	90	5¼"	2¾"	3⅞"
SP-12	12	4.0	250	100	6"	3½"	4¾"
SP-17	12	5.2	300	125	6½"	3½"	5⅝"
SP-22	12	6.4	400	125	7"	3½"	6½"
SF-20	12	8.4	400	150	6¾"	4"	8½"
SF-25	12	10.	500	150	7¼"	4"	9¾"

Prices upon request. Submit your special requirements to our engineers.

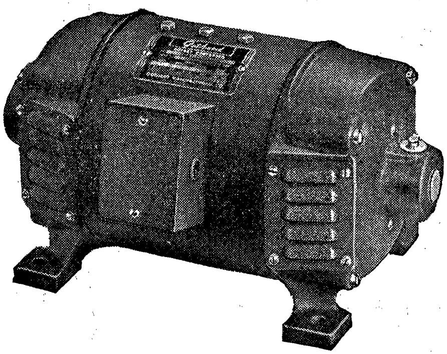
Above ratings are continuous duty with temperature of 40°C.
Also supplied for 6, 14, 24, 28, or 32 Volt input. "SP" and "SF" dynamotors may be supplied in fan-ventilated construction as types "SPF" and "SFF". Prices upon request.



MODEL "SF-20" DYNAMOTOR



MODEL "AK-15" CONVERTER (With Filter)



MODEL "BK-35" CONVERTER (Less Filter)

GOTHARD ROTARY CONVERTERS

TYPE "K" 3600 RPM (60 Cycle) • 3000 RPM (50 Cycle)

Model	Frame	INPUT		OUTPUT at 90% P.F.			App. Net Wt.		List Price	
No.	Size	Volts	Amps.	A.C. Volts	VA at 60 cy.	VA at 50 cy.	Conv. only	Add for Filter	Less Filter	With Filter
6K11	**AK-15**	6	36	110	110	90	24#	6#	**$88.55**	**$112.60**
12K11	**AK-15**	12	18	110	110	90	24#	6#	**88.55**	**112.60**
12K16	**AK-25**	12	24	110	160	125	29#	6#	**108.80**	**141.70**
24K11	**AK-15**	24	9	110	110	90	24#	6#	**88.55**	**112.60**
24K20	**AK-25**	24	14	110	200	160	29#	6#	**108.80**	**141.70**
24K30	**BK-22**	24	19.4	110	300	250	38#	6#	**151.25**	**169.95**
24K50	**BK-35**	24	30.4	110	500	400	45#	6#	**175.45**	**201.15**
3K11	**AK-15**	32	6.2	110	110	90	24#	6#	**81.00**	**105.00**
3K20	**AK-25**	32	10.4	110	200	160	29#	6#	**101.20**	**134.10**
3K30	**BK-22**	32	14.5	110	300	250	38#	6#	**127.80**	**161.95**
3K50	**BK-35**	32	22.0	110	500	400	45#	6#	**158.15**	**193.55**
3K75	**CK-35**	32	34	110	750	600	68#	7#	**231.50**	**288.45**
4K11	**AK-15**	48	4.4	110	110	90	24#	6#	**88.55**	**112.60**
4K20	**AK-25**	48	7.0	110	200	160	29#	6#	**108.80**	**141.70**
4K30	**BK-22**	48	9.7	110	300	250	38#	6#	**151.25**	**169.95**
4K50	**BK-35**	48	15.2	110	500	400	45#	6#	**175.45**	**201.15**
4K75	**CK-35**	48	22.7	110	750	600	68#	7#	**231.50**	**287.35**
1K11	**AK-15**	115	1.8	110	110	90	24#	6#	**81.00**	**105.00**
1K20	**AK-25**	115	3.0	110	200	160	29#	6#	**101.20**	**134.10**
1K30	**BK-22**	115	4.2	110	300	250	38#	6#	**127.80**	**161.95**
1K50	**BK-35**	115	6.6	110	500	400	45#	6#	**158.15**	**193.55**
1K75	**CK-35**	115	9.4	110	750	600	68#	7#	**231.50**	**288.45**
1K100	**CK-35**	115	12.4	110	1000	800	80#	7#	**283.40**	**358.00**
2K11	**AK-15**	230	.9	110	110	90	24#	6#	**84.80**	**108.80**
2K20	**AK-25**	230	1.5	110	200	160	29#	6#	**105.00**	**137.90**
2K30	**BK-22**	230	2.1	110	300	250	38#	6#	**131.60**	**165.75**
2K50	**BK-35**	230	3.3	110	500	400	45#	6#	**161.95**	**197.35**
2K75	**CK-35**	230	4.7	110	750	600	68#	7#	**235.30**	**292.25**
2K100	**CK-35**	230	6.2	110	1000	800	80#	7#	**287.20**	**361.80**

Also supplied for Marine Type Filter, 220 Volt A.C. Output, and automatic frequency control, manual frequency control, 28 volts input, 1500 V.A. output, 50 cycles. Prices upon request.
Ball Bearings are standard on all models.

CHICAGO STANDARD TRANSFORMER CORPORATION

STANCOR TRANSFORMERS

AND RELATED COMPONENTS

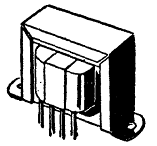
TELEVISION COMPONENTS

This section contains only specific television components. Consult following Stancor pages for other audios, powers and chokes having extensive application in television, radio and electronics.

POWER TRANSFORMERS—ALL PRIMARIES FOR 117V, 60 CYCLE OPERATION

Part	Plate Supply			Rect. Fil.		Other Fils.		Height	Base	Mtg.	Mtg.	Shpg. Wt.	List
No.	AC Volts	DC Ma.	Max. DC Ma.#	Volts	Amps.	Volts	Amps.	Overall	Area	Ctrs.	Type	in Lbs.	Price
P-8158	117	200				6.3 6.3 6.3	4.25 4.0 2.0	3½	$3\frac{7}{16}$ x 4⅛	2¾ x $3\frac{7}{16}$	M‡	6.2	**$15.85**
P-8168	220–0–220 130–0–130	330 220		5.0	3.0	6.3† 6.3† or 12.6 CT†	6.5 6.5 6.5	4⅞	3¾ x 4½	3 x 3¾	M‡	10.5	**26.65**
P-8155	225–0–225	90	105	5.0	2.0	6.3	5.15	3¾	$2\frac{13}{16}$ x 3⅜	2¼ x $2\frac{13}{16}$	M	4.5	**11.10**
PM8418	230–0–230	50				6.3	2.5	2⅝	2½ x 3	2 x 2½	M	2.2	**6.55**
PM8419	240–0–240	70				6.3	3.0	2⅞	2½ x 3	2 x 2½	M	2.6	**7.50**
PC8403	250–0–250	70		5.0	2.0	6.3 CT	2.5	$3\frac{3}{16}$	2⅝ x 3⅛	2 x $2\frac{1}{16}$	C	3.2	**8.40**
PM8403	250–0–250	70		5.0	2.0	6.3 CT	2.5	3⅛	2½ x 3	2 x 2½	M	3.2	**8.40**
P-8167	280–0–280	400	450	5.0	6.6	6.3 6.3	4.5 8.5	6	$3\frac{13}{16}$ x 4¾	$3\frac{3}{16}$ x $4\frac{1}{16}$	M‡	13.0	**28.50**
P-8164	300–0–300	225	250	5.0	3.0	6.3	9.0	4⅛	$3\frac{7}{16}$ x 4⅛	2¾ x $3\frac{7}{16}$	M‡	7.5	**20.10**
PM8407	325–0–325	55		5.0	2.0	6.3 CT	2.0	3⅛	2½ x 3	2 x 2½	M	3.2	**7.60**
P-5059§	337.5–0–337.5	200	225	5.0 CT	3.0	6.3 CT	5.0	4⅜	4¾ x 4	3 x $3\frac{5}{16}$	C	9.6	**16.90**
PC8408	340–0–340	70		5.0	2.0	6.3 CT	2.5	3⅝	3 x 3⅜	2¼ x 2⅛	C	3.8	**8.60**
PM8408	340–0–340	70		5.0	2.0	6.3 CT	2.5	3½	2⅞ x 3⅜	2¼ x $2\frac{13}{16}$	M	3.8	**8.60**
P-8166	340–0–340	330	360	5.0	6.0	6.3 6.3† 6.3† or 12.6†	2.5 5.0 5.0 5.0	6	$3\frac{13}{16}$ x 4¾	$3\frac{3}{16}$ x $4\frac{1}{16}$	M‡	13.0	**29.55**
PM8409	350–0–350	90		5.0	2.0	6.3 CT	3.0	3¾	2⅞ x 3⅜	2¼ x $2\frac{13}{16}$	M	4.5	**9.60**
P-8165	350–0–350 220–0–220	180 70		5.0	3.0	6.3 6.3	2.0 10.0	4¾	3¾ x 4½	3 x 3¾	M‡	11.0	**26.80**
P-8160	358–0–358 166–0–166	185 65		5.0	3.0	6.45	12.0	4¼	3¾ x 4½	3 x 3¾	M	9.6	**20.25**
PC8410	360–0–360	120		5.0	3.0	6.3 CT	3.5	4	3¼ x 3¾	2½ x $2\frac{7}{16}$	C	5.5	**10.60**
PM8410	360–0–360	120		5.0	3.0	6.3 CT	3.5	3¾	3⅛ x 3¾	2½ x 3⅛	M	5.5	**10.60**
P-8159	360–0–360	250	290	5.0	3.0	5.0 6.3 6.3	2.0 8.0 0.6	$5\frac{5}{16}$	$3\frac{13}{16}$ x 4¾	$3\frac{3}{16}$ x $4\frac{1}{16}$	M‡	10.0	**23.50**
P-8156	365–0–365	295	340	5.0	6.0	5.0 12.6 CT	2.0 5.0	6⅝	$3\frac{13}{16}$ x 4¾	$3\frac{3}{16}$ x $4\frac{1}{16}$	M‡	16.5	**29.15**
P-8163	370–0–370	190	225	5.0	3.0	6.3 6.3	7.75 1.2	$5\frac{9}{16}$	$3\frac{13}{16}$ x 4¾	$3\frac{3}{16}$ x $4\frac{1}{16}$	M‡	10.8	**24.10**
P-6315	370–0–370	275	310	5.0 CT	3.0	6.3 CT	7.0	4¼	3¾ x 4½	3 x 3¾	M	9.3	**19.50**
PC8411	375–0–375	150		5.0	3.0	6.3 CT	4.5	$4\frac{5}{16}$	3⅝ x 4	2¾ x $2\frac{13}{16}$	C	5.8	**12.70**
PM8411	375–0–375	150		5.0	3.0	6.3 CT	4.5	3⅞	3½ x 4⅛	2¾ x $3\frac{7}{16}$	M	5.8	**12.70**
P-8154	375–0–375	205	230	5.0	3.0	5.0 6.3	2.0 5.6	4¼	3¾ x 4½	3 x 3¾	M	9.1	**18.50**
P-8171	375–0–375	225	250	5.0	3.0	6.3 6.3	2.0 9.0	5	3¾ x 4½	3 x 3¾	M3‡	10.5	**23.60**
P-8162	380–0–380	180	210	5.0 CT	3.0	6.3	9.0	5½	4⅛ x $3\frac{7}{16}$	2¾ x $3\frac{7}{16}$	M3‡	9.0	**19.25**
P-8169	380–0–380	220	250	5.0	3.0	6.3 6.3† 6.3† or 12.6†	1.2 5.0 7.0 5.0	4⅝	3¾ x 4½	3 x 3¾	M‡	10.5	**23.65**
P-8170	380–0–380	220	250	5.0	3.0	6.3 6.3† 6.3† or 12.6†	1.2 5.0 7.0 5.0	4¾	4 x 4¾	3 x $3\frac{9}{16}$	C	10.5	**23.00**
P-8157	385–0–385 235–0–235	195 105		5.0 5.0	3.0 2.0	6.3 6.3 5.0	7.65 0.6 2.0	4¾	3¾ x 4½	3 x 3¾	M	11.1	**25.10**
P-8161	385–0–385	230	270	5.0 5.0	3.0 2.0	6.3	9.0	$5\frac{9}{16}$	$3\frac{13}{16}$ x 4¾	$3\frac{3}{16}$ x $4\frac{1}{16}$	M‡	11.8	**26.85**
PM8412	400–0–400	200		5.0	3.0	6.3 CT	5.0	3⅞	3¾ x 4½	3 x 3¾	M	8.2	**14.30**
PC8413	400–0–400	250		5.0	4.0	6.3 CT	5.0	4¾	4 x 4½	3 x $3\frac{5}{16}$	C	10.0	**17.95**

#Loading to maximum DC MA will have no appreciable effect on the service or life of the transformer.
†May be used as 6.3V windings or in series as 12.6V C.T.
‡With copper shorting band to reduce external magnetic field. §Primary for 117/107 volts.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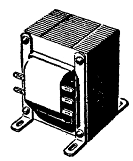
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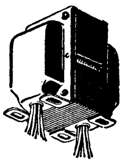
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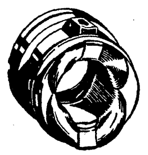
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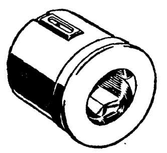
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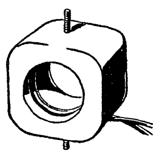
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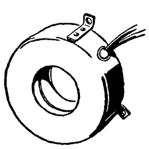
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TELEVISION COMPONENTS

CHICAGO STANDARD TRANSFORMER CORPORATION

FILAMENT TRANSFORMERS

Part No.	Secondary Volts	Secondary Amps.	RMS. V. Insul.	Primary Volts	Height Overall	Base Area	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
P-3064	6.3 CT	6.0	2,500	117	3⅛	2½ x 2⅞	2 x 2	B	2.4	**$6.25**
P-5014	6.3 CT	3.0	2,500	117	3⅛	2½ x 2½	2 x 1¾	B	2.0	**5.15**
P-6134	6.3 CT	1.2	2,500	117	1⅝	2⅞ x 1⅝	2⅜	A	0.8	**2.90**
P-6308	6.3 CT	10.0	2,500	117/107	3½	2⅞ x 2¾	2¼ x 2 3/16	N	3.4	**7.50**
P-8190	6.3	1.2	5,000	117	2	3¼ x 1¾	2 13/16	A	1.0	**3.80**
P-8191	6.3	1.2	5,000	6.3	2	3¼ x 1¾	2 13/16	A	1.0	**4.10**

HORIZONTAL DEFLECTION and HIGH VOLTAGE TRANSFORMERS

Part No.	Approx. Anode KV#	Max. Scan.	Replacement Application	Height Overall	Base Area	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8119†	13–14	53°	Exact Repl. RCA 211T5	4 11/32	2¼ x 3¾	HO	1.8	**$11.60**
A-8127	9–10	53°	Exact Repl. RCA 211T1 and 211T3	4 11/32	2¼ x 3¾	HO	1.8	**9.65**
A-8128	10–11	53°	Similar to A-8127, for Higher Voltage Applications	4 11/32	2¼ x 3¾	HO	1.8	**10.90**
A-8129	12–13	70°	Conversion Unit	4 11/32	2¼ x 3¾	HO	1.8	**10.65**
A-8130	10–14	70°	Replaces GE 77J1	4 1/16	2 3/16 x 2⅞	HG	0.9	**10.00**
A-8131	11–13	70°	Replaces RCA 74951 in Direct Drive Circuits	2⅝	3 x 3½	HR	0.5	**6.50**
A-8132	13–15	70°	Exact Repl. Muntz TO-0031			HM	1.3	**10.50**
A-8133	12.5–15	70°	Exact Repl. Admiral 79C30-1, 79C30-3	4 11/16	3½ x ¾	HA	1.0	**10.50**
A-8134	12.5–15	70°	Exact Repl. Admiral 79C30-2, 79C30-4	4 11/16	3½ x ¾	HA	1.0	**10.50**
A-8135	13–15	70°	Exact Repl. Admiral 79D41-1, 79D41-2	4¼	3½ x ¾	HB	1.2	**10.75**
A-8136	13–15	70°	Exact Repl. Philharmonic 86-263, 80-265, 80-265-2	4 5/16	2½ x 1¾	HP	1.2	**10.00**

#Actual high voltage obtained is dependent upon circuit parameters. †For use with two rectifiers in a voltage-doubling circuit.

DEFLECTION YOKES*

Part No.	Coil Inductance in MH. Horizontal	Coil Inductance in MH. Vertical	Coil Resistance in Ohms Horizontal	Coil Resistance in Ohms Vertical	Case Diameter	Unit Length	Mounting Type	Shpg. Wt. in Lbs.	List Price
DY-1A	8.3	50	13.5	66	3⅛	3	DY	1.0	**$7.90**
DY-8A	8.5	50	14.5	52.5	3⅛	2⅝	DF	1.0	**10.00**
DY-8	Same as DY-8A but without leads and network.								**9.80**
DY-9A	13.5	50	17.5	53.5	3⅛	2⅝	DF	1.0	**10.00**
DY-9	Same as DY-9A but without leads and network								**9.80**
DY-10A	30.0	3.5	45	3.5	3⅛	2⅝	DF	1.0	**10.00**
DY-10	Same as DY-10A but without leads and network								**9.80**
DY-11A	20	50	23	50	3⅛	2⅝	DF	1.0	**10.00**
DY-12A	30	50	34	50	3⅛	2⅝	DF	1.0	**10.00**

*All units have 70° deflection except DY-1 which has 53° deflection.

FOCUS COILS

Part No.	Resistance DC Ohms	Max. DC Ma.	Case Dimensions	Case Depth	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
FC-10	247	200	3 11/32 x 3 11/32	1 29/64	Two 8-32 Screws	FC	2.0	**$8.55**
FC-11	470	140	4¾ Dia.	1⅛	2 11/16 Radius—120° Apart	FO	3.2	**10.90**
FC-12	370	165	3 11/32 x 3 11/32	1 29/64	Two 8-32 Screws	FC	2.0	**8.55**

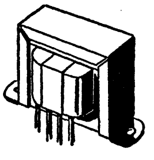
VERTICAL DEFLECTION OUTPUT TRANSFORMERS

Part No.	Turns Ratio Pri./Sec.	Primary Impedance#	DC Res. Pr.	DC Res. Sec.	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8112	10:1	18,000 Ω @ 12 DCMA	1300 Ω	10 Ω	2	1¾ x 3¼	2 13/16	A	1.0	**$4.35**
A-8113	8.8:1	16,500 Ω @ 10 DCMA	700 Ω	12 Ω	2	1¾ x 3¼	2 13/16	A	1.0	**4.45**
A-8115	10:1	19,000 Ω @ 13 DCMA	600 Ω	7 Ω	3 1/16	2½ x 2½	1 19/32 x 2	N	2.5	**6.60**
A-8116	10:1	18,000 Ω @ 10 DCMA	525 Ω	7 Ω	3 1/16	2¼ x 2½	1 19/32 x 1¾	N	2.2	**6.05**
A-8123	11.4:1	17,000 Ω @ 20 DCMA	1200 Ω	11 Ω	2	1¾ x 3¼	2 13/16	A	1.2	**4.05**
A-8140	44:1	11,000 Ω @ 20 DCMA	400 Ω	0.3 Ω	3 1/16	2½ x 2½	1 19/32x2	N	2.5	**6.85**
A-8141*	18:1	30,000 Ω @ 10 DCMA	1650 Ω	4.5 Ω	2¼	3¾ x 2⅛	3⅛	A	1.5	**5.85**

#Primary impedance measured at 30 V. 60 cycle. *Autoformer type.

HORIZONTAL BLOCKING-OSCILLATOR TRANSFORMERS

Part No.	Turns Ratio Pri./Sec.	Height Overall	Base Area	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8110	2:1	1½	1½ x 2½	2	A	0.4	**$3.05**
A-8120	2:1	1¾	1½ x 2 5/16	1 15/16	TD	0.4	**4.30**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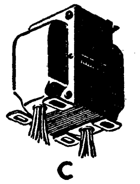
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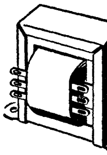
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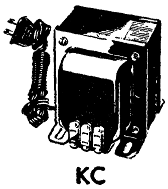
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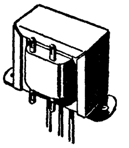
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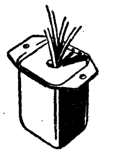
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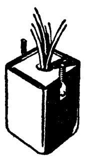
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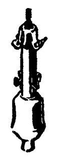
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TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

TELEVISION COMPONENTS

CHICAGO STANDARD TRANSFORMER CORPORATION

VERTICAL BLOCKING-OSCILLATOR TRANSFORMERS

Part No.	Turns Ratio Pri./Sec.	Height Overall	Base Area	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8111	1:4.2	1½	1½ x 2½	2	A	0.4	**$2.70**
A-8121	1:4.2	1¾	1½ x 2 5/16	1 15/16	TD	0.4	**3.45**
A-8122	1:4.2	1 9/16	1 3/16 x 1 3/16	1¼	TS	0.3	**4.20**
A-8124	Sec. #1 1:0.48 Sec. #2 1:1	1⅝	1⅝ x 2⅞	2⅜	A	0.7	**4.15**
A-8125	1:4.2	1 3/16	2 3/16 x 1¼	1¾	A	0.4	**2.70**

WIDTH CONTROL With AGC Winding

Part No.	Induc.	Res.	Q	AGC Induct.	AGC Res.	AGC Q	Mtg. Type	Shpg. Wt. in Lbs.	List Price
WC-5	4–39 mh.	32 Ω	70 max.	2.7–7.6 mh.	19.5 Ω	37 max.	WC	0.3	**$2.10**

CR TUBE BOOSTER

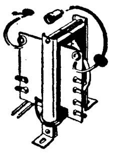
Part No.	Application	Ship. Wt. in Lbs.	List Price
P-8192	Brightens CR tubes where dimming is due to low cathode emission. Has 15″ leads for mounting anywhere in set. Plug-in type, no soldering	0.5	**$4.90**

AUDIO OUTPUT TRANSFORMERS

Part No.	Application	Max. Pri. DC	Max. Audio Watts	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-2313	Single plate, 7,000 ohms, to 8 ohms voice coil	40 ma.	10	2	3¼ x 3¾	2 13/16	A	1.0	**$3.40**
A-3303	Push-pull plates, 14,000 ohms, to 500/15/8/4 ohms line or voice coil	55 ma.	20	3 3/16	2⅝ x 2⅝	2 x 1 11/16	C	2.7	**9.80**
A-3330	Single plate, 2,000 ohms to 3.5 ohm voice coil	50 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**2.30**
A-3332	Single plate, 2,000 ohms to 3.2 ohm voice coil	50 ma.	3	1 3/16	2⅛ x 1	1¾	A	0.4	**1.60**
A-3823	Single or push-pull plates, 4,000–14,000 ohms, to voice coil	40 ma.	8	1⅝	2⅞ x 1½	2⅜	Q	0.7	**3.10**
A-3824	Single or push-pull plates, 6,000–10,000 ohms, to voice coil	75 ma.	8	2	3¼ x 2	2 13/16	Q	1.4	**4.95**
A-3825	Single plate, 1,500-4,500 ohms, to voice coil	75 ma.	8	2	3¼ x 1⅝	2 13/16	Q	0.9	**3.95**
A-3830	Push-pull plates, 3,000–10,000 ohms, to voice coil	60 ma.	20	2 11/16	3 5/16 x 2¼	2 13/16	J	1.8	**5.40**
A-3849	Single plate, 1,500–10,000 ohms, to voice coil	55 ma.	10	1⅝	2⅞ x 1½	2⅜	Q	0.7	**3.15**
A-3850	Single or push-pull plates, 4,000–10,000 ohms, to voice coil	40 ma.	8	2	2⅜ x 1½	2	J	0.7	**3.60**
A-3852	Push-pull plates, 4,000–14,000 ohms, to voice coil	40 ma.	18	2 5/16	2⅞ x 2	2⅜	J	1.3	**4.00**
A-3856	Single or push-pull plates, 4,000–14,000 ohms, to voice coil	35 ma.	4	1⅜	2⅜ x 1⅜	2	Q	0.4	**2.90**
A-3870	Push-pull plates, 4,000–14,000 ohms, to voice coil	50 ma. ea. ½	18	2	3¼ x 2	2 13/16	Q	1.3	**4.95**
A-3876	Single plate, 2,000 ohms, to 4 ohm voice coil	60 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**1.90**
A-3877	Single plate, 5,000 ohms, to 4 ohm voice coil	40 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**2.00**
A-3878	Single plate, 7,000 ohms, to 4 ohm voice coil	30 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**1.95**
A-3879	Single plate, 10,000 ohms, to 4 ohm voice coil	30 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**1.90**
A-3880	Push-pull plates, 4,000–14,000 ohms, to voice coil	40 ma.	15	2¼	3¾ x 2¼	3⅛	Q	1.7	**5.95**
A-8114	Single plate, 7,600 ohms, to 3.2 ohm voice coil	32 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**2.65**

CHOKES

Part No.	At Rated DC Ma.	Inductance At 75 % Ma.	At 115 % Ma.	DC Res. in Ohms	RMS. V. Insul.	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. in Lbs.	List Price
C-1646	5.0 hy. 200 ma.	7.0 hy.	3.7 hy.	90	5,000	4	3¼ x 3⅜	2½ x 2 3/16	C	4.5	**$9.00**
C-1703	4.0 hy. 250 ma.	4.5 hy.	3.5 hy.	60	3,000	3½	2⅞ x 3⅛	2¼ x 2½	B	4.2	**9.10**
C-1709	9.0 hy. 85 ma.	10.5 hy.	7.5 hy.	250	1,500	2	3¼ x 2	2 13/16	A	1.4	**3.40**
C-1721	8.5 hy. 200 ma	9.5 hy.	7.5 hy.	120	3,000	3⅞	3⅛ x 3	2½ x 2¼	N	4.4	**8.20**
C-2303	2.5 hy. 130 ma.	3.0 hy.	2.1 hy.	100	2,000	2	3¼ x 1¾	2 13/16	A	1.0	**3.10**
C-2304	2.3 hy. 150 ma.	2.6 hy.	2.0 hy.	60	1,500	2	3¼ x 1¾	2 13/16	A	1.0	**3.20**
C-2309	3.0 hy. 150 ma.	3.6 hy.	2.5 hy.	90	2,000	2¼	3¾ x 2¼	3⅛	A	1.7	**3.85**
C-2325	2.0 hy. 200 ma.	2.5 hy.	1.5 hy.	60	1,500	2¼	3¾ x 2¼	3⅛	A	1.8	**3.85**
C-2326	1.0 hy. 300 ma.	1.5 hy.	0.6 hy.	43	1,500	2¼	3¾ x 2¼	3 5/16	A	1.7	**4.35**
C-2327	1.5 hy. 200 ma.	1.7 hy.	1.3 hy.	85	1,500	1⅝	2⅞ x 1½	2⅜	A	0.8	**2.45**
C-2328	0.8 hy. 375 ma.	1.0 hy.	0.65 hy.	25	1,500	2¼	3¾ x 2	3⅛	A	1.5	**5.05**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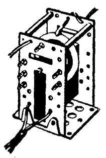
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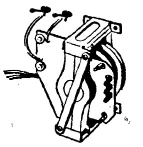
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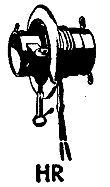
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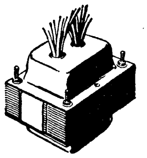
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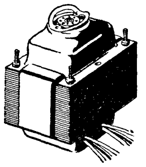
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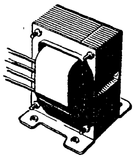
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HIGH FIDELITY TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

HIGH FIDELITY OUTPUT TRANSFORMERS

Better than ±1 db from 20 to 20,000 cps.

These Stancor output transformers combine the most advanced design and manufacturing practices to provide outstanding audio response at low cost. Maximum power level is conservatively rated at 50 watts. They are designed to match the most popular types of output tubes to speaker or line impedances.

Extensively interleaved "trifilar" windings, extremely tight coupling and careful electrical balance result in audio fidelity to please the most critical specialist. Inasmuch as elaborate shielding is not required at the audio output level, an inexpensive, but thoroughly practical, Type C mounting is used. Shipping weight is 6.5 lbs.

Part No.	Pri. Imp. (P-P) in Ohms	Sec. Imp. in Ohms	Max. Pri. D.C. Per Side	Audio Watts	Height Overall	Base Area	List Price
A-8050	1500	8, 16	200	50	4 5/16″	3 9/16″ x 4¼″	**$20.45**
A-8051	2500	8, 16	150	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8052	3000	8, 16	175	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8053	5000	8, 16	150	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8054	9000	8, 16	100	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8156	6600	8, 16	125	50	4 5/16″	3 9/16″ x 4¼″ 2¾″ x 3 1/16″	**20.45**
A-8060	1500	500	200	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8061	2500	500	150	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8362	3000	500	175	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8063	5000	500	150	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8064	9000	500	100	50	4 5/16″	3 9/16″ x 4¼″	**20.45**
A-8166	6600	500	125	50	4 5/16″	3 9/16″ x 4¼″ 2¾″ x 3 1/16″	**20.45**

*Where more than one secondary impedance is shown, only one value is to be used at any time.

STANCOR-WILLIAMSON HIGH FIDELITY AMPLIFIER

Superb audio quality at low cost is now possible through the use of Stancor transformers. Write for Stancor Bulletin 382R or ask your Stancor distributor for a free copy. Detailed instructions for the construction of a Williamson Amplifier, using Stancor transformers A-8054, PC8412 and C-1411, will be found in this bulletin.

A set of chassis for the Williamson Amplifier, completely punched and finished, is available from your distributor. Ask for Stancor Chassis WM-8, $5.75 net.

TONE CONTROL UNIT

Part No.	Application	Mtg. Type	Height Overall	Base Area	Mtg. Ctrs.	Shpg. Wt. in Lbs.	List Price
C-2332-1	Used in amplifiers for separate control of bass and treble frequencies	W1	2½″	2″ x 2⅛″	1½″ x 1⅜″	1.3	**$11.40**

TRANSISTOR TRANSFORMERS

Here are the smallest iron core audio transformers ever built. They weigh less than 1/10 ounce and are no larger than the transistors they power. Write for Bulletin 462 showing typical circuit application.

These transformers are designed primarily for transistor audio application but they can be used wherever low power is involved. Useful range, below 1 mw level. They are constructed of extremely fine wire, wound on molded nylon bobbins, with special nickel alloy steel laminations. Mounting style is coil and iron only.

SPECIAL Stancor ultra-miniature transistor transformers, designed and built to your requirements, can be supplied in quantities of five or more. Send your specifications for information on price and delivery.

Part No.	Application	Pri. Imp.	Sec. Imp.	Pri. DC Res.	Sec. DC Res.	Dimensions§	Weight	List Price
UM-110	Interstage	20,000	1,000	1675	285	¼″ x ⅜″ x ⅜″	0.07	**$12.25**
UM-111	Output or matching	1,000	50/60	120	9.0	⅜″ x ⅜″ x ⅜″	0.10	**10.50**
UM-112	High imp. mic. input	200,000	1,000	4000	195	⅜″ x ⅜″ x ⅜″	0.10	**13.75**
UM-113	Interstage	20,000	1,000	1350	205	⅜″ x ⅜″ x ⅜″	0.10	**11.00**
UM-114	Output or matching	500	50/60	70	9.0	⅜″ x ⅜″ x ⅜″	0.10	**10.50**

§Dimensions ±.015″.

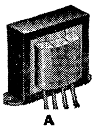
MINIATURE HIGH FIDELITY AUDIO TRANSFORMERS

Stancor Tinytrans are miniature transformers made with nickel steel laminations. They have an exceptional frequency response for units of this size; ±1 db. 30-15,000 cps, Maximum level 0 db. Write for Bulletin 463 showing frequency response curves on these transformers.

These units are sealed and potted in ⅞″ square, anodized aluminum cases with phenolic terminal boards. Total height, including terminals, is 1¼″. The case has two 2-56 threaded inserts, 11/16″ centers, for easy chassis mounting. The entire transformer weighs only 1.3 ounces. Mounting type UM.

Part No.	Application	Primary Impedance	Secondary Impedance	List Price
TT-11	Mic., pickup or line to single grid	50, 200/250, 500/600	50,000	**$14.15**
TT-12	Mic., pickup or line to push-pull grids	50, 200/250, 500/600	50,000	**14.75**
TT-13	Dynamic mic. to single grid	7.5/30	50,000	**13.45**
TT-14	Single plate to single grid	15,000*	60,000	**11.60**

*No DC in primary.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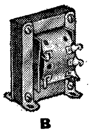
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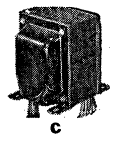
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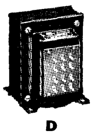
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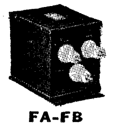
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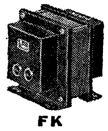
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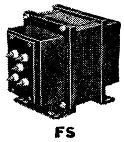
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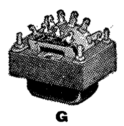
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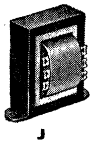
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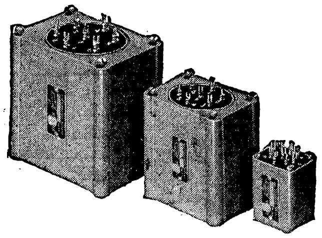
HIGH FIDELITY TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

HF AND WF SERIES HIGH FIDELITY AUDIO TRANSFORMERS



HF Series

These units have a wide frequency response of 20 to 20,000 cps with ±1 db. Correct design reduces harmonic and intermodulation distortion to a negligible amount. Balanced construction minimizes hum pickup. Stancor impregnation insures long life. Cases are finished in gray enamel and have four threaded holes at each end for flush mounting. Stud-type terminals are plainly marked for easy identification.

LOW IMPEDANCE TO GRID

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	60,000 overall, in two sections	15 db	−74 db	HF-1	**$32.50**
HF-20X	Low Imp., Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	14 db	−92 db‡	HF-1	**41.60**
HF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	120,000 overall, in two sections	15 db	−74 db	HF-1	**36.40**
HF-22X	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	14 db	−92 db‡	HF-1	**45.50**

INTERSTAGE

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-29	Sgl. Pl. to P.P. Grids—Split secondary	15,000	95,000 (Turn ratio 2.5:1 overall)	17 db	−50 db	HF-1	**$31.20**
HF-31	Single Plate to P.P. Grids. Split pri. and sec.	15,000	135,000 (Turn ratio 3:1 overall)	14 db	−74 db	HF-1	**31.20**
HF-32	P.P. Plates to P.P. Grids Split pri. and sec.	30,000 Plate to Plate	80,000 (Turn ratio 1.6:1 overall)	26 db	−50 db	HF-2	**40.30**

MIXING

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-40	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	17 db	−74 db	HF-1	**$32.50**

OUTPUT

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction¶	Mtg. §	List Price
HF-65†	P.P. 2A3's, 6L6's, etc. to Line or Voice Coil	3,000 or 5,000 Plate to Plate	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333 or 500	20 watts	......	HF-2	**$36.40**
HF-67†	P.P. 2A3's, 6L6's, etc. to Voice Coil	3,000 or 5,000 Plate to Plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	20 watts	......	HF-2	**26.00**
HF-68†	P.P. Par. 2A3's, 6A5G's, 300A's, 6A3's to Line or Voice Coil	1,500 or 2,500 Plate to Plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	40 watts	......	HF-3	**65.00**

§HF-1 Case: *Shpg. wt., 3.0 lbs. Height overall, 3¼″. Base area,* $2\frac{9}{16}$x$3\frac{1}{16}$″. *Mtg. ctrs.,* $1\frac{15}{16}$x$2\frac{7}{16}$″. HF-2 Case: *Shpg. wt., 7.5 lbs. Height overall, 4⅛″. Base area,* $3\frac{3}{16}$″x$4\frac{3}{16}$″. *Mtg. ctrs.,* $2\frac{11}{16}$″x$3\frac{11}{16}$″. HF-3 Case: *Shpg. wt., 15.0* lbs. *Height overall,* $4\frac{11}{16}$″. *Base area,* $4\frac{11}{16}$″x$5\frac{9}{16}$″. *Mtg. ctrs.,* $4\frac{3}{16}$″x$5\frac{1}{32}$″.

†Response ±1 db from 25 to 20,000 cps.

¶As compared to standard uncased units.

‡Quadruple alloy magnetic shied.

WF Series

These units are of the same outstanding quality as the HF Series above, and, with the exception of two units, have a frequency response of 30–20,000 cps within ±2 db. The WF-21 and WF-35 have a response within ±2 db from 50–20,000 cps and have multiple alloy shields for extremely low hum pickup. All WF units are cased in the WF-6 type cast case with phenolic terminal board and four tapped holes for flush mounting. Overall dimensions are 2″ high with 1½″ x 1½″ base area. Mounting centers are $1\frac{5}{32}$″ x $1\frac{5}{32}$″. Shipping weight is 0.6 lbs.

INPUT

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	**$19.50**
WF-21	Low Imp. Mic., Pickup, or L. to Sgl. or P.P. Grids	50, 200, 500	50,000	**20.80**
WF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	**19.50**
WF-24	Dynamic Microphone to 1 or 2 Grids	30	50,000 overall, in two sections	**17.70**

INTERSTAGE

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-26	Single Plate to Single Grid	15,000	60,000 (Turn ratio 2:1)	**$16.45**
WF-28	Sgl. Pl. to 2 Grids. Can use split pri. for P.P. Pl.	15,000	80,000 overall (Turn ratio 2.3:1 overall)	**18.20**

LOW LEVEL OUTPUT

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-34	Single Plate to Line	15,000	50, 125/150, 200, 250, 333, 500/600	**$19.50**
WF-36	P.P. Low Level Plates to Line	30,000 Plate to Plate	50, 125/150, 200, 250, 333, 500/600	**19.50**
WF-35	Single Plate to Multiple Line Primary D.C. 8.0 ma. Response from 50–20,000 cps within ±2 db	15,000	50, 125/150, 200, 250, 333, 500/600	**18.20**

MIXING

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
WF-30	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	**19.50**

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

DRIVER TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO PUSH-PULL GRIDS

Part No.	Pri. Impedance in Ohms	Pri./½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4713	10,000	2:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1⅛″	0.7	**$3.00**
A-4752	10,000	2/1.5/1:1	¾″ x ¾″	40 ma.	A	2″	3¼″ x 1¾″	1.2	**4.40**
‡**A-4722**	10,000	2:1	¾″ x 1″	30 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.50**
A-4292	10,000	2.5:1	⅝″ x ⅝″	20 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.15**
‡**A-4734**	10,000	2.5:1	¾″ x ¾″	25 ma.	S	2 5/16″	2⅞″ x 1¾″	1.2	**4.30**
A-4723	10,000	3:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.00**
‡**A-4721**	10,000 to 22,500	3/2:1	¾″ x 1″	25 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**7.10**
A-4210	1,500 to 5,000	3:1	1″ x 1″	40 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.4	**7.45**
A-4702	1,500 to 5,000	5:1	1″ x 1″	80 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**7.35**

PUSH-PULL PLATES TO PUSH-PULL GRIDS

Part No.	Pri. Imp. (P.P.) in Ohms	Pri./½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
‡**A-4404**	3,000 to 5,000	2:1	1⅛″ x 1⅛″	90 ma.	C	3⅝″	3″ x 3⅛″	3.7	**$9.55**
A-4208#	20,000 to 30,000	2.8:1	1″ x 1″	15 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**8.35**
‡**A-4712**	20,000	3:1	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.55**
A-4701#	20,000	3:1	1″ x 1″	25 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.7	**9.60**
A-4212	1,500 to 5,000	3.2:1	1″ x 1″	50 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**7.80**
A-4416#	3,000 to 10,000	5:1	1″ x 1″	40 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.8	**8.70**
A-4703#	3,000 to 10,000	5:1	1⅛″ x 1⅛″	95 ma.	C	3⅝″	3″ x 3⅛″	3.7	**9.50**

POLY-PEDANCE DRIVER MULTI-TAPPED UNITS FOR USE IN CIRCUITS WHERE THE OPTIMUM RATIO CANNOT BE PREDETERMINED.

Driver circuit changes often require new transformers. Many times it is impossible to match correctly tubes involved with a specific transformer, with high distortion resulting. *Poly-Pedance* units solve that problem; three transformers with the maximum number of usable ratios will match the driver tubes to any Class B modulator grid circuit without exceeding the power capabilities of the driver tubes.

Part No.	Application and Ratio Pri./½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4761	Driver to Class "B" Grids 1.25:1/ 1.4:1/ 1.6:1/ 1.8:1/ 2:1/ 2.2:1/ 2.4:1	Pri—150 ma. Sec—100 ma.	15	CD	3 3/16″	2⅝″ x 3⅝″	3.4	**$16.65**
A-4762	Driver to Class "B" Grids 2.6:1/ 3:1/ 3.2:1/ 3.4:1/ 4:1/ 4.5:1/ 5:1	Pri—150 ma. Sec—180 ma.	15	CD	3 3/16″	2⅝″ x 3⅛″	2.7	**15.70**
A-4763	Driver to Class "B" Grids 1.25:1/ 1.5:1/ 1.75:1/ 2:1/ 2.25:1/ 3.2:1	Pri—225 ma. Sec—280 ma.	30	CD	3⅝″	3″ x 4″	4.3	**19.45**

POLY-PEDANCE LINE DRIVER MULTI-TAPPED UNITS TO MATCH ALL COMMON LINE IMPEDANCES TO GRID CIRCUIT OF MODULATOR OR CLASS "B" AMPLIFIER.

Designed with pie wound coils to assure low leakage inductance, low resistance and low capacity, these two units will easily match all common line impedances to any modulator grid circuit. Individually boxed with complete instructions.

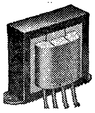
Part No.	Application and Ratio Pri./ ½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4765	Line to Grid 1:0.75/ 1:0.85/ 1:1/ 1:1.25/ 1:1.45/ 1:1.75/ 1:2/ 1:2.25/ 1:2.5/ 1:2.75/ 1:3.15	Pri—180 ma. Sec—100 ma.	15	CD	3 3/16″	2⅝″ x 3⅜″	3.2	**$17.25**
‡**A-4766**	Line to Grid 1:0.75/ 1:0.85/ 1:1/ 1:1.25/ 1:1.45/ 1:1.75/ 1:2/ 1:2.25/ 1:2.5/ 1:2.75/ 1:3.15	Pri—280 ma. Sec—200 ma.	30	CD	3⅜″	3″ x 3¾″	3.9	**19.15**

AUDIO CHOKES

Audio reactors are rated at 2 volts, 200 cycles, with maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part No.	Rated Inductance	Max. D.C.	D.C. Res. in Ohms	Test Volts	Core	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
‡**C-1034**¶	8 hy at 30 ma.	30 ma.	1365	1500	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.1	**$3.70**
C-1003	16 hy at 50 ma.	50 ma.	580	1500	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.1	**2.45**
C-2301	135 hy at 5 ma.	10 ma.	6500	1500	¾″ x 1″	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.35**

#These units have split secondaries for individual bias adjustment and/or use of inverse feedback.
¶Center tapped. ‡To be removed from next catalog.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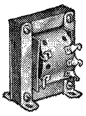
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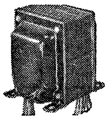
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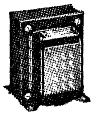
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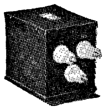
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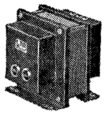
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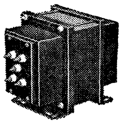
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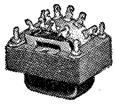
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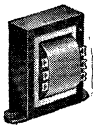
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INPUT-INTERSTAGE

CHICAGO STANDARD TRANSFORMER CORPORATION

MICROPHONE OR LINE TO LINE

Part No.	Impedance In Ohms	Mtg.	Height Overall	Base Area	Shpt. Wt. In Lbs.	List Price
A-4350#	Pri—500/333/200/125/50 Sec—500/333/200/125/50	Q	2″	3¼″ x 1¾″	1.0	**$ 6.50**
A-4407#†	Pri—500/333/200/125/50 Sec—500/333/200/125/50	D	3 3/16″	2⅝″ x 3¼″	2.4	**13.10**

MICROPHONE PICKUP OR LINE TO GRID

Part No.	Application	Impedance in Ohms	Turns Ratio	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4705	S. B. Mic. to S. Grid	Pri—200/70 Sec—80,000	1:20	A	1⅜″	2⅜″ x 1⅜″	0.4	**$3.20**
A-4706	S. B. Mic. to S. Grid	Pri—100 Sec—60,000	1:24.5	A	1⅜″	2⅜″ x 1½″	0.5	**3.25**
A-4708	D. B. Mic. to S. Grid	Pri—200 CT Sec—57,000	1:17	J	2″	2⅜″ x 1⅝″	0.7	**4.40**
A-4742	S. B. Mic. to P.P. Grids	Pri—100 Sec—400,000 CT	1:64	S	2 5/16″	2⅞″ x 1¾″	1.2	**4.70**
A-4743	S. B. Mic. to P.P. Grids	Pri—100 Sec—400,000 CT	1:64	VE	2 5/16″	2⅞″ x 2⅛″	1.2	**6.45**
***A-4747**	S. B. Mic. or Low Imp. Line to S. Grid	Pri—10 Sec—1,300,000	1:137	VE	1 7/16″	1 5/16″ x 1¼″ 1½″	0.5	**3.60**
A-4351#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**6.95**
A-4352#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	Q	2″	3¼″ x 1¾″	1.0	**6.05**
‡A-4726	Line and High Imp. to P.P. Grids	Pri—200 CT/50 and 2,500 Sec—100,000	1:22.4 1:6.3	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**8.05**
A-4709	Dynamic Mic. or Pickup to S. Grid	Pri—30/15/8/4 Sec—106,000	1:60	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**7.80**

INTERCOMMUNICATOR AND TRANSCEIVER

Part No.	Application	Impedance in Ohms	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4744	Intercom. input	Pri—4 Sec—25,000	VE	1⅜″	2⅜″ x 1½″	0.5	**$2.80**
***A-4748**	Intercom. input	Pri—45 or 50 Sec—50,000	A	1 3/16″	2 3/16″ x 1¼″ 1¾	0.4	**3.10**
A-3833	Transceiver Input Mic. and Plate to Grid	Pri—200 and 5,000 Sec—60,000	A	1⅝″	2⅞″ x 1½″	0.7	**4.30**
‡A-3836	Transceiver Output. Plate to Low or High impedance phones	Pri—10,000 Sec—50 and 2,000	A	1⅝″	2⅞″ x 1½″	0.7	**4.20**

SINGLE PLATE TO SINGLE GRID—FOR 7,000-20,000 OHM PLATE IMPEDANCES

Part No.	Turns Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-53	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1½″	0.5	**$2.65**

SINGLE PLATE TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

A-52-C	1:2	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.4	**$2.75**
A-62-C	1:2	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.10**
‡A-4745	1:2	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**8.50**
	Recommended for use in super-regenerative circuits. Has a static shield between pri. and sec. windings.							
A-53-C	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.5	**2.70**
A-63-C	1:3	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.05**
A-73-C	1:3	¾″ x ¾″	10 ma.	A	2″	3¼″ x 1¾″	1.0	**3.80**
A-4719	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**7.45**
‡A-83-C	1:3	⅞″ x ⅞″	10 ma.	A	2¼″	3¾″ x 2¼″	1.5	**6.45**
‡A-103-C	1:3	1″ x 1″	10 ma.	A	2⅝″	4″ x 2¼″	2.2	**7.55**
A-64-C	1:4	⅝″ x ⅝″	10 ma.	A	2″	2⅜″ x 1¾″	0.7	**3.65**
A-4206#	1:3.25	1″ x 1″	15 ma.	C	3⅛″	2⅝″ x 2⅝″	2.5	**9.85**

MULTI-PURPOSE INTERSTAGE—PIE-WOUND SPLIT SECONDARIES

May be used as a single plate to single grid, single plate to push-pull grid, or push-pull plate to push-pull grid interstate transformers. Overall ratios are 3:1, however, primaries are center-tapped and secondaries have split windings, thus providing ratios of 1:1, 3:1 and 6:1 in either step-up or step-down applications.

A-4774	1:3	¾″ x ¾″	10 ma.	S	2 5/16″	2⅞″ x 1¾″	1.2	**$4.60**
A-4773	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**7.80**

PUSH-PULL PLATES TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

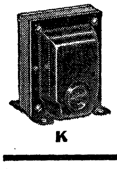
A-4711	1:1	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**$3.65**
A-4155	1:3	¾″ x ¾″	10 ma.	L	2 1/16″	2 5/16″ x 1¾″	1.0	**6.55**

PUSH-PULL PLATES TO PARALLEL OR PUSH-PULL GRIDS—FOR 7,000-20,000 OHM PLATE IMPEDANCES

A-4208	1:1.4	1″ x 1″	15 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**$8.35**
‡A-4777	1:1.5	1″ x 1″	10 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**9.50**

#Has a dual primary—when properly connected the 500 and 200 ohm sections are center tapped.

†Has a static shield between primary and secondary windings. ‡Designates part numbers to be removed from next catalog.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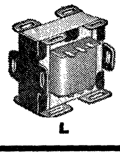
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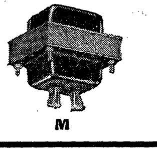
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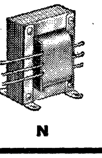
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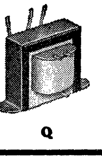
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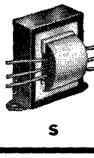
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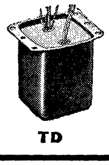
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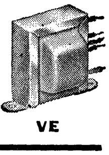
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OUTPUT TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO VOICE COIL

Part No.	Application	Max. Pri. D.C.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
‡**A-3865**	1,500 ohms to 6/4/2 ohms	55 ma.	48, 25B6, 25L6, 50L6	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**$3.30**
A-3332	2,000 ohms to 3.2 ohms	50 ma.	25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	3	A	1³⁄₁₆"	2⅛" x 1"	0.4	**1.60**
A-3876	2,000 ohms to 4 ohms	60 ma.	2A3, 6A3, 6B4, 6W6, 6Y6, 25AC5, 25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.90**
A-3328	4,000 ohms to 3.5 ohms	10 ma.	1S4, 3S4	A	3	A	1³⁄₁₆"	2⅛" x 1"	0.4	**2.05**
‡**A-2203**	4,000 ohms to 8 ohms	40 ma.	43, 45, 48, 12A5, 25A6	A	5	A	1⅝"	2⅛" x 1⅝"	0.7	**3.70**
A-3877	5,000 ohms to 4 ohms	40 ma.	43, 59, 6V6, 7C5, 25A5	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.00**
A-3310	5,000 ohms to 500/15/8/4 ohms	55 ma.	45, 6L6, 6V6, 25A6, 25A7	A	20	C	3³⁄₁₆"	2⅝" x 2⅝"	2.5	**8.05**
A-3878	7,000 ohms to 4 ohms	30 ma.	20, 31, 33, 42, 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.95**
A-2313	7,000 ohms to 8 ohms	40 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	10	A	2"	3¼" x 1¾"	1.0	**3.40**
A-8114	7,600 ohms to 3.2 ohms	32 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜"	2⅜" x 1⅝"	0.4	**2.65**
A-3329	8,000 ohms to 3.5 ohms	10 ma.	1C5-GT, 1G5-G, 1Q5-GT/G, 1S4, 3S4	A	3	A	1³⁄₁₆"	2⅛" x 1"	0.4	**1.90**
A-3879	10,000 ohms to 4 ohms	30 ma.	1J6, 3C5, 6A4, 6G6, 6N7	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**1.90**
A-3881	15,000 ohms to 4 ohms	10 ma.	1D8, 1E7, 1F4, 1F5, 1J5, 1T5, 6V7, 6Y7, 12A7	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.15**
A-3327	25,000 ohms to 4 ohms	5 ma.	1A5, 1D8-GT, 1F4, 1F5-G, 1LA4, 1LB4, 1N6-G	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.45**

PUSH-PULL PLATES TO VOICE COIL

Part No.	Application	Max. Pri. D.C.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
‡**A-3306**	P.P. Par. 2,500 ohms to 500/15/8/4 ohms	100 ma.	45, 48, 2A3, 25L6	AB	25	C	3⅝"	3" x 3⅛"	3.8	**$10.95**
‡**A-3301**	3,000 ohms to 500/15/8/4 ohms	55 ma.	48, 2A3, 6A3, 6B4, 25L6	AB	30	C	3⅝"	3" x 3⅛"	3.7	**10.20**
A-3802	3,800/3,300 to 500/250/8/4 ohms	250 ma.	45, 6L6, Par. 6L6	AB2, AB1	75	C	4¾"	4" x 3⅞"	7.9	**14.25**
‡**A-5528**	4,000 ohms to 500/15/8/4 ohms	65 ma.	6Y6, 25LG	AB	8	C	3³⁄₁₆"	2⅝" x 2¼"	1.9	**8.00**
A-3851§	4,400 ohms to 500/250/15/8/4 ohms	70 ma.	6L6	AB1	30	C	3⅝"	3" x 3⅛"	3.6	**10.80**
A-3872	5,000 ohms to 15/8/4 ohms	75 ma.	45, 2A3, 6A3, 6L6	AB	18	TD	2¹¹⁄₁₆"	2¾" x 2³⁄₁₆"	1.7	**7.00**
A-3800	5,000 ohms to 500/250/15/8/4 ohms	80 ma.	45, 2A3, 6A3, 6L6	AB	30	C	3⅝"	3" x 3⅜"	3.7	**8.70**
‡**A-3307**	6,000 ohms to 500/15/8/4 ohms	100 ma.	46, 59, 42, 2A5, 6F6, Par. 53, 6A6, 6N7	B, AB2	30	C	3⅝"	3" x 3⅛"	3.5	**11.30**
A-3801	6,600 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4"	3¼" x 3⅜"	5.8	**10.45**
‡**A-2201**	8,000 ohms to 6 ohms	40 ma.	43, 45, 48, 71, 25A6	AB	10	A	2"	3¼" x 1¾"	1.0	**4.70**
A-3885	9,000 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4"	3¼" x 3⅜"	4.5	**12.70**
A-3304	10,000/7,000 ohms to 500/15/8/4 ohms	60 ma.	45, 6V6, 6AC5	AB	25	C	3³⁄₁₆"	2⅝" x 2⅝"	2.7	**9.65**
A-3311	10,000 ohms to 500/15/8/4 ohms	70 ma.	6F6, 6V6, 6AC5	AB	25	C	3⅝"	3" x 3⅛"	3.5	**9.10**
A-3831	10,000 ohms to 8/4/2 ohms	40 ma.	30, 49	AB	5	A	1⅝"	2" x 1½"	0.7	**3.35**
***A-3335**	10,000 ohms to 6-8/3.2-4 ohms	40 ma.	10	S	2⁵⁄₁₆"	2¹⁵⁄₁₆" x 1¾"	2⅜"		1.0	**4.40**
A-2312	14,000 ohms to 4 ohms	40 ma.	33, 41, 42, 47, 49, 2A5, 6F6, 6K6, 7B5	AB	10	A	2"	3¼" x 1¾"	1.0	**3.50**
A-3496	14,000 ohms to 4 ohms	25 ma.	33, 41, 42. 47, 49, 2A5, 6F6, 6K6, 7B5	AB	5	A	1⅜"	2⅜" x 1⅜"	0.4	**3.20**
A-3303	14,000 ohms to 500/15/8/4 ohms	55 ma.	41, 42, 47, 59, 89, 2A5, 6F6, 6K6, 7B5	AB	20	C	3³⁄₁₆"	2⅝" x 2⅝"	2.7	**9.80**
A-3857	25,000 ohms to 4 ohms	10 ma.	1F4, 1F5, 1J5, 1T5, 6G6 12A7, 950	A	5	A	1⅜"	2⅜" x 1⅜"	0.4	**2.55**

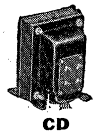
HUM-REDUCING TRANSFORMERS, Single Plate to Voice Coil

A-3330	†2,000 ohms to 3.5 ohms	60 ma.	5	A	1⅜"	2⅜" x 1⅜"	2	0.4	**$2.30**
***A-3336**	#2,500 ohms to 3.5 ohms	50 ma.	5	A	1⅜"	2⁷⁄₁₆" x 1⅜"	2	0.4	**2.65**

CRYSTAL RECORDER OUTPUT

Part No	Application	Max. Pri. D.C.	Audio Watts	Core Size	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3853	Single 7,000 ohm plate to 70,000 ohm crystal cutter OR 4 ohm voice coil	35 ma.	5	¾" x ¾"	A	2"	3¼" x 1¾"	1.0	**$5.95**
A-3854	Single 7,000 ohm plate to 70,000 ohm crystal cutter AND 4 ohm voice coil	35 ma.	10	⅞" x ⅞"	A	2¼"	3¾" x 2¼"	1.5	**6.60**
A-3859	Push-pull 10,000 ohm plates to 70,000 ohm crystal cutter OR 4 ohm voice coil	30 ma. ea. ½	5	¾" x ¾"	A	2"	3¼" x 1¾"	1.0	**6.40**
A-3860	Push-pull 10,000 ohm plates to 70,000 ohm crystal cutter AND 4 ohm voice coil	35 ma. ea. ½	10	⅞" x ⅞"	A	2¼"	3¾" x 2¼"	1.5	**7.20**

#Has tapped primary for use in hum-reducing circuit. §This unit has a tertiary winding to provide 10% inverse feedback.
‡Designates part number to be removed from next catalog. †Has a 4.5% primary tap.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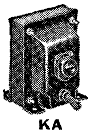
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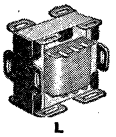
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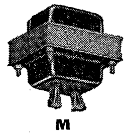
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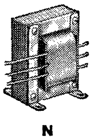
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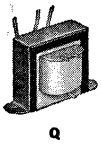
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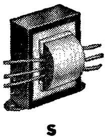
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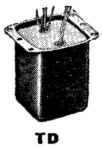
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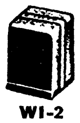
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OUTPUT TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

UNIVERSAL OUTPUT

Part No.	Application	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3856	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$2.90**
A-3822	Single plate (7,000 to 10,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**2.75**
A-3848	Single plate (7,000 to 16,000 ohms) to voice coil	10 ma.	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**3.90**
A-3823	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	Q	1⅝″	2⅜″ x 1½″	0.7	**3.10**
A-3850	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	J	2″	2⅜″ x 1½″	0.7	**3.60**
A-3825	Single plate (1,500 to 4,500 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 1⅝″	0.9	**3.95**
A-3824	Single or Push-pull plates (6,000 to 10,000 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 2″	1.4	**4.95**
A-3849	Single plate (1,500 to 10,000 ohms) to voice coil	55 ma.	10	Q	1⅝″	2⅞″ x 1½″	0.7	**3.15**
A-3880	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	15	Q	2¼″	3¾″ x 2¼″	1.7	**5.95**
A-2855	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	L	2 1/16″	2 5/16″ x 1¾″	1.0	**5.30**
A-3890	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**8.15**
A-3852	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	18	J	2 5/16″	2⅞″ x 2″	1.3	**4.00**
A-3870	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	18	Q	2″	3¼″ x 2″	1.3	**4.95**
A-3830	Push-pull plates (3,000 to 10,000 ohms) to voice coil	60 ma. ea. ½	20	J	2 11/16″	3 5/16″ x 2¼″	1.8	**5.40**

TUBE TO LINE

Part No.	Application	Impedance in Ohms	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3841	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500 Sec—500	60 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.5	**$7.50**
A-3842	Push-pull plates to line	Pri—14,000/12,000/10,000/8,000 CT Sec—500	55 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.7	**7.80**
A-4770	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500 Sec—500	60 ma.	20	J	3⅛″	3⅝″ x 2¼″	2.4	**7.90**
A-3250	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT Sec—500/333/200/125/50	15 ma.	—	Q	2″	3¼″ x 1¾″	1.0	**4.95**
A-3315	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT Sec—500/333/200/125/50	35 ma.	—	D	3 3/16″	2⅝″ x 2⅝″	2.7	**11.30**

LINE TO VOICE COIL

Part No.	Impedance in Ohms	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-8101	Pri—500 Sec—3.2/6-8	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$2.20**
A-3883	Pri—500 Sec—15/8/6/4	25	J	2 5/16″	2⅞″ x 1¾″	1.1	**4.70**
A-3882	Pri—500/333/250 Sec—15/8/4	25	D	3 3/16″	2⅝″ x 3½″	2.4	**9.30**
A-3838	500/250/175/150/140/125/100/85/45/14/4/0.7 This Unit is designed to operate one or more speakers in series across a 500 ohm line or to match unequal lines.	30	B	3⅛″	2½″ x 2¼″	2.3	**7.35**
A-3818	Pri—1,500/1,000/500 Sec—15/8/4	25	J	3⅛″	3⅝″ x 2¼″	2.2	**5.45**
A-7947	Pri—2,000/1,500/1,000/500 Sec—6 ohms	8	Q	1⅝″	2 13/16″ x 1 9/16″	0.7	**3.20**
A-7949	Pri—2,000/1,500/1,000/500 Sec—6-8 ohms	12	J	2 5/16″	2⅞″ x 1 13/16″	1.1	**4.25**
A-3820	Pri—2,000/1,500/1,000/500 Sec—15/8/4	40	D	4 5/16″	3⅝″ x 4½″	5.0	**15.20**
***A-8104**	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	10	J	2 5/16″	2 15/16″ x 1¾″ 2⅜″	1.5	**6.10**
A-3837	Line to Line or V. C. (Autoformer) Pri—500 Sec—8/4/2.65/2.35/2/1.5/0.7/0.5/0.3/0.2/0.1/0.05 This Unit is designed to operate one or more speakers in parallel across a 500 ohm line.	15	J	2 5/16″	2⅞″ x 2″	1.4	**5.50**

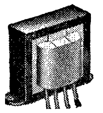
70.7 VOLT LINE TO VOICE COIL

Part No.	Power Steps in Watts	Impedance in Ohms	Mtg. Type	Height Overall	Base Area	Mtg. Ctrs.	Shpg. Wt. in Lbs.	List Price
***A-8102**	8/4/2/1/0.5	Pri—625/1,250/2,500/5,000/10,000 Sec—4/8/16	J	2″	1⅝″ x 2⅞″	2″	0.7	**$4.50**
***A-8103**	16/8/4/2/1/0.5	Pri—312.5/625/1,250/2,500/5,000/10,000 Sec—4/8/16	J	2⅛″	2¼″ x 3¼″	2 13/16″	1.5	**6.30**

LINE TO VOICE COIL—OUTDOOR TYPE

Part No.	Impedance in Ohms	Rated Watts	Mtg.	Mtg. Centers Can or Brkt.	Height Overall	Base Area†	Shpg. Wt. in Lbs.	List Price
A-3333	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	14	TW	2″ x 3 5/32″	3½″	3½″ x 3″	3.4	**$14.65**
A-3334	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	25	TW	2″ x 3 5/32″	3½″	3½″ x 3″	3.5	**17.75**
20-337	Adapter Hardware Set For clamping Part Numbers A-3333 and A-3334 to the mounting bracket of a trumpet projector. Set consists of holding plate and four each of screws, nuts and lockwashers to secure transformer assembly to speaker bracket up to 2″ wide.							**.55**

†Dimensions with bracket.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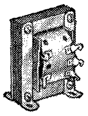
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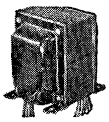
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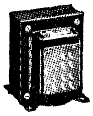
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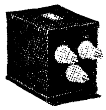
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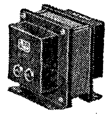
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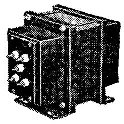
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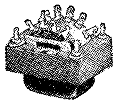
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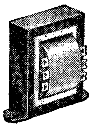
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STANCOR

POWER TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

COMBINATION PLATE AND FILAMENT SUPPLY

POWER TRANSFORMERS TO PROVIDE APPROXIMATELY 260 VOLTS D.C. TO CONDENSER INPUT FILTER

Type and Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PC8401	235-0-235	40	5.0	2.0	6.3 CT	2.0	2⅝″ x 2⅝″	3 3/16″	2″ x 1 9/16″	2.2	**$ 6.75**
PM8401							2½″ x 3″	2⅝″	2″ x 2½″		
PC8402	240-0-240	55	5.0	2.0	6.3 CT	2.0	2⅝″ x 2¾″	3 3/16″	2″ x 1 11/16″	2.4	**7.50**
PM8402							2½″ x 3″	2¾″	2″ x 2½″		
PC8403	250-0-250	70	5.0	2.0	6.3 CT	2.5	2⅝″ x 3⅛″	3 3/16″	2″ x 2 1/16″	3.2	**8.40**
PM8403							2½″ x 3″	3⅛″	2″ x 2½″		
PC8404	260-0-260	90	5.0	2.0	6.3 CT	3.0	3″ x 3½″	3⅝″	2¼″ x 2¼″	4.0	**9.45**
PM8404							2⅞″ x 3⅜″	3⅝″	2¼″ x 2 13/16″		
PC8405	270-0-270	120	5.0	3.0	6.3 CT	3.5	3¼″ x 3½″	4″	2½″ x 2 3/16″	4.9	**10.45**
PM8405							3⅛″ x 3¾″	3½″	2½″ x 3⅛″		

POWER TRANSFORMERS FOR USE WITH CHOKE INPUT FILTER, VR-TUBE REGULATED SUPPLY, SPEAKER FIELD IN FILTER, OR HIGHER VOLTAGE WITH CONDENSER INPUT FILTER

Type and Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PC8406	325-0-325	40	5.0	2.0	6.3 CT	2.0	2⅝″ x 2¾″	3 3/16″	2″ x 1 11/16″	2.4	**$ 6.90**
PM8406							2½″ x 3″	2¾″	2″ x 2½″		
PC8407	325-0-325	55	5.0	2.0	6.3 CT	2.0	2⅝″ x 3⅛″	3 3/16″	2″ x 2 1/16″	3.2	**7.60**
PM8407							2½″ x 3″	3⅛″	2″ x 2½″		
PC8408	340-0-340	70	5.0	2.0	6.3 CT	2.5	3″ x 3⅜″	3⅝″	2¼″ x 2⅛″	3.8	**8.60**
PM8408							2⅞″ x 3⅜″	3½″	2¼″ x 2 13/16″		
PC8409	350-0-350	90	5.0	2.0	6.3 CT	3.0	3″ x 3⅝″	3⅝″	2¼″ x 2⅜″	4.5	**9.60**
PM8409							2⅞″ x 3⅜″	3¾″	2¼″ x 2 13/16″		
PC8410	360-0-360	120	5.0	3.0	6.3 CT	3.5	3¼″ x 3¾″	4″	2½″ x 2 7/16″	5.5	**10.60**
PM8410							3⅛″ x 3¾″	3¾″	2½″ x 3⅛″		
PC8411	375-0-375	150	5.0	3.0	6.3 CT	4.5	3⅝″ x 4″	4 5/16″	2¾″ x 2 13/16″	5.8	**12.70**
PM8411							3½″ x 4⅛″	3⅞″	2¾″ x 3 7/16″		
PC8412	400-0-400	200	5.0	3.0	6.3 CT	5.0	4″ x 4″	4¾″	3″ x 2 13/16″	8.2	**14.30**
PM8412							3¾″ x 4½″	3⅞″	3″ x 3¾″		
PC8413	400-0-400	250	5.0	4.0	6.3 CT	5.0	4″ x 4½″	4¾″	3″ x 3 5/16″	10.0	**17.95**
PC8414	600-0-600	200	5.0	3.0	6.3 6.3	3.0 3.0	4″ x 4″	4¾″	3″ x 2 13/16″	8.3	**18.05**

POWER TRANSFORMERS FOR USE WITH 6AX5, 6X4, 6X5, OR SELENIUM RECTIFIERS

Type and Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PS8415	125 ½-wave	15	...	...	6.3	0.6	2⅜″ x 1⅜″	2″	2″	0.7	**$ 3.15**
PS8416	125-0-125	25	...	...	6.3	1.0	2⅞″ x 1¾″	2 5/16″	2⅜″	1.0	**3.95**
***PA8421**	125 ½-wave	50	---	---	6.3	2.0	3¾″ x 2⅛″	2¼″	3⅛″	1.5	**5.25**
PC8417	220-0-220	50	6.3	0.6	25.2	0.5	2⅝″ x 2⅝″	3 3/16″	2″ x 1 9/16″	2.2	**7.40**
PC8418	230-0-230	50	...	...	6.3	2.5	2⅝″ x 2⅝″	3 3/16″	2″ x 1 9/16″	2.2	**6.55**
PM8418							2½″ x 3″	2⅝″	2″ x 2½″		
PC8419	240-0-240	70	...	...	6.3	3.0	2⅝″ x 2⅞″	3 3/16″	2″ x 1 13/16″	2.6	**7.50**
PM8419							2½″ x 3″	2⅞″	2″ x 2½″		
PC8420	260-0-260	90	...	...	6.3	4.0	3″ x 3½″	3½″	2″ x 2¼″	3.5	**8.35**
PM8420							2⅞″ x 3⅜″	3½″	2¼″ x 2 13/16″		

CATHODE RAY TUBE POWER TRANSFORMERS

For use with type 2X2 rectifier tubes in a conventional half-wave voltage supply.

Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Milliamperes	Rectifier Filament Volts	Rectifier Filament Amperes	Other Windings Volts	Other Windings Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-8150	1,550 half-wave	1.5	2.5	1.75	...	...	TD	3 1/16″	3″ x 2½″	1.8	**$11.00**
P-8151	2.400 half-wave	5.0	2.5	2.0	2.5	2.0	C	4 5/16″	3 9/16″ x 3⅞″	6.4	**16.30**

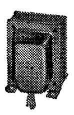
PHOTOFLASH POWER TRANSFORMER

Part No.	Application	Pri.	Sec.	Mtg. Type	Height Overall	Base Area	Mtg. Ctrs.	Shpg. Wt. in Lbs.	List Price
***P-6425**	For use in Sprague electronic flash circuits. See Sprague Electronic Flash Handbook C-703	105/115/125V. 60 cy.	Charges up to 1050 mfd. to 450 Volts D.C.	S	2 5/16″	2 15/16″ x 2″	2⅜″	1.4	**$5.25**
***P-6426**	Trigger coil for use with 450V. flashtube. Replaces G.E. 86G41				¾″	9/16″ diam.		0.2	**2.50**

SPEAKER FIELD SUPPLY TRANSFORMER

Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Milliamperes	Rectifier Filament Volts	Rectifier Filament Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6146	120-0-120	250	5.0	3.0	C	4″	3¼″ x 3⅛″	4.2	**$11.75**

All Primary Windings for 117 V-60 cycle operation unless otherwise indicated.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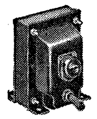
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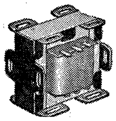
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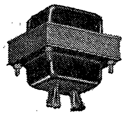
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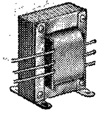
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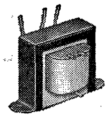
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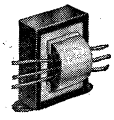
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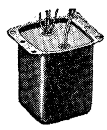
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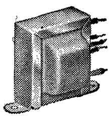
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POWER TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

REPLACEMENT POWER TRANSFORMERS (Misc.)

Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Filament Volts—Amperes	Other Windings Volts—Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6001	325-0-325	40	5.0 CT–2.0	2.5 CT–4.0	M	2¾″	2½″ x 3″	2.5	**$ 9.00**
‡P-6002	350-0-350	50	5.0 CT–2.0	2.5 CT–7.25	M	3⅛″	2½″ x 3″	3.0	**11.20**
P-6003	350-0-350	70	5.0 CT–2.0	2.5 CT–9.0	M	3⅛″	2⅞″ x 3⅜″	3.7	**12.80**
P-6005	350-0-350	70	5.0 CT–3.0	2.5 CT–9.0 2.5 CT–3.5	M	4¼″	2⅞″ x 3⅜″	4.8	**8.75**
‡P-6009	275-0-275	70	5.0 CT–3.0	2.5 CT–10.5 5.0 C.T.–0.5	M	3¼″	2⅞″ x 3⅜″	3.8	**13.40**
‡P-4042	350-0-350	70	5.0–3.0	2.5 CT–3.5 2.5–7.5	C	4″	3¼″ x 3″	3.8	**13.45**
P-4047	350-0-350	70	5.0–3.0	2.5 CT–9.0 6.3–3.0	C	4″	3¼″ x 3″	3.8	**12.70**
P-6004	350-0-350	90	5.0 CT–3.0	2.5 CT–12.5	M	3″	3⅛″ x 3¾″	4.2	**11.55**
‡P-4043	350-0-350	90	5.0–3.0	2.5 CT–3.5 2.5–9.0	C	4 5/16″	3⅝″ x 3⅜″	4.8	**14.75**
‡P-4048	350-0-350	90	5.0–3.0	2.5 CT–10.0 6.3–3.5	C	4 5/16″	3⅝″ x 3⅜″	5.2	**14.20**
P-6007	400-0-400	110	5.0 CT–3.0	2.5 CT–15.0 2.5 CT–3.5	M	3⅜″	3⅛″ x 3¾″	5.4	**14.15**
‡P-6290	350-0-350	120	18/24/50 v. † 5.0 CT–3.0	6.3 CT–4.7	M-2	3⅛″	3¾″ x 3⅜″	5.4	**15.40**
P-6006	350-0-350	120	5.0 CT–3.0	2.5 CT–12.5 2.5 CT–3.5	M	3⅝″	3⅛″ x 3⅝″	5.5	**14.95**
P-3005#	360-0-360 80 v. Bias	125	5.0 CT–3.0 5.0 CT–2.0	2.5 CT–10.0 6.3 CT–4.0	C	4¾″	4″ 3⅞″	8.0	**20.30**
P-6143	440-0-440	130	5.0–3.0	6.3 CT–3.5	C	4 5/16″	3⅝″ x 3⅞″	7.0	**15.25**
P-4004#	400-0-400 80 v. Bias	175	5.0 CT–3.0	2.5–1.75 6.3 CT–2.5 6.3 CT–2.5	C	4¾″	4″ x 3⅞″	8.3	**17.85**
P-5059#	337.5-0-337.5	200	5.0 CT–3.0	6.3 CT–5.0	C	4¾″	4″ x 4¼″	9.6	**16.90**
P-6315	370-0-370	275	5.0 CT–3.0	6.3 CT–7.0	M	4¼″	3¾″ x 4½″	9.3	**19.50**

VIBRATOR TRANSFORMERS WITH 6 VOLT D.C. PRIMARY

Part No.	Secondary A.C. Volts	Secondary Volts	D.C. to Filter Milliamperes	Recommended Buffer Cap.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6301	210-0-210	150	40	0.008 mfd.	S	2 5/16″	2⅞″ x 1¾″	1.2	**$5.20**
P-4060	240-0-240	225	40	0.008 mfd.	N	3⅛″	2½″ x 2⅝″	2.5	**6.75**
P-4061	290-0-290	250	50	0.006 mfd.	N	3⅛″	2½″ x 2⅝″	2.5	**6.50**
P-4062	300-0-300	260	65	0.006 mfd.	N	3⅛″	2½″ x 2⅝″	2.3	**7.15**
P-4063	320-0-320	285	75	0.006 mfd.	N	3⅛″	2½″ x 2¾″	2.8	**9.10**
P-6131	370-0-370	330	100	0.007 mfd.	N	3½″	2⅞″ x 2″⅞	3.5	**10.05**

VIBRATOR TRANSFORMER WITH 6 VOLT D.C. AND 117 VOLT A.C. PRIMARY

P-6166	350-0-350	— Filament—6.3 volts at 2.25 Amps.	135	C	4¾″	4″ x 3⅝″	6.9	**$16.85**

AUTO RADIO VIBRATOR TRANSFORMERS—EXACT DUPLICATE

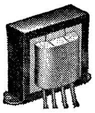
Exact duplicate of mounting type used in original equipment. For detailed drawings, see Howard W. Sams *Auto Radio Manual.*

Part No.	Original Part No.	Trade Name	D.C. Volts at Filter Input	D.C. Ma.	Recommended Buffer Cap.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-4064	7240519	United Motors (Delco)	280	65	0.015–0.015 mfd.	3 9/16″	2 9/16″ x 2 9/16″	2.5	**$11.75**
P-4065	7255881	United Motors (Delco)	265	56	0.006 mfd.	4 1/16″	2⅜″ x 2 7/32″	2.6	**10.90**
P-6470	140-111	Regal (5-tube univ. series)	145	50	0.009 mfd.	2 11/16″	2 11/16″ x 2 3/16″	1.4	**7.65**
P-6471	25B472533	Motorola (408, 508, etc.)	235	70	0.006 mfd.	3″	3⅜″ x 2 3/16″	2.0	**7.60**
P-6472	D 71014 C 217020 C 71014 25B70950	Colonial-Detrola No. 8072 Colonial-Bendix M1 Colonial-Motorola Motorola (405, 505, etc.)	270	56	0.007 mfd.	2⅝″	2 27/32″ x 2 5/32″	2.0	**7.60**
P-6473	95-1073	Zenith	272	73	0.008 mfd.	3 1/32″	2⅜″ x 2½″	2.4	**8.65**
P-6474	95-1066	Zenith	240	52.5	0.008 mfd.	3 1/32″	2⅜″ x 2½″	2.2	**7.90**
P-6476	D 70267 C 70267	Colonial-Detrola No. 7070 Col.-Mot.-Det. No. 8030	220	53.5	0.008 mfd.	2⅝″	2 27/32″ x 2 5/32″	2.0	**7.80**

CONDENSER TESTER POWER TRANSFORMER

Part No.	Plate Supply A.C. Volts	Plate Supply D.C.-M.A.	Fil. Wdgs. Volts	Fil. Wdgs. Amps.	Overall Dimensions L	Overall Dimensions W	Overall Dimensions D	Mtg.§ Type	Shpg. Wt. in Lbs.	List Price
***P-6459**	550 55	30 60	6.3 6.3	0.9 0.6	2⅝″	2 3/16″	2¼″	Coil and Iron	1.4	**$8.20**

All Primary Windings for 117 V-60 cycle operation unless otherwise indicated. #Primary for 117/107 volts. §Use original brackets.
†Motor-tuner windings for intermittent duty. ‡Designates part number to be removed from next catalog.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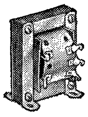
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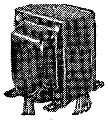
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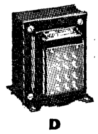
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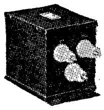
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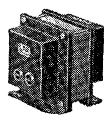
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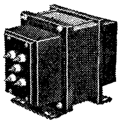
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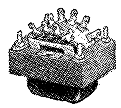
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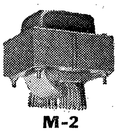
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FILTER CHOKES

CHICAGO STANDARD TRANSFORMER CORPORATION

SMOOTHING CHOKES FOR D.C. POWER SUPPLIES.

Inductance varies with the amount of D C. flowing through the coil, therefore these units have been tested under uniform conditions. They are rated at 10 volts, 60 cycles, with maximum D.C. in winding. Tolerance of plus 15% is maintained on all ratings.

Part No.	Rating Induc.	at	Ma. D.C.	D.C. Res. in Ohms	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1515	20.0 hy.	at	15 ma.	900	1500	A	1⅝"	2⅞" x 1½"	0.7	**$2.20**
C-1706	4.5 hy.	at	50 ma.	300	1500	A	1⅜"	2⅜" x 1⅜"	0.4	**1.85**
C-1707	7.0 hy.	at	50 ma.	550	1500	A	1⅜"	2⅜" x 1⅜"	0.4	**1.95**
C-1003	16.0 hy.	at	50 ma.	580	1500	A	2"	3¼" x 1¾"	1.1	**2.45**
C-1708	13.0 hy.	at	65 ma.	500	1500	A	2"	3¼" x 1¾"	1.0	**3.05**
C-1355	8.0 hy.	at	75 ma.	290	1500	L	2 1/16"	2 5/16" x 1¾"	1.0	**3.05**
C-1002	15.0 hy.	at	75 ma.	400	1500	A	2¼"	3¾" x 2¼"	1.7	**3.25**
C-1420	16.0 hy.	at	80 ma.	360	1500	C	3 3/16"	2⅝" x 2⅝"	2.5	**5.40**
C-1709	8.0 hy.	at	85 ma.	250	1500	A	2"	3¼" x 2"	1.4	**3.40**
C-2305	5.0 hy.	at	100 ma.	300	1500	TD	2 11/16"	2¾" x 2 3/16"	1.5	**4.70**
C-1001	10.5 hy.	at	110 ma.	225	3000	A	2⅝"	4" x 2¼"	2.3	**4.45**
C-2303	2.5 hy.	at	130 ma.	100	2000	A	2"	3¼" x 1¾"	1.0	**3.10**
C-1421	7.0 hy.	at	140 ma.	165	3000	C	3 3/16"	2⅝" x 2⅝"	2.5	**6.15**
C-2304	2.3 hy.	at	150 ma.	60	1500	A	2"	3¼" x 1¾"	1.0	**3.20**
C-2309	3.0 hy.	at	150 ma.	90	2000	A	2¼"	3¾" x 2¼"	1.7	**3.85**
C-1710	7.0 hy.	at	150 ma.	200	1500	A	2⅝"	4" x 2¼"	2.2	**4.95**
C-1410	4.0 hy.	at	175 ma.	100	3000	C	3 3/16"	2⅝" x 2⅝"	2.4	**6.30**
***C-2327**	1.5 hy.	at	200 ma,	85	1500	A	1⅝"	2⅞" x 1½"	0.8	**2.45**
C-1646	5.0 hy.	at	200 ma.	90	5000	C	4"	3¼" x 3⅜"	4.5	**9.00**
C-1411	4.5 hy.	at	200 ma.	80	3000	C	3⅝"	3" x 3⅛"	3.5	**7.15**
C-1721	8.5 hy.	at	200 ma.	120	3000	N	3⅞"	3⅛" x 3"	4.4	**8.20**
C-1703	4.0 hy.	at	250 ma.	60	3000	B	3½"	2⅞" x 3⅛"	4.2	**9.10**
C-1412	4.0 hy.	at	250 ma.	60	3000	C	3⅝"	3" x 3½"	4.3	**10.45**
C-1722	8.0 hy.	at	300 ma.	80	3000	N	4⅝"	3¾" x 3½"	7.3	**13.60**
C-2308	8.0 hy.	at	300 ma.	80	3000	C	4¾"	4" x 3⅞"	7.8	**13.75**
C-1413	8.0 hy.	at	300 ma.	80	5000	D	4¾"	4" x 4⅛"	7.8	**13.75**
***C-2328**	0.8 hy.	at	375 ma.	25	1500	A	2½"	3¾" x 2"	1.5	**5.05**
C-1414	7.5 hy.	at	400 ma.	60	5000	D	4¾"	4" x 5⅛"	11.8	**19.80**
C-1415	6.0 hy.	at	500 ma.	75	7500	FS	7⅝"	6⅛" x 7"	23.7	**45.80**

SWINGING CHOKES FOR INPUT SECTION OF D.C. POWER SUPPLIES.

Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. Swinging chokes are rated at 10 volts, 60 cycles, from maximum to 10% of maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part No.	Min. Swg. Induc.	D.C. Res. in Ohms	Approx. Range of Induc.	at	D.C. Ma.	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1718	10 hy.	130	13.5-3.5 hy.	at	15-150	2000	C	3 3/16"	2⅝" x 2½"	2.3	**$6.35**
C-1400	10 hy.	100	12-2	at	17.5-175	3000	C	3 3/16"	2⅝" x 2⅝"	2.4	**7.10**
C-1401	10 hy.	80	12-2	at	20-200	3000	C	3⅝"	3" x 3⅛"	3.5	**8.10**
C-1645	10 hy.	90	12-2	at	20-200	5000	C	4"	3¼" x 3⅜"	4.5	**9.30**
C-1702	10 hy.	60	12-2	at	25-250	3000	B	3½"	2⅞" x 3⅛"	4.3	**9.30**
C-1402	10 hy.	60	12-2	at	25-250	3000	C	3⅝"	3" x 3½"	4.3	**10.45**
C-1720	16 hy.	80	20-4	at	30-300	3000	N	4⅝"	3¾" x 3½"	7.2	**13.30**
C-2307	16 hy.	80	20-4	at	30-300	3000	C	4¾"	4" x 3⅞"	7.9	**15.15**
C-1403	16 hy.	80	20-4	at	30-300	5000	D	4¾"	4" x 4⅛"	7.7	**13.50**
C-1404	14 hy.	60	17-3	at	40-400	5000	D	4¾"	4" x 5⅛"	11.7	**19.80**
C-1405	12 hy.	75	16-4	at	50-500	7500	FS	7⅝"	6⅛" x 7"	24.3	**40.70**

SMOOTHING CHOKES FOR USE IN A.C.-D.C. POWER SUPPLIES.

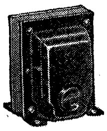
Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. Filter chokes are rated at 10 volts, 60 cycles, with maximum D.C. in windings Tolerance of plus 15% is maintained on all ratings.

Part No.	Rating Induc.	at	Ma. D.C.	D.C. Res. in Ohms	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1080	3.5 hy.	at	50 ma.	200	1500	A	1⅝"	2⅞" x 1½"	0.7	**$2.15**
C-1325	5.0 hy.	at	50 ma.	250	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.30**
C-1277	7.0 hy.	at	50 ma.	300	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.55**
C-1723	4.5 hy.	at	50 ma.	325	1500	A	1⅜"	2⅜" x 1⅜"	0.4	**2.00**
C-1227	7.0 hy.	at	50 ma.	350	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.50**
C-1279	8.5 hy.	at	50 ma.	400	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.20**
C-1333	8.0 hy.	at	50 ma.	450	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.25**
C-1215	9.0 hy.	at	50 ma.	500	1500	A	1⅝"	2⅞" x 1½"	0.7	**2.05**

SPEAKER FIELD SUBSTITUTE CHOKE

Part No.	D.C. Resistance	Max. Current	Height Overall	Base Area	Mtg.	Shpg. Wt. in Lbs.	List Price
‡C-2302	1750/1000/750/500 ohms 3000/2500/2250/2000/1500/500 ohms	60 ma. cont. or 75 ma. int. 40 ma. cont. or 55 ma. int.	3½"	2⅞" x 2¼"	N	3.1	**$9.15**

‡Designates part number to be removed from next catalog.



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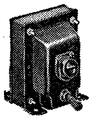

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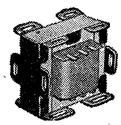

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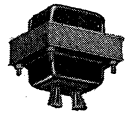

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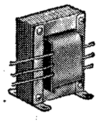

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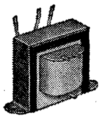

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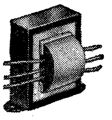

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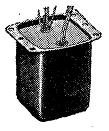

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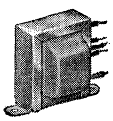

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TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

MODULATION TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

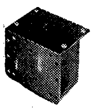
PLATE MODULATION

Part No.	Impedance in Ohms	Max. Ma. D.C./Tube Pri.	Sec.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3812	Pri—10,000 CT Sec—4,000	32	50	Sgl.—37, 38, 41, 1G5, 6K6 Sgl.—19, 1G6, 1J6, 6E6, 6G6, 6Z7 P.P.—30, 49, 1H4	A B B	5	A	1 5/8″	2 7/8″ x 1 1/2″	0.7	**$3.65**
A-3871	Pri—4,500 Sec—8,500 #Secondary used as primary.	60	50	Sgl.—6L6, HY69 #Sgl.—6B5, 6F6, 6N6	A A	10	TD	2 11/16″	2 3/4″ x 2 3/16″	1.4	**6.65**
‡A-3873	Pri—8,500 CT Sec—8,000	100	100	Sgl.—6B5, 6F6, 6N6 P.P.—6L6, RK56, HY60	A AB	25	C	3 3/16″	2 5/8″ x 3 5/8″	4.2	**10.55**
A-3845	Pri—10,000 CT Sec—8,000/6,500/5,000/3,000	100	100	Sgl. 53, 79, 6A6, 6N7, 6Y7 P.P.—42, 2A5, 6F6, 6V6	B AB2	25	C	3 3/16″	2 5/8″ x 2 3/4″	2.8	**8.35**
‡A-3835	Pri—5,000/3,000 CT Sec—10,000/8,350/5,350	80	100	P.P.—45, 50, 2A3, 6A3, 6A5, 6B4, 6L6	AB	25	C	4″	3 1/4″ x 3 1/8″	4.0	**11.30**
‡A-3868	Pri—6,600 CT Sec—12,000/10,000	100	70	P.P.—6L6	AB	35	C	3 3/16″	2 5/8″ x 3 5/8″	4.0	**10.95**
‡A-3843	Pri—6,600 CT Sec—14,500/7,500/5,000	150	150	P.P.—6L6, RK56, HY56	AB	40	D	4 5/16″	3 5/8″ x 4 7/8″	6.2	**15.50**
A-3808	Pri—3,800/3,300 CT Sec—10,000/7,500/5,000/4,000	260	170	P.P.—6L6, 807, HY61, RK41 P.P. Par—6L6	AB2 AB1	60	D	4 3/4″	4″ x 2 7/8″	7.7	**18.75**
‡A-2907	Pri—8,000 CT Sec—12,500/9,000/6,800/5,000/3,300	200	150	P.P.—10, T20, TZ20, HY25, 46, 801, 825, 841	B	90	D	4 3/4″	4″ x 5 1/4″	9.7	**21.30**
‡A-2908	Pri—12,000/7,200 CT Sec—6,250/5,350/4,500/3,000	260	220	P.P.—RK18, T20, TZ20, HY25, RK31, 35T, 50T, 800, 801, 830B, 1623	B	120	D	4 3/4″	4″ x 5 5/8″	9.7	**22.90**
A-3829	Pri—9,000/6,900 CT Sec—6,250/5,000/4,000/3,300	250	300	P.P.—RK12, HY25, 35T, HY40Z, T40, TZ40, 100TL, HK354, 756, 809, 830B	B	175	D	4 3/4″	4″ x 6 1/8″	11.4	**23.75**

POLY-PEDANCE MODULATION MULTI-TAPPED UNITS TO PROPERLY MATCH THE OUTPUT OF THE MODULATOR STAGE TO THE MODULATED LOAD. WILL MATCH ALL COMMON IMPEDANCES OF CLASS "B" MODULATOR (2,000 to 20,000 OHMS) TO CLASS "C" LOAD IMPEDANCES OF 2,000 TO 20,000 OHMS.

The number of excellent transmitting tubes available is constantly increasing. R.F. applications, too, have increased and it is sometimes difficult to obtain the correct modulation transformer suitable for matching some given modulator tubes or R.F. load. These units give an almost unlimited range in power and impedance ratings to assure a correct impedance match in all cases.

Part No.	Max. Watts	Max. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3891	15	Pri—100 ma. Sec—100 ma.	D	3 3/16″	2 5/8″ x 2 7/8″	2.5	**$13.60**
A-3892	30	Pri—150 ma. Sec—150 ma.	D	4″	3 1/4″ x 3 5/8″	4.3	**17.20**
A-3893	60	Pri—180 ma. Sec—180 ma.	D	4″	3 1/4″ x 4 1/8″	6.2	**18.60**
A-3894	125	Pri—225 ma. Sec—225 ma.	D	4 3/4″	4″ x 4 5/8″	9.4	**22.50**
A-3898	300	Pri—260 ma. Sec—260 ma.	FS	7 3/4″	7 3/8″ x 8 1/8″	37.9	**70.65**
A-3899	600	Pri—500 ma. Sec—500 ma.	FS	11 1/4″	7 3/8″ x 9″	70.0	**140.70**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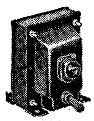
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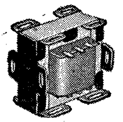
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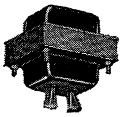
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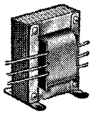
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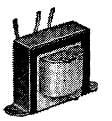
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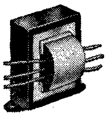
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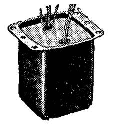
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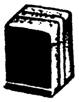
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TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

FILAMENT TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

FILAMENT TRANSFORMERS WITH SINGLE SECONDARY

Part No.	Secondary		R.M.S. V. Insul.	Primary Volts#	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
	Volts	Amperes							
P-4026	2.5	1.5	2,500	117	A	1⅝″	2⅞″ x 1½″	0.7	**$3.60**
P-4082	2.5 CT	2.5	2,500	117/107	TD	2¹¹⁄₁₆″	2¾″ x 2³⁄₁₆″	1.5	**7.25**
P-6133	2.5 CT	5.0	7,500	117	S	2¹¹⁄₁₆″	3⁵⁄₁₆″ x 2¼″	1.5	**5.70**
P-4083	2.5 CT	6.0	2,500	117/107	C	3³⁄₁₆″	2⅝″ x 2⅜″	2.2	**7.60**
P-3024	2.5 CT	10.0	2,500	117/107	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.5	**7.50**
P-3060	2.5 CT	10.0	10,000	117	B	3½″	2⅞″ x 2½″	2.5	**6.90**
‡P-3025	2.5 CT	10.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	10.7	**22.35**
P-3026	5.0 CT	3.0	2,500	117/107	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.4	**7.50**
P-4088	5.0 CT	3.0	2,500	117	B	3⅛″	2½″ x 2½″	1.8	**5.45**
***P-6467**	5.0 CT	3.0	2,500	117	A	2	3⁵⁄₁₆″ x 2″ 2¹³⁄₁₆″	1.4	**4.80**
P-3062	5.0 CT	6.0	2,500	117	B	3⅛″	2½″ x 2½″	2.3	**6.35**
P-5000	5.0 CT	6.0	2,500	117/107	C	3³⁄₁₆″	2⅝″ x 2⅞″	3.1	**8.70**
P-6135	5.0 CT	10.0	2,500	117	N	3⅛″	2½″ x 2⅞″	3.0	**7.05**
P-4086	5.0 CT	14.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	12.3	**25.45**
P-6302	5.0 CT	22.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	13.5	**27.80**
***P-6468**	5.0 CT	30.0	2,500	117/107	D	4⁵⁄₁₆″	3⁹⁄₁₆″ x 3⅞″ 2¾″ x 2¹¹⁄₁₆″	4.3	**16.25**
‡P-6305	5.0 CT	30.0	10,000	117/107	FB	5⅛″	4¼″ x 10″	18.3	**34.70**
P-6137	5.25 CT	13.0	2,500	117	N	3⅛″	3⅛″ x 3¼″	5.2	**11.60**
P-6134	6.3 CT	1.2	3,000	117	A	1⅝″	2⅞″ x 1⅝″	0.8	**2.90**
***P-8190**	6.3	1.2	5,000	117	A	2	3¼″ x 1¾″ 2¹³⁄₁₆″	1.0	**3.80**
***P-8191**	6.3	1.2	5,000	6.3	A	2	3¼″ x 1¾″ 2¹³⁄₁₆″	1.0	**4.10**
P-5014	6.3 CT	3.0	2,500	117	B	3⅛″	2½″ x 2½″	2.0	**5.15**
***P-6466**	6.3 CT	3.0	2,500	117	A	2	3⁵⁄₁₆″ x 2″ 2¹³⁄₁₆″	1.4	**4.65**
P-4019	6.3 CT	4.0	2,500	117/107	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.7	**7.20**
P-3064	6.3 CT	6.0	2,500	117	B	3⅛″	2½″ x 2⅞″	2.4	**6.25**
P-4089	6.3 CT	6.0	2,500	117/107	C	3⅝″	3″ x 3⅛″	3.5	**8.25**
P-6308	6.3 CT	10.0	2,500	117/107	N	3½″	2⅞″ x 2¾″	3.4	**7.50**
P-6309	6.3 CT	20.0	2,500	117/107	N	4⅝″	3¾″ x 3″	6.7	**14.20**
P-6164	6.3/5/2.5	2.5	2,500	117	J	2¹¹⁄₁₆″	3⁵⁄₁₆″ x 2¼″	1.7	**5.85**
P-5015	7.5 CT	4.0	2,500	117	B	3⅛″	2½″ x 2⅞″	2.7	**6.35**
P-4091	7.5 CT	5.0	2,500	117/107	C	3⅝″	3″ x 3″	3.4	**10.05**
P-6138	7.5 CT	8.0	2,500	117	N	3⅞″	3⅛″ x 2⅞″	4.7	**9.20**
P-4092	7.5 CT	8.0	2,500	117/107	C	4″	3¼″ x 3⅜″	4.7	**10.20**
P-5016	10.0 CT	4.0	2,500	117	B	3½″	2⅞″ x 2⅝″	3.3	**7.65**
P-4096	10.0 CT	5.0	2,500	117/107	C	4″	3¼″ x 3⅛″	4.0	**9.10**
P-6139	10.0 CT	8.0	2,500	117	N	3⅞″	3⅛″ x 3⅛″	4.9	**9.30**
P-4097	10.0 CT	8.0	2,500	117/107	C	4″	3¼″ x 3⅝″	5.2	**10.10**
P-5002	10.0 CT	12.0	7,500	117/107	FA	5⅛″	4¼″ x 8½″	14.7	**26.75**
P-3020	11.0 CT	10.0	2,500	117/107	C	4¾″	4″ x 3½″	7.7	**14.95**
P-8130	12.6 CT	2.0	1,500	117	A	2″	3¼″ x 2″	1.4	**5.15**
P-6469	25.2	1.0	1,500	117	A	2″	3¼″ x 2″	1.4	**4.90**

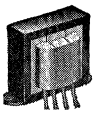
FILAMENT TRANSFORMERS WITH MULTIPLE SECONDARY

P-6144	2.5 CT 5.0 CT 6.3 CT	3.5 3.0 3.0	2,500 2,500 2,500	117	C	3⅝″	3″ x 3⅛″	3.7	**$11.70**
P-6338	2.5 5.0 5.0 CT 6.3 CT	3.0 3.0 2.0 3.0	2,500 2,500 2,500 2,500	117	N	3½″	2⅞″ x 2¾″	3.4	**11.10**
P-5009	5.0 CT 6.3 CT	3.0 6.0	2,500 2,500	117/107	C	4″	3¼″ x 3¼″	4.5	**13.35**
P-5008	5.0 CT 6.3 CT	4.0 3.6	2,500 2,500	117/107	C	3⅝″	3″ x 3¼″	3.8	**11.75**
P-4022	5.0 CT 6.3 CT	6.0 6.0	2,500 2,500	117/107	C	4″	3¼″ x 3⅜″	4.8	**12.55**
P-6333	5.0 5.0 6.3 CT 7.5/6.3 CT	3.0 3.0 4.0 3.0	2,500 2,500 2,500 2,500	117	B	3½″	2⅞″ x 3⅞″	4.7	**12.90**

TUBE CHECKER MULTI-TAPPED FILAMENT TRANSFORMER

Part No.	Secondary Volts	Primary Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-1834-3	1.1/ 1.4/ 1.5/ 2.0/ 2.5/ 3.0/ 3.3/ 5.0/ 6.3/ 7.0/ 7.5/ 12/ 25/ 30/ 35/ 50/ 70/ 85/ 110/ 117	125/115/105	A	2⅝″	4″ x 2″	2.4	**$14.20**

#All primary windings for 60 cycle operation. ‡Designates part number to be removed from next catalog.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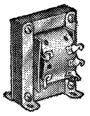
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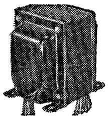
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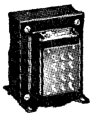
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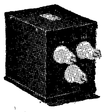
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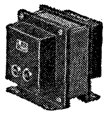
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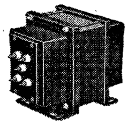
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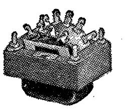
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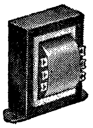
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Radio's Master—18th Edition

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TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

PLATE TRANSFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

PLATE TRANSFORMERS

Part No.	D.C. Volts	Sec. A.C. Volts at Plate	D.C. Ma. CCS	D.C. Ma. ICAS	Pri. Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-8040	400 40	500/40–0–500	300	375	115	C	4¾″	4″ x 4½″	9.8	**$19.05**
P-8041	500 400 40	615/520/40–0–520/615	250	310	115	C	4¾″	4″ x 5⅛″	13.6	**20.65**
P-8042	600 400 40	770/510/40–0–510/770	300	375	115	C	4¾″	4″ x 6⅜″	18.0	**30.45**
P-8043	750 600 40	950/750/40–0–750/950	300	375	115	FS	7⅝″	6⅛″ x 8″	29.0	**56.70**
‡P-8045	1000 750	1225/850–0–850/1225	250	310	115	FS	7⅝″	6⅛″ x 8″	28.5	**61.00**
P-8025	1000 750	1230/940–0–940/1230	400	500	115	FS	7⅝″	6⅛″ x 8¾″	35.0	**71.95**
P-8026	1250 1000	1475/1175–0–1175/1475	300	375	115	FS	7¾″	7⅜″ x 8¼″	36.5	**68.45**
P-8027	1250 1000	1510/1210–0–1210/1510	500	625	115	FS	7¾″	7⅜″ x 9″	45.2	**80.90**
P-8028	1500 1250	1740/1460–0–1460/1740	300	375	115	FS	7¾″	7⅜″ x 8½″	38.7	**72.45**
‡P-8029	1500 1250	1775/1500–0–1500/1775	500	625	115–230	FS	11¼″	7⅜″ x 8¾″	65.0	**112.35**
‡P-8030	1750 1500	2100/1800–0–1800/2100	300	375	115	FS	7¾″	7⅜″ x 9″	45.8	**79.90**
‡P-8031	1750 1500	2075/1775–0–1775/2075	500	625	115–230	FS	11¼″	7⅜″ x 8¾″	65.5	**110.60**
‡P-8032	2000 1750	2400/2100–0–2100/2400	300	375	115	FS	7¾″	7⅜″ x 9¼″	46.0	**94.55**
P-8033	2000 1750	2375/2065–0–2065/2375	500	625	115–230	FS	11¼″	7⅜″ x 9½″	77.0	**138.35**
P-8034	2500 2000	2900/2385–0–2385/2900	300	375	115–230	FS	11¼″	7⅜″ x 8¾″	62.8	**134.50**
P-8035	2500 2000	2950/2375–0–2375/2950	500	575	115–230	FS	11¼″	7⅜″ x 9¾″	80.0	**146.90**
‡P-9920	2500§ 2000	2980–0–2980 2450–0–2450	350 500	450 625	117	Y	9⅛″	11⅛″ x 9⅞″	122.0	**229.85**

PLATE TRANSFORMERS—NEW FUNCTIONAL UNITS

No exposed terminals. Insulated leads provide protected routing to circuits. Simplified design offers ease of mounting and neat, convenient circuit wiring. No difficult cutouts needed. Each of these units is "all transformer," taking a minimum of chassis space. No bulky casing or protruding, "hot" terminals to increase mounting area.

D.C. output rated CCS at load terminals of single-section reactor-input filter, ICAS with single-section capacitor-input filter. Primaries for 117 volts, 60 cycles.

Type Part No.	Secondary A.C. Volts	D.C. Output Volts	D.C. Output Ma.	Type Filter	Rectifier	List Price
PC8301	415-0-415	300 425	200 160	Reactor Input Capacitor Input	5U4G 5U4G	**$12.05**
PC8302	515-0-515	385 500	235 200	Reactor Input Capacitor Input	5U4G 5R4GY	**15.45**
PC8303	665-0-665	500 750	250 200	Reactor Input Capacitor Input	5R4GY 5R4GY	**19.55**
PC8304	750-0-750	600 850	265 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**21.90**
PC8305	920-0-920	750 1000	250 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**22.85**
PC8306*	920-0-920	750 1100	150 125	Reactor Input Capacitor Input	5R4GY 5R4GY	**23.20**
	500-0-500	380 550	150 125	Reactor Input Capacitor Input	5U4G 5U4G	

D.C. output rated at load terminals of single-section, reactor-input filter with full-wave mercury-vapor rectification. Primaries for 117 volts, 60 cycles.

Type and Part No.	Secondary A.C. Volts	D.C. Volts	D.C. Ma. CCS	D.C. Ma. ICAS	List Price
PT8311	1200-0-1200	1000	225	280	**$25.20**
PT8312	1200-0-1200	1000	325	405	**41.70**
PT8313	1475-0-1475	1250	250	310	**39.95**
PT8314	1790-0-1790	1500	225	280	**46.10**
PT8315	2065-0-2065	1750	200	250	**46.50**

BIAS SUPPLY TRANSFORMERS

Part No.	High Voltage Supply A.C. Volts at D.C. Milliamps.	Rectifier Fil. Volts	Rectifier Fil. Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6317	200/170/130/90/0/90/130/170/200 @ 200 ma.	5.0	3.0	CD	4″	3¼″ x 3⅝″	4.9	**$17.20**
P-6318	450/400/350/250/0/250/350/400/450 @ 200 ma.	5.0	3.0	CD	4 5/16″	3⅝″ x 4⅛″	7.0	**19.55**

All Primary Windings for 60 cycle operation. ‡Designates part number to be removed from next catalog.
§Output changed by means of tap on primary winding. Rating is for a single section choke input filter using a 6 mfd. condenser.

ISOLATION AND AUTOFORMERS

CHICAGO STANDARD TRANSFORMER CORPORATION

STRAIGHT ISOLATION—125/115/105 VOLTS TO 115 VOLTS.

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6160	100	125/115/105	115	KA	4¾″	4″ x 3⅝″	7.0	**$19.00**
P-6161	250	125/115/105	115	KA	4¾″	4″ x 5⅜″	14.2	**35.75**
P-6298	500	125/115/105	115	FK	7⅝″	6⅛″ x 7⅛″	28.0	**55.95**
P-6125	1000	125/115/105	115	FK	7¾″	7⅜″ x 6⅞″	34.8	**73.35**
P-6123	1500	125/115/105	115	FK	7¾″	7⅜″ x 8½″	49.8	**91.50**

STEP-DOWN ISOLATION—250/230/210 VOLTS TO 115 VOLTS.

P-6383	100	250/230/210	115	KA	4¾″	4″ x 3⅝″	7.3	**$20.80**
P-6385	250	250/230/210	115	KA	4¾″	4″ x 5⅜″	14.2	**33.70**
P-6387	500	250/230/210	115	FK	7⅝″	6⅛″ x 7⅛″	29.5	**57.75**
P-6389	1000	250/230/210	115	FK	7¾″	7⅜″ x 6⅞″	33.8	**74.40**
P-6390	1500	250/230/210	115	FK	7¾″	7⅜″ x 8½″	50.3	**102.95**

ISOLATION TESTING TRANSFORMER

P-6415	350	117	105/115/125	KC	5⅜″	4½″ x 5¾″	17.0	**$30.25**

Large enough to handle almost any television or radio receiver on test. Has three standard receptacles, providing output voltages of 105, 115 and 125, with 117 volts, A.C., from the line for testing purposes or for correction of high or low line voltage. Has electrostatic shield.

AUTOFORMERS

P-6287	40	230	115	—	4½″	3″ Diam. can	2.7	**$ 9.50**
P-5062	80	230	115	K	3⅝″	3″ x 3¼″	3.8	**10.20**
P-5063	100	230	115	K	4″	3¼″ x 3¼″	4.5	**11.55**
P-5064	150	230	115	K	4$\frac{5}{16}$″	3⅝″ x 3⅝″	5.2	**13.35**
P-5065	300	230	115	K	4¾″	4″ x 4⅛″	8.8	**17.60**
P-6141	500	230	115	K	4¾″	4″ x 5⅛″	13.7	**23.10**
P-6124	1000	230	115	FK	7⅝″	6⅛″ x 6½″	24.5	**50.30**
P-6299	150	115	150/140/130/120/110/100/90	KA	4″	3¼″ x 4¾″	6.0	**19.05**

Testing Autoformer—Designed especially for various service and test application. Incorporates a convenient tap switch to permit variable voltages from 90 to 150 volts. It may be used to apply an overload voltage to amplifiers, radio receivers, or other electronic devices being serviced, which will indicate and cause suspected parts to break down. Primary equipped with 6 ft. approved cord and plug. Secondary connected to female receptacle.

LINE ADJUSTING AUTOFORMERS

Stancor Line Adjusters permit operation of electrical devices at 115 volts when the supplied voltage is 65, 75, 90, 100, 115, 130 or 145. They are also useful for altering a 115 volt line above or below that level. The line adjuster input is correctable in seven steps by means of a selector switch and is accurately indicated by an output voltmeter. The meter has a convenient red-line marker at 115 volts on a 150 volt scale.

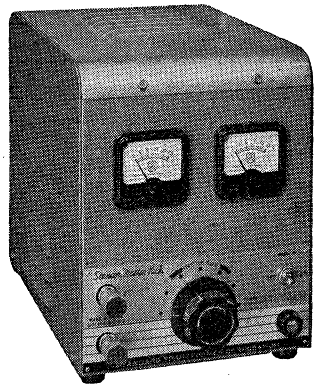
Type and Part No.	Va.*	Input Voltage 50-60 Cycle	Output Voltage	Height	Base Area	Shpg. Wt. in Lbs.	List Price
PV-6441	150	65/75/90/100/115/130/145	115	5½″	3⅞″ x 5⅜″	6.4	**$21.95**
PV-6442	350	65/75/90/100/115/130/145	115	5½″	3⅞″ x 6⅛″	10.5	**27.90**
PV-6443	500	65/75/90/100/115/130/145	115	5½″	3⅞″ x 6⅞″	15.0	**34.75**
PV-6444	750	65/75/90/100/115/130/145	115	6$\frac{5}{16}$″	4½″ x 8⅛″	19.0	**52.40**

*Watts to pure resistive load. To other types of loads, multiply rating of line adjuster by power factor of load for actual wattage.
#All Primary Windings for 60 cycle operation.

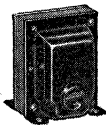
SIX VOLT DC POWER SUPPLY

The Stancor Model 752 Master Pack replaces bothersome storage batteries, meeting the needs of the serviceman for a six volt power supply that is practical in design, convenient to use, and large enough to handle heavy-duty jobs.

The Stancor Master Pack is conservatively rated to provide 6 volts D.C. at 12.5 amperes continuously from the standard 115 volt, 50–60 cycle source. An instantaneous rating of 25 amperes makes the Model 752 ideal for demonstrating or testing auto radios with push-button or floor-switch magnetic tuning. Reserve power permits simultaneous operation of two or more receivers. Separate voltmeter and ammeter afford a continuous, visual check of voltage and current delivered to load. Meter needles are damped to prevent annoying "wiggle." The extractor-type line fuse gives positive protection against damage from excessive overloads. Thorough filtering, less than 3% ripple through a choke-capacitor filter, allows use in applications where the hum from a poorly filtered power supply cannot be tolerated. Selenium rectifiers are used for dependability and cooler operation. Controls and terminals are conveniently located on the front panel. The sturdy steel case is finished in durable gray hammertone. No detail has been slighted in making the Stancor Model 752 Master Pack the outstanding power supply for the service bench. Size overall, 9½″ high, 7⅜″ wide, 12″ long. Weight in carton, 30 pounds.



MODEL 752 MASTER PACK **USERS NET** $43.90



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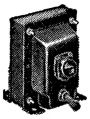

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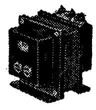

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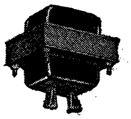

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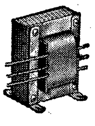

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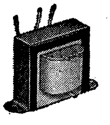

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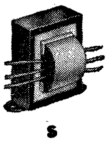

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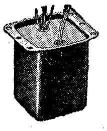

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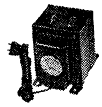


PV

TRIAD TRANSFORMER CORP.

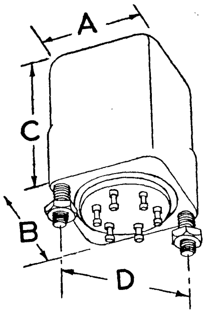
MINIATURE AUDIO Transformers

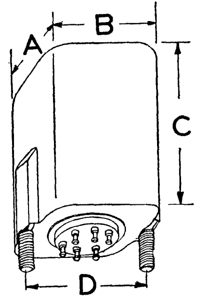
Tiny tubes, transistors, condensers, resistors, etc., inevitably create a demand for miniature transformers to complete really portable gear. Triad's superior techniques in the handling of very fine wire allow these designs to attain minute size without compromise in types of insulation or moisture protection. These are the "world's smallest hermetically sealed transformers."

Hermetically Sealed — JAF Series

Type No.	Application	Impedance Primary	Impedance Secondary	Max. Level VU	Shielding db.	Freq. Resp.	Case No.	List Price
JAF-1	Line or mike to grid.	600/250/50	5000	0	45	60-15000	AF	$16.00
JAF-2	Line or mike to grid. Hi-gain	600/250/50	250000	0	45	100-15000	AF	16.50
JAF-3	Line or mike to p.p. grids.	600/250/50	60000 C.T.	0	45	60-15000	AF	16.50
***JAF-5**	Dynamic mike or speaker VC to grid.	30/12/4	50000	0	45	50-15000	AF	16.50
JAF-11	Plate to grid.	15000	50000	10	45	60-15000	AF	15.50
JAF-12	Plate to p.p grids.	15000	60000 C.T.	10	45	60-15000	AF	16.00
JAF-13	Plate to p.p grids. DC in pri.	15000	95000 C.T.	10	45	350-7000	AF	16.50
***JAF-14**	Mike or line to grid.	200	½ megohm	0	45	voice	AF	16.50
***JAF-15**	Single plate to single grid.	15000	1 megohm	0	45	voice	AF	16.50
JAF-21	Plate to line.	15000	600/250/50	10	45	60-15000	AF	16.00
JAF-22	Plate to line. DC in pri.	15000	600/250/50	10	45	350-7000	AF	16.00
JAF-23	P.p. plates to line.	20000 C.T.	600/250/50	10	45	60-15000	AF	16.50
JAF-31	Line to line.	600/250/50	600/250/50	10	45	60-15000	AF	16.00
JAF-101	Coupling Reactor.	50 h.-1 Ma.			45		AF	14.50

*New item.





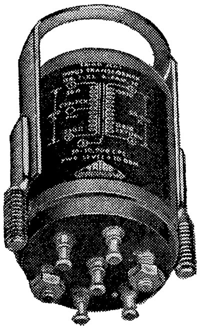
MIL-T-27 Cases

	AF	AG	AH	AJ
A	¾	1	$1\frac{5}{16}$	1⅝
B	¾	1	$1\frac{5}{16}$	1⅝
C	1⅛	1⅜	1¾	2⅜
D	¶$\frac{27}{32}$	$1\frac{1}{32}$	$1\frac{11}{32}$	1⅝
F	⅝	¾	⅞	⅞
Wt.	1 oz.	2½ oz.	4 oz.	9 oz.

¶4-40 Studs.

Hermetically Sealed VOICE FREQUENCY Transformers

Type No.	Application	Impedance Primary	Impedance Secondary	Max. Level VU	Freq. Resp.	Case No.	List Price
HS-71	Plate to line. DC in pri.	10000 (10 Ma.)	600/150	33	300-5000	AH	$16.00
HS-73	Plate to line & VC.DC in pri.	5000 (40 Ma.)	4-8-16-250-500	37	300-5000	AJ	18.30
HS-75	P.p. to line & VC.	10000 C.T. (50 Ma. bal.)	4-8-16-250-500	40	300-5000	EB	20.40

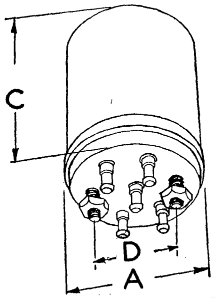


Uncased Trijets

Type No.	Application	Primary Impedance	Secondary Impedance	List Price
T-1	Line or mike to grid.	600/250/50	50000	$ 5.90
***T-2**	Line or mike to grid. Hi-gain.	600/250/50	250000	6.00
***T-3**	Line or mike to p.p. grids.	600/250/50	60000C.T.	6.00
T-5	Dynamic mike or speaker VC to grid.	30/12/4	50000	5.90
***T-11**	Plate to grid.	15000	50000	5.85
***T-12**	Plate to p.p grids.	15000	60000 C.T.	5.90
***T-13**	Plate to p.p. grids. DC in pri.	15000	95000 C.T.	6.00
***T-20**	Plate to line.	15000	600/250/50	5.85
T-21	Plate to line.	30000	50	5.85
***T-22**	Plate to line. DC in pri.	15000	600/250/50	5.85
***T-23**	P.p. plates to line.	20000 C.T.	600/250/50	6.00
***T-31**	Line to line.	600/250/50	600/250/50	6.00
T-101	Coupling Reactor.	50 henries at 1 Ma.		5.35

*New item. NOTE: Sizes of above items are ⅝"x¾"x$\frac{9}{16}$". Wt. less than ½ oz.

JO Series



	JOA	JOB
A	$\frac{15}{16}$ dia.	$\frac{15}{16}$ dia.
B	Round	Round
C	$1\frac{13}{32}$	$1\frac{25}{32}$
D	$\frac{9}{16}$	$\frac{9}{16}$
F	⅞	⅞
Wt.	1¼ oz.	1½ oz.

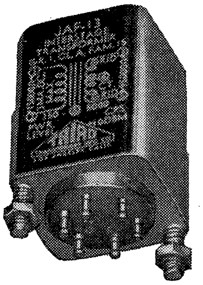
Hermetically Sealed — JO-Series

Type No.	Application	Impedance Primary	Impedance Secondary	Max. Level VU	Shielding db.	Freq. Resp.	Case No.	List Price
JO-1	Line or mike to grid.	600/250/50	50000	0	45	50-15000	JOA	$15.50
JO-2	Line or mike to grid. Hi-gain.	600/250/50	250000	0	45	300-7000	JOA	16.00
JO-3	Line or mike to p.p grids.	600/250/50	60000 C.T.	0	45	50-15000	JOA	16.00
JO-5	Dynamic mike or speaker VC to grid.	30/12/4	50000	0	45	50-15000	JOA	16.00
JO-11	Plate to grid.	15000	50000	10	45	50-15000	JOB	15.00
JO-12	Plate to p.p. grids.	15000	60000 C.T.	10	45	50-15000	JOB	15.50
JO-13	Plate to p.p. grids. DC in pri.	15000	95000 C.T.	10	45	300-7000	JOB	16.00
JO-21	Plate to line.	15000	600/250/50	10	45	50-15000	JOB	15.50
JO-22	Plate to line. DC in pri.	15000	600/250/50	10	45	300-2000	JOB	15.50
JO-23	P.p. plates to line.	20000 C.T.	600/250/50	10	45	50-15000	JOB	16.00
JO-31	Line to line.	600/250/50	600/250/50	10	45	50-15000	JOB	15.50
JO-101	Coupling Reactor.	50 h.-2 Ma.			45			14.00

TRIAD TRANSFORMER CORP.

TRANSISTOR Transformers Hermetically Sealed

Currently, transistors are commercially available and offer great possibilities for savings in weight, size, and battery consumption in certain classes of electronic equipment. Certain transformers in the Triad line are well adapted for use in this service and these are listed herewith. These include transformers, both cased and uncased, for all applications in connection with both NPN and PNP type of transistors. Other types listed in this catalog can be adapted to transistor circuits and certainly Triad quality will result in maximum performance and best appearance of the equipment in which these are used.

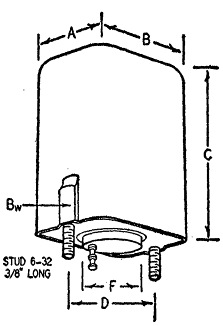


JAF Series

Type No.	Application	Impedance Winding #1	Impedance Winding #2	Max. Level VU	Shielding db.	Case No.	List Price
JAF-1	Collector to Emitter or Hi impedance to Emitter.	50000	600/250/50	10	45	AF	**$16.00**
JAF-2	Collector to Emitter or Very Hi impedance to Emitter.	250000	600/250/50	10	45	AF	**16.50**
***JAF-5**	Collector to VC or VC to Collector.	50000	30/12/4	10	45	AF	**16.50**
JAF-11	Collector to Hi impedance or matching impedance.	50000	15000	10	45	AF	**15.50**
JAF-21	Collector to line or Low impedance collector to Emitter.	15000	600/250/50	10	45	AF	**16.00**
JAF-23	Same as above exept Winding #1 C.T.	20000 C.T.	600/250/50	10	45	AF	**16.50**
JAF-31	Emitter to line or line to Emitter.	600/250/50	600/250/50	10	45	AF	**16.00**
HS-71	Hi level collector to line, etc.	10000	600/150	33	0	AH	**16.00**

*New item.

Uncased TRANSISTOR Transformers



Type No.	Application	Impedance Winding #1	Impedance Winding #2	Max. Level VU	Dimensions H	Dimensions W	Dimensions D	List Price
T-1	Collector to Emitter or Hi impedance to Emitter.	50000	600/250/50	10	5/8	3/4	9/16	**$ 5.90**
***T-2**	Collector to Emiter or Very Hi impedance to Emitter.	250000	600/250/50	10 10	5/8 5/8	3/4 3/4	9/16 9/16	**6.00** **5.90**
T-5	Collector to VC or VC to Collector.	50000	30/12/4					
***T-11**	Collector to Hi impedance or matching impedance.	50000	15000	10	5/8	3/4	9/16	**5.85**
***T-20**	Collector to line or low impedance collector to Emitter.	15000	600/250/50	10	5/8	3/4	9/16	**5.85**
T-21	Collector to speaker or line.	30000	50	10	5/8	3/4	9/16	**5.85**
***T-23**	Collector to line or low impedance collector to Emitter. Winding #1 C.T.	20000 C.T.	600/250/50	10	5/8	3/4	9/16	**6.00**
***T-31**	Emitter to line or line to Emitter.	600/250/50	600/250/50	10	5/8	3/4	9/16	**6.00**

*New item.

AUDIO INPUT Transformers

	GP-1	GP-2	GP-3
A	7/8	1 1/16	1 1/4
B	1 1/16	1 1/4	1 1/2
Bw	1 1/8	1 11/32	1 9/16
C	1 11/16	2 1/4	2 3/8
D	1 3/32	1 3/16	1 1/2
F	3/4	3/4	15/16
Wt.	3 oz.	5 1/2 oz.	8 oz.

	GP-4	GP-5
A	1 7/16	1 5/8
B	1 3/4	2
C	2 1/2	2 3/4
D	1 1/2	1 1/2
F	15/16	15/16
Wt.	12 oz.	17 oz.

Type No.	Application	Primary Impedance	Turn Radio	Freq. Resp.	Max. Level VU	Shielding	Case No.	List Price
HS-1	Univ. line or mike to grid.	600‡/250‡/150/62.5	1:11.3	20-20000	10	P-5	GP-4	**$38.50**
HS-11	Same as above.					P-1	GP-2	**26.40**
HS-3	Univ. line or mike to p.p. class A grids.	600‡/250‡/150/62.5	1:14 overall	20-20000	10	P-5	GP-5	**43.50**
HS-4	Same as above.					P-3	GP-4	**39.70**
HS-14	Same as above.					P-1	GP-3	**28.60**
HS-5	Dynamic mike to grid—Hi-gain.	30-50	1:65.7	50-10000	0	P-5	GP-4	**38.50**
HS-8	Line to p.p. class A grids—Hi-level.	600‡/250‡/150/62.5	1:14 overall	20-20000	20	P-1	GP-4	**38.50**

‡Balanced center tap available.

AUDIO INTERSTAGE Transformers

Type No.	Application	Primary Impedance	Turn Radio	Freq. Resp.	Max. Level Pri. Volts	Shielding	Case No.	List Price
HS-23	Single plate to single grid.	15000	1:2.7	20-20000	25	P-3	GP-4	**$26.40**
HS-25	Single plate to p.p. class A grids.	15000	1:2.72 overall	20-20000	15	P-1	GP-4	**28.60**
HS-35	Single plate to p.p. class A grids.	15000	1:2.72 overall	20-20000	20	P-1	GP-2	**21.80**
HS-27	P.p. plates to p.p. class A grids.	20000/5000	1:1.72 overall	20-20000	50	P-1	GP-4	**29.70**
HS-29	Bridging-line to 1 or 2 grids.	20000/5000	1:2 overall	20-20000	20	P-5	GP-4	**38.50**
HSM-31	P.p. 6J5's or parallel-fed 6F6 triode to AB grids.	20000/5000	1:1 or 2:1	20-20000	240		FA	**25.00**

SHIELDING

P-1—One nickel-alloy high permeability shield—45 db. reduction in pickup.

P-3—Two nickel alloy shields interleaved with one heavy copper shading ring—70 db. reduction in pickup.

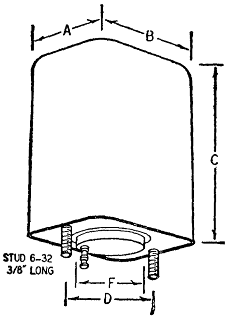
P-5—Three nickel alloy shields interleaved with two heavy copper shading rings—95 db. reduction in pickup.

TRIAD TRANSFORMER CORP.

AUDIO LOW LEVEL OUTPUT, MIXING, MATCHING and BRIDGING Transformers

Type No.	Application	Impedance Primary	Impedance Secondary	Freq. Resp.	Max. Level VU	Shielding	Case No.	List Price
HS-50	Plate to universal line.	15000	600‡/250‡/ 150/62.5	20-20000	26	P-3	GP-4	**$29.70**
HS-60	Plate to universal line.	15000	600‡/250‡/ 150/62.5	20-20000	10	P-1	GP-2	**21.80**
HS-52	P.p. plates to universal line.	20000/5000	600‡/250‡/ 150/62.5	20-20000	26	P-1	GP-4	**32.50**
HS-54	Bridging, single or p.p plates to univ. line.	20000/5000	600‡/250‡/ 150/62.5	20-20000	10	P-5	GP-4	**38.50**
HS-56	Universal line to universal line.	600‡/250‡/ 150/62.5	600‡/250‡/ 150/62.5	10-30000	20	P-3	GP-4	**32.50**
HS-66	Same as above.			10-30000	20	P-1	GP-3	**27.50**

‡Balanced center tap available.



Hermetically Sealed POWER COMPONENTS

50-60 Cycle

The MIL-T-27 procurement specification is written to assure our military services of transformers which will give continuous and unfailing service under extremely adverse conditions of climate and overload. Good commercial equipment also must use only the best obtainable components since failure would cost much more in "down-time" than the savings in cost of parts.

TRIAD "HS" Series Power Transformers are designed to fill these stringent applications. These are the finest transformers available.

Combined PLATE and FILAMENT Transformers

Primary 115 volts

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments	Case No.	List Price
†HSM-201	500 C.T.	20	6.3 C.T.-2A.	GA	**$16.75**
HSM-203	600 C.T.	50	6.3 C.T.-2.5A.-5-2A.	JB	**24.50**
HSM-205	700 C.T.	70	6.3 C.T.-3A.-5-3A.	JA	**27.50**
HSM-207	700 C.T.	120	6.3 C.T.-5A.-5-3A.	KA	**30.80**
HSM-211	700 C.T.-70 v. bias tap	150	6.3 C.T.-6A. 2.5 C.T.-5A.-5-3A.	LA	**33.00**
HSM-215	800/700 C.T.-70 v. bias tap	200	6.3 C.T.-6A. 2.5 C.T.-10A.-5-6A.	MA	**41.50**
HS-217	800/700 C.T.-70 v. bias tap	300	6.3 C.T.-8A. 2.5 C.T.-10A.-5-6A.	Spec.	**48.00**
***HSM-219**	(115-230 pri.) 760/1600 C.T. (Choke input)	40/230		Spec.	**69.00**

*New item. †Low flux density—for pre-amplifier service. All types electrostatically shielded.

FILAMENT Transformers

Type No.	Primary Volts	Secondary Volts	Secondary Amperes	Insulation Test Voltage	Case No.	List Price
HSM-223	115	6.3	.6	1500	AJ	**$10.25**
HSM-225	105-115-125	6.3 C.T.	2	2500	EA	**9.90**
HSM-227	105-115-125	§6.3 C.T.-6.3	3-3	2500	GA	**18.00**
HSM-229	105-115-125	6.3 C.T.	8	2500	JB	**16.50**
HSM-228	105-115-125	§6.3 C.T.-6.3	6-6	2500	JA	**27.60**
HSM-231	105-115-125	6.3 C.T.-5 C.T.	5-3	2500	JB	**17.60**
HSM-235	105-115-125	2.5 C.T.-10 C.T.	10-10	7500-2500	MA	**23.00**

§Series or parallel connections.

General Purpose SMOOTHING REACTORS

Type No.	Current DC Ma.	Inductance Henries	Resistance Ohms	Test Voltage	Case No.	List Price
HSM-301	20	30	1000	1500	EA	**$10.30**
HSM-305	70	15	300	2500	GB	**11.90**
HSM-307	120	15	185	2500	JB	**15.10**
HSM-309	150	9	115	2500	JB	**15.90**
HSM-315	200	10	100	2500	JA	**17.35**
HSM-319	300	10	85	2500	LA	**24.20**

Standard MIL-T-27 Case Sizes

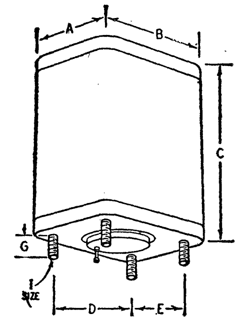
	EA	EB	FA	FB	GA	GB
A	1 15/16	1 15/16	2 5/16	2 5/16	2 3/4	2 3/4
B	1 13/16	1 13/16	2 1/16	2 1/16	2 3/8	2 3/8
C	2 3/4	2 7/16	3 1/8	2 1/2	3 13/16	2 13/16
D	1 3/8	1 3/8	1 11/16	1 11/16	2 1/8	2 1/8
E	1 1/4	1 1/4	1 7/16	1 7/16	1 3/4	1 3/4
G	3/8	3/8	3/8	3/8	3/8	3/8
I	6-32	6-32	6-32	6-32	6-32	6-32
Wt. lbs.	1	15 oz.	1 3/4	1 1/2	2	1 3/4

	HA	HB	JA	JB	KA	KB
A	2 5/8	2 5/8	3 1/16	3 1/16	3 3/8	3 3/8
B	3 1/16	3 1/16	3 9/16	3 9/16	3 15/16	3 15/16
C	4 1/4	3 3/16	4 7/8	3 7/8	5 1/4	4 5/16
D	2 19/64	2 19/64	2 5/8	2 5/8	3	3
E	1 55/64	1 55/64	2 1/8	2 1/8	2 7/16	2 7/16
G	3/8	3/8	3/8	3/8	1/2	1/2
I	8-32	8-32	8-32	8-32	10-32	10-32
Wt. lbs.	2 1/2	2 1/4	4 1/2	4	7 3/4	7

	LA	LB	MA	MB	NA	NB
A	3 11/16	3 11/16	4	4	4 5/16	4 5/16
B	4 5/16	4 5/16	4 11/16	4 11/16	5 1/16	5 1/16
C	5 9/16	4 1/2	6	4 15/16	6 13/16	5 1/2
D	3 5/16	3 5/16	3 11/16	3 11/16	4 1/16	4 1/16
E	2 11/16	2 11/16	3	3	3 5/16	3 5/16
G	1/2	1/2	5/8	5/8	5/8	5/8
I	10-32	10-32	1/4-20	1/4-20	1/4-20	1/4-20
Wt. lbs.	9 1/4	8 1/2	13 1/2	12 1/2	18	16

TRIAD TRANSFORMER CORP.

Hermetically Sealed POWER COMPONENTS
380-1500 Cycle



Avoid redesign—Use Triad HS and HSM transformers in military prototypes.

Since Triad HS and HSM series transformers use MIL-T-27 standard sizes, plus electrical and mechanical design to meet all MIL-T-27 requirements, equipment using these transformers need not be redesigned to submit for military approval. The basically good design factors which are necessary to meet MIL-T-27 standards for performance ensure longest life in any class of service.

These transformers are permanently marked with electrical and test data as specified in MIL-T-27. All are "Climatite" treated, use sturdy TRIAD terminals and are beautifully finished in grey enamel.

Combined PLATE and FILAMENT Transformers

Primary 115 Volts — Double Filament Windings 6.3 or 12.6 Volts

Type No.	Plate Supply		Filaments	Case No.	List Price
	AC Volts	DC Ma.			
HS-401	500 C.T.	40	6.3 C.T.-1A.-6.3-1A.	EB	$19.80
HS-405	600 C.T.	70	6.3 C.T.-2A.-6.3-2A.-△6.3/5-2A.	GA	25.70
HS-407	600 C.T.	120	6.3 C.T.-3.5A.-6.3-3.5A.-△6.3/5-3A.	JB	30.80
HS-413	450 C.T.	200	6.3 C.T.-6A.-6.3-6A.-△6.3/5-4A.	JA	42.00
HS-415	800/600 C.T.	200	6.3 C.T.-6A.-6.3-6A.-△6.3/5-6A.	KB	42.00
HS-417	800/600 C.T.	300	6.3 C.T.-6A.-6.3-6A.-△6.3/5-6A.	LA	45.00

△Tapped for 5 volt rectifier use. All types electrostatically shielded.

FILAMENT Transformers

Type No.	Primary Volts	Secondary		Insulation Test Voltage	Case No.	List Price
		Volts	Amperes			
HS-425	105-115-125	6.3 C.T.	2	1500	AJ	$13.75
HS-427	105-115-125	6.3 C.T.	5	1500	EA	19.40
HS-433	105-115-125	▲6.3 C.T.-6.3	5-5	2500	FA	21.20
HS-435	105-115-125	▲6.3 C.T.-6.3-¶6.3/5	3.5-3.5-3	2000	FA	22.50
HS-441	105-115-125	▲5 C.T.-5-2.5 C.T.	10-10-10	2000-7500	HA	28.00

▲Series or parallel connection. ¶5 volt tap for filament type rectifiers.

FILTER REACTORS

Miniaturized for use with high frequency power supplies

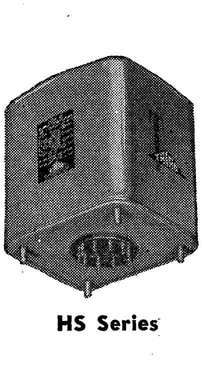
Type No.	Current DC Ma.	Inductance Henries	Resistance Ohms	Test Voltage	Case No.	List Price
HS-331	40	4	375	1500	AH	$11.00
HS-333	70	3	225	1500	AJ	11.50
HS-335	120	3	150	1500	EB	12.00
HS-339	200	3	105	2000	FB	13.60
HS-341	300	2	48	2000	GB	14.60

HIGH FIDELITY OUTPUT TRANSFORMERS

TUBE TO LINE — TUBE TO VOICE COIL — LINE TO VOICE COIL

Hermetically Sealed HIGH LEVEL OUTPUT

TRIAD "HS" Series Output Transformers represent the application of the most modern techniques in the design of fine audio equipment. Use of the very best core materials, combined with interleaved coil structures, have resulted in an open circuit inductance to leakage inductance ratio of 10,000, representing a frequency response range of better than 13 octaves. These transformers will deliver full rated power output within 1 db from 7-50000 cycles. Full DC plate current can be carried through the primary windings, but every effort should be made to balance the two plates in push-pull circuits to obtain optimum results at the extreme low frequencies.



HS Series

Type No.	Application	Impedance		Freq. Response	Max. Level-Watts	Case No.	List Price
		Primary	Secondary				
HSM-81	P.p. 6V6's, etc. to V.C.	8000 Split pri.	16/8/4	7-50000	15	JB	$30.50
HSM-82	As above—to line.	8000 C.T.	500/250/125	7-50000	15	JB	30.50
HSM-84	P.p. 2A3's, 6B4's, 6L6's, etc. to V.C.	5000 C.T.	16/8/4	7-50000	20	JB	30.50
HSM-85	As above—to line.	5000 C.T.	500/250/125	7-50000	20	JB	30.50
*°HSM-189	P.p. KT-66's, 807's, etc. —for Williamson circuit.	10000/2500 Split pri.	16/8/4	7-50000	25	KB	39.50
*°HSM-190	As above—to line.	10000/2500 Split pri.	500/250/125	7-50000	25	KB	39.50
HSM-87	AB, 6L6's, etc. to V.C.	9000 C.T.	16/8/4	7-50000	25	KB	35.80
HSM-88	As above—to line.	9000 C.T.	500/250/125	7-50000	25	KB	35.80
HSM-91	P.p. parallel 2A3's, 6L6's, etc. to V.C.	2500 C.T.	16/8/4	7-50000	50	LA	49.50
HSM-94	P.p. par. 6L6's to V.C.	4500 C.T.	16/8/4	7-50000	55	LA	61.00
HSM-95	As above—to line.	4500 C.T.	500/250/125	7-50000	55	LA	61.00
HS-97	P.p. 845's to line.	6600 C.T.	500/250/125	10-30000	125	Spec.	115.00
HS-101	Line to parallel lines—autoformer.		500/250/167/125/100/88/71	10-30000	30	Spec.	35.80
HS-103	Line to V.C.—autoformer.		500/16/8/4	10-30000	30	Spec.	30.50

*New item. °Williamson type circuit. Proper taps on primary for screen operation.

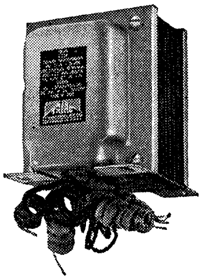
TRIAD TRANSFORMER CORP.

HIGH LEVEL OUTPUT

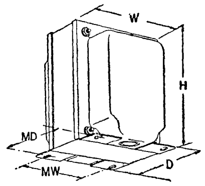
The Triad high fidelity transformers in the group below afford a standard of performance exceeded only by the "HS" series outputs. These transformers have a frequency response linear within 1 db from 20-20000. Feedback loops employing as high as 30 db of negative feedback may be used.

Type No.	Application	Impedance Primary	Impedance Secondary	Output Watts	Case Dim.-Inches H	Case Dim.-Inches W	Case Dim.-Inches D	Mtg. Dim.-Inches MW	Mtg. Dim.-Inches MD	Wt. Lbs.	List Price
S-31A	P.p. 6V6, 45, etc.	8000 C.T.	4-8-16	15	3⅛	2⅝	3⅜	2	2⅝	3½	**$12.00**
S-32A	P.p. 6V6, 45, etc.	8000 C.T.	500/250/125	15	3⅛	2⅝	3⅜	2	2⅝	3½	**12.50**
S-33A	P.p. 2A3, 6A5, 6B4, etc.	3000 C.T.	4-8-16	15	3⅛	2⅝	3⅜	2	2⅝	3½	**12.00**
S-35A	P.p. 2A3, 6L6, etc.	5000 C.T.	4-8-16	20	3⅛	2⅝	3⅝	2	2⅞	4	**13.00**
S-36A	P.p. 2A3, 6L6, etc.	5000 C.T.	500/250/125	20	3⅛	2⅝	3⅝	2	2⅞	4	**13.50**
#S-148A	P.p. KT-66, 807, etc. triodes.	10000 C.T.	4-8-16	25	3½	3	4⅜	2¼	3⅛	5¾	**25.75**
S-38A	P.p. 6L6, class AB.	9000 C.T.	4-8-16	25	3½	3	4⅜	2¼	3⅛	5¾	**16.70**
S-39A	P.p. 6L6, class AB.	9000 C.T.	500/250/125	25	3½	3	4⅜	2¼	3⅛	5¾	**17.50**
S-40A	P.p. par. 2A3, 6L6, etc.	2500 C.T.	4-8-16	30	3½	3	4⅜	2¼	3⅛	5¾	**16.70**
S-42A	P.p. par. 6L6, class A.	4500 C.T.	4-8-16	50	4¼	3⅝	4¾	2¾	3⅞	9	**22.75**
S-45Z	70 v. line. Autoformer.	4000/2000/ 1000/500	4-8	10	2⅝	3 5/16	2¼	2 13/16		1¾	**5.65**
S-46A	70 v. line. Autoformer.	2000/1000/ 500/250	4-8-16	20	3⅛	2⅝	3⅜	2	2⅝	4	**11.50**

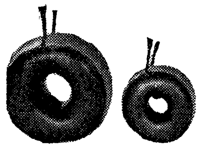
#Proper taps on primary for screen operation. Williamson type circuit.



Case A



TOROIDS

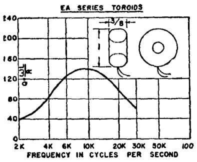


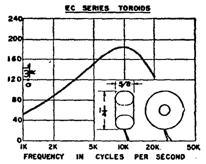
TOROIDS for Filter Components

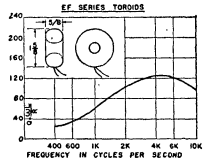
The nearest practical approach to perfect inductance of no resistance, no capacity and infinite "Q" is made by winding on a pressed molybdenum permalloy dust core of toroidal shape. Depending on size and composition of core materials, Triad Toroids will develop (under certain conditions) "Q"s of greater than 200, inductance values up to 25 Henries on the EH series and stability with level, temperature and humidity almost beyond belief.

Triad Toroids, adjusted to within 1% of the values shown, are ordinarily encapsulated in a clear plastic material, but may be obtained in a hermetically sealed case if desired. When ordering hermetically sealed Toroids, order by the uncased number, followed by the letters HS.

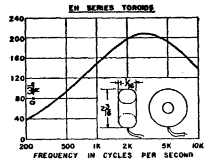
Special inductors, made to your specifications as to inductance and "Q," may be ordered from the factory. Prices on request.

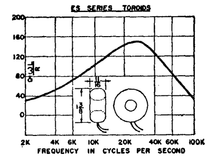






Inductance	Type No. EA Series	List Price	Type No. EC Series	List Price	Type No. EF Series	List Price	Type No. EH Series	List Price	Type No. ES Series	List Price
1 mh	....		EC-001	$8.65	....		....		ES-001	$12.00
2 mh	....		EC-002	8.65	....		....		ES-002	12.25
5 mh	EA-005	$8.20	EC-005	8.65	EF-005	$9.00	....		ES-005	12.60
7 mh	EA-007	8.35	EC-007	8.70	EF-007	9.10	....		ES-007	12.80
10 mh	EA-010	8.50	EC-010	8.80	EF-010	9.25	....		ES-010	12.90
15 mh	EA-015	8.60	EC-015	9.00	EF-015	9.45	EH-015	$23.40	....	
20 mh	EA-020	8.70	EC-020	9.25	EF-020	9.65	....		ES-020	13.20
40 mh	EA-040	8.90	EC-040	9.50	EF-040	9.85	EH-040	24.00	....	
50 mh	EA-050	8.95	EC-050	9.60	EF-050	10.00	....		ES-050	13.45
70 mh	EA-070	9.10	EC-070	9.75	EF-070	10.20	....		ES-070	13.65
100 mh	EA-100	9.25	EC-100	9.90	EF-100	10.40	EH-100	24.35	ES-100	14.00
200 mh	EA-200	9.65	EC-200	10.15	EF-200	10.70	....		....	
250 mh	EA-250	9.75	EC-250	10.25	EF-250	10.90	EH-250	24.75	....	
500 mh	EA-500	11.20	EC-500	10.85	EF-500	11.00	....		....	
600 mh	EA-600	11.40	EC-600	11.40	EF-600	11.20	EH-600	25.10	....	
700 mh	EA-700	11.60	EC-700	11.75	EF-700	11.35	....		....	
1 h	EA-1000	11.85	EC-1000	12.50	EF-1000	11.75	....		....	
1.5 h	....		EC-1500	14.20	EF-1500	12.40	EH-1500	26.00	....	
2 h	....		EC-2000	15.00	EF-2000	12.80	....		....	
4 h	....		EC-4000	15.40	EF-4000	13.75	EH-4000	26.80	....	
5 h	....		EC-5000	15.80	EF-5000	14.35	....		....	
6 h	....		....		EF-6000	14.85	....		....	
7 h	....		....		EF-7000	15.40	....		....	
10 h	....		....		EF-10000	16.20	EH-10000	27.85	....	
25 h	....		....		....		EH-25000	31.50	....	





TRIAD TRANSFORMER CORP.

These miniature blocking oscillator transformers are now in quantity production for manufacturers in a number of applications and with outstanding results. Their multiple winding construction makes them available for a variety of circuits and their fast rise time (.05 microseconds) makes them exceptionally useful. Positive hermetic sealing prevents deterioration of performance with time (absolutely necessary for long shelf life).

PULSE

Type No.		List Price
PL-4	2 equal windings. Pulse widths .35 to 1.2 microseconds. Duty cycle .05 max. Dimensions .4" dia. by .625" long.	$28.00
PL-5	3 equal windings. Pulse widths .15 to .65 microseconds. Duty cycle .05 max. Dimensions .50" dia. by .68" long.	24.20
PL-6	3 equal windings. Pulse widths .15 to .65 microseconds. Duty cycle .05 max. Dimensions (Transformer only) 1/16" dia. by ¾" long. Mounts with 8-32 x ½" stud.	21.25

POWER

GENERAL PURPOSE

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Rect. Fil. Volts	Rect. Fil. Amp.	Other Fil. Volts	Other Fil. Amp.	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
R-4A	500 C.T.	40			6.3 C.T.	2	2¾	2⅜	2¾	1 13/16	1⅞	1¾	$ 6.25
R-4B	500 C.T.	40			6.3 C.T.	2	1¾	2⅝	2 3/16	2 3/16	1¾	1¾	6.25
R-5A	600 C.T.	65			6.3 C.T.	2.7	3 3/16	2⅝	2⅝	2	1⅞	2¾	7.35
R-5B	600 C.T.	65			6.3 C.T.	2.7	1⅞	3	2½	2½	2	2¾	7.25
R-6A	480 C.T.	50	5	2	6.3 C.T.	2	3 3/16	2⅝	2⅝	2	1⅞	2¾	7.50
R-6B	480 C.T.	50	5	2	6.3 C.T.	2	1⅞	3	2½	2½	2	2¾	7.40
R-7A	600 C.T.	50	5	2	6.3 C.T.	2	3 3/16	2⅝	2⅝	2	1⅞	2¾	7.90
R-7B	600 C.T.	50	5	2	6.3 C.T.	2	1⅞	3	2½	2½	2	2¾	7.80
R-8A	500 C.T.	75	5	2	6.3 C.T.	2.5	3 3/16	2⅝	3⅛	2	2⅜	3	8.25
R-8B	500 C.T.	75	5	2	6.3 C.T.	2.5	2⅜	3	2½	2½	2	3	8.20
R-9A	600 C.T.	75	5	2	6.3 C.T.	3	3 9/16	3	3⅜	2¼	2⅛	3½	8.50
R-9B	600 C.T.	75	5	2	6.3 C.T.	3	2 11/32	3⅜	2 13/16	2 13/16	2¼	3½	8.40
R-10A	525 C.T.	90	5	2	6.3 C.T.	5	3 9/16	3	3⅞	2¼	2½	4½	9.35
R-10B	525 C.T.	90	5	2	6.3 C.T.	5	2¾	3⅜	2 13/16	2 13/16	2¼	4½	9.20
R-11A	700 C.T.	90	5	3	6.3 C.T.	3.5	3 9/16	3	3⅞	2¼	2⅝	4¼	9.70
R-11B	700 C.T.	90	5	3	6.3 C.T.	3.5	2 27/32	3⅜	2 13/16	2 13/16	2¼	4¼	9.55
R-12A	550 C.T.	110	5	2	6.3 C.T.	5	4	3¼	3⅜	2½	2⅜	4½	10.50
R-12B	550 C.T.	110	5	2	6.3 C.T.	5	2⅜	3¾	3⅛	3⅛	2½	4½	10.35
R-14A	700 C.T.	125	5	3	6.3 C.T.	4.5	4	3¼	3 15/16	2½	2 13/16	6	11.50
R-14B	700 C.T.	125	5	3	6.3 C.T.	4.5	2⅞	3¾	3⅛	3⅛	2½	6	11.30
R-16A	700 C.T.	160	5	3	6.3 C.T.	5	4	3¼	4 7/16	2½	3⅜	7	12.95
R-16B	700 C.T.	160	5	3	6.3 C.T.	5	3⅜	3¾	3⅛	3⅛	2½	7	12.75
R-17A	750 C.T. 80 Tap	160	5	3	6.3 C.T. 2.5 C.T.	5 5	4 5/16	3⅝	4⅜	2¾	3½	7¼	16.25
R-18A	750 C.T.	175	5	3	6.3 C.T.	8	4 5/16	3⅝	4½	2¾	3⅝	8½	16.50
R-18B	750 C.T.	175	5	3	6.3 C.T.	8	3 3/16	4⅛	3 7/16	3 7/16	2¾	8½	16.30
R-19A	750 C.T. 80 Tap	200	5	3	6.3 C.T. 2.5 C.T.	6 10	4⅝	3⅞	4½	3	3 5/16	9½	19.00
R-20A	700 C.T.	200	5	3	6.3 C.T.	8	4 5/16	3⅝	4½	2¾	3⅝	8½	16.25
R-20B	700 C.T.	200	5	3	6.3 C.T.	8	3 3/16	4⅛	3 7/16	3 7/16	2¾	8½	16.10
R-21A	800 C.T.	200	5	3	6.3 C.T.	6	4 5/16	3⅝	5	2¾	4⅛	9¼	17.60
R-21B	800 C.T.	200	5	3	6.3 C.T.	6	3 11/16	4⅛	3 7/16	3 7/16	2¾	9¼	17.45
R-24A	800 C.T.	300	5	6	6.3 C.T.	6	4⅝	3⅞	5¾	3	4 1/16	14	22.50
R-24B	800 C.T.	300	5	6	6.3 C.T.	6	3 15/16	4½	3¾	3¾	3	14	22.30
R-25A	800 C.T.	500	5	6	6.3 C.T.-6.3	3-7	5⅜	4 7/16	5¾	3½	4¾	19	36.00
*R-58A	875 C.T.	185	5	3	6.3-6.3	4-3	4⅝	3⅞	4½	3	3⅝	9½	18.50

*New item.

For CATHODE RAY Tubes

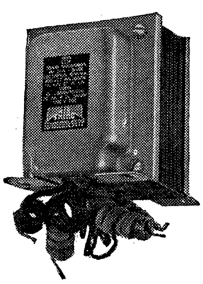
Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
R-41C	440-0-440-1250	125/5	§6.3V.-.6A. °2.5V.-1.75A. °2.5V.-1.75A. 5V.-3A.	3¼	4⅛	3½	3 7/16	2¾	7½	$23.15
R-45C	400-0-400-800	30/5	§6.3V.-.6A. 6.3 C.T.-3A. °5V.-2A. 6.3V.-1A. 5V.-2A.	2½	3¾	3⅛	3⅛	2½	4½	16.50
R-43C	1600	3	§6.3/5/2.5V.-1A. °6.3/5/2.5V.-3A.	2⅜	3	2½	2½	2	3½	13.80

°Statically shielded and insulated for full plate voltage. §Insulated for full plate voltage.

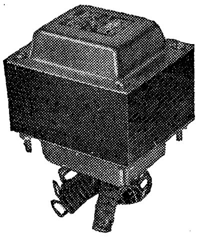
For PREAMPLIFIERS, VTVM, etc.

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
R-2C	135	15	6.3V.-.9A.	1⅜	1⅞	1 9/16		1¼	1	$ 4.75
R-3A	500 C.T.	20	6.3 C.T.-2A.	2¾	2⅜	2⅝	1 13/16	1¾	1¾	6.15
R-29A	230 C.T.	40	6.3V.-1.5A.	2¾	2⅜	2½	1 13/16	1⅝	1¾	6.00
R-30X	135	50	6.3V.-1.5A.	2¼	3 13/16	2⅛	3⅛		1½	5.20
*R-54X	115	15	6.3V.-.6A.	1 11/16	2 13/16	1½	2⅜		½	4.75
*R-56A	130	20	0/15/22.5/30-.6A.	2¾	2⅜	2⅞	1 13/16	2	2	6.55

*New item.



Case A



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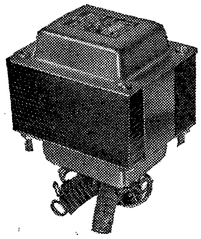

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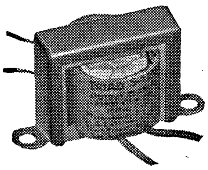


Case X

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

TRIAD TRANSFORMER CORP.

Combined PLATE and FILAMENT Transformers For REGULATED POWER SUPPLIES

Type No.	Plate Supply		Filament Wndings Volts and Amperes		Case. Dim.-Ins.			Mtg. Dim.-Ins.		Wt. Lbs.	List Price
	AC Volts	DC Ma.			H	W	D	MW	MD		
R-26A	880-720 C.T.	200	6.3 C.T.-8A. 6.3V.-1A.	6.3V.-3A. 5V.-3A.	4¾	3⅞	4¾	3	3⅝	12	**$21.50**
R-28A	1250 C.T.	300	6.3 C.T.-8A. 6.3V.-3A.	6.3V.-3A. 5V.-6A.	5⅜	4½	5⅞	3½	4¾	20	**32.50**
***R-46A**	1250 C.T. 130 (Bias winding)	350 50	5V.-4A.	6.3V.-4A. 6.3V.-1A. 6.3V.-1A.	5⅜	4½	5⅞	3½	4¾	20	**33.00**
R-46A will supply 550 V.D.C. using 2 5R4G rectifier tubes, choke input. Will also supply 130 V. for bias using Selenium rectifier. Sufficient filament windings to regulate screen voltages.											
R-27A	1500 C.T.	400	5V.-6A.	6.3V.-3A. 6.3V.-8A.	5⅜	4½	7⅜	3½	6¼	30	**45.00**

*New item.

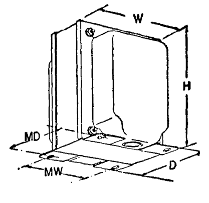
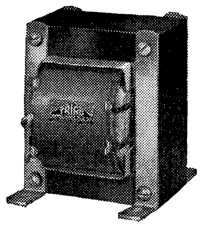


PLATE POWER Transformers

Type No.	Secondary Volts		Sec. DC Ma.		Rect. Fil.	Case Dim.-Ins.			Mtg. Dim.-Ins.		Wt. Lbs.	List Price
	AC	DC	CCS	ICAS		H	W	D	MW	MD		
P-1A	440/220 C.T.	180/90	160	190	5V.-3A.	3$\frac{9}{16}$	3	3⅜	2¼	2⅛	4	**$ 9.20**
P-3A	600/300 C.T.	250/125	300	360	5V.-4A.	4	3¼	3$\frac{15}{16}$	2½	2⅞	5¾	**12.50**
P-5A	1100 C.T.	400	250	310	5V.-4A.	4⅝	3⅞	4¼	3	3$\frac{1}{16}$	9	**15.75**
P-7A	1235 C.T.	500	250	310	5V.-4A.	4⅝	3⅞	4¾	3	3$\frac{9}{16}$	11	**18.00**
P-9A	1235 C.T.	500	500	600	5V.-6A.	5⅜	4$\frac{7}{16}$	5¾	3½	4¾	19	**33.00**
P-11A	1455 C.T.	600	250	310		4⅝	3⅞	5	3	3$\frac{13}{16}$	12	**21.50**
†P-13A	1780 C.T.	750	250	310		5⅜	4½	4¾	3½	3¾	14	**25.00**
‡P-14A	1780 C.T.	750/600	250	310		5⅜	4½	4¾	3½	3¾	14	**25.50**
†P-15A	2340 C.T.	1000	250	310		5⅜	4½	5¼	3½	4¼	17	**29.00**
†P-17A	2880 C.T.	1250	250	310		5⅜	4½	5¾	3½	4¾	20	**38.50**
***P-16A**	2430 C.T.	1000	500	600		6½	5½	6½	4¼	4½	31	**64.00**
***P-18A**	2880 C.T.	1250	500	600		6½	5½	7	4½	5	35	**72.00**
***P-20A**	3300 C.T.	1500	350	425		6½	5½	7	4½	5	35	**71.00**

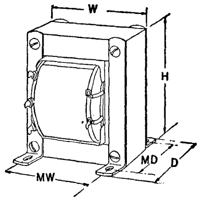
*New item. †Plate leads out side of case for 866 rectifiers. ‡Tapped Pri. to produce the lower D.C. voltage.



Case U

DRY DISK RECTIFIER Transformers

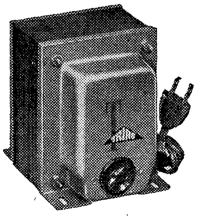
Type No.	Secondary		Rectifier Circuit		Test Volts	Case Dim.-Ins.			Mtg. Dim.-Ins.		Wt. Lbs.	List Price
	AC Volts	Amperes	A Volts DC	B Volts DC		H	W	D	MW	MD		
F-47U	17-18	3	6-7	13-14	1500	3	2½	2⅞	1⅝	2½	2½	**$ 7.75**
F-48U	17-18	3	6-7	13-14	1500	3¾	3⅛	3⅝	2½	2⅝	5¼	**13.00**
F-49U	36-36	3-3	13	26	1500	4½	3¾	4	3	3	9½	**20.00**



ISOLATION Transformers

Type No.	V. A. Output	Input Volts	Output Volts	Case Dim.-Ins.			Mtg. Dim.-Ins.		Wt. Lbs.	List Price
				H	W	D	MW	MD		
N-51X	35	115	115	2¼	3$\frac{13}{16}$	2¼	3⅛		1¾	**$ 5.95**
N-53M	85	115	115	3$\frac{9}{16}$	3	3⅝	2¼	2⅜	4½	**12.75**
N-55M	250	115	115	4¾	3⅞	5	3	3⅞	12	**25.30**
N-57M	500	115	115	5$\frac{5}{16}$	4½	6⅜	3½	5¼	24	**40.75**
N-59M	1000	115	115	5$\frac{5}{16}$	4½	8⅜	3½	7¼	35	**67.20**
⊗N-60	2000	230/115	230/115	4¾	8½	13¼	Spcl.		58	**130.00**

⊗Special case.

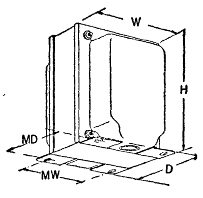


Case M

STEPDOWN Autoformers

Type No.	V. A. Output	Input Volts	Output Volts	Case Dim.-Ins.			Mtg. Dim.-Ins.		Wt. Lbs.	List Price
				H	W	D	MW	MD		
N-1X	50	230	115	2¼	3$\frac{13}{16}$	2⅛	3⅛		1½	**$ 5.05**
N-3M	85	230	115	3$\frac{9}{16}$	3	2⅞	2¼	1¾	2¾	**9.80**
N-5M	250	230	115	4	3¼	4$\frac{3}{16}$	2½	3⅛	6¾	**14.30**
N-7M	500	230	115	4¾	3⅞	5	3	3⅞	12	**22.00**
N-9M	1000	230	115	5$\frac{5}{16}$	4½	6⅜	3½	5¼	25	**40.75**
N-11M	2000	230	115	5$\frac{5}{16}$	4½	8⅜	3½	7¼	35	**67.20**
N-34X	150	95-105-115-125-135	115	2⅝	4	2½	3$\frac{9}{16}$		2	**8.15**
þN-35M	350	Off-90-100-115-120-125-135	115	4$\frac{5}{16}$	3⅝	3½	2¾	2⅝	5½	**18.50**
***N-50M** With switch and meter.	500	90 to 135	115	4⅝	3⅞	5⅞	3	4$\frac{3}{16}$	8	**26.50**

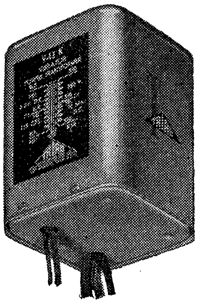
*New item. þM case with switch for primary voltage control.



TRIAD TRANSFORMER CORP.

For Vibrator Power Supply

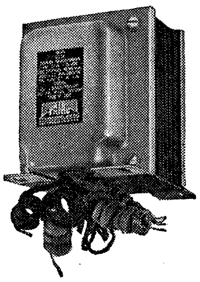
Type No.	Primary Volts	Secondary AC Volts	Secondary DC Ma	Case Dim.-Inches H	Case Dim.-Inches W	Case Dim.-Inches D	Mtg. Dim.-Inches MW	Mtg. Dim.-Inches MD	Wt. Lbs.	List Price
V-1K	6-8	450 C.T.	40	3	2 3/16	2⅜			2¼	$ 8.25
V-3K	6-8	500 C.T.	50	3	2½	2⅜			2½	8.95
V-5A	6-8	600 C.T.	75	3 3/16	2⅝	2⅞	2	1⅞	2½	9.15
V-7A	6-8	600 C.T.	100	3 9/16	3	3¼	2¼	2	3½	11.70



Case K

For Automobile Radio Replacement

Type No.	Primary Volts	Secondary AC Volts	Secondary DC Ma.	Replacement	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
V-11K	6-8	760 C.T.	65	Buick	3⅝	2⅜	2¾			2½	$ 9.55
V-12K	6-8	550 C.T.	55	Cadillac, Chevrolet, Firestone, Ford, Hudson, Kaiser, Motorola, Nash, Oldsmobile, Packard, Philco, Studebaker, Truetone.	2⅝	2¾	2¼			2½	9.00
V-13K	6-8	580 C.T.	70	Delco, Ford, Lincoln, Motorola, Philco, Pontiac.	3	2½	2⅜			3½	7.50
V-16K	6-8	460 C.T.	50	Ford, Kaiser, MoPar, Philco, Truetone, Willys.	2⅝	2¾	2¼			2¼	8.25
V-18X	6-8	580 C.T.	60	Chevrolet, MoPar, Oldsmobile, Pontiac, Silvertone.	2¼	3 13/16	2¼	3⅛		1¾	6.15
V-19A	6-8	320 C.T.	40	Automatic, Coronado, Philco, Regal, Studebaker.	2¾	2⅜	2⅜	1 13/16	1⅝	1¾	5.65
V-20K	6-8	560 C.T.	50	Motorola, Truetone.	3	2½	2⅜			2½	8.55

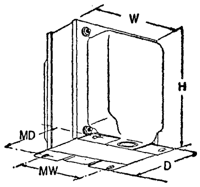


Case A

CHOKES

SWINGING Filter REACTORS

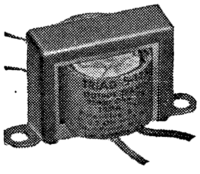
Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim. Ins. MW	Mtg. Dim. Ins. MD	Wt. Lbs.	List Price
C-31A	25/5	20/200	150	2500	3 9/16	3	3⅝	2¼	2⅜	4½	$ 7.60
C-33A	25/5	30/300	105	3000	4 5/16	3⅝	4¼	2¾	3 7/16	7¼	11.75
C-35A	20/4	40/400	60	3000	4⅝	3⅞	4½	3	3 5/16	9½	16.00
C-39A	25/5	50/500	65	3000	5⅜	4½	5¼	3½	4¼	17	27.50



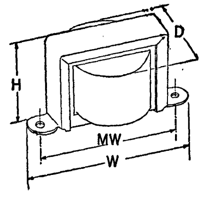
SMOOTHING Filter REACTORS

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
C-30X	50	15	3500	1500	1⅜	2⅜	1½	2		½	$ 2.50
C-2X	2	15	70	1500	1 3/16	2⅛	1¼	1¾		¼	1.70
C-1X	15	20	1000	1500	1 3/16	2⅛	1¼	1¾		¼	1.85
C-3X	10	50	500	1500	1 11/16	2 13/16	1½	2⅜		¾	1.90
C-4X	4	50	360	1500	1⅜	2⅜	1⅜	2		½	1.90
C-6X	5	65	330	1500	1 11/16	2 13/16	1½	2⅜		¾	2.00
C-5X	12	75	400	1500	1 15/16	3¼	1⅞	2 13/16		1	2.75
C-8X	7	75	240	1500	1 15/16	3¼	1⅞	2 13/16		1	2.70
C-7X	10	90	270	1500	1 15/16	3¼	2	2 13/16		1¼	3.00
C-9X	4	90	100	1500	1 15/16	3¼	1⅞	2 13/16		1	2.80
C-11X	6	110	160	1500	2¼	3 13/16	2⅛	3⅛		1½	3.60
C-10X	9	125	250	1500	2¼	3 13/16	2⅛	3⅛		1½	3.60
C-12X	6	160	165	1500	2¼	3 13/16	2¼	3⅛		1¾	4.00
C-12A	6	160	165	1500	2¾	2⅜	2⅝	1 13/16	1¾	1¾	4.85
C-13X	3	160	75	1500	2¼	3 13/16	2¼	3⅛		1¾	3.90
C-14X	6	200	150	1500	2⅝	4 1/16	2½	3 9/16		2¼	4.15
C-14A	6	200	150	1500	3 3/16	2⅝	2⅝	2	1⅞	2½	4.95
C-16A	10	200	150	2500	3 9/16	3	3⅝	2¼	2⅜	4¼	7.60
C-21X	1.5	225	65	1500	1 15/16	3¼	1⅞	2 13/16		1	3.75
C-15X	4	250	100	1500	2⅝	4 1/16	2½	3 9/16		2¼	4.05
C-15A	4	250	100	1500	3 3/16	2⅝	2⅝	2	1⅞	2½	4.90
C-23X	1.2	260	45	1500	1 15/16	3¼	2	2 13/16		1¼	3.75
C-17X	1.5	300	40	1500	2¼	3 13/16	2⅛	3⅛		1½	3.75
C-18A	8	300	90	2500	4	3¼	3 15/16	2½	2⅞	6	9.50
C-19A	10	300	105	3000	4 5/16	3⅝	4¼	2¾	3⅜	7¼	11.75
C-25A	2.6	310	60	1500	3 3/16	2⅝	3⅛	2	2⅜	3½	5.60
C-20A	8	400	60	3000	4¾	3⅞	4½	3	3 5/16	10½	16.00
C-22A	10	500	65	3000	5 5/16	4½	5⅜	3½	4¼	17	27.50
*C-48U	.08/.02	2.5/5A	.57/.143	1500	3¾	3⅛	4	2½	3	6½	12.50

*New item.



Case X



TRIAD TRANSFORMER CORP.

FILAMENT

FILAMENT Transformers, Single Secondary

Type No.	Secondary Volts	Secondary Amperes	Test Volts	Case Dim.-Inches H	Case Dim.-Inches W	Case Dim.-Inches D	Mtg. Dim.-Inches MW	Mtg. Dim.-Inches MD	Wt. Lbs.	List Price
F-1X	2.5 C.T.	3	1500	1 11/16	2 13/16	1⅝	2⅜		¾	$ 2.90
F-3X	2.5 C.T.	10	3000	2¼	3 13/16	2¼	3⅛		1¾	4.25
F-5U	2.5 C.T.	10	7500	3	2½	2⅜	1⅝	2	2	6.00
F-7X	5 C.T.	3	1500	1 15/16	3¼	2	2 13/16		1¼	4.00
F-8X	5 C.T.	6	1500	2¼	3 13/16	2¼	3⅛		1¾	4.75
F-9U	5.2 C.T.	13	1500	3⅜	2 13/16	3⅜	2¼	2⅜	3¾	8.00
F-11U	5.2 C.T.	24	1500	3¾	3⅛	4	2½	3	6½	11.10
F-13X	6.3	.6	1500	1⅜	2⅜	1⅜	2		½	2.75
F-14X	6.3 C.T.	1.2	1500	1 11/16	2 13/16	1⅝	2⅜		¾	2.80
†F-52X	6.3	1.2	5000	1 15/16	3¼	1⅞	2 13/16		1	3.55
†F-51X	6.3/5	2	5000	1 15/16	3¼	2	2 13/16		1¼	3.95
F-16X	6.3 C.T.	3	1500	1 15/16	3¼	2	2 13/16		1¼	4.15
F-18X	6.3 C.T.	6	1500	2⅝	4 1/16	2½	3 9/16		2¼	5.90
F-18A	6.3 C.T.	6	1500	3 3/16	2⅝	2⅝	2	1⅞	2½	7.25
F-21A	6.3 C.T.	10	1500	3 9/16	3	3¼	2¼	2	3½	7.75
F-22A	6.3 C.T.	20	2000	4	3¼	4 3/16	2½	3⅛	7	13.50
F-23U	10 C.T.	7	1500	3⅜	2 13/16	3⅜	2¼	2⅜	4	8.00
F-25X	12.6 C.T.	1.5	1500	1 15/16	3¼	2	2 13/16		1¼	3.90
F-40X	24	1	1500	1 15/16	3¼	2	2 13/16		1¼	4.00
†F-50X	Filament line transformer Pri. 6.3V/5V Sec. 6.3/5V 2A		5000	1 15/16	3¼	2	2 13/16		1¼	3.85

†Low capacity—High voltage for damper tube operation.

FILAMENT Transformers, Multiple Secondary

Type No.	Secondary Volts and Amperes		Test Volts RMS	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
F-27U	10 C.T.-10A. 2.5 C.T.-10A.		1500 7500	4⅛	3 7/16	3½	2¾	2½	6	$10.85
F-30A	5 C.T.-3A. 6.3 C.T.-8A.		1500	3 9/16	3	3⅜	2¼	2⅛	3¾	9.00
F-32A	6.3 C.T.-3A.	6.3 C.T.-3A.	1500	3 3/16	2⅝	2⅝	2	1⅞	2½	8.20
F-34A	6.3 C.T.-1.75A. 6.3V.-1.75A.	6.3V.-1.75A. 6.3V.-1.75A.	2500	3 3/16	2⅝	3	2	2⅜	3	8.75
F-36A	6.3 C.T.-3.5A. 6.3V.-3.5A.	6.3V.-3.5A. 6.3V.-3.5A.	2500	4	3¼	3 9/16	2½	2½	5	11.60
F-38A	6.3 C.T.-5A. 6.3V.-1A.—5V.-4A.	6.3V.-5A. 5 C.T.-2A.	2500	4	3¼	3 13/16	2½	2¾	5½	13.20

AUDIO

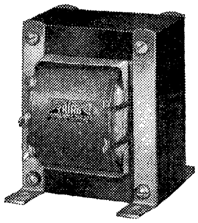
DRIVER Transformers

Type No.	Driver Tubes	Output Tubes	Frequency Response	Ratio Primary ½ Sec.	Primary D.C. Ma.	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
A-81X	30, 1H4, etc.	P.p. 19, 30's, 1J6, etc.	300-3000	2.66:1	15	1 3/16	2⅛	1¼	1¾		¼	$ 2.80
A-83X	6F6, 42, 45, etc.	P.p. 6L6, 6F6, 6V6, 807, etc.	70-7000	1.33:1	40	1 11/16	2 13/16	1½	2⅜		½	3.35
A-85X	6F6, 42, 45, etc.	P.p. 6L6, 6F6, 6V6, 807, etc.	50-10000	1.33:1	40	1 15/16	3¼	1⅞	2 13/16		1	3.75
A-89A	P.p. plates to class B or AB grids—Universal 15 watt.	Any class B or AB tubes. 100-500 watts output.	50-10000	3.1 or 2.2:1	100 per side	3 3/16	2⅝	2⅝	2	1⅞	2¾	8.70
A-91A	P.p. plates to class B or AB grids—Universal 30 watt.	Any class B or AB tubes. 400-1500 watts output.	50-10000	3.1 or 2.2:1	160 per side	3 9/16	3	3½	2¼	2¼	4	12.50

MODULATION Transformers — Tube to RF Load

Type No.	Primary	Frequency Response	Secondary Impedance	Secondary Ma.	Audio Watts	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
M-1X	10000 C.T. for 19, 1J6, 6N7, 6A6, etc.	300-3000	5000-8000-10000	50	5	1 3/16	2⅛	1¼	1¾		¼	$ 3.80
M-3X	10000 C.T. for 6N7, 6A6, 6F6's, etc.	300-3000	3000-5000-8000	100	20	2¼	3 13/16	2⅛	3⅛		1½	5.60
M-7A	4250 C.T. for 807's	300-3000	3000-5000-8000	200	60	4 5/16	3⅝	4	2¾	3⅛	6½	14.45
***M-8A**	Multi-match.	300-3000	4000 to 20000	200	80	4 5/16	3⅝	4½	2¾	3 5/16	8	15.55
***M-12A**	Multi-match.	300-3000	4000 to 20000	300	125	4¾	3⅞	4¾	3	3 9/16	12	20.35

*New item.



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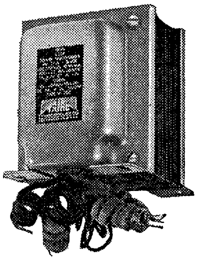
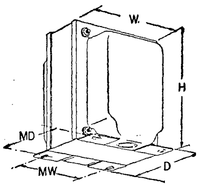
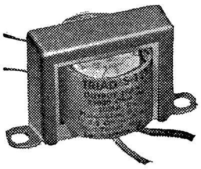


Case A





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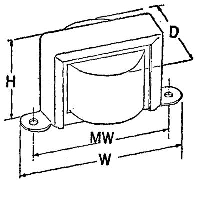
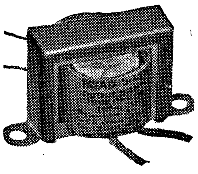


TRIAD TRANSFORMER CORP.

AUDIO

REPLACEMENT OUTPUT Transformers — Tube to Standard Voice Coil (3-4 ohms)



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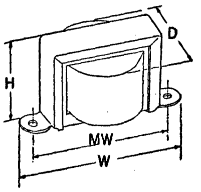
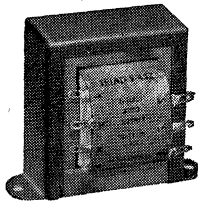


Type No.	Primary: Tubes Used	Primary: Impedance	DC Ma.	Audio Watts	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	Price List
S-1X	25L6, 50L6, 35A5, 50B5, 2A3, 6B4, etc.	2500	60	3	1⅜	2⅜	1⅜	2		½	$ 1.75
S-2X	2A3, 6A3, 6B4, 6Y6, 7A5, 25B6, 50L6.	2000	55	4	1⅜	2⅜	1⅜	2		½	1.85
S-3X	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	40	3	1⅜	2⅜	1⅜	2		½	1.80
S-4X	2A3, 6B4, 6L6, 6U6, 12A5, 25L6, 50A5, 117N7.	3000	70	5	1 15/16	3¼	1⅞	2 13/16		1	2.95
S-5Z	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	50	5	2¼	2⅞	1⅞	2⅜		1	3.10
S-5X	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	50	5	1 15/16	3¼	1⅞	2 13/16		1	3.10
S-6X	3B5, 6AQ5, 6AS5, 25A6, 25A7, 35L6, 43, 117L7.	5000	35	2	1 3/16	2⅛	1¼	1¾		¼	2.00
S-7X	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	40	3	1⅜	2⅜	1⅜	2		½	1.85
S-8X	1C5, 1H4, 1Q5, 1S4, 3Q5, 3S4, 14A5, 25AC5.	8000	30	2	1 3/16	2⅛	1⅛	1¾		¼	2.00
S-9Z	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	50	5	2¼	2⅞	1⅞	2⅜		1	3.25
S-9X	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	50	5	1 15/16	3¼	1⅞	2 13/16		1	3.25
S-11X	1J6, 3Q4, 3V4, 6AK6, 6AG7, etc.	10000	30	2	1 3/16	2⅛	1¼	1¾		¼	2.00
S-13X	1A5, 1N6, 1LA4.	25000	10	2	1 3/16	2⅛	1¼	1¾		¼	2.00
S-15X	P.p.—6V6, 7C5, 6K6, 6F6, etc.	10000 C.T.	40	7	1 11/16	2 13/16	1½	2⅜		½	2.95
S-19Z	P.p.—6V6, 7C5, 6K6, 6F6, etc.	10000 C.T.	50	10	2¼	2⅞	2	2⅜		1¼	3.85
S-21A	P.p.—6V6, 7C5, 45, 6L6, etc.	8000 C.T.	50	15	2¾	2⅜	2½	1 13/16	1⅝	1¾	5.60
S-23X	Line to VC. Autoformer.	50/3.2	0	3	1 3/16	2⅛	1¼	1¾		¼	2.20
*S-26X	Line to VC. Autoformer.	500/50/3.2	0	4	1 3/16	2⅛	1¼	1¾		¼	2.20
S-25Z	70 volt line to VC. Autoformer.	4000/2000/ 1000/500 to 4-8	0	10	2¼	2⅞	1⅞	2⅜		1	3.80
*S-58X	Line to line.	500/125 500/125 Split windings	0	2	1 3/16	2⅛	1¼	1¾		¼	2.80

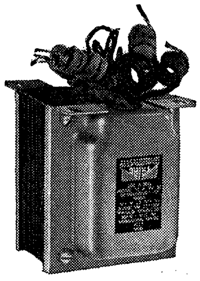
*New item.



Case Z

REPLACEMENT OUTPUT Transformers — Single Tube to Voice Coil and Line

Type No.	Primary: Tubes	Primary: Impedance	Secondary Imp.	DC Pri.	Audio Watts	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
S-27A	2A3, 6A3, 6B4, 6L6, 6U6, 6Y6, 12A5, 25B6, 35B5, 50A5.	2500	4-8-16-500	80	8	2¾	2⅜	2½	1 13/16	1⅝	1¾	$ 6.80
S-28X	2A5, 6AC5, 6B5, 6F6, 6K6, 7B5, 14A5, 25AC5.	7500	4-8-16-500	40	5	1 15/16	3¼	1⅞	2 13/16		1	4.50
S-29X	6AQ5, 6AS5, 6V6, 7C5, 25A6, 25B5, 25L6, 25N6, 35A5, 35L6.	5000	4-8-16-500	45	5	1 15/16	3¼	1⅞	2 13/16		1	4.50



Case A

UNIVERSAL OUTPUT Transformers — Any Tube to Any Voice Coil

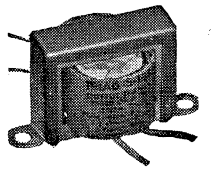
Type No.	Application	Pri. DC Ma.	Audio Watts	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
S-51X	Single or p.p. plates (4,000 to 14,000 ohms) to VC.	35	5	1⅜	2⅜	1⅜	2		½	$ 2.75
S-53X	Single or p.p. plates (4,000 to 14,000 ohms) to VC.	40	8	1 11/16	2 13/16	1½	2⅜		½	3.10
S-55Z	Push-pull plates (4,000 to 14,000 ohms) to VC.	40 ea. side	10	2¼	2⅞	1⅞	2⅜		1	4.15
S-55X	Push-pull plates (4,000 to 14,000 ohms) to VC.	40 ea. side	10	1 15/16	3¼	1⅞	2 13/16		1	4.15
S-57Z	Push-pull plates (4,000 to 14,000 ohms) to VC.	50 ea. side	15	2⅝	3 5/16	2⅛	2 13/16		1½	5.15

TRIAD TRANSFORMER CORP.

AUDIO

INTERSTAGE Transformers — Plate to Grid

Type No.	Application	Frequency Response	Impedance-Ohms Primary	Impedance-Ohms Secondary	Ratio	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
A-31X	Plate to single or p.p. grids.	300-3000	10000	90000	1:3	1 3/8	2 3/8	1 3/8	2		1/2	$ 2.75
A-33X	Plate to single or p.p. grids.	70-7000	10000	90000	1:3	1 15/16	3 1/4	1 7/8	2 13/16		1	3.80
A-35A	Plate to single or p.p. grids.	50-10000	10000	90000	1:3	2 3/4	2 3/8	2 1/2	1 13/16	1 5/8	1 3/4	6.00
A-39A	P.p. plates to p.p. grids.	50-10000	20000 C.T.	45000	1:1.5	2 3/4	2 3/8	2 1/2	1 13/16	1 5/8	1 3/4	6.30
A-40J	Parallel-fed 6J5 or 6SN7. Plate to p.p. grid. 45 db. shielding.	30-15000	15000	86000	1:2.76	1 3/4	1 3/8	1 3/8	15/16		1/4	12.50

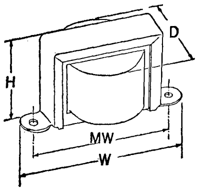


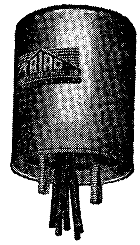
Case X

INPUT Transformers — Line or Microphone to Grid

Type No.	Application	Frequency Response	Primary Impedance Ohms	Turn Ratio	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
A-1X	Line or single button mike to grid.	300-3000	100	31.4	1 3/16	2 1/8	1 1/4	1 3/4		1/4	$ 2.75
A-3X	Line or D.B. mike to grid.	300-3000	400 C.T.	15.8	1 3/16	2 1/8	1 1/4	1 3/4		1/4	3.00
A-5X	Single button mike to p.p. grids—Hi-gain.	300-3000	100	84	1 11/16	2 13/16	1 1/2	2 3/8		1/2	4.00
A-7J	Speaker V.C. (3.2 ohms) to grid. 45 db. shielding.	300-3000	3.2	124	1	1 1/8	1 1/8	1 3/16		1/8	5.00
A-9J	Line or mike to grid 45 db. shielding.	30-15000	600/250/50	12	1 3/4	1 3/8	1 3/8	15/16		1/4	12.50
*A-10J	Line to grid. 45 db. shielding.	30-15000	600/125 Split windings for center tap.	10.1	1 3/4	1 3/8	1 3/8	15/16		1/4	12.75

*New item.





CASE J

LOW LEVEL OUTPUT Transformers

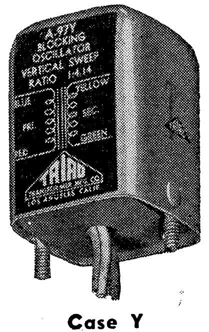
Type No.	Application	Frequency Response	Primary Impedance	Ohms Secondary	Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
A-51X	Tube to line.	300-3000	7000	50	1 3/16	2 1/8	1 1/4	1 3/4		1/4	$ 2.50
A-53X	Single or p.p tubes to line.	70-7000	18000 C.T.	600/250/50	1 11/16	2 13/16	1 1/2	2 3/8		1/2	3.45
A-55J	Parallel-fed 6J5 or 6SN7 to line. 45 db. shielding.	30-15000	15000	600/250/50	1 3/4	1 3/8	1 3/8	15/16		1/4	12.50
*A-65J	Parallel-fed 6J5 or 6SN7 to line. 45 db. shielding.	30-15000	15000	600/150 Split winding	1 3/4	1 3/8	1 3/8	15/16		1/4	12.75
A-57J	Line to line. 45 db. shielding.	30-15000	600/250/50	600/250/50	1 3/4	1 3/8	1 3/8	15/16		1/4	11.75
*A-67J	Line to line. 45 db. shielding.	30-15000	600/150 —Split windings—	600/150	1 3/4	1 3/8	1 3/8	15/16		1/4	12.00

*New item.

TELEVISION COMPONENTS

VERTICAL BLOCKING OSCILLATOR

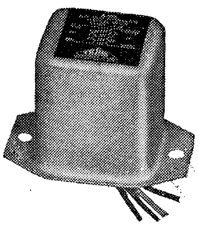
Type No.	Application	Ratio	Case Dim.-Inches H	Case Dim.-Inches W	Case Dim.-Inches D	Mtg. Dim.-Inches MW	Mtg. Dim.-Inches MD	Wt. Lbs.	List Price
A-96X	Dumont type. 3 windings.	1:0.5 1:1	1 11/16	2 13/16	1 1/2	2 3/8		1/2	$ 3.75
A-97X	Blocking oscillator transformer for vertical sweep.	1:4.14	1 3/16	2 1/8	1 1/4	1 3/4		1/4	3.75
A-97K	Same—Case K.	1:4.14	1 3/4	2 5/16	1 1/2	1 15/16		1/2	3.50
A-97Y	Same—Case Y.	1:4.14	1 11/16	1 1/4	1 1/4	1 1/8		1/4	3.25



Case Y

VERTICAL OUTPUT Transformers

Type No.	Application	Ratio	Case Dim.-Inches H	Case Dim.-Inches W	Case Dim.-Inches D	Mtg. Dim.-Inches MW	Mtg. Dim.-Inches MD	Wt. Lbs.	List Price
A-99X	Output—to couple vertical output tube to deflection coil.	10:1	2 1/4	3 13/16	2 1/8	3 1/8		1 1/2	$ 4.60
A-101U	Same—different mounting.	10:1	3	2 1/2	2 1/4	1 5/8	1 7/8	2	6.00
A-104X	Vertical output autoformer.	18:1	2 1/4	3 13/16	2 1/8	3 1/8		1 1/2	5.00
A-102X	Vertical output autoformer.	11.4:1	1 15/16	3 1/4	1 7/8	2 13/16		1	3.80
A-103X	Vertical output transformer.	49.1	2 1/4	3 13/16	2 1/8	3 1/8		1 1/2	4.65
A-105X	Vertical output transformer.	25:1	2 1/4	3 11/16	2 1/8	3 1/8		1 1/2	5.00
A-107X	Vertical output transformer.	10:1	2 5/8	4 1/16	2 1/2	3 9/16		2 1/4	6.50



Case K

TRIAD TRANSFORMER CORP.

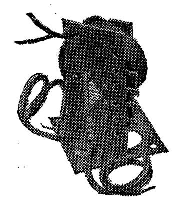
TELEVISION COMPONENTS

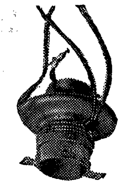
HORIZONTAL OUTPUT (Flyback) Transformers

Type P

Type No.	Application	Mtg. Type	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
D-1	Delivers 12,000-14,000 anode volts from single 6BG6 or 6BQ6 driver and single HV rectifier. Ample deflection for 70° tubes.	Q	4	3	2½	¾	$ 9.00
D-2	Autoformer type. Delivers 14,000 V. from 6BG6 or 6BQ6 driver and single HV rect. Sufficient for 70° tubes.	Q	4	2½	3	¾	9.00
D-11	Delivers 9,000-10,000 V. from single 6BG6 tube, and single HV rect. 53° operation.	H	4 11/16	3¾	2 3/32	2	9.65
D-14	Delivers 14,000 V. from 1 driver tube, replaces GE 77J1	P	4	2½	2¾	¾	10.45
D-15	Delivers 14,000 V. from 1 driver tube. 2 tapped secondary windings for A.G.C. circuits.	P	4	2½	2¾	¾	10.65
D-19	Delivers 14,000 to 16,000 V.—Single driver—70°—17" to 24" tubes—replaces RCA 225T1.	P	4	2½	2¾	¾	10.45
DA-20	Delivers 13,000 to 14,000 V. Single driver—air core.	T	2⅝	3	3	½	7.00
*D-22	Delivers 16,000 V.—Single driver—70° tubes—17" to 24"—90 Kc De-Ringer.	P	4	2½	2¾	¾	10.45
*D-24	Delivers 18,000 V.—Single driver—70° tubes—17" to 24".	P	4	2½	2¾	¾	10.45
*D-26	Voltage doubler type—20,000 V.—for 70° to 90° deflection picture tubes.	Q	4	2½	2¾	¾	10.65
*D-27	Delivers 17,000 V. for A.C.-D.C. types of Television receivers—Single rectifier—Single 6BQ6 driver.	Q	4	3	2½	¾	10.25
*D-31	Universal type—18,000 V.—Single driver—70° tubes—All types—similar to RCA 231-T1.	P	4	2½	2¾	¾	10.50

*New item.


Type Q


Type T

Width and Linearity COILS

Type No.	Application	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
WC-11	Width control coil—3.8—30 mh. has sec. winding use for A.G.C.	2	¾	¾	⅛	$ 2.50
WC-12	Width and linearity coil—.8-15 mh. tapped.	2⅜	⅝	⅝	⅛	2.15

Type WC

Deflection YOKES

Type No.	Core	Construction	Inductance-mh. Horiz.	Inductance-mh. Vert.	Defl.	Networks & Leads	Dim-Inches Dia.	Dim-Inches L.	Wt. Lbs.	List Price
Y-11	Iron	Semi-cosine	8.3	50	53°	Yes	3¼	3	3	$ 8.75
Y-12	Ferrite	Cosine	8.3	50	70°	Yes	3¼	2⅝	1	10.45
*Y-21	Ferrite	Cosine	10.3	41.5	70°	Leads	3¼	2⅝	1	10.45
Y-17	Ferrite	Cosine	13.5	41.5	70°	Yes	3¼	2⅝	1	10.45
*Y-22	Ferrite	Cosine	18.5	42	70°	Leads	3¼	2⅝	1	10.45
Y-19	Ferrite	Cosine	23.	41.5	70°	Leads	3¼	2⅝	1	10.45
Y-20	Ferrite	Cos-anast.	30.	3.3	70°	Leads	3¼	2⅝	1	10.45
*Y-24	Ferrite	Cosine	30.	41.5	70°	Leads	3¼	2⅝	1	10.45

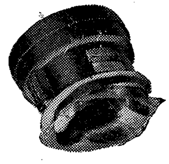
*New item.

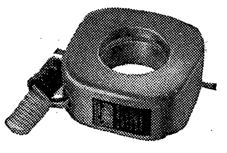
Type Y-11

FOCUS Coils

Type No.	Application	Case	Mtg.	Case Dim.-Inches H	Case Dim.-Inches W	Case Dim.-Inches D	Wt. Lbs.	List Price
B-160-S	160 ohm coil. Focuses tubes up to 70° deflection with 210* Ma.	Sq.	4-Bracket	3½	3½	1⅜	1½	$ 8.80
B-247-S	247 ohm coil. Focuses tubes up to 70° deflection with 170* Ma. Direct replacement for RCA 202-D1.	Sq.	2-Stud	3½	3½	1⅜	1½	8.25
B-365-S	365 ohm coil. Focuses tubes up to 70° deflection with 150* Ma.	Sq.	2-Stud	3½	3½	1⅜	1½	8.25
B-470-R	470 ohm coil. Narrow cross section. For focusing tubes up to 70° deflection with 125* Ma.	Round	3-Bracket	4¾	4¾	1¼	1¼	10.45
B-1000-S	1000 ohm coil. Focuses tubes up to 70° deflection with 85* Ma.	Sq.	2-Bracket 1-Stud	3½	3½	1⅜	1½	9.00

*Max. current required for 70° tubes.


Type Y-12


Type S

HORIZONTAL BLOCKING OSCILLATOR

Type No.	Application	Case Dim.-Inches H	Case Dim.-Inches W	Case Dim.-Inches D	Mtg. Dim.-Inches MW	Mtg. Dim.-Inches MD	Wt. Lbs.	List Price
A-98X	Generates 15750 pulse.	1 3/16	2⅛	1¼	1¾		¼	$ 3.75
A-98K	Generates 15750 pulse.	1¾	2 5/16	1½	1 15/16		½	2.75

TRIAD TRANSFORMER CORP.

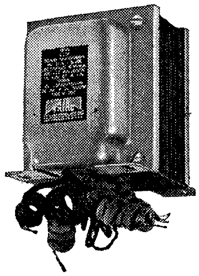
TELEVISION COMPONENTS

Replacement POWER Transformers — Combined Plate and Filament

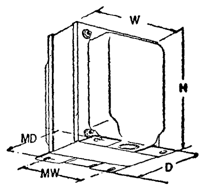
Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments Volts and Amperes		Case Dim.-Ins. H	Case Dim.-Ins. W	Case Dim.-Ins. D	Mtg. Dim.-Ins. MW	Mtg. Dim.-Ins. MD	Wt. Lbs.	List Price
R-31A	760 V.C.T.	320	5V.-6A. 5V.-2A.	12.6 C.T.-5A.	4¾	3⅞	6	3	4⅞	16	$25.50
R-31BC					4 11/16	4½	3¾	3¾	3	16	27.00
R-31A and R-31BC are designed for a great many of the 28 to 30 tube chassis where a 5V damper tube is used.											
R-32A	760 V.C.T.	320	5V.-6A.	12.6 V.C.T.-5A. 6.3V.-1.2A.	4¾	3⅞	6	3	4⅞	16	25.50
R-32A is designed for 28 to 30 tube chassis where a 6.3V damper tube is used.											
R-33A	775 V.C.T.	230	5V.-3A.	6.3V.-9A. 6.3V./5V.-2A.*	4¾	3⅞	4¾	3	3⅝	12	23.50
R-33BC					3 7/16	4½	3¾	3¾	3	12	24.75
R-33A and R-33BC are designed to deliver 400 V into an 80 m.f.d. condenser using 5U4G rectifier. 6.3V or 5 V damper tube (low capacity).											
R-34A	750 V.C.T.	230	5V.-3A.	6.3V.-8.5A. 6.3V.-1.2A.	4¾	3⅞	4¾	3	3⅝	12	21.50
R-34A is designed to deliver 390 V into an 80 m.f.d. condenser using 5U4G rectifier. 6.3V damper tube.											
R-35A	725/340 V.C.T.	250	5V.-3A. 5V.-2A.	6.3V.-8A. 6.3V.-2.5A.	4¾	3⅞	5¼	3	4⅛	14	23.50
R-35BC					3 15/16	4½	3¾	3¾	3	14	25.00
R-35A and R-35BC are designed to deliver 380 V DC into an 80 m.f.d. condenser out of a 5U4G rectifier and simultaneously delivering 200 V DC from the taps with a 5U4G rectifier, the accumulative current to be a maximum of 250 ma.											
R-36A	775 V.C.T.	275	5V.-6A.	6.3V.-8.5A. 6.3V.-1.2A.*	4¾	3⅞	5¼	3	4⅛	14	24.00
R-36BC					3 15/16	4½	3¾	3¾	3	14	25.25
R-36A and R-36BC are designed to deliver 410 V into 80 m.f.d. condenser, using 2 5U4G tubes as rectifiers. 6.3V damper tube (low capacity).											
R-37BC	735 V.C.T.	275	5V.-6A.	6.3V.-8.5A. 6.3V./5V.-2A.*	3 11/16	4½	3¾	3¾	3	13	24.35
R-37BC is designed for 380 V into filter condenser using 5U4G rectifier tubes. Either 6.3V or 5V damper tube (low capacity).											
R-38A	750 V.C.T.	225	5V.-3A.	6.3V.-10A. 6.3V.-1.2A.* 6.3V.-.9A.	4¾	3⅞	4¾	3	3⅝	12	22.50
R-38BC					3 7/16	4½	3¾	3¾	3	12	23.75
R-38A and R-38BC are designed to deliver 395 V into an 80 m.f.d. condenser, using 5U4G rectifier. 6.3V damper tube (low capacity).											
R-39A	640 V.C.T.	225	5V.-3A.	6.3V.-10A. 6.3V.-1.2A.*	4¾	3⅞	4¾	3	3⅝	12	21.25
R-39BC					3 7/16	4½	3¾	3¾	3	12	22.50
R-39A and R-39BC are designed to deliver 335 V into 60 m.f.d. condenser using 5U4G rectifier. 6.3V damper tube (low capacity).											
R-40A	780/440 V.C.T.	300	5V.-3A. 5V.-3A. 5V.-2A.	6.3V.-8.5A. 6.3V.-3.5A.	4¾	3⅞	5¼	3	4⅛	14	27.00
R-40BC					3 15/16	4½	3¾	3¾	3	14	28.45
R-40A and R-40BC are designed to deliver 410 V to 80 m.f.d. filter using 5U4G tube and simultaneously delivering 235 V DC from the taps with suitable rectifier, and the accumulative current to be a maximum of 300 Ma.											
R-42A	675 V.C.T.	185	5V.-3A.	6.3V.-7A. 6.3V.-2A.*	4¾	3⅞	3⅞	3	2¾	8	21.30
R-42BC					2 9/16	4½	3¾	3¾	3	8	22.80
R-42A and R-42BC are designed to deliver 350 V DC to 80 m.f.d. filter using 5U4G rectifier. 6.3V damper tube (low capacity).											
***R-47BS**	725 V.C.T.	225	5V.-3A.	6.3V.-10A. 6.3V.-2.7A.*	3 7/16	4½	3¾	3¾	3	12	22.75
Tube socket type, wired for 5U4G and designed to deliver 360 V into 80 m.f.d. condenser, low capacity damper tube winding.											
***R-48BS**	750 V.C.T.	180	5V.-3A.	6.3V.-9A. 6.3V.-2.7A.*	3 7/16	4½	3¾	3¾	3	12	21.75
Tube socket type, wired for 5U4G and designed to deliver 375 V into 80 m.f.d. condenser, low capacity damper tube winding.											
***R-49BS**	650 V.C.T.	240	5V.-3A.	6.3V.-9A. 6.3V.-.9A. 6.3V.-1.2A.*	3 11/16	4½	3¾	3¾	3	13	22.50
Tube socket type, wired for 5U4G and designed to deliver 325 V into 80 m.f.d. condenser, low capacity damper tube winding.											
R-50A	790/650 V.C.T.	310	5V.-3A. 5V.-3A. 5V.-2A.	6.3V.-5A. 6.3V.-5A. 6.3V.-2.6A.	4¾	3⅞	5½	3	4⅜	15	27.50
R-50BC					4 3/16	4½	3¾	3¾	3	15	29.00
R-50A and R-50BC are designed to deliver 415 V to 80 m.f.d. filter using 5U4G rectifier tube and simultaneously delivering 340 V DC from the taps with suitable rectifier, the accumulative current to be a maximum of 310 Ma.											
***R-60BC**	460 V.C.T.	300	5V.-6A.	6.3V.-8A. 6.3V.-1.2A.*	3 7/16	4½	3¾	3¾	3	12	23.75
R-60BC is designed to deliver 250 V into an 80 m.f.d. condenser, using 2 rectifier tubes, low capacity damper tube winding.											
***R-61BC**	560 V.C.T.	275	5V.-6A.	6.3V.-6A. 6.3V.-6A. 6.3V.-1.2A.*	3 15/16	4½	3¾	3¾	3	14	24.20
R-61BC is designed to deliver 305 V into an 80 m.f.d. condenser, using 2 rectifier tubes, low capacity damper tube winding.											
***R-62BC**	700 V.C.T.	290	5V.-6A.	6.3V.-10A. 6.3V.-2.5A. 6.3V.-1.2A.*	4 11/16	4½	3¾	3¾	3	16	19.50
R-62BC is designed to deliver 365 V into an 80 m.f.d. condenser, using 2 rectifier tubes, low capacity damper tube winding.											
***R-63BC**	122 V.	800		6.3V.-7A. 6.3V.-.6A. 6.3V.-1.2A.	3 3/16	4½	3¾	3¾	3	11	19.50
122 V winding designed for use in a voltage doubler circuit.											

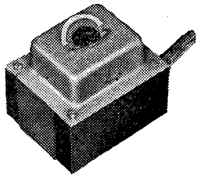
*New item. †Less than 100 m.m.f.d. capacity to ground and insulated for high voltage damper tube.
Height of transformers in BC cases is measured from chassis line to top of case. Copper shading ring on all BC cases to reduce external magnetic field.

Note: Last letter of Type No. denotes case style

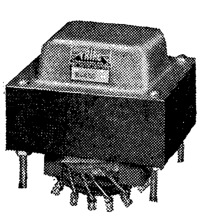


Case A

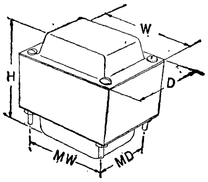




Case BS



Case BC



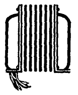
PEERLESS
ELECTRICAL PRODUCTS

DIVISION
ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.

CASE A



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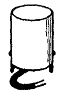

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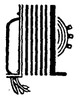

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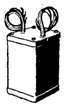
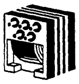


CASE K



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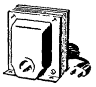
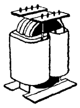
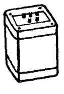


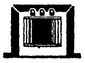
CASE N



CASE Q



CASE X



Ⓕ New, Special Feature, item.
** All primaries are 117 V, 60 cycle.
* All low-impedance windings of high-level output and impedance matching transformers may be worked into loads within ±20% of the rated impedance.
† All transformers in this group are supplied with electro-static shield.

‡ Low flux-density core for preamplifiers.
[1] CCS—Continuous duty.
[2] ICAS—Intermittent duty (20% duty cycle).
[3] No center tap on second winding.
▲ Maximum operating level, 1 mw reference.
⊗ Choke input to filter.

● Impedance is total of two separate windings.
■ For RTMA standardized 70 volt line.
○ These units may also be used as bridging transformers. Complete application data in each packing box.

COMBINATION PLATE AND FILAMENT TRANSFORMERS ** †

Type Number	High Voltage Secondary AC Volts	High Voltage Secondary DC MA.	Filament Current, Amperes 5 V.	Filament Current, Amperes 6.3 V. C.T.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
R-320-A	325-0-325	70	3.	3.	3 ½	3 ⅝	2 ⅞	4	$11.25
R-340-FⒻ	325-0-325	100	3.	5.	4 ⅜	3 1/16	2 ¾	3 ½	18.50
R-400-A	350-0-350	90	3.	4.	4 3/16	3 ⅝	3 ¾	6 ¼	12.50
R-480-A	350-0-350	120	3.	5.	4	3 ½	3 ¼	4	14.00
R-480-Q	350-0-350	120	3.	5.	5	4 5/16	4 1/16	8	27.40
R-482-A	350-0-350	120	3.	3.-3.	4	3 ½	3 ¼	4	14.50
R-490-FⒻ	350-0-350	200	3.	6.	5 5/16	3 15/16	3 ⅜	5 ½	23.00
R-560-A	400-0-400	200	3.	6.	5	4 ⅞	4 ⅜	11 ¾	19.75
R-562-FⒻ	400-0-400	220	3.	6.	5 5/16	3 15/16	3 ⅜	6 ½	30.00
R-630-FⒻ	500-435-0-435-500 (Has 100 V tap for C bias)	225	3.	6.	5 ⅜	4 5/16	3 13/16	8	37.50
R-800-A	400-0-400	300	4.	4.-5.	5	6 ¼	4 ⅜	16 ½	25.30

FILAMENT TRANSFORMERS

Type Number	Secondary Current, Amperes 2.5V. C.T.	5.V. C.T.	6.3V. C.T.	7.5V. C.T.	10.V. C.T.	Test Volts R.M.S.	Primary Volts 60 Cycle	Dimensions, Inches Height	Depth	Width	Weight Lbs.	List Price
F-012-X			1.			2000	117	1 ⅝	2 ⅞	1 ⅝	½	$ 3.75
F-037-X			1-1 (2 Windings)[3]			2000	117	2	3 ½	2	1	10.90
F-073-X			2-2 (2 Windings)[3]			2000	117	2 ⅜	3 ¾	2 ¼	1 ½	12.50
F-096-X	10					7500	117	2 ⅝	4 ¼	2 ½	2 ⅛	9.00
F-139-E			8			2000	117	3 ½	3 ⅛	2 ⅞	3 ½	10.50
F-140-E					5	2000	117	3 ½	3 ⅛	2 ⅞	3 ½	10.50
F-155-E		15				10,000	117	3 ⅞	3 ½	3 ¼	6	24.00
F-168-E					10	2000	117	4 3/16	3 ⅛	2 ⅞	5 ¼	13.50
F-342-E				26		2000	117	4 ⅝	4 ½	3 ⅞	11	25.50

SMOOTHING CHOKES

Type Number	Current D.C. MA.	Inductance Henrys	Resistance Ohms	Test Volts R.M.S.	Dimensions, Inches Height	Depth	Width	Weight Lbs.	List Price
C-305-X	90	10	285	1500	2 ⅜	3 ¾	2 ¼	1 ½	$ 3.40
C-315-X	225	3	80	1500	2 ⅜	3 ¾	2 ½	1 ¾	5.20
C-325-F	120	10	240	1500	3 ¼	3 1/16	2 ¾	2 ¾	11.75
C-325-X	120	10	240	1500	2 ⅝	4 ¼	2 ½	2 ⅛	6.20
C-390-F	200	10	150	1500	4 15/16	3 9/16	3 3/16	6	15.80
C-445-A	250	10	110	2500	4 3/16	3 ¾	3 ¾	6 ½	13.25

PEERLESS
ELECTRICAL PRODUCTS

DIVISION
ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.

INPUT TRANSFORMERS

Type Number	Descriptive Data	Impedance, Ohms		Turns Ratio	Freq. Range ±1 db	Dimensions, Inches			Weight Lbs.	List Price
		Primary	Secondary			Height	Depth	Width		
K-007-X	Single-Button Mic. to 1 or 2 Grids.	100	700,000 C.T.	1:84	Voice	1⅝	2⅞	1⅝	½	$ 6.50
K-044-D low level	Line, Mixer, or Mic. to Sgle. Grid. Max. Level: —20 dbm▲. 60 db Magnetic Shielding. Can be rotated in clamp ring for null. Has Electro-Static Shield. 6″ Leads.	600-250 and 30-50	70,000		30 15,000	1¾	1⅝	Round	½	19.00
K-049-D	Line, Mixer or Mic. to Single Grid. Max. Level: +8 dbm▲. 30 db Magnetic Shielding.	500 C.T.-333 250-200 C.T. 125-50	60,000		20 20,000	2⅞	1¾	1¾	1	21.50
K-049-Q	Same as K-049-D except 90 db Magnetic Shielding.	500 C.T.-333 250-200 C.T. 125-50	60,000		20 20,000	3½	2⅜	2½	1½	29.90
K-054-Q	Line, Mixer, or Mic. to 2 Grids. Max. Level: +18 dbm▲. 30 db Shielding.	500 C.T.-333 250-200 C.T. 125-50	70,000●		20 20,000	3½	2⅜	2½	1½	33.00
K-063-A high level	Line to P-P Grids. Max. Level: +42 dbm▲.	500 C.T.-125	12,500●		30 15,000	3⅛	3	2 9/16	2½	12.65

INTERSTAGE TRANSFORMERS

Type Number	Descriptive Data	Primary	Secondary	Turns Ratio	Freq. Range ±1 db	Height	Depth	Width	Weight Lbs.	List Price
G-306-X	Single Plate to 1 or 2 Grids.	10,000	96,000 C.T.	1:3.1	100-5000	1⅝	2⅞	1⅝	½	$ 6.00
G-318-D	Sgle. Plate to Sgle. Grid. Max. Level: +8 dbm▲. 30 db Magnetic Shielding.	10,000	60,000		20 20,000	2⅞	1¾	1¾	1	17.85
G-322-Q	1 or 2 Plates to 2 Grids. Max. Level: +18 dbm▲. 30 db Shielding.	20,000●	70,000●		20 20,000	3½	2⅜	2½	1½	29.90

IMPEDANCE MATCHING TRANSFORMERS

Type Number	Descriptive Data	Audio Watts		Impedance, Ohms		Freq. Range ±1 db	Dimensions, Inches			Weight Lbs.	List Price
		Max.	70 V Line	Primary	Secondary		Height	Depth	Width		
E-372-Q Repeat Coil	Electro-static Shield. 60 db Magnetic Shield.	+18 dbm▲	—	500 C.T.-333 250-200 C.T. 125-50	500 C.T.-333 250-200 C.T. 125-50	20 20,000	3½	2⅜	2½	1½	$27.50
E-374-X ■	Line to Spkr. Insertion Loss 0.6 db—¼ watt tap for lines of 500 or less ohms.	4	¼-½ ⅔-1 2-4	10,000 C.T. 7500 5000 C.T. 2500-1250	16-12-8 4-2 *	30 15,000	2⅜	3¾	2¼	1¾	11.75
E-377-X	Line to Speaker.	5	—	500	16-8	40-10,000	2	3½	2	1	7.00
E-383-X Ⓕ ■	Line to Spkr. Insertion Loss 0.6 db. 2½ watt tap for lines of 500 or less ohms. Rated 20 watts 50-15,000 cps. 40 watts 150-15,000 cps.	10	1¼-2½ 3⅓-5 10-20-40 (See Data)	4000 C.T. 2000 C.T. 1500 1000 C.T. 500-250-125	16-12-8 4-2 *	30 15,000	2⅝	4⅛	2⅞	2½	18.75
E-386-E ■	Line to Speaker. Insertion Loss 0.6 db. Max.	24	3-4 6-12 24	1600 C.T. 1200 800 C.T. 400-200	16-12-8 4-2*	30 15,000	3⅞	3	3¼	4¼	18.50
E-392-E ■	Same Data as E-386-E.	64	8-11 16-32 64	625 C.T.-470 312 C.T.-156 78	16-12-8 4-2*	30 15,000	4¾	4⅞	3⅞	9	29.55

REACTOR EQUALIZING

Type Number	Descriptive Data	Res. Ohms	Ind. Henrys	D.C. MA		Dimensions, Inches			Weight Lbs.	List Price
				Normal	Max.	Height	Depth	Width		
L-370-D	Low Pass Filter.	725	4	0	10	⅜	1¾	1⅝ Round	⅜	$10.55

PEERLESS ELECTRICAL PRODUCTS

DIVISION ALTEC LANSING CORPORATION

9356 Santa Monica Blvd.
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161 Sixth Avenue
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STANDARD OUTPUT TRANSFORMERS

Type Number	Descriptive Data	Freq. Range ±1 db	Impedance, Ohms Primary	Impedance, Ohms Secondary	Pri. DC MA. Max.	Pri. DC MA. Unbal.	Audio Watts	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
S-448-Q	Single or P-P plates to line. 30 db hum bucking.	20-20,000	20,000 C.T. 12,500 C.T. 5000-3125	500 C.T. 200 C.T.-333 250-125-50	15	2	+18 dbm▲	3 ½	2 ⅜	2 ½	1 ½	**$26.10**
S-508-A	P-P plates to speaker.	30-15,000	8000 C.T.	16-12-8-4	45	5	10	2 13/16	2 13/16	2 ¼	1 ¾	**11.00**
S-510-F Ⓕ	P-P plates to speaker.	20-30,000	10,000 C.T. 8000 C.T.	16-8*	40	4	10	2 ⅞	2 ¾	2 ½	2	**17.00**
S-516-A	P-P plates to speaker.	30-15,000	6600 C.T.	16-12-8-4	70	7	20	3 ⅛	3	2 9/16	2 ½	**12.75**
S-526-F Ⓕ	P-P plates to speaker.	20-30,000	6600 C.T. 5000 C.T.	16-8-4*	60	6	20	4 ⅜	3 1/16	2 ¾	3	**21.00**
S-532-A	P-P plates to speaker.	30-15,000	5000 C.T. 3000 C.T.	16-12-8-4	90	9	20	3 ⅛	3	2 9/16	2 ½	**14.50**
S-542-F Ⓕ	P-P plates to speaker.	20-30,000	5000 C.T. 4000 C.T.	16-8-4*	140	14	40	4 15/16	3 9/16	3 3/16	5 ½	**26.00**
S-552-A ■	P-P plts. to spkr. or line.	30-15,000	3800 C.T. 3200 C.T.	330, 82 ½ 16-12-8-4-2	250	25	60	4 ¾	4 ⅝	3 ⅞	9	**33.00**

INPUT TRANSFORMERS (20-20 PLUS)

Type Number	Descriptive Data	Max. Level ▲	Impedance, Ohms Primary	Impedance, Ohms Secondary	Primary DC MA. Max.	Primary DC MA. Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
K-241-D Ⓕ	Frequency response, ±1 db: 10-30,000 cps. Primary balanced to attenuate longitudinal currents in excess of 50 db. Sec. may be used single ended or in P-P. Has 2 sec. windings with bal. cap. to grnd. Electrostatic shield is provided between pri. and sec. Has 90 db electromagnetic shielding. Insertion loss 1 ¼ db. Transformer will operate into open circuit or resistive load. Frequency resp. down less than 1 db at 15 KC, when operated into resistive load shunted with 120 MMFD, cap. High power rating makes transf. suitable for use as output transf.	+8 dbm	500-280-125-31 or 600-340-150-37.5	70,000 ● or 84,000 ●	0	—	2 ¾	1 ½	2	¾	**$42.00**

OUTPUT TRANSFORMERS (20-20 PLUS)

Type Number	Descriptive Data	Max. Level ▲	Impedance, Ohms Primary	Impedance, Ohms Secondary	Primary DC MA. Max.	Primary DC MA. Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
S-217-D Ⓕ **Line Level**	Frequency response: ±1 db: 5-65,000 cps. Pri. may be used single ended or P-P. Sec. windings have bal. cap. to grnd. Has C.T. tertiary of 24.5 ohms which may be used for feedback or grnded. for electrostatic shield. Parallel feed is required. Astatic balance and electromagnetic shield provide approx. 50 db of sh'elding. Insertion loss 0.5 db. Transf. may be used as excellent input transf. to either single or P-P grids. When used this waj balanced low impedance winding provides excellent line termination.	+20 dbm	12,500 3125	600-300 150-75 Tert—See Data	25	0	3 ¼	1 ½	2	1 ¼	**$56.50**

MATCHING TRANSFORMERS (20-20 PLUS)

Type Number	Descriptive Data	Max. Level ▲	Impedance, Ohms Primary	Impedance, Ohms Secondary	Primary DC MA. Max.	Primary DC MA. Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
E-204-D Ⓕ **Repeat Coil**	Frequency response: ±1 db: 5-85,000 cps. Electrostatic shield. Astatic balance and electromagnetic shield provide approx. 50 db magnetic shielding. Attenuates longitudinal currents 80 db in bal. circuit in freq. range up to 70,000 cps. Insertion loss 0.4 db.	+23 dbm	500 C.T. 125 C.T. or 600 C.T. 150 C.T.	500 C.T. 125 C.T. or 600 C.T. 150 C.T.	100	0	3 ¼	1 ½	2	1 ¼	**$56.50**

As a Hybrid Transformer This precise matching transf. is an excellent hybrid unit for operation from two 250/300 ohm sources. Balancing resistor of approx. 125/150 ohms required in pri. circuit. For max. attenuation between sources the exact value of resistor should be determined from measurements made in circuit where transf. is used. Correct value will yield average attenuation of 27 to 30 db with a max. attenuation of approx. 50 db at some point between 500 cps and 1,000 cps.

Total Pri.	Impedances, Ohms Pri. 1	Impedances, Ohms Pri. 2	Sec.	Max. Level ▲
500 or 600	250 or 300	250 or 300	500-125 or 600-150	+23 dbm

OUTPUT TRANSFORMERS (20-20 PLUS)

Type Number	Descriptive Data	Impedance, Ohms Primary	Impedance, Ohms Secondary	Max. Level ▲	Primary DC MA Max.	Primary DC MA Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
S-226-Q Ⓕ **High Level**	Frequency response, ±1 db: 10-100,000 cps. Power rating, at 15 cps., 10 watts; at 10 cps., 5 watts. Insertion loss 0.5 db. Can be used between half and double of rated impedances. For half impedances, power ratings are doubled. For doubled impedances, power ratings are halved. Sec. may be operated with one end, or C.T. grnded.	6600 C.T. 1650 C.T.	16, 12, 8, 4, 2	+43 dbm (20 watts) See Data	70	7	4 ⅛	3 3/16	3 1/16	3 ¼	**$38.00**

OUTPUT TRANSFORMERS (20-20 PLUS) *(Continued)*

Type Number	Descriptive Data	Impedance, Ohms		Max. Level ▲	Primary DC MA		Dimensions, Inches			Weight Lbs.	List Price
		Primary	Secondary		Max.	Unbal.	Height	Depth	Width		
S-256-Q Ⓕ	Same as S-226-Q, except: Power rating, at 15 cps., 20 watts; at 10 cps., 10 watts. Insertion loss, 0.4 db.	5000 C.T.	16, 12, 8, 4, 2	+46 dbm (40 watts) See Data	120	12	4⅝	3⅝	3½	6½	**$50.00**
S-268-Q Ⓕ	Same as S-226-Q, except: Frequency response ±1 db: 8-80,000 cps. Power rating, at 15 cps., 40 watts; at 10 cps., 20 watts. Insertion loss, 0.3 db.	8000 C.T. 2000 C.T.	16, 12, 8, 4, 2	+49 dbm (80 watts) See Data	125 250	12 25	6⅜	5⅛	5⅛	14	**$82.50**

INPUT TRANSFORMERS (20-20)

K-221-Q ○ **Low Level**	Sec. may be used single ended or in P-P—has two sec. windings with balanced capacitance to grnd. Electro-static shield is provided between pri. and sec. Has 90 db electro-magnetic shield.	500-250-30 or 600-300-36	70,000● or 84,000●	—12 dbm	0		3½	2⅜	2½	1⅝	**$38.50**
K-281-Q High Level	For P-P arrangement only—has two sec. windings with bal. cap. to grnd.	500-220-125-56-14 or 600-265-150-67-17	30,000● or 36,000●	+38 dbm	0		4⅝	3⅝	3½	5½	**59.85**

INTERSTAGE TRANSFORMERS (20-20)

G-212-Q ○ **Low Level**	Both pri. and sec. may be used single-ended or in P-P—has two sec. windings with bal. cap. to grnd.—has electro-static shield between pri. and sec.—parallel feed is recommended. Has 90 db electro-magnetic shield.	10,000 2,500	40,000 10,000	—12 dbm	5	0.5	3½	2⅜	2½	1⅝	**$40.00**
G-252-Q ○ **Line Level**	Same as G-212-Q except has 30 db electro-magnetic shield.	10,000 2,500	40,000 10,000	+23 dbm	10	1.0	4⅛	3 3/16	3 1/16	2⅜	**57.00**

OUTPUT TRANSFORMERS (20-20)

S-227-Q High Level	Sec. may be operated with one end grounded.	10,000 C.T.	16-8-4-2 *	+43 dbm (20 watts)	50	5	4⅝	3⅝	3½	6	**$28.00**
S-230-Q	Same as S-227-Q.	6600 C.T.	16-8-4-2 *	+43 dbm (20 watts)	70	7	4⅝	3⅝	3½	6	**27.50**
S-240-Q	Same as S-227-Q.	5000 C.T.	16-8-4-2 *	+43 dbm (20 watts)	90	9	4⅝	3⅝	3½	6	**27.50**
S-242-Q ■	Same as S-235-Q.	5000 C.T.	500-250-125-62½	+43 dbm (20 watts)	90	9	4⅝	3⅝	3½	6	**28.00**
S-245-Q	Same as S-227-Q.	3000 C.T.	16-8-4-2 *	+43 dbm (20 watts)	110	11	4⅝	3⅝	3½	6	**27.50**
S-265-Q	Two center-tapped pri. for series or parallel. Sec. operated with one end grounded.	10,000 C.T. 2500 C.T.	16-8-4-2 *	+46 dbm (40 watts)	110 220	11 22	5	4 5/16	4 1/16	10	**45.00**
S-270-Q ■	Same as S-265-Q except sec. should be operated bal. to grnd.	10,000 C.T. 2500 C.T.	500-250-125-62½	+46 dbm (40 watts)	110 220	11 22	5	4 5/16	4 1/16	10	**50.00**

BRIDGING TRANSFORMERS

Type Number	Descriptive Data	Impedance, Ohms		Unmatched Bridging 500/600 Ohm Line		Matched Bridging 500/600 Line			Dimensions, Inches			Weight Lbs.	List Price
		Sec.	Pri.	Bridged Line Max. Level▲	Bridging Loss db	Bridged Line Max. Level▲	Bridging Loss db	Resist. 2 Reqd. (1 watt)	Height	Depth	Width		
K-221-Q	Has electrostatic shield and 90 db electro-magnetic shield.	500/600 250/300	70,000	+9 dbm	21½	+15 dbm	28½	33,000	3½	2⅜	2½	1⅝	**$38.50**
		30/36	17,500	+3 dbm	15½	+8 dbm	21	7500					
G-212-Q	Same data as K-221-Q.	40,000 10,000	10,000	+1 dbm	+6 db (Gain)	+8 dbm	0	4150	3½	2⅜	2½	1⅝	**40.00**
G-252-Q	Has electrostatic shield and 30 db electro-magnetic shield.	40,000 10,000	10,000	+36 dbm	+6 db (Gain)	+43 dbm	0	3600	4⅛	3 3/16	3 1/16	2⅜	**57.00**

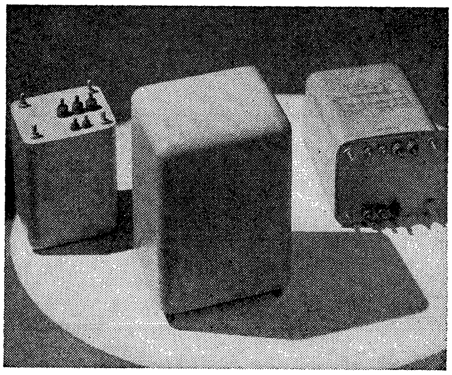
IMPEDANCE MATCHING TRANSFORMERS (20-20)

Type Number	Descriptive Data	Impedance, Ohms		Max. Level ▲	Primary DC MA		Watt Power RMA 70 V Line	Dimensions, Inches			Weight Lbs.	List Price
		Primary	Secondary		Max.	Unbal.		Height	Depth	Width		
E-214-Q	For use between line and spkr.	1000-500 250	16-12-8-4-2 *	+40 dbm (10 watts)	—	—		4⅛	3 3/16	3 1/16	2¾	**$26.00**
E-243-Q ■	Same as E-233-Q except insertion loss less than ¾ db.	1000 C.T. 750 500 C.T. 250-125	16-12-8-4-2 *	+43 dbm (20 watts)	—	—	5-6⅔-10-20	4⅝	3⅝	3½	6	**31.00**

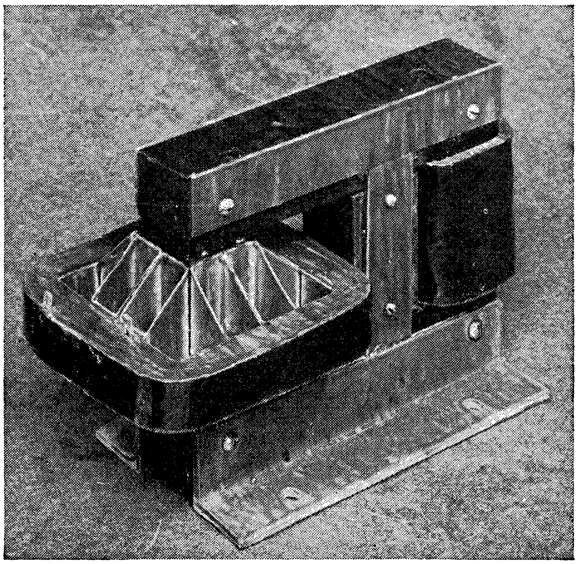
TRANSFORMERS

For Electronic Equipment

MILITARY, INDUSTRIAL, & COMMERCIAL



Cast-permafil transformers



Special magnetron filament transformer

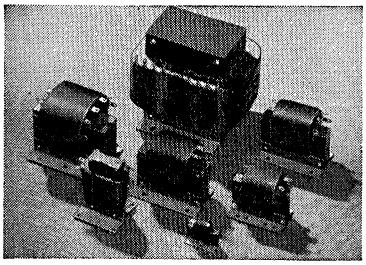
Plate
Filament
Plate and Filament
Filter Reactors
Pulse
Audio

in

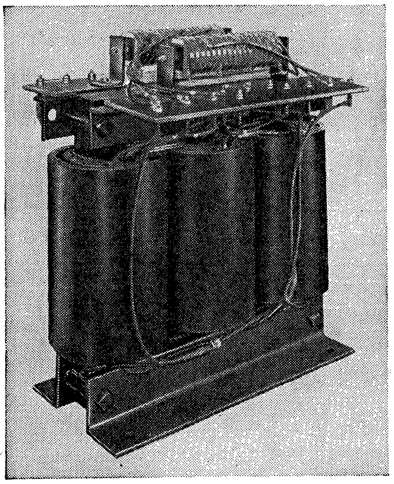
Core-and-coil
Permafil
Compound-filled
Hermetic
Construction

for

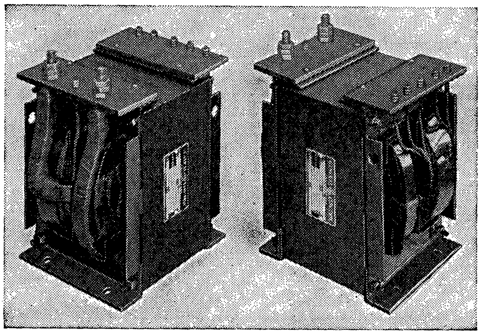
Radar
Communication
Television and Radio
Transmitters
and Similar Equipment



Permafil-type transformer



Core-and-coil assemblage for plate transformer for use with rectifier, 33.3 kva



Heavy-duty, high-reactance filament transformers

The above illustrations show only a few of the transformers typical of this line. More complete information may be obtained by sending your request for details, along with specific requirements, to the nearest G-E Apparatus Sales Office.

UNITED TRANSFORMER CO.

PRICE LIST

Type	List
A-10	$16.00
A-11	18.00
A-12	16.00
A-14	17.00
A-16	15.00
A-17	17.00
A-18	16.00
A-19	19.00
A-20	16.00
A-21	18.00
A-24	16.00
A-25	17.00
A-26	16.00
A-27	16.00
A-30	12.00
A-32	10.00
CG-1C	75.00
CG-1S	75.00
CG-2L6	20.00
CG-4L6	35.00
CG-15	13.00
CG-16	13.00
CG-19	13.00
CG-33	8.00
CG-34	13.00
CG-40	10.00
CG-41	10.00
CG-44	10.00
CG-45	10.00
CG-48C	10.00
CG-50	16.00
CG-51AX	13.00
CG-53AX	15.00
CG-59AX	15.00
CG-100	11.00
CG-101	11.00
CG-102	16.00
CG-103	16.00
CG-104	23.00
CG-105	23.00
CG-108	45.00
CG-109	45.00
CG-120	17.00
CG-121	25.00
CG-122	20.00
CG-124	22.00
CG-125	23.00
CG-126	37.00
CG-131	11.00
CG-132	12.00
CG-133	14.00
CG-134	14.00
CG-135	15.00
CG-136	15.00
CG-137	12.00
CG-140	12.00
CG-141	14.00
CG-233	13.00
CG-235	18.00
CG-238AX	35.00
CG-300	20.00
CG-301	30.00
CG-302	37.00
CG-303	50.00
CG-304	140.00
CG-305	75.00
CG-306	140.00
CG-307	125.00
CG-308	165.00
CG-309	300.00
CG-310	210.00
CG-311	75.00
CG-312	75.00
CG-315	20.00
CG-316	30.00
CG-333	14.00
CG-422	22.00
CG-428	30.00
CG-429	31.00
CG-431	45.00
CG-433	14.00
CG-512	35.00
CG-710	13.00
CGE-1A	30.00
CVA-1	14.00
CVA-2	17.00
CVA-3	22.00
CVA-4	32.00
CVA-5	45.00
CVL-1	10.00
CVL-2	13.50
CVL-3	20.00
CVL-10	10.00
CVL-11	13.50
CVL-12	20.00
CVM-0	10.00
CVM-1	15.00
CVM-2	23.00

Type	List
CVM-3	$33.00
CVM-4	55.00
CVM-5	130.00
CVP-1	11.00
CVP-2	16.00
CVP-3	25.00
CVP-4	35.00
CVP-5	60.00
FT-1	3.50
FT-2	3.20
FT-3	4.00
FT-4	4.25
FT-5	4.50
FT-6	4.50
FT-7	4.50
FT-8	6.00
FT-9	6.00
FT-10	7.00
H-1	16.50
H-2	16.00
H-3	13.50
H-4	13.50
H-5	15.50
H-6	16.00
H-7	16.50
H-8	15.50
H-9	16.50
H-10	15.00
H-11	12.00
H-20	20.00
H-21	23.00
H-22	21.00
H-23	20.00
H-24	15.00
H-30	13.00
H-31	13.00
H-32	13.00
H-33	13.00
H-34	13.00
H-35	11.00
HA-100	21.00
HA-100X	26.00
HA-101	24.00
HA-101X	29.00
HA-103A	25.00
HA-104	22.00
HA-105	16.00
HA-106	18.00
HA-107	26.00
HA-108	21.00
HA-108X	25.00
HA-111	22.00
HA-113	20.00
HA-114	22.00
HA-130X	30.00
HA-133	20.00
HA-134	25.00
HA-135	25.00
HA-137	22.00
HC-115	13.00
HC-116	20.00
HC-117	13.00
HP-122	15.00
HP-123	22.00

Type	*Net
HQA-1	7.00
HQA-2	7.00
HQA-3	7.50
HQA-4	7.50
HQA-5	8.00
HQA-6	8.00
HQA-7	9.00
HQA-8	9.00
HQA-9	10.00
HQA-10	10.00
HQA-11	10.00
HQA-12	11.00
HQA-13	11.00
HQA-14	13.00
HQA-15	14.00
HQA-16	15.00
HQA-17	16.00
HQA-18	17.00
HQB-1	16.00
HQB-2	16.00
HQB-3	16.00
HQB-4	17.00
HQB-5	17.00
HQB-6	18.00
HQB-7	19.00
HQB-8	20.00
HQB-9	21.00
HQB-10	22.00
HQB-11	23.00
HQB-12	24.00

Type	*Net
HQC-1	$13.00
HQC-2	13.00
HQC-3	13.00
HQC-4	13.00
HQC-5	13.00
HQD-1	15.00
HQD-2	15.00
HQD-3	15.00
HQD-4	15.00
HQD-5	15.00
HQE-1	6.00
HQE-2	6.00
HQE-3	7.00
HQE-4	7.50
HQE-5	8.00

Type	List
LS-6L1	50.00
LS-6L3	35.00
LS-6L4	60.00
LS-5	50.00
LS-6	35.00
LS-7	40.00
LS-10	25.00
LS-10X	35 00
LS-12	28.00
LS-12X	35.00
LS-14	32.00
LS-14X	37.00
LS-15X	37.00
LS-18	31.00
LS-19	26.00
LS-20	25.00
LS-21	26.00
LS-22	32.00
LS-25	32.00
LS-26	30.00
LS-27	26.00
LS-30	26.00
LS-30X	32.00
LS-31	32.00
LS-31X	39.00
LS-32	30.00
LS-33	30.00
LS-34	45.00
LS-38	40.00
LS-39	30.00
LS-40	26.00
LS-47	35.00
LS-48	60.00
LS-49	60.00
LS-50	26.00
LS-51	28.00
LS-52	35.00
LS-54	25.00
LS-55	35.00
LS-56	35.00
LS-57	25.00
LS-58	50.00
LS-60A	40.00
LS-61	35.00
LS-62A	35.00
LS-63	25.00
LS-66	110.00
LS-67	110.00
LS-70	40.00
LS-72	43.00
LS-74	40.00
LS-80	30.00
LS-82	32.00
LS-83	70.00
LS-84	30.00
LS-88	12.00
LS-89A	100.00
LS-90	15.00
LS-91	15.00
LS-92	25.00
LS-93	40.00
LS-96	75.00
LS-98	40.00
LS-99	120.00
LS-102	80.00
LS-103	110.00
LS-104A	500.00
LS-105	120.00
LS-106	270.00
LS-120	50.00
LS-121Y	60.00
LS-140	35.00
LS-141	30.00
LS-142	35.00
LS-143	30.00
LS-150	30.00
LS-151	27.00
LS-180	20.00
LS-183	125.00
LS-184	200.00
LS-185	450.00
LS-192	35.00

Type	List
LS-691	$400.00
LS-692	800.00
LS-950	15.00
LS-980	40.00
MC-1	15.00
MC-2	17.00

Type	Net
MQA-1	7.00
MQA-2	7.00
MQA-3	7.00
MQA-4	7.50
MQA-5	8.00
MQA-6	8.00
MQA-7	9.00
MQA-8	10.00
MQA-9	10.00
MQA-10	10.00
MQA-11	11.00
MQA-12	11.00
MQA-13	11.00
MQA-14	12.00
MQA-15	13.00
MQA-16	14.00
MQA-17	15.00
MQA-18	17.00
MQA-19	25.00
MQB-1	16.00
MQB-2	16.00
MQB-3	16.00
MQB-4	17.00
MQB-5	17.00
MQB-6	18.00
MQB-7	19.00
MQB-8	20.00
MQB-9	21.00
MQB-10	22.00
MQB-11	23.00
MQB-12	24.00
MQE-1	5.50
MQE-2	5.50
MQE-3	6.00
MQE-4	6.00
MQE-5	6.50
MQE-6	6.50
MQE-7	7.00
MQE-8	7.50
MQE-9	8.00
MQE-10	8.50
MQE-11	9.00
MQE-12.	9.00
MQE-13	9.50
MQE-14	10.00
MQE-15	11.00

Type	List
O-1	14.00
O-2	14.00
O-3	13.00
O-4	11.00
O-5	11.00
O-6	13.00
O-7	13.00
O-8	14.00
O-9	14.00
O-10	14.00
O-11	14.00
O-12	13.00
O-13	10.00
O-14	14.00
O-15	14.00
P-1	15.00
P-2	15.00
P-3	14.00
P-4	13.00
P-5	13.00
P-6	14.00
P-7	14.00
P-8	15.00
P-9	15.00
P-10	15.00
P-11	15.00
P-12	14.00
P-13	11.00
P-14	15.00
P-15	15.00
PF-1	12.00
PF-2	12.00
PF-3	5.00
PF-4	12.00
R-14	2.20
R-15	2.20
R-16	2.20
R-17	3.00
R-18	3.00

Type	List
R-19	$4.20
R-20	4.60
R-21	4.60
R-22	4.20
R-33	3.20
R-34	3.20
R-35	4.20
R-38A	3.30
R-39	4.20
R-40	6.00
R-41	9.50
R-42	10.50
R-43	12.00
R-44	14.50
R-45	21.00
R-46	45.00
R-47	12.00
R-48	15.00
R-49	15.00
R-53	4.00
R-55	2.00
R-58	3.30
R-59	4.00
R-60	4.10
R-64	80.00
R-72	9.50
R-73	14.00
R-74	25.00
R-75	40.00
R-76	65.00
R-77	110.00
R-78	20.00
R-79	25.00
R-80	35.00
R-81	70.00
R-83	20.00
R-84	25.00
R-85	35.00
R-86	70.00
R-101	7.50
R-102	9.00
R-103	9.50
R-104	10.50
R-105	13.00
R-106	7.50
R-107	9.00
R-108	10.50
R-109	16.00
R-110	7.50
R-111	9.00
R-112	10.50
R-113	16.00
SO-1	6.50
SO-2	6.50
SO-3	6.50
SO-4	6.50
SO-5	5.50
SO-6	6.50
SSO-1	6.50
SSO-2	6.50
SSO-3	6.50
SSO-4	6.50
SSO-5	5.50
SSO-6	6.50
SSO-7	6.50

Type	*Net
S-1	3.60
S-2	4.50
S-3	3.50
S-4	5.70
S-5	4.70
S-6	3.50
S-7	5.50
S-8	5.00
S-9	6.00
S-10	5.50
S-11	4.70
S-12	5.50
S-13	7.00
S-14	5.20
S-15	5.50
S-16	7.00
S-17	9.00
S-18	6.00
S-19	9.00
S-20	13.00
S-21	18.00
S-22	28.00
S-23	3.80
S-24	4.20
S-25	3.50
S-26	3.50
S-27	4.50
S-28	4.50
S-29	4.50
S-30	4.50
S-31	6.00
S-32	6.00

Type	*Net
S-33	$8.50
S-34	8.50
S-35	13.00
S-36	13.00
S-37	16.00
S-38	16.00
S-39	15.00
S-40	15.00
S-41	15.00
S-42	17.00
S-43	22.00
S-44	18.00
S-45	15.00
S-46	18.00
S-47	23.00
S-48	34.00
S-49	33.00
S-50	50.00
S-51	11.00
S-52	14.00
S-53	3.70
S-54	3.70
S-55	3.70
S-56	3.70
S-57	5.50
S-58	6.50
S-59	5.50
S-60	12.00
S-61	5.50
S-62	6.50
S-63	12.50
S-64	6.50
S-65	6.50
S-66	6.50
S-67	6.50
S-68	7.00
S-69	7.00
S-70	7.00
S-71	12.00
S-72	7.50
SC-3	5.00
SC-4	7.00
SC-5	13.00
V-0	13.00
V-1	20.00
V-1-M	35.00
V-2	17.00
V-3	25.00

Type	List
VIC-1	11.00
VIC-2	11.00
VIC-3	11.00
VIC-4	11.00
VIC-5	11.00
VIC-6	11.00
VIC-7	14.00
VIC-8	14.00
VIC-9	14.00
VIC-10	14.00
VIC-11	14.00
VIC-12	14.00
VIC-13	14.00
VIC-14	14.00
VIC-15	16.50
VIC-16	16.50
VIC-17	16.50
VIC-18	16.50
VIC-19	16.50
VIC-20	16.50
VIC-21	17.50
VIC-22	18.50

FILTERS AND EQUALIZERS

Type	Page	*Net
3A	16	150.00
3AX	16	240.00
4C	16	200.00
BMI*	15	25.00
BML*	15	25.00
HMI*	15	25.00
HML*	15	25.00
LMI*	15	25.00
LML*	15	25.00

*STOCK FREQUENCIES SHOWN ON PG. N-45. SPECIAL FREQUENCIES $35.00 NET.

AMPLIFIER KITS

Type	Page	List
W-10	B	75.00
W-20	B	120.00

*Net

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

LINEAR STANDARD AUDIO TRANSFORMERS

LINEAR STANDARD AUDIO UNITS FEATURE:

UNIFORM FREQUENCY RESPONSE . . . at low frequencies, is effected through the use of HIPERM-ALLOY, a STABLE nickel iron alloy of very high initial permeability. Uniform high frequency response is the result of multiple section interleaved windings arranged in a semi-toroidal coil structure. This, plus special winding methods and insulations, assures a minimum of distributed capacity and leakage reactance.

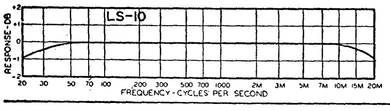
UTC LINEAR STANDARD transformers are the ONLY audio units with a **GUARANTEED** uniform response . . . ± 1 DB from 20 to 20,000 cycles.

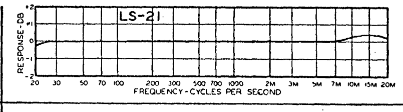
MINIMUM HUM PICKUP . . . is accomplished through the use of a hum balanced, semi-toroidal, coil structure which affords maximum neutralization of external fields. In addition, all units employ high conductivity outer case for maximum shielding. For very low level applications, units whose code numbers end in X employ multiple alloy shielding, making possible a transformer with extremely low inductive pickup.

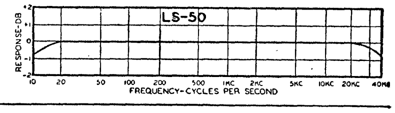
NEGLIGIBLE WAVE FORM DISTORTION . . . is a function of proper impedance matching, minimum phase shift, and low flux density. These elements have been given great attention in the design of Linear Standard units. It is interesting to note that an output transformer reasonably flat from 20 to 20,000 cycles may show serious distortion at 30 and 10,000 cycles. For this reason, UTC high level units have a frequency range better than guaranteed value, generally 10 cycles to 50,000 cycles (see page 6).

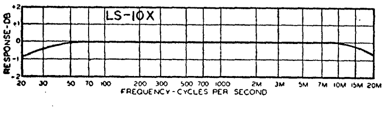
MULTIPLE TAP WINDINGS . . . make possible a wide combination of impedance terminations without impairing fidelity or efficiency. Precision winding methods result in winding accuracy of .1% . . . perfect balance of inductance and capacity . . . exact impedance reflection.

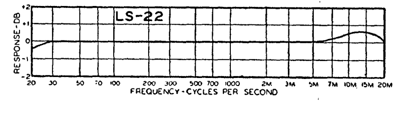
DEPENDABILITY . . . is a function of external and internal structure. Linear Standard units are housed in rugged die cast cases of precise dimension with reversible mounting to permit above chassis or subchassis wiring. The solid terminal posts on low absorption bakelite are arranged in a circular layout so that a round chassis hole will clear all terminals. Coils are vacuum baked and impregnated. **Semi-hermetic sealing** is accomplished through the use of a high adhesion compound poured through the large opening opposite the terminal board after controlled preheating of the unit for full compound penetration.

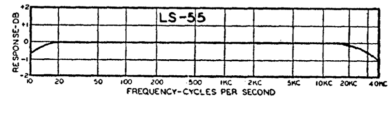


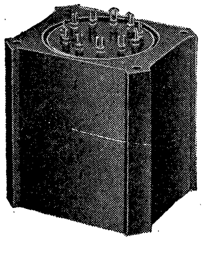












LS-1 CASE

Length	3⅛"
Width	2⅝"
Height	3¼"
Mounting	1¹⁵⁄₁₆" x 2⁷⁄₁₆"
Screws	6-32
Cutout	1⅞" dia.
Unit Weight	3 lbs.

LOW IMPEDANCE TO GRID TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative* hum	Unbal. DC in prim'y	Case No.
LS-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600 ohms	60,000 ohms in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-10X	As above	As above	50,000 ohms	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	120,000 ohms overall, in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-12X	As above	As above	80,000 ohms overall, split	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-14	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	60,000 ohms in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-14X	As above	As above	50,000 ohms	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-15X	Three isolated lines or pads to one or two grids	30, 50, 200, 250 ohms each primary	60,000 ohms overall, in two sections	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-18	High level multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	50,000 ohms overall, in two sections	20-20,000	+20 DB	—50 DB	.5 MA	LS-2
LS-26	Bridging line to single or push pull grids	5,000 ohms	60,000 ohms in two sections	15-20,000	+15 DB	—74 DB	0 MA	LS-1

(Refer to Page N-35 for UTC Prices)

MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No.
LS-30	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200, 250, 333, 500/600 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	−74 DB	.5 MA	**LS-1**
LS-30X	As above	As above	As above	20-20,000	+15 DB	−92 DB-Q	.3 MA	**LS-1**
LS-31	Three isolated lines or pads to multiple line	30, 50, 200, 250 ohms each primary	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	−74 DB	.5 MA	**LS-1**
LS-31X	As above	As above	As above	20-20,000	+14 DB	−92 DB-Q	.3 MA	**LS-1**
LS-32	Mixing, low impedance mike, pickup, or parallel mixer to multiple line	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	−74 DB	.5 MA	**LS-1**

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No.
LS-19	Single plate to push pull grids like 2A3, 6L6, 300A. Split secondary	15,000 ohms	95,000 ohms; 1.25:1 each side	20-20,000	+12 DB	−50 DB	0 MA	**LS-1**
LS-20	Single plate to single grid	15,000 ohms	60,000 ohms; 2:1 turn ratio	20-20,000	+10 DB	−74 DB	0 MA	**LS-1**
LS-21	Single plate to push pull grids. Split pri. and sec.	15,000 ohms	135,000 ohms; 3:1 overall	20-20,000	+10 DB	−74 DB	0 MA	**LS-1**
LS-40	Single plate to push pull grids. Split secondary	15,000 ohms	135,000 ohms; 3:1 overall	30-20,000	+12 DB	−74 DB	8 MA	**LS-1**
LS-22	Push pull plates to push pull grids. Split primary and secondary	30,000 ohms plate to plate	80,000 ohms; turn ratio 1.6:1 overall	20-20,000	+18 DB	−50 DB	.25 MA	**LS-2**
LS-25	Push pull plates to push pull grids. Medium level. Split primary and sec.	30,000 ohms plate to plate	50,000 ohms; turn ratio 1.3:1 overall	20-20,000	+15 DB	−74 DB	1 MA	**LS-1**
LS-26	Bridging line to 1 or 2 grids	5000 ohms	60,000 in two sections	15-20,000	+15 DB	−74 DB	0 MA	**LS-1**

PLATE, CRYSTAL, PHOTOCELL, AND BRIDGING TO LINE TRANSFORMERS

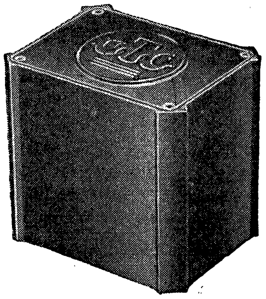
Type No.	Application	Primary Impedance	Secondary Imp. ohms	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No
LS-27	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-15,000 cycles	+15 DB	−74 DB	8 MA	**LS-1**
LS-50	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	20-20,000	+15 DB	−74 DB	0 MA	**LS-1**
LS-51	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	20-20,000	+16 DB	−74 DB	1 MA	**LS-1**
LS-38	Crystal microphone or pickup to multiple line, with internal equalizer	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	Equalized for crystal	+10 DB	−74 DB	0 MA	**LS-1**
LS-39	Photocell, high-mu triode, diode or overbiased detector to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	20-20,000	+10 DB	−74 DB	0 MA	**LS-1**
LS-150	Bridging from 50 to 500 ohm line to line	4,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	15-30,000	+15 DB	−74 DB	1 MA	**LS-1**
LS-151	Bridging from 50 to 500 ohm line to line	16,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	15-30,000	+18 DB	−74 DB	1 MA	**LS-1**

OUTPUT TRANSFORMERS TO HIGH IMPEDANCE (RF) LOAD

Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	± .4 db. from	Max. Level	Case No.
LS-56	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6AS7, 6L6	5,000 ohms plate to plate and 3,000 ohms plate to plate	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	**LS-2**
LS-66	Class B 203A, 838, ZB120, 805	9,000 ohms plate to plate	5000, 4200, 4100, 3500, 3300, 2650, 2500, 2100, 1250, 600	25-20,000	260 watts	*
LS-67	Class B 203A, 838, ZB120, 805	9,000 and 6,900 ohms plate to plate	10000, 2500	25-20,000	260 watts	*
LS-691	Class B 849, 833, 250TH	10,400 ohms plate to plate	4500, 4000, 3500, 2750, 2000	25-20,000	1000 watts	**LS-6**
LS-692	Class B push pull parallel 833's	4,750 ohms plate to plate	2500, 2000, 1750, 1500, 1250	25-20,000	2500 watts	**LS-6**

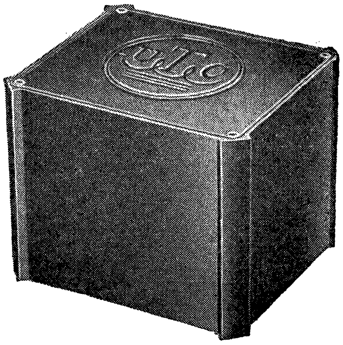
MODULATION REACTORS

Type No.	Application	Inductance	DC Current	DC Resistance	Insulation Test Voltage	Case No.
LS-102	Modulation reactor	50 hy	350 MA	250 ohms	5000	*
LS-103	Modulation reactor	50 hy	500 MA	175 ohms	7500	*
LS-104A	Modulation reactor	50 hy	1.3 amp	75 ohms	20000	LS-7
LS-106	Modulation reactor	50 hy	750 MA	120 ohms	10000	Spec.



LS-2 CASE

Length	4 7/16"
Width	3½"
Height	4 3/16"
Mounting	2 11/16" x 3 11/16"
Screws	8-32
Cutout	2¾" dia.
Unit Weight	7.5 lbs.



LS-3 CASE

Length	5 13/16"
Width	5"
Height	4 11/16"
Mounting	4 9/16" x 5 1/32"
Screws	10-24
Cutout	3¾" dia.
Unit Weight	15 lbs.

The values of unbalanced DC shown will effect approximately 1.5 DB loss at 30 cycles.

*** Comparison of hum balanced unit with shielding to normal uncased type.**

Q Multiple alloy magnetic shield.

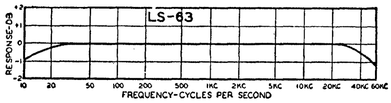
† 6MW as ODB reference.

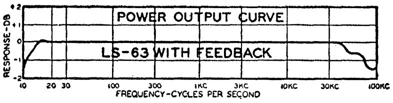
‡ See page N-39 for dimensions.

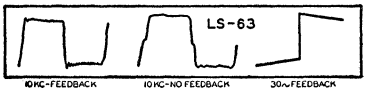
(Refer to Page N-35 for UTC Prices)

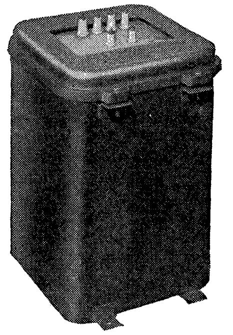
LS OUTPUT TRANSFORMERS THE FINEST

While the UTC Linear Standard line is generally designed for a flat response from 20 cycles to 20 Kc., a much wider response is required for output transformers. As is noted in the first curve below, typical UTC output transformers are down less than 1 BD at 10 cycles and less than 1 DB at 40 to 60 Kc. Because of this, a fine power output curve is possible. (Second curve.)
The third figure below illustrates square waves obtained with the LS-63 transformer in a "Williamson" Amplifier Circuit. Of particular interest is the short rise time, which is far superior for UTC transformers than any standard make which we have measured.









LS-6 CASE

Length	15¾"
Width	13"
Height	24"
Mounting Hole	⅜" dia.
Unit Weight	350 lbs.

LS-7 CASE

Length	20⅜"
Mounting	7⅜" x 14⁵⁄₁₆"
Height	18½"
Mounting	11⅝" x 19⅜"
Mounting Hole	⅜" dia.
Unit Weight	500 lbs.
Width	17¾"

HYBRID AND REPEAT COILS

Type No.	Application	Pri. and Sec. Impedances	± 1 db from	Max. Level	Hum Reduction	Max. Unbal. DC in Pri.	Case No.
LS-140	Line to line for isolating balanced and unbalanced circuits; balanced for maximum reduction cross talk (70 DB)	500/600 ohms split 500/600 ohms split	30-20,000	+10 DB	—92 DB Quadruple alloy shield	0 MA	LS-1
LS-141	Three sets of balanced windings for hybrid service, centertapped	500/600 ohms 500/600 ohms	30-15,000	+10 DB	—74 DB	0 MA	LS-1
LS-142	Line to line and to push pull grids for hybrid service	500/600 ohms 500/600 ohms 60,000 ohms	30-15,000	+10 DB	—74 DB	0 MA	LS-1
LS-143	High efficiency ring and talk repeat coil, for low frequency ringing	500/600 ohms 500/600 ohms	Efficient 15/12,000 cycles	+25 DB	—74 DB	5 MA	LS-2

DRIVER TRANSFORMERS

Type No.	Application	Primary Impedance	Refl. Sec. Impedance	± 1 db from	Max. Level	Max. Unbal. Dc in Pri.	Case No.
LS-5	Driver, multiple line to class B 838's, 805's, ZB-120's, 203A's and similar tubes	50, 125, 200, 250, 333, 500/600 ohms	2,000 ohms; 1:2 overall turns ratio	20-20,000	+32 DB	5 MA	LS-2
LS-6	Driver, push pull 45's, 2A3's, 6A5G's, etc., to push pull 845 or 211D grids	5,000 ohms plate to plate	2.25 primary impedance; turns ratio 1.5:1 overall	20-20,000	+32 DB	5 MA	LS-2
LS-7	Push pull 6C5 or similar plates to A prime 45's, 6F6's, 2A3's, 6L6's	30,000 ohms plate to plate	.45 primary impedance turn ratio 1.5:1 Pri. to Sec.	20-20,000	+25 DB	1 MA	LS-2
LS-47	Driver from push pull 2A3's, 6A5G's, or 300A's to class B 838's, 203A's, 805's, or ZB120's	5,000 ohms plate to plate	.1 pri. impedance turns ratio, Pri./½ Sec. 3.2:1	20-20,000	+32 DB	5 MA	LS-2
LS-48	Driver transformer push pull 845's to 204 or 849 grids in class B	12,000 ohms plate to plate	.038 pri. impedance turns ratio, Pri./½ Sec. 5.1:1	20-20,000	+37 DB	15 MA	LS-3
LS-49	Push pull parallel 2A3, 6A5G, or 300A tubes to four 838, 203A, 805, or ZB120 tubes	2,500 ohms plate to plate	Ratio Pri./½ Sec. 4:1 and 2.5:1	20-20,000	+37 DB	10 MA	LS-3

OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	± .2 db from	Max. Level	Case No.
LS-52	Push pull 245, 250, 6V6 or 245 A prime	8,000 ohms	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-55	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6L6's, 6AS7G	5,000 ohms plate to plate and 3,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-57	Same as above	5,000 ohms plate to plate and 3,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-58	Push pull parallel 2A3's, 6A5G's, 300A's, 6A3's	2,500 ohms plate to plate and 1,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	40 watts	LS-3
LS-60A	Push pull 2A3's, 6A3's, 6B4G's fixed bias, cathode follower drive	4,600 ohms plate to plate	15, 10, 7.5, 5, 3.75, 2.5, 1.2	20-20,000	30 watts	LS-3
LS-62A	Same as above	As above	500, 125	20-20,000	30 watts	LS-3
LS-61	Push pull 6F6, class B 46's 6AS7G, 807-TR, 1614-TR	10,000 ohms plate to plate and 6,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-63	Same as above	10,000 ohms plate to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-6L1	Push pull 6L6's self bias	9,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L3	Same as above	9,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L4	Push pull 6L6's fixed bias or push pull parallel 6L6's self bias	3,800 ohms plate to plate and 4,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	55 watts	LS-3

HIGH LEVEL MATCHING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± .2 db from	Max. Level	Case No.
LS-33	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5 10, 15, 20, 30, 50, 125, 200, 250, 333, 500/600	20-20,000	15 watts	LS-2
LS-34	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333. 500/600	20-20,000	30 watts	LS-3

(Refer to Page N-35 for UTC Prices)

LINEAR STANDARD POWER EQUIPMENT

COMBINED PLATE AND FILAMENT TRANSFORMERS

Type No.	Typical Application	Pri. Volts 50/60 cycles	High Voltage	Filament Windings	Case No.
LS-180	For pre-amplifier service	110	225-0-225 15 MA	6.3 V.C.T.-2A 6.3 V.C.T.-6A	LS-1
LS-192	Power amplifier service	105, 115, 125	335-0-335 180 MA DC 60-0-60, 20 MA	5 V.-3A 6.3 V.C.T.-.75A 6.3 V.C.T.-5.25A	LS-3
LS-70	High power amplifier service	100, 105, 110, 115, 120, 125	425-375-0-375-425 200 MA 70-0-70 50 MA	5 V.C.T.-3A 5 V.C.T.-2A 2.5 V.C.T.-10A 6.3 V.C.T.-1A 6.3 V.C.T.-3A	LS-3
LS-72	For fixed or self bias 6L6's, 300A's	100, 105, 110, 115, 120, 125	525-450-0-450-525 250 MA 70-0-70 50 MA	5 V.C.T.-3A 2.5 V.C.T.-3A 2.5 V.C.T.-3A 6.3 V.C.T.-1A 6.3 V.C.T.-3A tapped at 5 V.C.T.-6A	LS-3
LS-74	For push pull parallel 6L6's, 2A3's, 6B4's	115	415-395-0-395-415 275 MA	5 V.-6A 6.3 V.C.T.-5A	LS-3

PLATE TRANSFORMERS*

Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Approximate DC Voltage Out of Filter	DC Current
LS-183	Class B 805 or push pull parallel 203A's, etc.	100, 110, 120, 220, 230, 240	1750-1500-0-1500-1750	1500-1250	400 MA
LS-184	Class B 204A, 849, HF200, HF300, 250TH, HK354,, 100TH, etc.	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	3000-2500-2100	500 MA
LS-185	For combined class B and class C stages as above	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	3000-2500-2100	1.2 amp.

FILAMENT TRANSFORMERS

Type No.	Application	Pri. Volts 50/60 cycles	Secondary Voltage	Insulation Test Voltage	Case No.
LS-80	866 rectifiers	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A	10,000	LS-3
LS-82	872 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	10,000	LS-3
LS-84	203A, 845, etc. HF200, HF300	100, 110, 120, 220, 230, 240	10 V.C.T.-8A	2,500	LS-3
LS-88	6.3 volt tubes	105, 115, 125	6.3 V.C.T.-2A	2,500	LS-1
LS-120	866 Bridge rectifier	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A 2.5 V.C.T.-5A 2.5 V.C.T.-5A	12,000	LS-3
LS-121Y	872 Bridge rectifier	100, 110, 120, 220, 230, 240	5 V.C.T.-20A 5 V.C.T.-10A 5 V.C.T.-10A	12,000	*
LS-83	872A, 575 or 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	35,000	*
LS-89A	Three 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-60A	35,000	*

LINEAR STANDARD FILTER, SWINGING, AND AUDIO CHOKES

(Inductance values are at D.C. current shown)

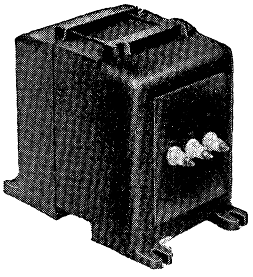
Type No.	Application	Inductance	DC Current	DC Resistance	Insulation Test Voltage	Case No.
LS-90	Filter choke with hum bucking tap	Series-50 hy Parallel-12.5 hy	50 MA 100 MA	450 ohms 110 ohms	2000	LS-2
LS-91	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	125 MA 250 MA	200 ohms 50 ohms	2000	LS-2
LS-92	Filter choke with hum bucking tap	Series-16 hy Parallel-4 hy	175 MA 350 MA	88 ohms 22 ohms	2500	LS-3
LS-93	Filter choke with hum bucking tap	Series-26 hy Parallel-6.5 hy	200 MA 400 MA	120 ohms 30 ohms	3500	LS-3
LS-950	Filter choke with hum bucking tap	Series-100 hy Parallel-25 hy	35 MA 70 MA	1000 ohms 250 ohms	1500	LS-2
LS-96	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	500 MA 1 amp	90 ohms 22.5 ohms	7500	*
LS-980	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	400 MA 800 MA	100 ohms 25 ohms	5000	LS-3
LS-98	Swinging choke	8-40 hy	400 MA	125 ohms	5000	LS-3
LS-99	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	1 amp 2 amp	50 ohms 12.5 ohms	10000	*
LS-105	Swinging choke	8-40 hy	1 amp	50 ohms	10000	*

* See dimension chart, this page.

In choosing power components for broadcast and commercial equipment, the first factor to be considered is dependability. Linear standard power components are very conservatively designed for maximum reliability. Designs provide for low temperature rise, 40°, and high insulation safety factors. Only the finest of materials and workmanship are used throughout.

The low power components of the Linear Standard series are housed in the familiar rectangular LS case with top or bottom mounting facilities. High power components are housed in end castings which completely protect the winding, while directly exposing the laminations for maximum heat transfer.

All units have a deep grey finish to obtain the highest heat radiation coefficient. Large components (up to 250 KVA) are housed in oil tanks.



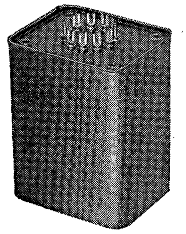
DIMENSIONS

Type No.	L	W	H	Mtg.	Wt.
LS-66	9¾	4¾	6¾	3⅞x 9⅛	37
LS-67	9¾	4¾	6¾	3⅞x 9⅛	37
LS-73	9½	4¾	6¾	3⅞x 8⅞	34
LS-83	8¾	4¾	6¾	3⅞x 8⅛	25
LS-89A	9⅝	7	9	6x8-13/16	68
LS-96	10¼	4¾	6¾	3⅞x 9⅝	40
LS-99	14⅛	8½	10¼	7¼x13⅛	80
LS-102	9¾	4¾	6¾	3⅞x 9⅛	37
LS-103	13⅛	8½	10¼	7¼x12⅛	58
LS-105	13⅛	8½	10¼	7¼x12⅛	58
LS-121Y	8¼	3¾	5⅛	3x7-13/16	23
LS-181	9¾	4¾	6¾	3⅞x 9⅛	37
LS-182	10¾	4¾	6¾	3⅞x10⅛	45
LS-183	15½	10	13¼	8½x14½	70
LS-184	17¼	10	13¼	8½x16¼	102
LS-185	23	10	13¼	8½x22	230

(Refer to Page N-35 for UTC Prices)

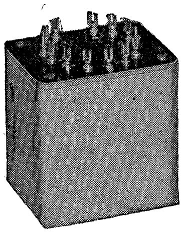
HIPERM ALLOY TRANSFORMERS

The UTC Hiperm alloy audio and power transformers are specifically designed for portable and compact service. While light in weight, neither dependability nor fidelity has been sacrificed. The frequency characteristic of the Hiperm alloy audio units is uniform from 30 to 20,000 cycles. They incorporate a Hiperm-alloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down. DC in Prim'y shown is maximum unbalanced.



TYPE H-1 CASE

Length	2⅜"
Width	1¹⁵⁄₁₆"
Height	3⅛"
Mounting	1⅜" x 1¹³⁄₁₆"
Screws	6-32
Cutout	1¹³⁄₁₆" dia.
Unit Weight	2 lbs.



TYPE H-2 CASE

Length	3⁹⁄₁₆"
Width	2¹³⁄₁₆"
Height	3½"
Mounting	2" x 2¾"
Screws	8-32
Cutout	2¹¹⁄₁₆" dia.
Unit Weight	5 lbs.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Imp. (ohms)	Secondary Impedance	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-100	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600	60,000 ohms in two sections	30-20,000	+ 10DB	.5 MA	H-1
HA-100X	Same as above but with tri-alloy internal shield to effect very low hum pickup						H-1
HA-101	Low impedance mike, pickup, or multiple line to P.P. grids	50, 125/150, 200, 250, 333, 500/600	120,000 ohms overall, split	30-20,000	+ 10DB	.5 MA	H-1
HA-101X	As above but with tri-alloy internal shield to effect very low hum pickup		80,000 ohms overall, split				H-1
HA-103A	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60	60,000 ohms in two sections	30-20,000	+ 10DB	.5 MA	H-1
HA-108	Mixing, low impedance mike, pickup, or multiple line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 10DB	.5 MA	H-1
HA-108X	Same as above but with tri-alloy internal shield to effect very low hum pickup						H-1
HA-130X	Three isolated lines or pads to one or two grids with tri-alloy internal shield	30, 50, 200, 250 each primary	60,000 ohms overall, in two sections	30-20,000	+ 10DB	.5 MA	H-1

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Imp.	Secondary Impedance	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-104	Single plate to P.P. grids like 2A3, 6L6 (split secondary)	15,000 ohms	95,000 ohms 1.25:1	30-20,000	+12 DB	0 MA	H-1
HA-105	Single plate to single grid (split secondary)	15,000 ohms	60,000 ohms 2:1 turn ratio	30-20,000	+ 12 DB	0	H-1
HA-106	Single plate to push pull grids (split secondary)	15,000 ohms	135,000 ohms 3:1 ratio overall	30-20,000	+ 12 DB	0	H-1
HA-107	Push pull plates to push pull grids (split primary and secondary)	30,000 ohms plate to plate	80,000 ohms 1.6:1 turn ratio overall	30-20,000	+ 20 DB	.25 MA	H-2
HA-137	Push pull plates to push pull grids (split Pri. and Sec.)	30,000 ohms plate to plate	68,000 ohms 1.5:1 turn ratio	30-20,000	+ 12 DB	0	H-1

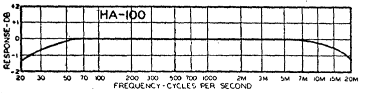
PLATE AND CRYSTAL TO LINE TRANSFORMERS

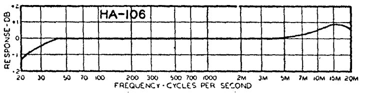
Type No.	Application	Primary Imp.	Secondary Imp. ohms	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-111	Crystal microphone or pickup, to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-20,000 measured with resistive source	+ 10 DB	0	H-1
HA-113	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600.	30-20,000	+ 12 DB	0 MA	H-1
HA-133	Single plate to multiple line (D.C. in Pri.)	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 15 DB	8 MA	H-1
HA-114	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 16 DB	1 MA	H-1
HA-134	Push pull 6B4's, 6L6, or 2A3's to line	5000/9400 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 32 DB	5 MA	H-2
HA-135	Push pull 2A3's, etc. to voice coil	3000/5000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	30-20,000	+ 34 DB	5 MA	H-2

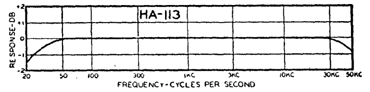
POWER TRANSFORMERS AND CHOKES

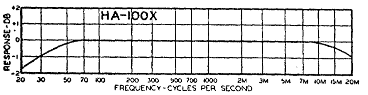
Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No.
HP-122	Pre-amp. power supply using 6X4, 6X5 rectifier	115	220-0-220 15 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-1.2A	H-1
HP-123	Pre-amp. or tuner power supply using 6X4, 6X5 rectifier	115	275-0-275 35 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-2A	H-2

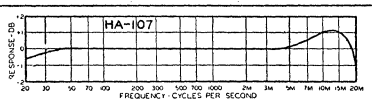
Type No.	Application	Inductance	DC Current	DC Resistance	Test Voltage	Case No.
HC-115	Parallel feed and filter choke	Series-400 hy Parallel-100 hy	2.5 MA 5 MA	6000 ohms 1500 ohms	1500	H-1
HC-116	Parallel feed and filter choke	Series-600 hy Parallel-150 hy	8 MA 16 MA	3400 ohms 850 ohms	1500	H-2
HC-117	Parallel feed and filter choke	Series-200 hy Parallel-50-hy	15 MA 30 MA	3200 ohms 800 ohms	1500	H-1

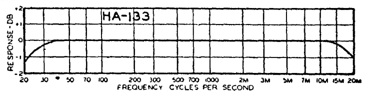


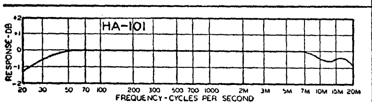


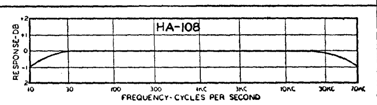


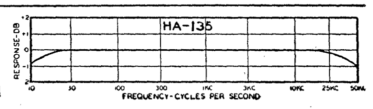












(Refer to Page N-35 for UTC Prices)

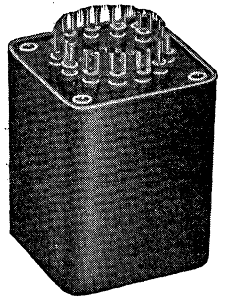
ULTRA COMPACT AUDIO UNITS

The **UTC Ultra compact** audio units are small and light in weight, ideally suited to remote amplifier and similar compact equipment. High fidelity is obtainable in all individual units, the frequency response being ± 2 DB from 30 to 20,000 cycles.

All units except those carrying DC in Primary employ a true hum balancing-coil structure, which combined with a high conductivity outer case, effects good inductive shielding. The die-cast case provides for top or bottom mounting. Maximum operating level +7 DB.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200/250, 333, 500/600 ohms	50,000 ohms	30-20,000
A-11	Low impedance mike, pickup, or line to 1 or 2 grids	50, 200, 500	50,000 ohms	50-20,000 multiple alloy shield for extremely low hum pickup
A-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200/250, 333, 500/600 ohms	80,000 ohms overall, in two sections	30-20,000
A-14	Dynamic microphone to one or two grids	30 ohms	50,000 ohms overall, in two sections	30-20,000
A-20	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200/250, 333, 500/600 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-21	Mixing, low impedance mike, pickup, or line to line	50, 200/250, 500/600	50, 200/250, 500/600	50-20,000 multiple alloy shield for extremely low hum pickup



INTERSTAGE AUDIO TRANSFORMERS

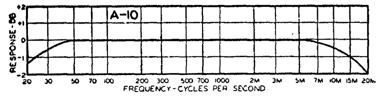
Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-16	Single plate to single grid	15,000 ohms	60,000 ohms, 2:1 turn ratio	30-20,000
A-17	Single plate to single grid 8 MA unbalanced D.C.	As above	As above	50-20,000
A-18	Single plate to two grids. Split primary, can also be used for P.P. plates	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio overall	30-20,000
A-19	Single plate to two grids 8 MA unbalanced D.C.	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio overall	50-20,000

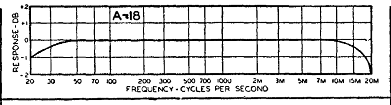
TYPE A CASE

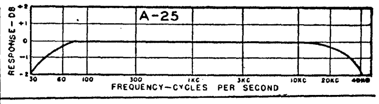
Length	1½"
Width	1½"
Height	2"
Mounting	1⁵⁄₃₂" sq.
Screws	4-40
Cutout	1⅜" dia.
Unit Weight	½ lb.

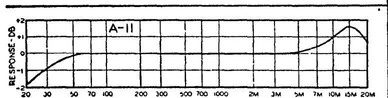
PLATE AND CRYSTAL TO LINE TRANSFORMERS

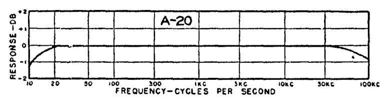
Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-24	Single plate to multiple line	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-25	Single plate to multiple line 8 MA unbalanced D.C.	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	50-20,000
A-26	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-27	Crystal microphone to multiple line	100,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000 measured with non-inductive source
A-30	Audio choke, 250 henrys @ 5 MA 6000 ohms D.C., 65 henrys @ 10 MA 1500 ohms D.C. 450 henrys @ 0 MA			
A-32	Filter choke 60 henrys @ 15 MA 2000 ohms D.C., 15 henrys @ 30 MA 500 ohms D.C.			

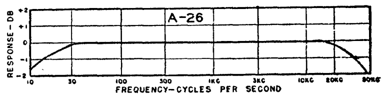


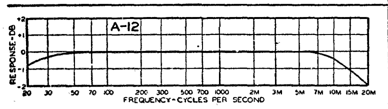


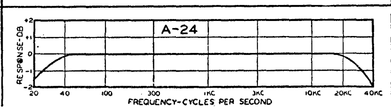


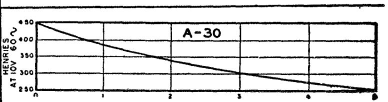












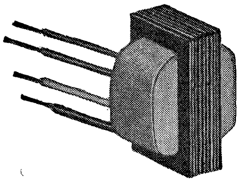
(Refer to Page N-35 for UTC Prices)

SUBOUNCER UNITS

FOR HEARING AIDS...VEST POCKET RADIOS...MIDGET DEVICES

UTC Sub-Ouncer units fulfill an essential requirement for miniaturized components having relatively high efficiency and wide frequency response. Through the use of special nickel iron core materials and winding methods, these miniature units have performance and dependability characteristics far superior to any other comparable items. They are ideal for hearing aids, miniature radios, and other types of miniature electronic equipment.

The coils employ automatic layer windings of double Formex wire . . . in a molded Nylon bobbin. All insulation is of cellulose acetate. Four inch color coded flexible leads are employed, securely anchored mechanically. No mounting facilities are provided, since this would preclude maximum flexibility in location. Units are vacuum impregnated and double (water proof) sealed. The curves below indicate the excellent frequency response available. Alternate curves are shown to indicate operating characteristics in various typical applications.

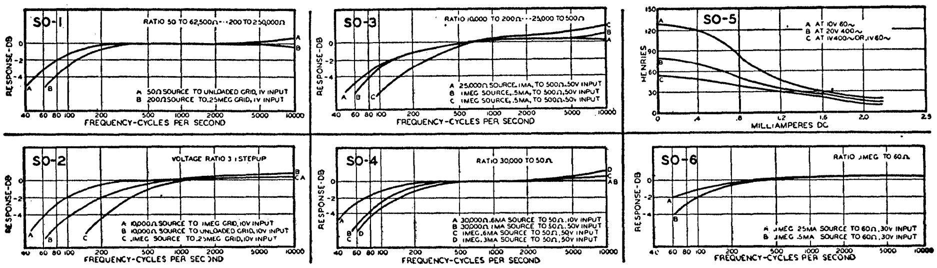


SUBOUNCER UNIT

Dimensions .... 9⁄16" x 5⁄8" x 7⁄8"
Weight ....03 lb.

Type	Application	Level	Pri. Imp.	D.C. in Pri.	Sec. Imp.	Pri. Res.	Sec. Res.
*SO-1	Input	+ 4 V.U.	200 50	0	250,000 62,500	16	2650
SO-2	Interstage/3:1	+ 4 V.U.	10,000	0	90,000	225	1850
*SO-3	Plate to Line	+ 20 V.U.	10,000 25,000	3 mil. 1.5 mil.	200 500	1300	30
SO-4	Output	+ 20 V.U.	30,000	1.0 mil.	50	1800	4.3
SO-5	Reactor 50 HY at 1 mil. D.C. 3000 ohms D.C. Res.						
SO-6	Output	+ 20 V.U.	100,000	.5 mil.	60	3250	3.8

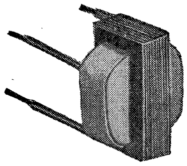
*Impedance ratio is fixed, 1250:1 for SO-1, 1:50 for SO-3. Any impedance between the values shown may be employed.



SUB-SUBOUNCER UNITS

FOR HEARING AIDS AND ULTRA-MINIATURE EQUIPMENT

UTC Sub-SubOuncer units have exceptionally high efficiency and frequency range in their ultra-miniature size. This has been effected through the use of specially selected Hiperm-Alloy core material and special winding methods. The constructional details are identical to those of the Sub-Ouncer units described above. The curves below show actual characteristics under typical conditions of application.

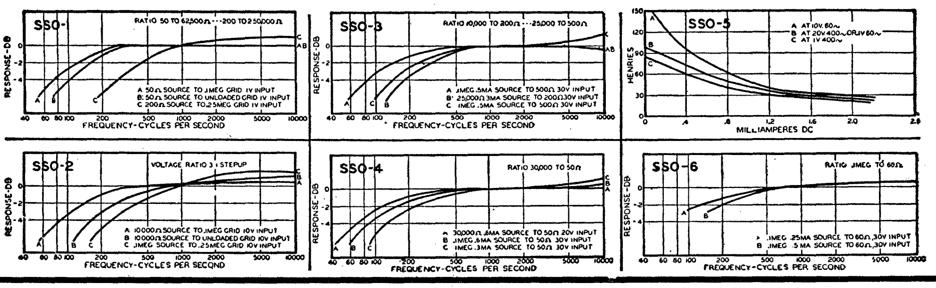


SUB-SUBOUNCER UNIT

Dimensions .... 7⁄16" x 3⁄4" x 5⁄8"
Weight ....02 lb.

Type	Application	Level	Pri. Imp.	MA D.C. in Pri.	Sec. Imp.	Pri. Res.	Sec. Res.
*SSO-1	Input	+ 4 V.U.	200 50	0	250,000 62,500	13.5	3700
SSO-2	Interstage/3:1	+ 4 V.U.	10,000	0.25	90,000	750	3250
*SSO-3	Plate to Line	+ 20 V.U.	10,000 25,000	3 1.5	200 500	2600	35
SSO-4	Output	+ 20 V.U.	30,000	1.0	50	2875	4.6
SSO-5	Reactor 50 HY at 1 mil. D.C. 4400 ohms D.C. Res.						
SSO-6	Output	+ 20 V.U.	100,000	.5	60	4700	3.3
SSO-7	Transistor Interstage	+ 10 V.U.	20,000 30,000	.5 .5	800 1,200	850	125

*Impedance ratio is fixed, 1250:1 for SSO-1, 1:50 for SSO-3. Any impedance between the values shown may be employed.



(Refer to Page N-35 for UTC Prices)

OUNCER AUDIO UNITS

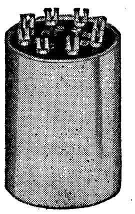
STANDARD AND PLUG-IN TYPES

UTC OUNCER components represent the acme in compact quality transformers. These units, which weigh one ounce, are fully impregnated and sealed in a drawn aluminum housing 7/8" diameter . . . mounting opposite terminal board.

Ouncer items are ideal for portable broadcast, hearing aid, aircraft, concealed service, and similar applications. High fidelity characteristics are provided, uniform from 40 to 15,000 cycles, except for 0-14, 0-15, and units carrying DC which are intended for voice frequencies from 150 to 4,000 cycles. Maximum level 0 DB.

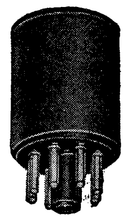
"P" series units are identical to the UTC OUNCER units but are sealed in bakelite housings with plug-in base to fit standard octal socket. While of submersion proof design, these units weigh but two ounces. Oversize pins in the base make it impossible to dislodge these units from their sockets.

OUNCER Type No.	Application	Pri. Imp.	Sec. Imp.	PLUG-IN Type No.
0-1	Mike, pickup or line to 1 grid	50, 200/250, 500/600	50,000	**P-1**
0-2	Mike, pickup or line to 2 grids	50, 200/250, 500/600	50,000	**P-2**
0-3	Dynamic mike to 1 grid	7.5/30	50,000	**P-3**
0-4	Single plate to 1 grid	15,000	60,000	**P-4**
0-5	Single plate to 1 grid, D.C. in Pri.	15,000	60,000	**P-5**
0-6	Single plate to 2 grids	15,000	95,000	**P-6**
0-7	Single plate to 2 grids, D.C. in Pri.	15,000	95,000	**P-7**
0-8	Single plate to line	15,000	50, 200/250, 500/600	**P-8**
0-9	Single plate to line, D.C. in Pri.	15,000	50, 200/250, 500/600	**P-9**
0-10	Push pull plates to line	30,000 ohms plate to plate	50, 200/250, 500/600	**P-10**
0-11	Crystal mike or pick-up to line	50,000	50, 200/250, 500/600	**P-11**
0-12	Mixing and matching	50, 200/250	50, 200/250, 500/600	**P-12**
0-13	Reactor, 300 Hys.—no D.C.; 50 Hys.—3 MA. D.C., 6000 ohms			**P-13**
0-14	50:1 mike or line to 1 grid	200	½ megohm	**P-14**
0-15	10:1 single plate to 1 grid	15,000	1 megohm	**P-15**



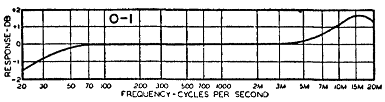
OUNCER CASE

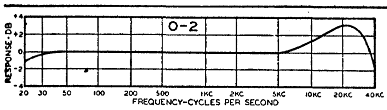
Dia. .... 7/8"
Ht. .... 1 3/16"
Mtg. .... 11/16"
Scr. 2-56
Wt. .... 1 oz.

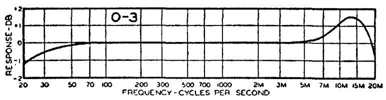


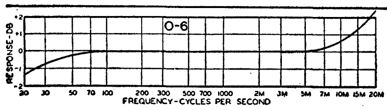
PLUG-IN CASE

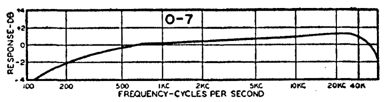
Dia. .... 1 3/32"
Ht. .... 1 15/32"
Skt. .... St. Oct.
Wt. .... 2 oz.

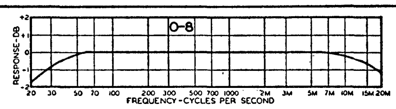


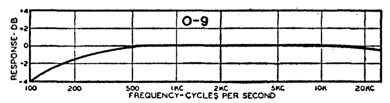


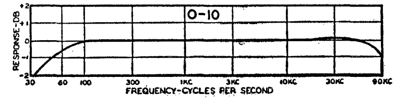


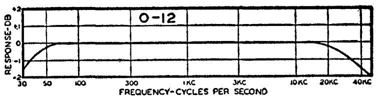


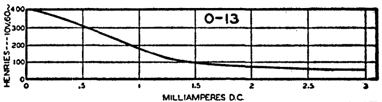


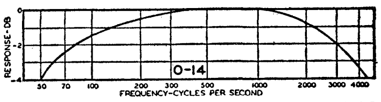


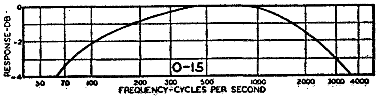












(Refer to Page N-35 for UTC Prices)

NEW "M" TYPE TOROIDS MAXIMUM Q MINIMUM SIZE

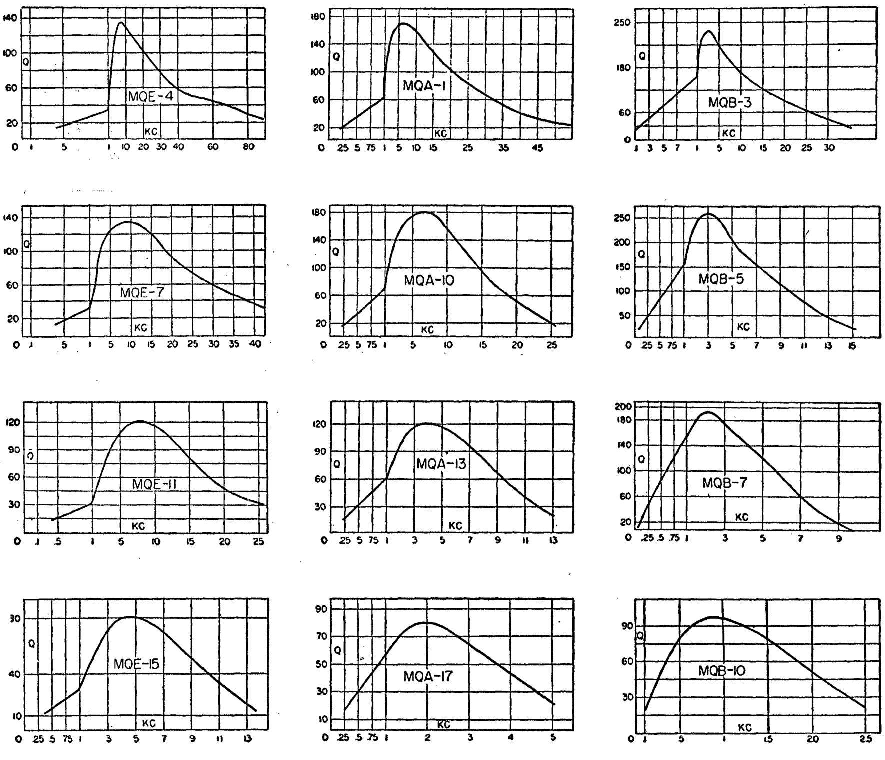
UTC Permalloy Dust Toroids have been the standard of the industry for over 15 years. The **MQ series** of coils provide the highest Q factor in their class (see curves below), with miniaturized dimensions. All units are **hermetically sealed** to MIL-T-27 Specifications.

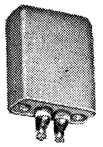
The **stability** is excellent. For the MQE-7 the inductance change is less than 1% for voltages from .1 to 3 volts The MQA-13 change is less than 1% for applied voltages from .1 to 20 volts. The MQB-5 change is less than 1% for applied voltages from .1 to 50 volts. DC is permissible through the coil (values listed below). Inductance is virtually independent of frequency temperature and vibration.

Hum pickup is extremely low due to the toroidal winding structure, with windings uniformly spread over the core. The case is of high permeability, affording additional shielding such that close spacing of units can be effected, the coupling attenuation being approximately 80 DB.

Other values of inductance than those listed are available on special order at the price of the next higher listed value.

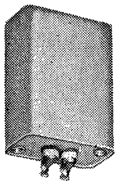
TYPICAL Q CURVES





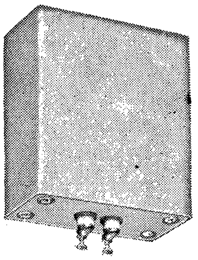
MQE CASE

Length	1 1/16"
Width	1/2"
Height	1 7/32"
Mounting	3/4"
Screws	4/40"
Cutout	5/16" x 1/2"
Unit Weight	1.5 oz.



MQA CASE

Length	1 9/32"
Width	11/16"
Height	1 23/32"
Mounting	7/8" x 9/32"
Screws	4/40"
Cutout	5/16" x 1/2"
Unit Weight	4 oz.



MQB CASE

Length	2 9/16"
Width	1 13/16"
Height	2 13/16"
Mounting	2 1/16" x 11/16"
Screws	6/32"
Cutout	7/8" x 1/2"
Unit Weight	14 oz.

MQE TYPES

Type No.	Inductance	*DC Max.
MQE-1	7 mhy.	135
MQE-2	12 mhy.	100
MQE-3	20 mhy.	80
MQE-4	30 mhy.	65
MQE-5	50 mhy.	50
MQE-6	70 mhy.	40
MQE-7	100 mhy.	35
MQE-8	150 mhy.	30
MQE-9	.25 hy.	22
MQE-10	.4 hy.	17
MQE-11	.6 hy.	14
MQE-12	.9 hy.	12
MQE-13	1.5 hy.	9
MQE-14	2 hy.	8
MQE-15	2.8 hy.	7.2

MQA TYPES

Type No.	Inductance	*DC Max.
MQA-1	7 mhy.	250
MQA-2	12 mhy.	200
MQA-3	20 mhy.	150
MQA-4	30 mhy.	125
MQA-5	50 mhy.	100
MQA-6	70 mhy.	80
MQA-7	120 mhy.	60
MQA-8	.2 hy.	50
MQA-9	.3 hy.	40
MQA-10	.5 hy.	30
MQA-11	.7 hy.	25
MQA-12	1 hy.	20
MQA-13	1.5 hy.	17
MQA-14	2.5 hy.	13
MQA-15	4 hy.	10
MQA-16	6 hy.	9
MQA-17	10 hy.	7
MQA-18	15 hy.	5
MQA-19	22 hy.	4

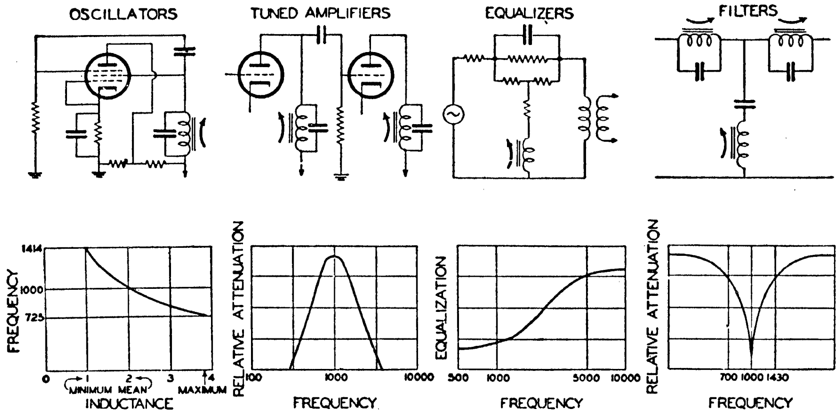
MQB TYPES

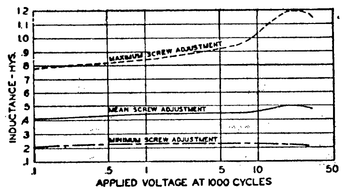
Type No.	Inductance	*DC Max.
MQB-1	10 mhy.	400
MQB-2	30 mhy.	250
MQB-3	70 mhy.	170
MQB-4	120 mhy.	120
MQB-5	.5 hy.	60
MQB-6	1 hy.	40
MQB-7	2 hy.	30
MQB-8	3.5 hy.	22
MQB-9	7.5 hy.	16
MQB-10	12 hy.	11
MQB-11	18 hy.	9
MQB-12	25 hy.	8

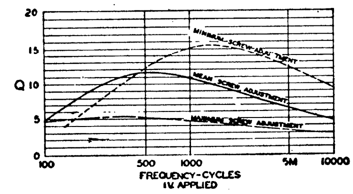
*This value of D.C. (MA) will drop the coil inductance 5%. Values of D.C. below this will show proportionately (linear) less inductance drop. For example, MQE-1 will drop ½% in L with 13.5 MA.

(Refer to Page N-35 for UTC Prices)

UTC VARIABLE INDUCTORS



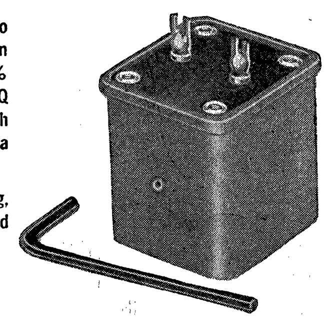




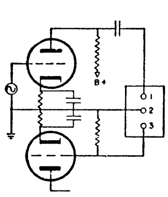
Type	Mean Hys.	DC MA*	Type	Mean Hys.	DC MA*
VI-C1	.0085	75	VI-C12	1.3	10
VI-C2	.013	60	VI-C13	2.2	8
VI-C3	.021	50	VI-C14	3.4	7
VI-C4	.034	40	VI-C15	5.4	6
VI-C5	.053	35	VI-C16	8.5	5
VI-C6	.084	30	VI-C17	13.	4
VI-C7	.13	25	VI-C18	21.	3.5
VI-C8	.21	21	VI-C19	33.	3
VI-C9	.34	18	VI-C20	52.	2
VI-C10	.54	15	VI-C21	83.	1.5
VI-C11	.85	12	VI-C22	130.	1

UTC type VIC variable inductors offer a revolutionary approach to the problem of tuned audio circuits. By adjusting a set screw in the side of the case, an inductance value of +90%, −50% from mean value is obtainable. Setting is positive. Effective Q for a wide frequency range and variation of inductance with applied AC voltage are shown on the illustrated curves, for a typical VIC unit.

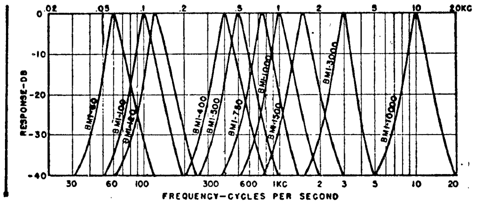
The VIC inductor is housed in a rugged die cast case 1 11/32" long, 1¼" wide and 1 7/16" high with mounting centers on terminal board side 1 3/16" by 29/32". Weight is 5½ oz.

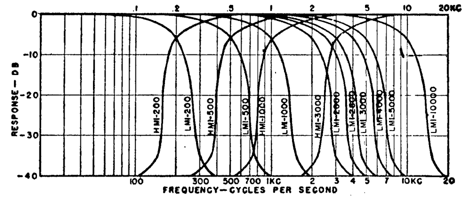


UTC INTERSTAGE AND LINE FILTERS



INTERSTAGE FILTER CONNECTIONS





STOCK FREQUENCIES

(Number after letters is frequency)

- BMI-60
- BMI-100
- BMI-120
- BMI-400
- BMI-500
- BMI-750
- BMI-1000
- BMI-1500
- BMI-3000
- BMI-10000
- HMI-200
- HMI-500
- HMI-1000
- HMI-3000
- LMI-200
- LMI-500
- LMI-1000
- LMI-2000
- LMI-3000
- LMI-5000
- LMI-10000
- BML-400
- BML-1000
- HML-200
- HML-500
- LML-1000
- LML-2500
- LML-4000
- LML-12000

UTC standardized filters have been designed to take care of many present day filter requirements through stock units. The interstage type filters have a nominal impedance of 10,000 ohms, and lend themselves to effecting gain simultaneously with their frequency discrimination.

BMI units (Band Pass) have 2:1 gain. They are sharply peaked, having approximately 2 DB attenuation at plus or minus 3% from center frequency and attenuation of 40 DB per octave as shown. Input 10,000 ohms, output to grid.

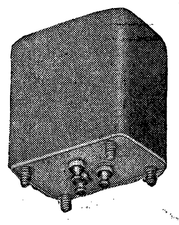
HMI units (High Pass) have a loss of less than 6 DB at cutoff frequency, and an attenuation of 35 DB at .67 cutoff frequency. Input and output 10,000 ohms.

LMI units (Low Pass) have a loss of less than 6 DB at cutoff frequency, and an attenuation of 35 DB at 1.5 cutoff frequency. Input and output 10,000 ohms.

HML (High Pass), and **LML** (Low Pass) filters are similar to the interstage filters, in all characteristics, except that they are intended for an input and output impedance of 500/600 ohms. **BML** (Band Pass) have input of 500/600 ohms, output to grid.

All of the standard filters are **housed in hermetically sealed cases, shielded to reduce hum pickup to 150 MV per gauss at 60 cycles.**

In addition to the stock filters listed, any of the six types are available as **special units** for any frequency from 100 to 12,000 cycles. Order by type followed **by frequency, as LMI-2500, designating low pass interstage filter—2500 cycles cutoff frequency. These special units are priced at $35.00 net.**



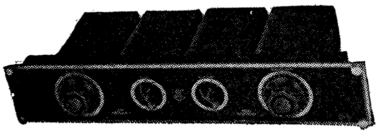
FILTER CASE M

Base	1 3/16" x 1 11/16"
Mtg.	¾" x 1¼"
Mtg. Screws	6-32
Cutout	⅞" dia.
Height, BMI, LMI, BML	1⅝"
Height, HMI, HML, LML	2½"
Weight	6 oz. and 9 oz.

(Refer to Page N-35 for UTC Prices)

BROADCAST AND RECORDING EQUALIZERS AND FILTERS*

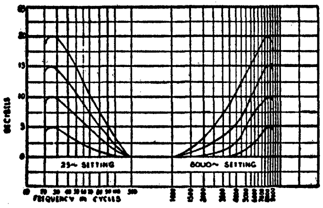
*500/600 ohms



3AX UNIVERSAL EQUALIZER

The universal characteristics of the UTC 3AX equalizer have made it the most popular item for broadcast and recording equalization. This unique unit, with which most communications engineers are already familiar, is an accurately calibrated, quickly adjustable, combined low and high frequency equalizer. The low frequency controls include a switch for adjusting the maximum equalization frequency to 25, 50, or 100 cycles and a calibrated T-pad for exact adjustment of the amount of equalization. The high frequency portion of this unit includes a switch to set maximum equalization point at 4000, 6000, 8000, 10,000 or 15,000 cycles, and a similar calibrated control reading directly in DB. Equalization up to 25 DB available at any frequency selected.

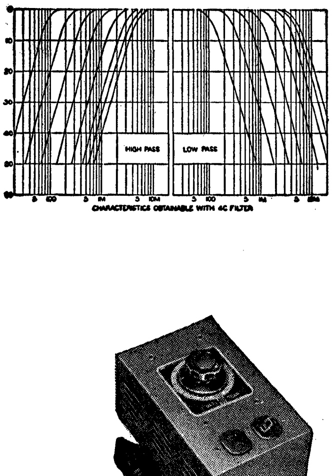
Through a unique arrangement of compensating pads, changes in adjustment of the 3AX equalizer do not affect the apparent aural level. This permits changes in tone color, with negligible change in volume. Where rapid changeover is required in service from one line to another, or from recording to play back, it is merely necessary to predetermine the required setting. The actual adjustment of the controls can be taken care of almost instantaneously. The construction is of the depressed chassis, etched panel, rack mount type. Thoroughly shielded against inductive pickup with UTC Trialloy Shielding. Dimensions of panel 3½" x 19". Depth 7½". Weight 15 lbs.



TYPICAL CURVES OBTAINABLE WITH 3A OR 3AX EQUALIZER

3A UNIVERSAL EQUALIZER

The 3A equalizer is identical to the 3AX described above, except that it does not incorporate the compensating pads for constant insertion loss. The insertion loss is roughly proportional to the amount of equalization employed. All other characteristics identical with the 3AX unit, this item weighs 10 lbs.

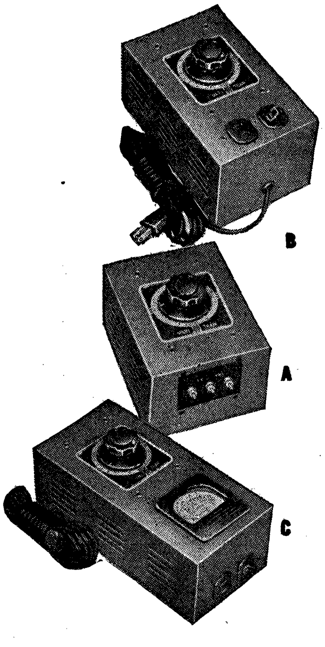


CHARACTERISTICS OBTAINABLE WITH 4C FILTER

4C SOUND EFFECTS FILTER

The use of filters to obtain unusual sound effects is now finding wide application in broadcast technique. The Model 4C Filter was originally developed for one of the large broadcast chains, and is now used extensively by most broadcast stations. Two controls are provided on the 5¼" x 19" panel, which is similar in appearance to the 3AX unit. The weight of the 4C unit is 20 lbs.

The low pass switch can be set for cutoff frequencies of 100, 250, 500, 1000, 2000, 3000, 4000, or 5000 cycles. The high pass switch has identical frequency points. The great number of cutoff frequencies provides for a wide latitude of tone control. If desired, though not normally necessary, external potentiometers may be inserted in the circuit for attenuation control.



UTC VARITRANS

The UTC Varitran is a simple autotransformer whose turns are arranged on one layer with the insulation removed so that every exposed turn may be used as a tap of the winding. A special non-fusing contact can be moved to any position on the winding, permitting the exact voltage desired to be obtained. The regulation

VARITRAN RATINGS

The Varitran autotransformer current and wattage rating is based at 115 volts. As the voltage is reduced, the wattage output is reduced correspondingly. The maximum current can be taken at any point from 0 to 20 volts and from 95 to 130 volts. Between 20 and 95 volts the current capacity tapers off from the two ends to approximately 60% of the rated maximum current at the 65 volt point. The mounting facilities are at both top and bottom of each unit to assure ease of mounting on panel, chassis or for laboratory bench service.

Type	Input Voltage	Output Voltage	Watts	Max. Amps.	Figure	Approx. Dimensions	Weight
V-0	115 volts	0-130	230	2	A	4¼ x 6½ x 4½	10
V-1	115 volts	0-130	570	5	B	4⅞ x 8 x 3⅝	12
V-1-M	115 volts	0-130	570	5	C	4⅞ x 9⅞ x 3⅝	14
V-2	115 volts	0-130	570	5	A	4⅞ x 7½ x 3¾	13
V-3	115 volts	0-130	850	7.5	A	4⅞ x 7½ x 3¾	16

(Refer to Page N-35 for UTC Prices)

HERMETICALLY SEALED COMPONENTS

For over fifteen years UTC has been the largest supplier of transformer components for military applications, to customer specifications. Listed below are a number of types, to latest military specifications, which are now catalogued as UTC stock items.

Terminals on items H-20 through H-24 are neoprene-ceramic assemblies. All other units employ glass bead headers. Items H-1 through H-11 can, however, be supplied with neoprene-ceramic terminals where required. To so order, specify the type number followed by NC (H-1 NC, etc.).

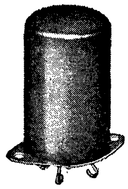
The **frequency response ratings** are based on military requirements. Actually, most of the units that do not carry DC are appreciably better in response than the range shown.

The **level ratings** are maximum level for reasonable distortion at the lowest frequency specified. For higher frequencies considerably higher levels are permissible.

The **impedance ratings** are listed in standard manner. Obviously, a transformer with a 15,000 ohm primary impedance can operate from a tube representing a source impedance of 7700 ohms, etc. In addition, transformers can be used for applications differing considerably from those shown, keeping in mind that impedance ratio is constant. Lower source impedance will improve response and level ratings . . . higher source impedance will reduce frequency range and level rating.

MINIATURE AUDIO UNITS . . . RCOF CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	DC in Pri., MA	Response ± 2db. (Cyc.)	Max. level dbm
H-1	Mike, pickup, line to grid	TF1A10YY	50,200 CT, 500 CT*	50,000	0	50-10,000	+ 5
H-2	Mike to grid	TF1A11YY	82	135,000	.50	250-8,000	+21
H-3	Single plate to single grid	TF1A15YY	15,000	60,000	0	50-10,000	+ 6
H-4	Single plate to single grid, DC in Pri.	TF1A15YY	15,000	60,000	4	200-10,000	+14
H-5	Single plate to P.P. grids	TF1A15YY	15,000	95,000 CT	0	50-10,000	+ 5
H-6	Single plate to P.P. grids, DC in Pri.	TF1A15YY	15,000	95,000 split	4	200-10,000	+11
H-7	Single or P.P. plates to line	TF1A13YY	20,000 CT	150/600	4	200-10,000	+21
H-8	Mixing and matching	TF1A16YY	150/600	600 CT	0	50-10,000	+ 8
H-9	82/41:1 input to grid	TF1A10YY	150/600	1 meg.	0	200-3,000 (4db.)	+10
H-10	10:1 single plate to single grid	TF1A15YY	10,000	1 meg.	0	200-3,000 (4db.)	+10
H-11	Reactor	TF1A20YY	300 Henries-0 DC, 50 Henries-3 Ma. DC, 6,000 Ohms.				

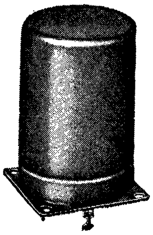


RCOF CASE

Length	1 25/64
Width	61/64
Height	1 13/32
Mounting	1 1/8
Screws	4-40 FIL.
Cutout	7/8
Unit Weight	1.5 oz.

COMPACT AUDIO UNITS . . . RC-50 CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	DC in Pri., MA	Response ± 2db. (Cyc.)	Max. level dbm
H-20	Single plate to 2 grids, can also be used for P.P. plates	TF1A15YY	15,000 split	80,000 split	0	30-20,000	+12
H-21	Single plate to P.P. grids, DC in Pri.	TF1A15YY	15,000	80,000 split	8	100-20,000	+23
H-22	Single plate to multiple line	TF1A13YY	15,000	50/200, 125/500**	8	50-20,000	+23
H-23	P.P. plates to multiple line	TF1A13YY	30,000 split	50/200, 125/500**	0	30-20,000	+19
H-24	Reactor	TF1A20YY	450 Hys.-0 DC, 250 Hys.-5 Ma. DC, 6000 ohms . . . 65 Hys.-10 Ma. DC, 1500 ohms.				



RC-50 CASE

Length	1 5/8
Width	1 5/8
Height	2 1/4
Mounting	1 5/16
Screws	#6-32
Cutout	1 1/2
Unit Weight	8 oz.

SUBMINIATURE AUDIO UNITS . . . SM CASE

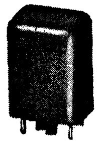
Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	DC in Pri., MA	Response ± 2db. (Cyc.)	Max. level dbm
H-30	Input to grid	TF1A10YY	50***	62,500	0	150-10,000	+13
H-31	Single plate to single grid, 3:1	TF1A15YY	10,000	90,000	0	300-10,000	+13
H-32	Single plate to line	TF1A13YY	10,000****	200	3	300-10,000	+13
H-33	Single plate to low impedance	TF1A13YY	30,000	50	1	300-10,000	+15
H-34	Single plate to low impedance	TF1A13YY	100,000	60	.5	300-10,000	+ 6
H-35	Reactor	TF1A20YY	100 Henries-0 DC, 50 Henries-1 Ma. DC, 4,400 ohms.				

*200 ohm termination can be used for 150 ohms or 250 ohms, 500 ohm termination can be used for 600 ohms.

**200 ohm termination can be used for 150 ohms or 250 ohms. 125/500 ohm termination can be used for 150/600 ohms.

***can be used with higher source impedances, with corresponding reduction in frequency range. With 200 ohm source, secondary impedance becomes 250,000 ohms . . . loaded response is—4 db. at 300 cycles.

****can be used for 500 ohm load . . . 25,000 ohm primary impedance . . . 1.5 Ma. DC.

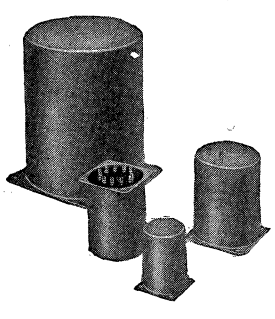


SM CASE

Length	11/16
Width	1/2
Height	29/32
Screw	4—40 FIL.
Unit Weight	.80 oz.

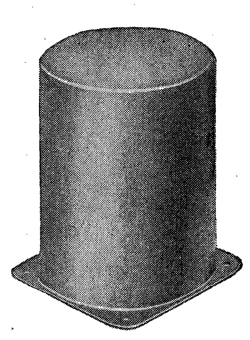
(Refer to Page N-35 for UTC Prices)

COMMERCIAL GRADE COMPONENTS



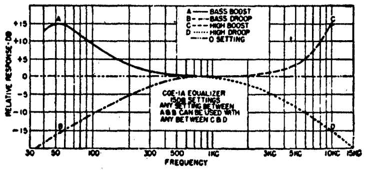
The commercial grade series of transformers incorporate conservative design and rugged construction to assure dependability under continuous service operation in industrial and commercial grade communication equipment. These units are mounted in uniform drawn cases finished in light grey enamel, and intended for chassis mounting. All items are poured with special sealing compound in addition to vacuum impregnation of coil structures. Type numbers are identical with the PA units except for the prefix "CG."

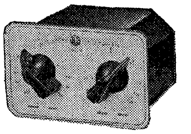
CG-134, 135 and 136 are of the hum-bucking type to assure low hum pick-up. All audio components are linear. ± 1½ DB from 40 to 10,000 cycles (no unbalanced D.C.), except CVL and CVM units . . . 40 to 6000 cycles. Parallel feed low level interstage units with 50,000 ohms and .25 mfd. 200 ohm windings on input transformers are balanced and may be used for 150 to 250 ohm circuits.



INPUT, INTERSTAGE, MIXING AND LOW LEVEL OUTPUT TRANSFORMERS

Type No.	Application	Primary Impedance Ohms	Secondary Impedance Ohms	Case No.
CG-131	1 plate to 1 grid	15,000	135,000 3:1 ratio	**RC-50**
CG-132	1 plate to 2 grids	15,000	135,000 centertapped 3:1 ratio overall	**RC-62**
CG-133	2 plates to 2 grids	30,000 P to P	80,000 overall 1.6:1 ratio overall	**RC-75**
CG-134	Line to 1 grid hum-bucking	50, 200, 500	80,000	**RC-50**
CG-135	Line to 2 grids hum-bucking	50, 200, 500	120,000 overall	**RC-50**
CG-235	Line to 1 or 2 grids, hum-bucking; multiple alloy shielded for low hum pickup	50, 200, 500 ohms	80,000 overall	**RC-75**
CG-136	Single plate and low impedance mike or line to 1 or 2 grids hum-bucking	15,000, 50, 200	80,000 overall	**RC-62**
CG-233	PP 6C5, 12AU7, similar triodes to AB 45's, 2A3's, 6L6's, etc.	30,000 P to P	25,000 overall .9:1 ratio overall	**RC-87**
CG-333	PP 6C5, 12AU7, similar triodes to fixed bias 6L6's	30,000 P to P	5,000 overall .4:1 ratio overall	**RC-87**
CG-433	PP 45, 2A3, similar tubes to fixed bias 2 or 4 6L6's	5,000 P to P	1,250 overall .5:1 ratio overall	**RC-100**
CG-137	Mixing	50, 200, 500	50, 200, 500	**RC-50**
CG-140	Triode plate to line	15,000	50, 200, 500	**RC-50**
CG-141	PP triode plates to line	30,000 P to P	50, 200, 500	**RC-50**





NEW UNIVERSAL INTERSTAGE EQUALIZER—CGE-1A

The UTC CGE-1A is the ideal device for any application where frequency response control is desired. Incorporating the latest developments in design and manufacture, this new unit provides the ultimate in control and flexibility. This equalizer is not a simple R-C tone control, but employs resonant circuits in a unique arrangement providing equalization characteristics unobtainable by conventional circuits. Designed to work from a low or medium impedance source (0 to 20,000 ohms) to a high impedance (500,000 ohms or open grid), the CGE-1A affords continuously variable equalization over a 30 DB range at either end of the spectrum, while introducing only 18 DB total insertion loss. (See curve above). Complete independence of high frequency and low frequency controls permits a wide variety of settings without affecting the over-all volume level. Because of its low insertion loss, this unit may be incorporated directly in many amplifiers. If existent gain is low, a single medium-mu triode stage will provide both proper gain and source impedance. (See circuit on centerfold, page C.) The mechanical construction permits mounting with case on panel directly behind controls, or with case separated from controls and panel. An etched, calibrated panel is provided.

CGE-1A Panel Dim. 2⅜" x 3½". Wt. 2 Lbs.

DYNAMIC NOISE SUPPRESSION-INDUCTOR

Incorporates two accurate High Q coils [.8 hy. and 2.4 hy.] for use in dynamic noise suppression circuits. Excellent circuit accompanies unit.

Type CG-50 RC-62 Case

COMMERCIAL GRADE CASE

Case No.	Base Dim. (Sq.)	Mounting Dim. (Sq.)	Height	Cutout Dia.	Unit Weight (Lbs.)
RC-50	1⅝	1-5/16	2¼	1½	½
RC-62	1-13/16	1½	2½	1½	1
RC-75	2-3/16	1-13/16	2⅞	1⅞	1½
RC-87	2-9/16	2-3/32	3¼	2	2½
RC-100	3	2⅜	3¾	2⅝	3½
RC-112	3-7/16	2-11/16	4⅛	2⅞	5
RC-125	3¾	3	4½	3	6½
RC-150	4½	3-9/16	5½	3¾	11
RC-152	5⅛	4⅛	5½	4	15½
RC-175	5¾	4⅞	7⅛	4	22

OUTPUT TRANSFORMERS

Secondary Impedances: 500, 200, 16, 8, 5, 3, 1.5 ohms

Type No.	Imped. P.P. Ohms, Overall	Typical Tubes	Max. Watts	Case No.
CG-15	8,000	45, 6F6 triode, 6V6	20	**RC-100**
CG-16	3,000/5,000	2A3, 6A3, 6B4, 6AS7G, 6L6	20	**RC-100**
CG-19	6,000/10,000	6N7, 6F6, 6V6	20	**RC-100**
CG-710	14,000/20,000	6K6, 7B5	20	**RC-100**
CG-2L6	9,000	6L6's, AB1	30	**RC-125**
CG-4L6	3,800/4,500	2-6L6's, AB2 or 4-6L6's AB1	55	**RC-150**

CG VARIMATCH OUTPUTS FOR P. A.

Universal units designed to match **any tubes** within the rated output power, to line or voice coil. Output impedance 500, 200, 50, 16, 8, 5, 3, 1.5 ohms. Primary impedance 3000, 5000, 6000, 7000, 8000, 10,000, 14,000 ohms.

Type No.	Audio Watts	Typical Tubes	Case No.
CVP-1	12	45, 2A3, 6F6, 25L6, 6V6, 6B4	**RC-100**
CVP-2	30	45, 2A3, 6L6, 6V6	**RC-125**
CVP-3	60	50's, 300A's, 6L6's, 801, 807, 1614	**RC-150**
CVP-4	125	800's, 801's, 807's, 4-6L6's, 845's, 4-1614's	**RC-152**
CVP-5	300	211, 242A's, 203A's, 838's, 4-845's, ZB-120's	**RC-175**

CG VARIMATCH LINE TO VOICE COIL TRANSFORMERS

The UTC VARIMATCH line to voice coil transformers will match any voice coil or group of voice coils to a 500 ohm line More than 50 voice coil combinations can be obtained, as follows:

.2, .4, .5, .62, 1, 1.25, 1.5, 2, 2.5, 3, 3.3, 3.8, 4, 4.5,
5, 5.5, 6, 6.25, 6.6, 7, 7.5, 8, 9, 10, 11, 12, 14, 15,
16, 18, 20, 25, 28, 30, 31, 40, 47, 50, 63, 69, 75.

Where speakers are to be connected in groups to one transformer, it is preferable that parallel connection be used to eliminate the possibility of multiple resonance. If two speakers of different impedances are connected in parallel, the lower impedance speaker will develop greater power. If connected in series, the higher impedance speaker will develop greater power.

Type No.	Audio Watts	Primary Impedance	Secondary Impedance	Case No.
CVL-1	15	500 ohms	.2 to 75 ohms	**RC-87**
CVL-2	40	500 ohms	.2 to 75 ohms	**RC-125**
CVL-3	75	500 ohms	.2 to 75 ohms	**RC-150**

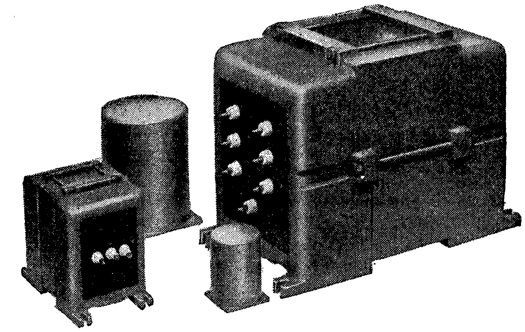
CG VARIMATCH LINE AUTOFORMERS

UTC Varimatch Line Autoformer will match one to ten 500 ohm lines or CVL windings to the 500 ohm output of an audio amplifier. The CVL-10 to 12 autoformers have impedances of 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms.

Type No.	Audio Watts	Case No.
CVL-10	15	**RC-87**
CVL-11	30	**RC-125**
CVL-12	60	**RC-150**

(Refer to Page N-35 for UTC Prices)

COMMERCIAL GRADE COMPONENTS



UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. The Special units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current of the class C stage for any of the impedances available and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases

CG VARIMATCH MODULATION UNITS

Will match any modulator tubes to any RF load.

The ever increasing number of vacuum tubes available for audio and RF applications has increased the difficulty of obtaining transformers suitable for matching to the various correct tube loads. If a standard transformer having a limited impedance range is purchased and used for a specific purpose as the "nearest thing" available, comparatively high distortion is inevitable. While a 20% mismatch caused by such an occurrence does not represent a serious loss in power, it greatly reduces the undistorted power available from a class B modulator because optimum plate load is not reflected to the tubes. The UTC Varimatch transformer eliminates this difficulty through the use of a combination of tapped windings affording an extremely wide range in impedance matching. Designs provide that for any load impedance employed, full class C plate current can be carried by secondary winding.

Primary impedances from 500 to 20,000 ohms
Secondary impedances from 30,000 to 300 ohms

Type No.	Max. Audio Watts	Max. Class C Input	Typical Modulator Tubes	Case No.
CVM-0	12	25	2A3, 6B5	RC-100
CVM-1	30	60	6V6, 2A3, 6L6, 210	RC-125
CVM-2	60	125	801, 6L6, 809, 4-46, T-20, 1608	RC-150
CVM-3	125	250	800, 807, 845, TZ-20, RK-30, 35-T	RC-152
CVM-4	300	600	50-T, 203A, 805, 838, T-55, ZB-120	RC-175
CVM-5	600	1200	805, HF-300, 204A, HK-354, 250TH	7x12x9H 60 lbs.

CG VARIMATCH DRIVER TRANSFORMERS

Type No.	Primary	Typical Output Tubes	Case No.
CG-51AX	All single tubes like: 6C5, 6C4, 12AU7, 45, 2A3	2A3, 45, 6L6	RC-87
CG-53AX	P. P. tube like: 45, 2A3, 6L6, 6B4	46, 4-46, 841, 210, 801, RK-18, 800, 203A, 838, 805, 50T, 830B	RC-112
CG-59AX	50, 200, 500 ohm line	805, 838, 203A, ZB-120, 100TH, 800, 55T, RK-18	RC-112
CG-238AX	4-2A3, 4-45, 4-50, 2-211A, 2-845	4-805's, 4-838's, 4-203A's, 2-204's, 2-849's, 2-HF300's, 2-HF200's, 2-250TH's, 2-450TH's	RC-150
CG-512	50, 200, 500 ohm line	2-250TH, 2-450TH, 2-HF200, 2-HF300, 2-204A, 2-849	RC-150

VARIPOWER AUTO-FORMERS

Type No.	Watts Output	Case No.
CVA-1	150	RC-112
CVA-2	250	RC-125
CVA-3	500	RC-150
CVA-4	1000	RC-152
CVA-5	2000	RC-175

Designed for line voltage control, filament control and reduced power operation. Output voltage from 0 to 130 volts, 50/60 cycles. Varipower units permit control of filament voltage at the tube socket to within 2½% of desired value simultaneously with line voltage control and plate voltage control. Can be used to reduce or increase voltages on filament transformers. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125 and 130 volts permit output voltages from 0 to 130 volts in 5 volt steps.

POWER AND BIAS TRANSFORMERS

Primary 115 volts 50/60 cycles

Type No.	High Voltage	DC MA.	Fil. 1	Fil. 2	Fil. 3	Fil. 4	Case No.
CG-422	435-365-0-365-435 125-0-125	125 25	5V-3A	5V-2A	6.3 VCT-3A	2.5 VCT-5A	RC-150
CG-428	500-0-500 80-0-80	250 100	5V-3A	5V-2A	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152
CG-429	600-525-0-525-600	250	5V-3A	6.3 VCT-3-A	7.5 VCT-3A, tapped 6.3 VCT-4A		RC-152
CG-431	500-400-0-400-500 80-0-80	500 100	5V-6A	5V-2A	6.3 VCT-5A	6.3 VCT-3A	RC-175
CG-315	Tapped for any DC voltage from 15 to 100 volts within 6% — 250 MA						RC-125
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6% — 250 MA						RC-152

CG PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts, 50/60 cycles. For reduced power, secondary voltages can be reduced to half by using 220V. Pri. on 110 volts. These transformers may be used on 25 to 43 cycles if 220V. Pri. is used on 110 volts. Secondary voltage is simultaneously halved.

Type No.	High Voltage	DC Voltage	DC MA	Case No.
CG-300	625-515-0-515-625	500/400	200	RC-150
CG-301	580-530-300-0-300-530-580	475/425/250	420	RC-152
CG-302	950-750-0-750-950	760/610	360	RC-175
CG-303	1500-1235-400-0-400-1235-1500	1250/1000 300	260* 175	RC-175

* 300MA, if used without load on low voltage winding.

TYPE EC CASE UNITS

Type No.	High Voltage	DC Voltage	DC MA	L	W	H	Wt. Lbs.
CG-304	1500-1235-0-1235-1500	1250/1000	800	15	8½	10⅜	100
CG-305	2400-1750-0-1750-2400	2000/1500	300	10½	4¾	6⅞	50
CG-306	2400-1750-0-1750-2400	2000/1500	500	15	8½	10⅜	100
CG-307	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	300	14½	8½	10⅜	90
CG-308	3500-3000-2400-0 2400-3000-3500	3000/2500 2000	500	16½	8½	10⅜	125
CG-309	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	1000	21	10	13¼	185
CG-311	1500-1235-0-1235-1500	1250/1000	500	10½	4¾	6⅞	50
CG-312	1800-1500-0-1500-1800	1500/1250	400	10½	4¾	6⅞	50

FILTER CHOKES

INDUCTANCE SHOWN IS AT RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-40	10	200	110	1750	RC-112
CG-41	4-20	200	110	1750	RC-112
CG-44	30	100	400	1750	RC-100
CG-45	250	15	5000	1750	RC-87
CG-48C	75	50	2200	1750	RC-87
CG-100	12	150	110	2500	RC-125
CG-102	12	250	100	3000	RC-150
CG-104	10	350	90	5000	RC-152
CG-108	10	500	52	7000	RC-175
CG-1S	10	1000	40	9000	11½x4¾x 6⅞ H, 60 lb.

SWINGING INPUT CHOKES

INDUCTANCE SHOWN IS FROM 100% TO 10% OF RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-101	5-25	150	110	2500	RC-125
CG-103	5-25	250	100	3000	RC-150
CG-105	5-25	350	90	5000	RC-152
CG-109	5-25	500	52	7000	RC-175
CG-1C	5-25	1000	40	9000	11½x4¾x 6⅞ H, 60 lb

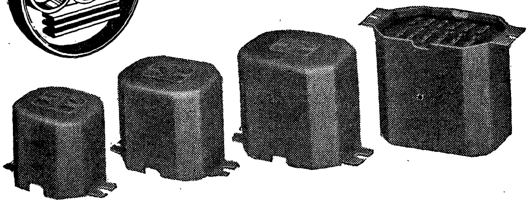
FILAMENT TRANSFORMERS

Primary for 105, 115, 220, 230 volts, 50/60 cycles. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half. *Two Windings.

Type No.	Sec. Volts C. T.	Sec. Amps.	Working Voltage	Test Voltage	Case No.
CG-33	6.3	4	500	2000	RC-75
CG-34	2½	10	2500	6000	RC-112
CG-120	2½	10	5000	11000	RC-125
CG-121	5	25	5000	11000	RC-150
CG-122	7.5/6.3	10	1500	4000	RC-125
CG-124	10	10	1500	4000	RC-150
CG-125	14/12/11	10	1500	4000	RC-150
CG-126	*14/11/10 14/11/10	10 10	1500	4000	RC-152

(Refer to Page N-35 for UTC Prices)

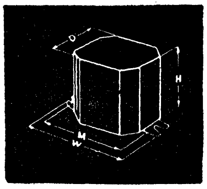
SPECIAL SERIES AUDIO TRANSFORMERS



UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. The Special units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current of the class C stage for any of the impedances available and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases with top or bottom mounting. All units are vacuum impregnated—compound filled.

CASE SIZES

Type No.	.H	W	D	M	Wt. Lbs.
G-1	1⅞	2-13/16	1¾	2⅜	1
G-2	2-5/16	3⅜	1-15/16	2⅞	1½
G-3	2½	3¾	2-5/32	3¼	2
G-4	2-15/16	4⅛	2-5/16	3⅝	3



CLASS A INPUT TRANSFORMERS

Type No.	Application	Ratio	Case
S-1	1 plate* to 1 grid	3½:1	G-2
S-2	1 plate* to 2 grids	2:1 4:1	G-2
S-3	1 plate* to 1 or 2 grids compact type	2:1	G-1
S-4	1 plate* to 2 grids wide range response	1:1	G-3
S-5	Single or double button mike or line to 1 grid hum-bucking type	16:1	G-2
S-6	Single or double button mike or line to 1 grid, compact type	16:1	G-1
S-7	Single plate* and carbon mike to one or two grids	3:1 16:1	G-2

* Will match tubes like 6J5, 6C4, 12AU7, etc. Can be used with high mu triodes with loss in low frequencies.

UNIVERSAL DRIVER TRANSFORMERS

(See Modulator chart for tube types)

Type No.	Application	Case
S-8	Single driver plate to pushpull grids	G-3
S-9	Pushpull driver plates to grids of class B tubes up to 400 watts output	G-4
S-10	Pushpull 56, 6C6 triode, 6C5, or similar plates to 45's, 2A3's or 6L6's, self or fixed bias	G-3

MATCHING TRANSFORMERS

Type No.	Application	Pri. Ohms	Sec. Ohms	Case
S-11	Single 6J5, 6C4, 12AU7 or similar tube to line	15,000	200/500	G-2
S-12	Line to speaker 15 watts	500, 2000, 4000	2, 4, 8, 15	G-2
S-13	Line to speaker 30 watts	500, 2000, 4000	2, 4, 8, 15	G-4

UNIVERSAL OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

(Secondary Impedances: 500, 15, 8, 2 ohms)

Type No. Max. Watts	Primary Impedance	Typical Tubes	Class	Case
	Single Tubes:			
	2500 ohms	2A3, 6A3, 6A5, 6B4, 6L6, 6Y6, 25L6, 35L6	A	G-2
S-14	4000 ohms	45, 6V6, 12A6	A	
10 W.	7000 ohms	42, 47, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	
	10,000 ohms	37, 38, 41, 1G5, 3C5, 6A4, 6N7	A	
	P. P. Tubes:			G-2
	4000 ohms	6Y6, 25L6	AB	
S-15	5000 ohms	45, 2A3, 6A3, 6A5, 6B4, 6AS7	AB	
12 W.	10,000 ohms	1H4, 6AC5G, 6B5, 19, 6A6, 6N6, 6N7, 6Y7	AB B	
S-16	3000 ohms	45, 2A3, 6A3, 6A5, 6B4, 25L6	AB	G-4
30-W.	6000 ohms	2A5, 6F6 triodes, 6AS7, 46, 6A6, 6N7	AB B	
	9000/10000 ohms	45, 2A5, 6AC5, 6B5, 6F6, 6L6, 6V6, 807-triode	AB	
S-17	3800 ohms	6L6's	AB2	G-5
55 W.	4500/5000 ohms	4—6L6's	AB1	
		46, 1608, 809	B	

UNIVERSAL MODULATION TRANSFORMERS

Secondary carries class C current
Any modulator tubes to any RF load. (See chart)

Type No.	Audio Power	Case
S-18	12 watts	G-3
S-19	30 watts	G-4
S-20	55 watts	G-5
S-21	110 watts	G-7
S-22	250 watts	G-9

TYPICAL MODULATOR COMBINATIONS

S-18—12 WATTS MAX.

DRIVER TUBES: In the combinations shown below, typical suitable driver tubes are: 6C5, 6E6, 6N7, 6J5, 6C4, 12AU7, 6P5, 6J7-TR, 6SJ7-TR.

DRIVER		MODULATOR STAGE				
Transf.	Sec. Term.	P.P. Tubes	Watts Output	P.P. Load	Plate Volts	Bias Volts
S-2	G-G	6E6	1.6	14,000	250	27
S-8	G-G	19, 1J6G	2.1	10,000	135	0
S-8	G-G	49	3.5	12,000	180	0
S-2	G-G	25L6	4	4,000	110	7.5
S-8	G′-G′	6Z7G	4.2	12,000	180	0
S-2	G-G	6Y6G	7	4,000	135	13.5
S-8	G-G	6Y7G	8	14,000	250	0
S-8	G′-G′	6AC5G	8	10,000	250	0
S-8	G′-G′	6A6, 6N6, 6N7	10	10,000	300	0
S-2	G-G	2A3, 6A3, 6A5G, 6B4G	10	5,000	325	750 ohm
S-8	G-G	45	10	5,000	275	770 ohm
S-2	G-G	6AS7G	10	5,000	250	1,250 ohm
		SINGLE TUBES				Pri. Lead
S-1	F-G	43, 45, 71A, 25A6, 25A7 46, 6V6 42, 46, 47, 49, 2A5, 6F6, 6B5 10, 41, 32, 6G6, 6K6 38, 12A7				4,000 ohm 6,000 ohm 7,000 ohm 10,000 ohm 14,000 ohm

S-19—30 WATTS MAX.

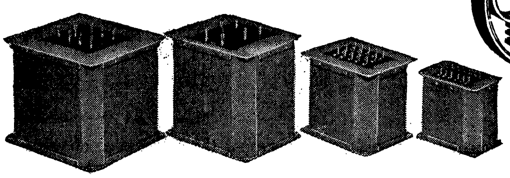
(6J5, 6C4, 12AU7, etc. may be substituted for 6C5 tubes)

DRIVER			MODULATOR STAGE				
Tube or Tubes	Transf.	Sec. Terms.	P.P. Tubes	Watts Output	P.P. Load	Plate Volts	Bias Volts
6C5	S-10	G-G	6V6	13	8,000	300	2
6C5	S-10	G-G	2A3, 6A3, 45, 6A5G, 6B4G	15	3,000	325	6
6C5	S-10	G-G	2A5, 6F6 Pentode AB	10	10,000	375	34 ohm
2A5	S-8	G-G	2A5, 6F6, triode AB	18	6,000	350	3
89	S-8	G′-G′	6A6, 6N6, 6N7	19	5,000	300	
45	S-8	G-G	10, 1602	25	8,000	425	5
45	S-8	G′-G′	46	25	6,000	425	
45	S-8	G′-G′	841	28	7,000	425	
6C5	S-10	G-G	6L6 self bias	30	9,000	400	2

S-20—55 WATTS MAX.

DRIVER			MODULATOR STAGE						
P.P. Tubes	Transf.	Sec. Terms.	P.P. Tubes	Watts O'tp't	P.P. Load	Plate Volts	Plate Tr'sf.	Bias Volts	Bia Trs
2A3	S-9	1-1	801	45	10000	600	S-45	75	S-
2A3	S-9	3-3	1608	50	5000	425	S-44	15	S-
2A3	S-9	1-1	T-20	50	8000	600	S-45	30	S-
Single 45	S-8	G′-G′	4-46, 59	56	3000	425	S-44	0	
6C5	S-10	G-G	6L6, AB2	60	3800	400	S-39	25	S-
6C5	S-10	G-G	4-6L6	60	4500	400	S-40	23	
2A3	S-9	3-3	809	60	5000	500	S-41	0	

SPECIAL SERIES POWER EQUIPMENT



UTC Special Series power supply components are designed specifically for amateur and popular-priced PA service. The ratings are based on such applications and recommended for ICAS intermittent use. For commercial application, GG or LS grade components should be employed. Tapped coil structures on power, and bias supply transformers afford maximum flexibility, permitting a given transformer to be used with many circuits and types of tubes. Stand by service should not be obtained by interrupting high voltage center tap.

S-21—115 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsf.
2-2	TZ-20	70	12000	800	S-46	0	
1-1	T-20	70	12000	800	S-46	40	S-51
*	845	75	4600	1000	S-47	175	S-52
1-1	807	80	6600	600	S-45	30	S-51
1-1	800, RK-30	100	12000	1000	S-47	55	S-51
3-3	809	100	8400	750	S-45	5	S-51
2-2	825	100	6600	850	S-46	30	S-51
2-2	TZ-40	100	6000	750	S-45	0	
2-2	T-756	100	7000	850	S-46	30	S-51
1-1	50-T	100	8000	1000	S-47	90	S-51
2-2	RK-18	100	12000	1000	S-47	50	S-51
1-1	HK-354	100	15000	1000	S-47	60	S-51
*	845	105	8800	1250	S-47	225	S-52
3-3	RK-31	110	14000	1000	S-47	0	
1-1	4-6L6	110	2000	400	S-44	25	S-51
2-2	35-T	115	11000	1000	S-47	30	S-51

* Reverse S-9 transformer using terminals 1-1 for plates and P.P. for grids.

S-22—250 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsf.
3-3	RK-31	140	17000	1250	S-47	0	
*	50 T	250	20000	2000	S-50	180	S-52
*	50 T	160	17000	1500	S-49	140	S-52
2-2	TZ-40	175	6800	1000	S-47	0	
1-1	T-55	175	6900	1000	S-47	40	S-51
1-1	T-55	225	9400	1250	S-47	50	S-51
2-2	HF-100	250	12000	1500	S-49	52	S-51
2-2	100 TH	250	7200	1250	S-47	0	
§	100 TL	230	7200	1250	S-47	112	S-52
2-2	ZB-120	150	4800	750	S-45	0	
2-2	ZB-120	245	9000	1250	S-47	0	
*	HK-154	225	11400	1250	S-47	210	S-52
1-1	203 A	250	9000	1250	S-47	45	S-51
3-3	203 Z	200	6900	1000	S-47	0	
1-1	211	200	6900	1000	S-47	77	S-51
1-1	211	250	9000	1250	S-47	100	S-51
1-1	HK-354	220	15000	1500	S-49	100	S-51
2-2	808	190	12700	1250	S-47	15	S-51
2-2	830 B	175	7600	1000	S-47	35	S-51
2-2	838	250	9000	1250	S-47	0	

* Reverse S-9, using 2-2 for plates and P-P for grids.
§ Reverse S-9, using 1-1 for plates and P-P for grids.

FILAMENT TRANSFORMERS

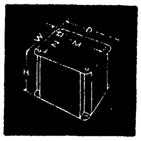
Primary Tapped 105, 115 Volts—50/60 Cycles

Type No.	Secondary Volts	Secondary Current	Insulation	Case No.
S-53	2.5 VCT	10 A.	1500 V.	G-3
S-54	5 VCT	4 A.	2500 V.	G-3
S-55	6.3 VCT	3 A.	1500 V.	G-3
S-56	7.5 VCT	3 A.	1500 V.	G-3
S-57	2.5 VCT	10 A.	10,000 V.	G-5
S-58	2.5 VCT	20 A.	10,000 V.	G-5
S-59	5 to 5.25 VCT	13 A.	5000 V.	G-5
S-60	5 to 5.25 VCT	22 A.	10,000 V.	G-7
S-61	7.5 VCT tapped 6.3 VCT	10 A.	3000 V.	G-5
S-62	10 VCT	10 A.	3000 V.	G-5
S-63	14 VCT tapped 12 Vct and 11 VCT	10 A.	5000 V.	G-7

Type No.	Fil. 1	Fil. 2	Fil. 3	Insulation	Case No.
S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	3000 V.	G-5
S-65	2.5 VCT-5A	5 VCT-4A	6.3 VCT-3A	3000 V.	G-5
S-66	2.5 VCT-10A	7.5 VCT-6.5A		3000 V.	G-5
S-67	5 VCT-6A	6.3 VCT-5A		3000 V.	G-5
S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	3000 V.	G-5
S-69	6.3 VCT-3A	7.5 VCT-6.5A		3000 V.	G-5
S-70	6.3 VCT-5A	6.3 VCT-5A		3000 V.	G-5
S-71	2.5 VCT-6A	2.5 VCT-6A	2.5 VCT-12A	10000 V.	G-7
S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	5000 V.	G-5

CASE SIZES

Type No.	H	W	D	M	N	Wt. Lbs.
G-5	3¾	3⅛	4½	3⅞	2-7/16	4½
G-7	4⅝	4⅝	5½	4-27/32	3-25/32	8
G-8	4⅝	5⅜	5⅜	4-25/32	4¾	12
G-9	5⅞	5⅜	6¾	6-3/32	4-19/32	21
G-10	5⅞	6⅛	6⅝	5-15/16	5-13/32	24
G-11	5⅞	6½	7⅜	6-21/32	5-29/32	31
G-12	10¼	7⅜	9¼	8½	6⅝	52



COMBINED PLATE AND FILAMENT UNITS

Primary 115 V.—50/60 Cycles

Type No.	Voltage	D.C. Voltages*	Rectifier Fil.	Fil. No. 1	Fil. No. 2	Case No.
S-39	490-400-0-400-490 175 Ma.	400/310	5 V.-3A	2.5 V.C.T. -6A	6.3 V.C.T. 4A	G-7
S-40	525-425-0-425-525 250 Ma.	400/310	5 V.-3A	6.3 V.C.T. -3A	6.3 V.C.T. 3A	G-7
S-41	600-0-600 200 Ma.	475	5 V.-3A	7.5 V. tapped 6.3 V.-3A	6.3 V.C.T. 2A	G-7
S-42	600-525-0-525-600 300 Ma.	480/400	5 V.-6A	7.5 V. tapped 6.3 V.-3A	6.3 V.C.T. 3A	G-8
S-43	525-0-525 450 Ma. 40-0-40, 200 Ma.	400	5 V.-3A 5 V.-6A	6.3 V.-3A -2A	6.3 V.C.T. 5A	G-9

* Based on two section filter, choke input.

PLATE TRANSFORMERS—BIAS TRANSFORMERS

Primary 115 V.—50/60 Cycles

Type No.	High Voltage	DC Voltages*	DC Current	Case No.
S-44	575-525-0-525-575	470/430	500 Ma.	G-9
S-45	900-750-0-750-900	750/620	200 Ma.	G-8
S-46	1000-750-0-750-1000	825/600	300 Ma.	G-9
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300 Ma.	G-10
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500 Ma.	G-11
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300 Ma.	G-11
S-50	3000-2500-0-2500-3000	2625/2175	300 Ma.	G-12
S-51	Will supply any bias voltage from 15 to 100 volts DC within approximately 6% of desired value.		200 Ma.	G-5
S-52	Will supply any bias voltage from 75 to 400 volts DC within approximately 6% of desired value.		200 Ma.	G-7

* Based on two section filter for 200 Ma. and 300 Ma. units, single section filter for 500 Ma. units, both choke input.
† 200 Ma. if used alone ‡ 300 Ma. if used alone

FILTER, SWINGING, AND AUDIO CHOKES

Type No.	Service	Inductance	Current	Resistance	Insulation	Case No.
S-23	Audio	450 Hy.	5 Ma.	5000 ohms	1500 V.	G-2
S-24	P.P. Choke	500 Hy. C.T.	3 Ma.	400 ohms	1500 V.	G-2
S-25	Filter	30 Hy.	30 Ma.	800 ohms	1500 V.	G-2
S-26	Filter	15 Hy.	60 Ma.	250 ohms	1500 V.	G-2
S-27	Filter	30 Hy.	75 Ma.	350 ohms	1500 V.	G-4
S-28	Filter	20 Hy.	100 Ma.	350 ohms	1500 V.	G-4
S-29	Filter	10 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-30	Swinging	5 25 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-31	Filter	20 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-32	Swinging	5/25 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-33	Filter	20 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-34	Swinging	5 25 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-35	Filter	20 Hy.	400 Ma.	60 ohms	5000 V.	G-8
S-36	Swinging	5 25 Hy.	400 Ma.	60 ohms	5000 V.	G-8
S-37	Filter	20 Hy.	550 Ma.	60 ohms	6000 V.	G-8
S-38	Swinging	5/25 Hy.	550 Ma.	60 ohms	6000 V.	G-8

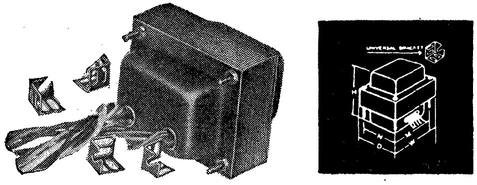
(Refer to Page N-35 for UTC Prices)

REPLACEMENT TYPE COMPONENTS

(PREVIOUS POWER TRANSFORMERS TYPE R-1 THRU R-13 AND R-54 WILL BE AVAILABLE UNTIL 1951)

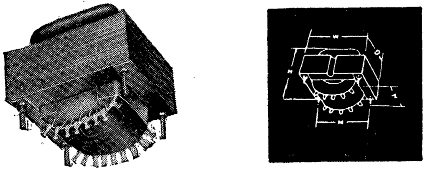
The UTC replacement type transformers represent the culmination of years of development in this field. All units are vacuum sealed against humidity with special impregnating materials to prevent corrosion and electrolysis. Shells and brackets are finished in attractive high lustre black enamel.

The UTC shells and universal brackets employed make possible a latitude in mounting dimensions never approached heretofore. A minimum number of transformers have been developed to cover any requirement in the replacement field. Pri. 117V. 50/60 cycles.



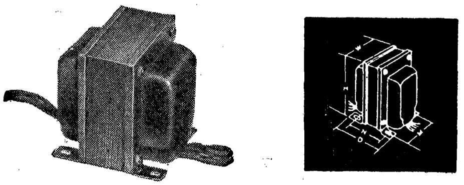
DOUBLE SHELL TYPE

The universal feet may be used for upright or horizontal mounting, or eliminated for flush mounting.



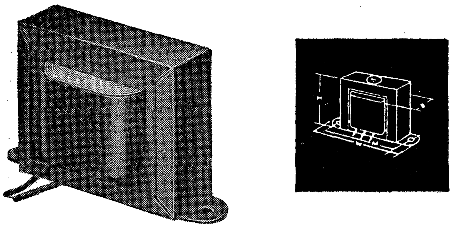
SINGLE SHELL TYPE

UTC flush type transformers are husky units designed for low temperature rise and good regulation. The rugged solder terminals permit ease of circuit change for the experimenter.



VERTICAL SHELL TYPE

UTC vertical power transformers are unusually attractive in appearance, having smooth drawn cases finished in high lustre black enamel.



CHANNEL FRAME TYPE

Channel frame chokes and audios are conservatively designed. Standard black enamel mounting channels are employed. Coils are tropic-sealed by vacuum-pressure method.

DOUBLE SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-101	275-0-275	50	5V-2A.	6.3V CT-2.7A	3	2½	2¾	2½	2-1/16	2½
R-102	350-0-350	70	5V-3A.	6.3V CT-3A.	3	2½	3⅜	2½	2-1/16	3½
R-103	350-0-350	90	5V-3A.	6.3V CT-3.5A.	3⅜	2⅞	3⅜	2-13/16	2¼	4½
R-104	350-0-350	120	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅜	3⅛	2½	5½
R-105	385-0-385	160	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅞	3⅛	2½	7

SINGLE SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-106	300-0-300	50	5V-2A.	6.3V CT-2.7A	3	2½	3	2½	2-1/16	2½
R-107	350-0-350	70	5V-3A.	6.3V CT-3A.	3	2½	3⅝	2½	2-1/16	3½
R-108	350-0-350	120	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅝	3⅛	2½	5½
R-109	400-0-400	200	5V-3A.	6.3V CT-6A.	4½	3¾	4	3¾	3	8

VERTICAL SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-110	300-0-300	50	5V-2A.	6.3V CT-2.7A	2½	2½	3¼	2	1¾	2½
R-111	350-0-350	70	5V-3A.	6.3V CT-3A.	2½	3⅛	3¼	2	2⅜	3½
R-112	350-0-350	120	5V-3A.	6.3V CT-5A.	3¼	3⅝	4	2½	2½	5½
R-113	400-0-400	200	5V-3A.	6.3V CT-6A.	3⅞	4¼	4⅝	3	3⅛	8

CHANNEL FRAME FILTER CHOKES

Inductance Shown Is at Rated D.C.M.A.—Insulation Test: 1750 Volts

Type No.	Induct. Hys.	Current	Resistance Ohms	Dimensions, Inc. W	D	H	M	Lbs.
R-55	6	40MA	300	2½	1⅜	1⅜	2	½
R-14	8	40MA	250	2⅞	1⅜	1-11/16	2⅜	¾
R-15	12	30MA	450	2⅞	1⅜	1-11/16	2⅜	¾
R-16	15	30MA	630	2⅞	1⅜	1-11/16	2⅜	¾
R-17	20	40MA	850	3-5/16	1⅝	2	2-13/16	1
R-18	8	80MA	250	3-5/16	1⅝	2	2-13/16	1
R-19	14	100MA	450	3¾	1¾	2-5/16	3⅛	1½
R-20	5	200MA	90	4⅛	2	2⅝	3-9/16	2½
R-21	3/15	200MA	90	4⅛	2	2⅝	3-9/16	2½
R-22	120	5MA	4000	3-5/16	1⅝	2	2-13/16	1

FILAMENT TRANSFORMERS

CHANNEL FRAME TYPE

Pri. 115 V. 50/60 Cycles—1500 V. Breakdown

Type No.	Secondary	Dimensions, Inches W	D	H	M	Wt. Lbs.
FT-1	2.5 V.C.T.-3A	2⅞	1⅜	1-11/16	2⅜	¾
FT-2	6.3 V.C.T.-1.2A	2⅞	1⅜	1-11/16	2⅜	¾
FT-3	2.5 V.C.T.-6A	3-5/16	1⅝	2	2-13/16	1
FT-4	6.3 V.C.T.-2.5A	3-5/16	1⅝	2	2-13/16	1
FT-5	2.5 V.C.T.-10A	3¾	1¾	2-5/16	3⅛	1½
FT-6	5 V.C.T.-3A	3¾	1¾	2-5/16	3⅛	1½
FT-7	7.5 V.C.T.-3A	3¾	1¾	2-5/16	3⅛	1½
FT-8	6.3 V.C.T.-6A	4⅛	2¼	2⅝	3-9/16	2½
FT-9	2.5V CT-10A. 10000V. Test	4⅛	2¼	2⅝	3-9/16	2½
FT-10	24V CT-2A. or 12V-4A.	4⅛	2¼	2⅝	3-9/16	2½

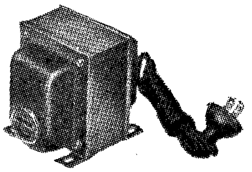
(Refer to Page N-35 for UTC Prices)

UTC REPLACEMENT TYPE COMPONENTS

STEP DOWN AUTO-TRANSFORMERS

With 6 foot cord and female receptacle 220-240 to 110-120 Volts—50/60 Cycles

Type No.	Application	L	W	H	Wgt. Lbs.
R-41	85 watt capacity	2⅝	2⅝	3⅛	4
R-42	125 watt capacity	3	3	3½	5
R-43	175 watt capacity	3¼	3¼	3⅞	5½
R-44	250 watt capacity	3⅞	3¼	3⅞	6½
R-45	500 watt capacity	4⅛	3⅞	4⅝	12
R-46	1200 watt capacity	6⅜	3⅞	4⅝	18
R-64	2500 watts, no cord	10½	4¾	6¾	30



MICROPHONE CABLE TRANSFORMERS

UTC Cable transformers are designed to be inserted in the cable circuit, and are ruggedly constructed to withstand mechanical abuse. The cable connections (supplied less cable) are made through spring strain relief to terminal boards inside the end caps. 1½″ diameter . . . 2½″ long . . . ½ lb.

Type MC-1—primary tapped 30/50 and 200/250 ohms, secondary to grid, standard fidelity.

Type MC-2—primary tapped 30/50 and 200/250 ohms, secondary to grid, high fidelity.

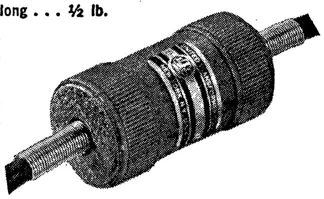


PHOTO FLASH TRANSFORMERS

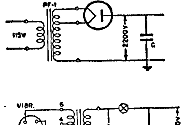
Can be used for either standard (Amglo type) or trigger (Sylvania type) multiple flash bulbs. Circuit details included with transformer.

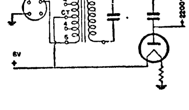
PF-1 Primary for 115 volts, 50/60 cycles. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. Compound sealed in G-3 case 2⅛ x 2¾ x 2½ inches high. Weight 2 Lbs.

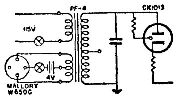
PF-2 For portable service. Primary tapped for 4 volt or 6 volt battery (full wave vibrator). Secondary for power supply delivering 2200 volts DC to condenser up to 60 Mfd. Compound sealed in G-3 case. Weight 2 Lbs.

PF-3 Trigger Transformer 15 KV peak. ⅞ O.D. x 3″ long. Weight 2 Oz.

PF-4 Dual Pri. for either 4V battery or 115V 50/60 cycles. Secondary for power supply delivering 900 volts DC to condenser up to 150 Mfd. G-3 case, 2 Lb.







CHANNEL FRAME AUDIO TRANSFORMERS

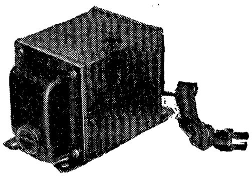
Type No.	Application	Description	Dimen., Ins. W	D	H	M	Wt. Lbs.
R-33	1 plate to 1 grid	4:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-34	1 plate to 2 grids	2:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-35	Mike to 1 grid	17:1 ratio Pri. C.T.	2⅞	1⅜	1-11/16	2⅜	¾
R-90 •	Intercomm. speaker to grid	4 ohm to 40,000 ohm grid	2½	1⅜	1⅜	2⅛	½
R-58	5 watt Universal output	Any single tube to any voice coil, .1 to 30 ohms	2½	1⅜	1⅜	2⅛	½
R-38A	6 watt Universal	Any tubes up to 6 watts to any voice coil, .1 to 30 ohms	2½	1⅜	1⅜	2⅛	½
R-59	10 watt Universal	Any tubes up to 10 watts to any voice coil, .1 to 30 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-60	15 watt Universal	Any tubes up to 15 watts to any voice coil, .1 to 30 ohms	3-5/16	1⅝	2	2-13/16	1
R-39	10 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-40	25 watt line Matching Transformer	250, 500 1,500 ohms to 2, 8, 15 ohms	4⅛	2¼	2⅝	3-9/16	2½

ISOLATION TRANSFORMERS

Ideal for isolating line noise, AC-DC sets, etc. Excellent electrostatic shielding. 1500 volt breakdown test. Six foot cord and female receptacle.

Primary 110-120 volts, 50/60 cycles—Secondary 110-120 volts

Type No.	Rating	L	W	H	Wgt. Lbs.
R-72	40 watts	2¾	2⅝	3⅛	4
R-73	100 watts	3⅜	3¼	3⅞	6
R-74	250 watts	4⅜	3⅞	4⅝	12
R-75	600 watts	6⅞	3⅞	4⅝	20
R-76	1200 watts	8⅜	4½	5⅞	30
R-77	2500 watts (no-cord)	12	7	9	70

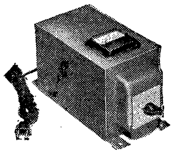


LINE VOLTAGE ADJUSTERS WITH METER

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage.

These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly. The nine tap switch provides for line voltages of 60 to 140 volts on 115 volt output models and 160 to 240 volts on 230 volt output models.

All units are designed for 50/60 cycle service and come complete with 6 foot input cord and plug and outlet receptacle.

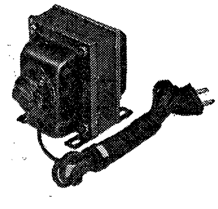


Type No.	Primary Voltages	Sec. Volts	Watts	L	W	H	Wt. Lbs.
R-78	60, 70, 80, 90, 100, 110, 120, 130, 140	115	150	7	4	4¾	6
R-79	60, 70, 80, 90, 100, 110, 120, 130, 140	115	300	7	4	4¾	9
R-80	60, 70, 80, 90, 100, 110, 120, 130, 140	115	600	10¼	4	4¾	13
R-81	60, 70, 80, 90, 100, 110, 120, 130, 140	115	1200	10¼	4	4¾	21
R-83	160, 170, 180, 190, 200, 210, 220, 230, 240	230	150	7	4	4¾	6
R-84	160, 170, 180, 190, 200, 210, 220, 230, 240	230	300	7	4	4¾	9
R-85	160, 170, 180, 190, 200, 210, 220, 230, 240	230	600	10¼	4	4¾	13
R-86	160, 170, 180, 190, 200, 210, 220, 230, 240	230	1200	10¼	4	4¾	21

EXPORT VOLTAGE ADAPTER

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115.

Type No.	Rating	Wgt. Lbs.
R-47	85 watts	4½
R-48	150 watts	5½



TV VOLTAGE REGULATOR

Complete with cord, plug, and special locking switch. Permits operation of 115 volt 50/60 cycle TV sets on line voltages of 85, 90, 95, 100, 105, 110, 120, 125, 130 V.

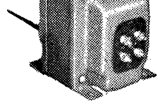
Type No.	Rating	Wt. Lbs.
R-49	350 Watts	5

SIGNALLING AND CONTROL TRANSFORMERS

Primary 110-120 volts, 50/60 cycles—Secondary 110-120 volts

High power transformers suitable for operating relays, sirens, horns, gongs, etc. from 115 V. 50/60 cycle line. These units have four secondary terminals providing 4, 8, 12, 16, 20 and 24 volt output. The volt ampere rating is based on the 24 volt secondary tap with corresponding reduction at the lower voltages. Underwriters' approved primary leads are employed, and screw-type binding posts.

TYPE	WATTS	OVERALL DIMENSIONS	MTG. DIM.	WEIGHT LBS.
SC-3	50	3 x3½x3-9/16	1⅞x2¼	3
SC-4	100	3¼x4 x4	2⅛x2½	5
SC-5	250	4 x5 x4¾	3¼x3	10



(Refer to Page N-35 for UTC Prices)

CHICAGO

NEW EQUIPMENT

POWER TRANSFORMERS
FILTER REACTORS

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

POWER TRANSFORMERS—PLATE AND FILAMENT SUPPLY

For CAPACITOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

High Voltage Secondary			Filaments				Wt. Lbs.	H-Type Mounting			S-Type Mounting			C-Type Mounting		
Volts A-C-	Ma. D-C	Output V.D-C	Rectifier Volts	Rectifier Amps.	Others Volts	Others Amps.		Cat. No.	Case No.	List Price	Cat. No.	Case No.	List Price	Cat. No.	Case No.	List Price
250-0-250	10	320	6.3	1.2	6.3	0.6	1¼	PHC-10	14	$23.35	...			...		
250-0-250	20	300	6.3	1.2	6.3	0.6	1¾	PHC-20	15	23.90	...			...		
225-0-225	40	210	5	2	6.3CT	2	3¼	PHC-40	17	19.75	PSC-40	17	$ 9.20	PCC-40	16	$ 6.50
270-0-270	55	260	5	2	6.3CT	2	3½	PHC-55	17	21.65	PSC-55	17	10.85	PCC-55	16	7.05
300-0-300	60	285	5	2	6.3CT	3	4½	PHC-60	19	22.60	PSC-60	19	11.40	PCC-60	18	8.10
335-0-335	70	320	5	2	6.3CT	3	4½	PHC-70	19	23.45	PSC-70	19	12.45	PCC-70	18	8.65
330-0-330	85	320	5	2	6.3CT	3	6	PHC-85	20	25.15	PSC-85	20	14.35	PCC-85	20	10.00
345-0-345	105	320	5	2	6.3CT	3.5	6½	PHC-105	21	27.70	PSC-105	21	15.20	PCC-105	20	10.85
375-0-375	120	380	5	3	6.3CT	4	9½	PHC-120	21	29.30	PSC-120	22	16.00	PCC-120	22	12.20
370-0-370	150	390	5	3	6.3CT 6.3CT	4 1	11½	PHC-150	22	36.30	PSC-150	22	21.15	PCC-150	22	16.30
385-0-385	200	390	5	3	6.3CT 6.3CT	4.5 1	12¼	PHC-200	22	38.20	PSC-200	22	22.50	PCC-200	22	17.60
400-80-0-80-400	250	410	5	6	6.3CT 5	7 2	15	PHC-250	24	45.60	PSC-250	24	26.05	PCC-250	24	21.70

For REACTOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

350-0-350	55	260	5	2	6.3CT	2	3¼	PHR-55	17	$21.65	PSR-55	17	$11.10	PCR-55	16	$ 7.85
425-0-425	70	320	5	2	6.3CT	3	4½	PHR-70	19	23.45	PSR-70	19	12.70	PCR-70	18	8.90
440-0-440	85	325	5	2	6.3CT	3	6	PHR-85	20	25.15	PSR-85	20	14.65	PCR-85	20	10.30
450-0-450	105	320	5	2	6.3CT	3.5	6½	PHR-105	21	27.70	PSR-105	21	15.45	PCR-105	20	11.10
500-0-500	120	390	5	3	6.3CT	4	9½	PHR-120	21	29.30	PSR-120	22	16.30	PCR-120	22	12.45
510-0-510	150	395	5	3	6.3CT 6.3CT	4 1	11½	PHR-150	22	36.30	PSR-150	22	21.40	PCR-150	22	16.50
520-0-520	200	390	5	3	6.3CT 6.3CT	4.5 1	12¼	PHR-200	22	38.20	PSR-200	22	22.80	PCR-200	22	17.90
550-370-75-0-75-370-550	300	420	5	6	6.3CT 6.3CT	1 5	17½	PHR-300	24	52.15	PSR-300	24	32.60	PCR-300	24	25.50

For REGULATED POWER SUPPLIES, CAPACITOR INPUT—Primary 117 Volts, 50-60 Cycles

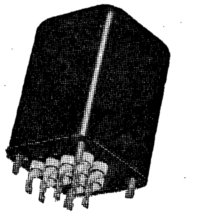
High Voltage Secondary			Filaments						Wt. Lbs.	H-Type Mounting			S-Type Mounting		
			Rectifier		Others										
Volts A-C	Ma. D-C	Output V.D-C-	Volts	Amps.	Volts	Amps.	Volts	Amps		Cat. No.	Case No.	List Price	Cat. No.	Case No.	List Price
440-0-440	165	430	5	3	6.3 6.3	7.5 0.6	6.3 6.3	3 3	12	PHC-165	22	$45.90	PSC-165	22	$30.60
450-0-450	200	442	5	2	6.3 6.3	4 4	6.3	0.6	12	PHC-200A	22	42.95	PSC-205	22	29.00

FILTER REACTORS

Inductance in Henries	Max. Current Ma. D-C	D-C Resistance in Ohms	Insulation Test Volts	Wt. Lbs.	H-Type Mounting			S-Type Mounting			C-Type Mounting		
					Cat. No.	Case No.	List Price	Cat. No.	Case No.	List Price	Cat. No.	Case No.	List Price
15	10	680	1,000	1	RH-1510	8	$9.75	...			...		
15	20	680	1,000	1	RH-1520	8	10.30	...			...		
15	40	475	2,500	1½	RH-1540	12	10.40	RS-1540	12	$ 4.55	RC-1540	12	$ 3.25
15	55	420	2,500	2	RH-1555	13	10.75	RS-1555	13	5.40	RC-1555	12	4.00
15	85	285	2,500	2¾	RH-1585	14	11.40	RS-1585	15	6.50	RC-1585	14	4.85
12	105	170	2,500	4	RH-12105	17	13.35	RS-12105	17	7.05	RC-12105	16	5.65
12	150	150	2,500	5½	RH-12150	19	15.30	RS-12150	19	9.45	RC-12150	18	7.85
12	200	140	2,500	7	RH-12200	20	18.00	RS-12200	21	11.10	RC-12200	20	9.45
10	55	230	2,500	1¾	RH-1055	13	10.75	RS-1055	13	5.10	RC-1055	12	3.80
10	85	175	2,500	2½	RH-1085	14	11.40	RS-1085	15	6.20	RC-1085	14	4.55
8	105	100	2,500	3¾	RH-8105	17	13.35	RS-8105	17	6.75	RC-8105	16	5.40
8	150	100	2,500	5¼	RH-8150	18	15.30	RS-8150	19	9.20	RC-8150	18	7.60
8	200	85	2,500	7	RH-8200	20	18.00	RS-8200	21	10.85	RC-8200	20	9.20
8	250	90	2,500	10½	RH-8250	22	21.70	RS-8250	22	13.55	RC-8250	22	11.95
8	300	55	3,500	12½	RH-8300	22	25.85	RS-8300	22	16.80	RC-8300	22	14.65

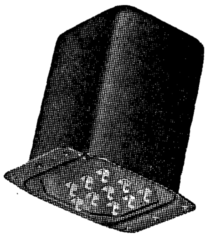
FILAMENT TRANSFORMERS—Primary 115-230 Volts, 50-60 Cycles

Secondary		Insulation Test Volts	Wt. Lbs.	H-Type Mounting			S-Type Mounting		
Volts	Amps.			Cat. No.	Case No.	List Price	Cat. No.	Case No.	List Price
2.5CT	5.25	3,500	2	FH-25	15	$15.45	F-25	14	$ 8.10
2.5CT	10.0	5,000	3	FH-210	15	22.15	F-210	17	11.65
2.5CT	10.0	9,000	4	FH-210H	19	25.75	F-210H	19	13.55
2.5CT	15.0	9,000	6	FH-215H	21	30.95	F-215H	20	16.30
5CT	4.0	2,500	2¼	FH-54	15	16.10	F-54	15	8.35
5CT	10.0	2,500	3½	FH-58	17	22.15	F-58	17	11.65
5CT	10	8,000	6	FH-510H	21	33.00	F-510H	21	17.35
5CT	20.0	2,500	6½	FH-516	21	32.00	F-516	21	16.80
5CT	20	10,000	13	FH-520HB	22	41.25	F-520HB	22	21.70
5CT	30	2,500	10½	FH-530	22	41.25	F-530	22	21.70
6.3CT	1.5	2,500	1	FH-615	12	9.05	F-615	12	4.75
6.3CT	3	2,500	2	FH-63	14	12.85	F-63	14	6.75
6.3CT	5.5	2,500	3	FH-65	16	18.55	F-65	17	9.75
6.3CT	10.0	2,500	5	FH-610	19	26.25	F-610	19	13.80
7.5CT	5.0	2,500	3¼	...			F-75	17	9.45
7.5CT	12	2,500	6½	...			F-712	21	16.30
7.5CT	25.0	2,500	12	...			F-725	22	21.75
10CT	4.0	2,500	3¼	FH-104	17	19.05	F-104	17	10.00
10CT	6.5	2,500	5	FH-106	19	26.25	F-106	19	13.80
10CT	10.0	2,500	6½	FH-1010	21	30.95	F-1010	21	16.25
11CT	10.0	2,500	9½	FH-1110	21	32.95	F-1110	22	17.35

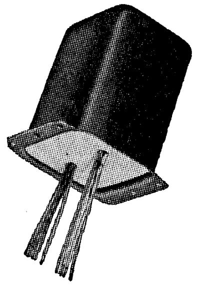


MEETS MIL-T-27 SPECS

H-Type. Steel base cover deep-seal soldered into case. Terminals hermetically sealed. Ceramic bushings. Stud-mounted unit.



S-Type. Steel base cover fitted with phenolic terminal board. Convenient numbered solder lug terminals. Flange-mounted unit.



C-Type. With 10" color-coded stripped and tinned leads brought out through fibre board base cover. Flange-mounted unit.

S-TYPE & C-TYPE CASE DIMENSIONS

Case No.	Depth	Width	Height
12	2¼	2⅛	2 11/16
13	2¼	2⅛	2 15/16
14	2½	2⅜	3 1/16
15	2½	2⅜	3 5/16
16	2⅞	2 11/16	3½
17	2⅞	2 11/16	3¾
18	3¼	3	3⅞
19	3¼	3	4¼
20	3 11/16	3 5/16	4 5/16
21	3 11/16	3 5/16	4 11/16
22	4 9/16	4⅛	5 5/16
24	5 5/16	4 13/16	6 1/16

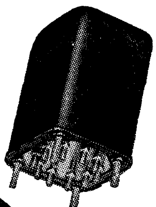
CHICAGO

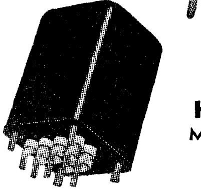
NEW EQUIPMENT

AUDIO TRANSFORMERS

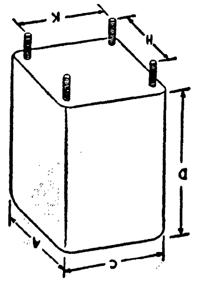
CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

B-TYPE
MOUNTING





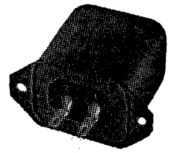
H-TYPE
MOUNTING



H & B TYPE MTG. DIMENSIONS

Case Size	Dimensions in Inches A	C	D	H	K
8	1½	1½	1 15/16	1	1
9	1½	1½	2⅛	1	1
12	2¼	2⅛	2 11/16	1 9/16	1⅜
13	2¼	2⅛	2 15/16	1 9/16	1⅜
14	2½	2⅜	3 1/16	1 13/16	1 11/16
15	2½	2⅜	3 5/16	1 13/16	1 11/16
16	2⅞	2 11/16	3½	2	1⅞
17	2⅞	2 11/16	3¾	2	1⅞
18	3¼	3	3⅞	2⅜	2⅛
19	3¼	3	4¼	2⅜	2⅛
20	3 11/16	3 5/16	4 5/16	2⅝	2⅜
21	3 11/16	3 5/16	4 11/16	2⅝	2⅜
22	4 9/16	4⅛	5 5/16	3⅜	3
24	5 5/16	4 13/16	6 1/16	3⅜	3

HIGH Q CHOKES



For Dynamic Noise Suppression Circuits (S-Type Mounting)

Two efficient reactors, inductance values .8 and 2.4 henrys respectively, are designed for noise suppression circuits, but can be used in any tuned circuit requiring the given inductances. Inductance values accurate within −5% with up to 15 ma. d-c. Minimum Q of 20. Mounted in identical drawn steel cases.

Cat. No.	Inductance	List Price
NSI-1	.8 hy.	$8.10
NSI-2	2.4 hy.	8.10

FULL FREQUENCY RANGE AUDIO TRANSFORMERS

Frequency Response within ±½ db, 30 to 15,000 Cycles

INPUT TRANSFORMERS

H-Type (Cat. No. BIH) and B-Type (Cat. No. BI) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Hum Shielding	Case Size	Wt. Lbs.	Cat. No.	List Price
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-1 BI-1	$45.40 23.90
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−90 dbm.	13	1½	BIH-2 BI-2	59.85 31.50
Line bridging to P-P Grids	*Pri: 8,000/6,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-3 BI-3	47.45 24.95
Line to Line	Pri: 600/150 ohms CT Sec: 600/150 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-4 BI-4	43.35 22.80
Line to Line	*Pri: 600/150 ohms CT *Sec: 600/150 ohms CT	+30 dbm.	−90 dbm.	18	3¼	BIH-5 BI-5	61.95 32.60
Interstage: P-P Plates to Sgl. or P-P Grids	*Pri: 20,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-6 BI-6	45.40 23.90
Low Imped. Mike, Pickup, or Multiple Line to Grid	Pri: 50/150/250/600 *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-7 BI-7	47.45 24.95
Single Plate to Push-Pull Grids	Pri: 10,000 ohms *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-8 BI-8	45.40 23.90
Single Plate to Push-Pull Grids**	Pri: 10,000 ohms *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	18	3¼	BIH-9 BI-9	53.70 28.25

OUTPUT TRANSFORMERS

H-Type (Cat. No. BOH) and B-Type (Cat. No. BO) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Case Size	Wt. Lbs.	Cat. No.	List Price
Single Plate to Line	†Pri: 15,000 ohms *Sec: 600/150 ohms CT	+15 dbm. (22 mw)	14	2¼	BOH-1 BO-1	$26.80 14.10
P-P Plates to Line	*Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+30 dbm. (1 watt)	16	3	BOH-2 BO-2	39.20 20.60
P-P Plates to Line	Pri: 5,000 ohms CT *Sec: 600/150 ohms CT	+40 dbm. (10 watts)	20	5¾	BOH-3 BO-3	35.10 18.45
P-P Plates to Line	Pri: 7,500 ohms CT *Sec: 600/150 ohms CT‡	+43 dbm. (20 watts)	20	6	BOH-4 BO-4	37.10 19.55
P-P Plates to Line or Voice Coil	*Pri: 10,000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+37 dbm. (5 watts)	18	4	BOH-5 BO-5	49.50 26.05
P-P Plates to Voice Coil	Pri: 7,500 ohms CT Sec: 8/20 ohms‡	+43 dbm. (20 watts)	20	6	BOH-6 BO-6	47.45 24.95
Line to Voice Coil	Pri: 600/150 ohms Sec: 8/20 ohms	+45 dbm. (30 watts)	20	6½	BOH-7 BO-7	45.40 23.90
P-P Parallel Pl. to Line or Voice Coil	Pri: 1500 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+45 dbm. (30 watts)	21	6½	BOH-8 BO-8	61.95 32.60
P-P Plates to Line or Voice Coil	*Pri: 5000/3000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+42 dbm. (15 watts)	20	6	BOH-9 BO-9	45.40 23.90
P-P Low Level Plates to Line	Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+15 dbm. (22 mw)	13	1½	BOH-10 BO-10	43.35 22.80
P-P Plates to Line or Voice Coil	*Pri: 3000/2500 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+46 dbm. (40 watts)	22	9½	BO-11	41.45
P-P Plates to Line or Voice Coil	Pri: 10,000 ohms CT Sec: 600/16/8 ohms	+40 dbm. (10 watts)	22	9	B-8075	24.75

*Split and balanced windings. †0 to 10 ma. D.C.
‡Has tertiary winding to provide 15% inverse feedback.
**Has D.C. in primary; frequency response ±2 db, 30–15,000 cycles.

DETAILS OF NEW EQUIPMENT LINE MOUNTINGS

H-TYPE MOUNTING—Hermetic sealing meets all MIL-T-27 specifications. Steel base cover is bonded into the case by deep-seal soldering. Terminals are hermetically sealed by unique rubber gasket—ceramic bushing construction. Units are stud mounted.

C-TYPE MOUNTING—Moisture-resistant compound surrounds coil and core. Ten-inch, RMA-color-coded leads, ends stripped and tinned for easy soldering. Flange-mounted drawn steel cases.

S-TYPE MOUNTING—Precision-fitted steel base-covers and terminal boards, plus compound filling, keep moisture out. Solder-lug terminals are clearly identified, easy to use. Drawn steel cases are flange-mounted.

B-TYPE MOUNTING—Steel bases are bonded into the drawn steel cases by deep-seal soldering to make units completely moisture proof. Stud-mounted cases take minimum chassis space. Convenient, compact, pin-type terminals.

BIAS TRANSFORMERS—Combination Plate and Filament—Primary 50-60 Cycles

Primary Volts	High Voltage Secondary AC Volts CT	DC Ma.	Rect. Volts	Fila. Amps.	H-Type Mounting Cat. No.	Case No.	List Price	S-Type Mounting Cat. No.	Case No.	List Price	C-Type Mounting Cat. No.	Case No.	List Price
115	180-160-140-120	150	5.0	3.0	1BH-150	19	$26.80	1BS-150	19	$14.10	1BC-150	18	$8.90
230	180-160-140-120	150	5.0	3.0	2BH-150	19	26.25	2BS-150	19	13.80	2BC-150	18	8.65

CHICAGO PUBLIC ADDRESS RANGE AUDIO TRANSFORMERS

Frequency Response within ±1 db, 50 to 10,000 Cycles

Driver and output transformers in this CHICAGO series are designed for three general power levels to fit a wide range of application. Up-to-date secondary impedances match 600 or 150-ohm lines, 16, 8, and 4-ohm speakers. (16/8/4-ohm taps also suitable for 20/6/3.2-ohm speakers.) Output transformers have tertiary windings for 10% inverse feedback that minimizes distortion and provides extra audio watts without loss of fidelity.

DRIVER TRANSFORMERS

H-Type (Cat. No. PHD), S-Type (Cat. No. PSD) and C-Type (Cat. No. PCD) Mountings

Application	Primary Impedance	Max. D.C. Pri.	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	List Price
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	10 ma.	3:1	14	2¼	PHD-10 PSD-10 PCD-10	$15.00 7.85 5.40
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	25 ma.	3:1	15	2¼	PHD-25 PSD-25 PCD-25	14.45 7.60 5.10
P-P Plates to P-P Grids	5,000/10,000 ohms (Pri. CT)	100 ma.	5:1	18	4½	PHD-100 PSD-100 PCD-100	24.75 13.00 9.20

OUTPUT TRANSFORMERS

H-Type (Cat. No. PHO), S-Type (Cat. No. PSO) and C-Type (Cat. No. PCO) Mountings

Application	Impedances	Typical Output Tubes	Class	Max. Audio Watts	Max. D.C. Pri. CT	Case Size Wt.	Cat. No.	List Price
P-P Plates to Line or Voice Coil	Primary: 5,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6B4G, 6L6, 6V6, etc.	A_1 AB	20	120 ma.	20: 6½ lbs.	PHO-80 PSO-80 PCO-80	$30.95 16.30 11.95
P-P Plates to Line or Voice Coil	Primary: 10,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6V6, 6F6, 6K6, etc.	AB, AB_1	15	200 ma.	19: 5 lbs.	PHO-150 PSO-150 PCO-150	27.85 14.65 10.30
P-P Plates to Line or Voice Coil	Primary: 6,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	Two 6L6's, Four 6V6's, or similar	B, AB_2†	30	250 ma.	22: 9 lbs.	PHO-200 PSO-200 PCO-200	34.60 17.90 13.55

*Has tertiary winding to provide 10% inverse feedback.
†For low distortion, use fixed bias.

COMMUNICATIONS RANGE AUDIO TRANSFORMERS

Frequency Response within ±1 db, 200 to 3,500 Cycles

These transformers are specifically designed for use in receiving and transmitting equipment such as amateur, police, railroad, and aircraft types, where clear voice reproduction is desired.

INPUT TRANSFORMERS

H-Type (Cat. No. CIH), S-Type (Cat. No. CIS) and C-Type (Cat. No. CIC) Mountings

Application	Impedances: Primary—Secondary	Case Size	Wt. Lbs.	Cat. No.	List Price
Low Level Line to Single or Push-Pull Grids	Pri: 600/150 ohms CT *Sec: 100,000 ohms CT	9	¾	CIH-1 CIS-1 CIC-1	$21.65 11.40 8.15
Low Level S. B. or D. B. Mike to Sgl. or P-P Grids	Pri: 125/50 ohms @ 80 ma. Sec. 125,000 ohms CT	9	¾	CIH-2 CIS-2 CIC-2	12.35 6.50 4.00

*Split and balanced windings: may be used singly or push:pull.

OUTPUT TRANSFORMERS

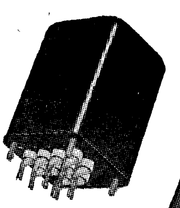
H-Type (Cat. No. COH), S-Type (Cat. No. COS) and C-Type (Cat. No. COC) Mountings

Application	Impedances: Pri.—Sec.	Typical Audio Tubes	Pri. Class	Max. Case Watts	Max. Pri. D.C.	Case Size	Wt. Lbs.	Cat. No.	List Price
Sgl. P. to Line or Speaker	Pri.: 5000 ohms Sec. ohms: 600/150/16/8/4	6L6, 6V6, 25A6	A	5	55 ma.	14	2¼	COH-1 COS-1 COC-1	$15.45 8.10 5.10
Sgl. Pl. to Line or Speaker	Pri: 8000 ohms Sec. ohms: 600/150/16/8/4	6F6, 6V6, 6K6	A	5	55 ma.	14	2¼	COH-2 COS-2 COC-2	16.00 8.35 5.40

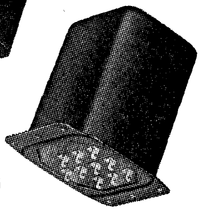
DRIVER TRANSFORMER

H-Type (Cat. No. CDH), S-Type (Cat. No. CDS) and C-Type (Cat. No. CDC) Mountings

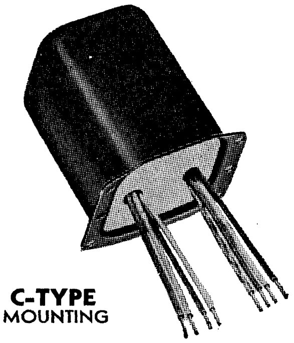
Application	Primary Impedance	Max. D.C. Pri. CT	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	List Price
P-P Plates (2A3's, etc.) to P-P Grids	5,000 ohms (Pri. CT)	100 ma.	3:1	17	3½	CDH-1 CDS-1 CDC-1	$17.00 8.90 6.20



H-TYPE
MOUNTING

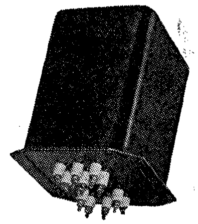


S-TYPE
MOUNTING



C-TYPE
MOUNTING

MODULATION TRANSFORMER CMS-1

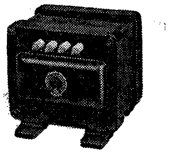


for
Communications
Transmitters

Freq.
Range,
200 to
3,500
Cycles

Chicago's No. CMS-1 Modulation Transformer and matching Driver Transformer No. CDS-1, at left, are ideally suited for use in ham and commerical speech transmitters. No. CMS-1 will deliver 250-350 watts of Class B audio power from P-P 203A's, 211's, 805's, 75TL's, etc. to a Class C load with response variations not exceeding ±1db. over the stated frequency range. Primary impedances, 9000/6700 ohms ct; secondary, 8000/6000/4000 ohms. Case size 26. Wt., 22 lbs.

No. CMS-1.........List Price, $43.45



MODULATION TRANSFORMER CMS-3

Delivers 500-750 watts of Class B audio power from 810's, 822's, etc. to a Class C load. Frequency response is within ±1 db. over the stated voice range. Primary impedance, 18,000/12,000 ohms CT; secondary, 6,250 ohms. FS-Type mounting, size 65 (see page N-57). Wt. 43 lbs.

No. CMS-3.........List Price, $81.50

CHICAGO

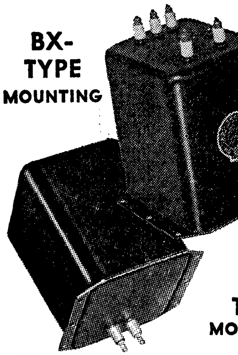
NEW EQUIPMENT

TRANSFORMERS and REACTORS

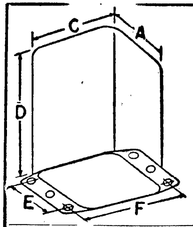
for Broadcast, Amateur, and Industrial Application

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

BX-TYPE MOUNTING

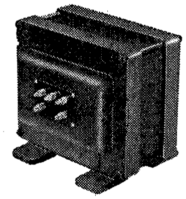


SX-TYPE MOUNTING

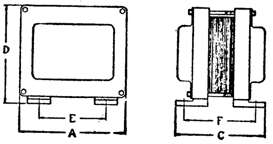


CASE DIMENSIONS FOR BX-, S- & SX-TYPE MOUNTINGS

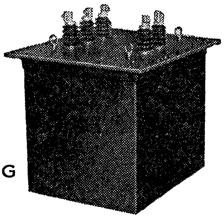
Case Size	Dimensions in Inches A	C	D	E	F
22	$4\frac{9}{16}$	4⅛	$5\frac{5}{16}$	2½	4¾
24	$5\frac{5}{16}$	$4\frac{13}{16}$	$6\frac{1}{16}$	3½	5⅜
26	6⅛	5¼	$7\frac{1}{16}$	4¼	6
28	$7\frac{1}{16}$	6⅛	$8\frac{1}{16}$	5	7



FS TYPE MOUNTING



Size	Dimensions in Inches A	D	E	F	C
60	7½	7	4¾	5½	$6\frac{5}{16}$
61	7½	7	4¾	$5\frac{5}{16}$	6⅞
62	7½	7	4¾	6¼	7⅛
63	7½	7	4¾	$6\frac{11}{16}$	7½
64	$7\frac{13}{16}$	10	8⅝	6	7¾
65	7½	7	4¾	6⅞	$7\frac{13}{16}$
71	8⅞	8½	5½	6½	8⅛
81	11½	10½	7½	8¼	10¼
84	11½	10½	7½	$11\frac{13}{16}$	$13\frac{13}{16}$
90	$13\frac{13}{16}$	12¾	9	8⅞	10⅜



WC-TYPE MOUNTING

Overall Case Dimensions: H—31½" W—26½" D—23½"

LARGE CAPACITY TRANSFORMERS AND REACTORS

For Broadcast, Communications and Industrial Use

DRIVER TRANSFORMERS

Recommended Application: In:	Tubes:	Ratio Pri./½ Sec.	Mtg. Type	Case Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	From two 2A3's, 6B4's, or similar P-P Plates to Class B 838's, 805's, 203-A's, etc.	3.5:1	B*	20	6½	**BD-1**	$32.60
1-KW Transmitter	From four 2A3's, 6B4's, or similar P-P Plates to two 833-A's or similar P-P Grids	3:1	†	24	12¼	**BD-2**	67.35
5-KW Transmitter	From four 845's, two 152-TL's or similar P-P Plates to 891-R's or similar P-P Grids	3.5:1	BX	26	24	**BD-3**	173.85

†Similar to SX-Type mounting, but with screw terminals on a terminal board.
*B-Type mounting, but with screw terminals. See page N-55 for dimensions.

MODULATION TRANSFORMERS

Recommended Application In:	With:	Impedances (Pri. Plate to Plate)	Modulator Tubes	Mtg. Type	Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	Driver Transformer #BD-1	Pri: 7500 ohms CT Sec: 5000 ohms	203-A, 838 805, etc.	BX	26	25	**BM-1**	$72.80
1-KW Transmitter	Driver Transformer #BD-2	Pri: 9000 ohms CT Sec: 7500 ohms	833-A, etc.	FS	84	175	**BM-2**	423.85
5-KW Transmitter	Driver Transformer #BD-2	Pri: 13500 ohms CT Sec: 10250 ohms	891-R, etc.	WC		1100	**BM-3**	777.00 (net)

MODULATION REACTORS

Recommended Application: In:	With:	Inductance	D.C. Ma.	Mtg. Type	Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	Mod. Transformer #BM-1	65 hy.	250	BX	28	41	**BR-1**	$105.42
1-KW Transmitter	Mod. Transformer #BM-2	100 hy.	500	FS	81	165	**BR-2**	201.06
5-KW Transmitter	Mod. Transformer #BM-3	120 hy.	900	WC		1100	**BR-3**	652.08(net)

PLATE TRANSFORMERS

Primary: Volts	Max. VA.	Secondary: A.C. Load Volts	D.C. Volts after Filter	D.C. Ma.	Mtg. Size	Mtg. Type	Wt. Lbs.	Cat. No.	List Price
115-230	185	675-0-675 575-0-575	500 400	250	22	S	12	**P-45**	$19.55
115-230	250	900-0-900 735-0-735	750 600	250	22	S	13½	**P-67**	23.35
115-230	310	1150-0-1150 870-0-870	1000 750	250	60	FS	37	**P-107**	54.35
115-230	360	1425-0-1425* 600-0-600	1250 400	150 200	24	S	26	**P-1240**	35.30
115-230	550	1710-0-1710 1430-0-1430	1500 1250	300	63	FS	43	**P-1512**	70.65
115-230	915	2820-0-2820 2260-0-2260	2500 2000	300	71	FS	71	**P-2520**	108.70
115-230	1600	2900-0-2900 2320-0-2320	2600 2100	500	64	FS	95	**P-2126**	135.00
115-230	1850	3450-0-3450 2850-0-2850	3000 2500	500	81	FS	137	**P-3025**	190.20
115-230	3050	4600-0-4600 4050-0-4050 3400-0-3400	4000 3500 3000	600	90	FS	150	**P-4353**	244.00

*Both secondaries may be rectified simultaneously.

FILTER REACTORS

Inductance in Henrys	Max. D.C. Ma.	D.C. Resistance, Ohms	Insulation Test Volts	Mtg. Type	Mtg. Size	Wt. Lbs.	Cat. No.	List Price
10	500	40	9,000	FS	62	35	**R-105**	$38.00
10	300	40	7,500	SX	26	22	**R-103**	21.70
6	700	35	10,000	FS	61	35	**R-67**	43.45
6	500	35	9,000	FS	60	35	**R-65**	35.30
6	300	35	7,500	SX	24	16½	**R-63**	18.45

Splatter Chokes for High Level "Clipper" Filters

Can withstand high peak voltages. Has tapped windings to cover an inductance from .02 to 1.5 henries at relatively constant Q. Eliminates splatter, caused by heavy modulation; limits band width to 3,000 cycles, effectively increases "get through" ability of phone signals, and prevents negative peak clipping.

Type	D.C. Ma.	Insulation Volts	Inductance in Henries	Mounting Type	Mounting Size	List
SR-300	300	7,500	.02 to 1.5 Hy	BX	22	$18.45
SR-500	500	10,000	.02 to 1.5 Hy	BX	24	23.90

Low Pass Filter No. LPF-1

For attenuating frequencies above 3,000 cycles in low level speech amplifiers. Operates out of a 15,000 ohm source, *e.g.*, the plate of 6C5, 6J5, etc. when its 60,000 ohm secondary is connected to an equal impedance output. Operates at signal levels up to —8 db. Complete with operating instructions. S type mtg. Case size 13. (See pg. N-54).

List Price......................**$13.55**

CHICAGO

REPLACEMENT TYPE

TRANSFORMERS and REACTORS

Premium Quality—Yet They Cost No More

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

POWER TRANSFORMERS—(Pri: 117 volts, 50/60 cycles)

6.3-VOLT FILAMENTS—VERTICAL SHIELD MOUNTING (V)

Catalog No.	High Voltage Secondary A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Amps.	Other Filaments Volts	Amps.	Dimensions H	W	D	Wt. Lbs.	List Price
PV-10S	250-0-250	10	6.3	1.2	6.3	0.6	2¼	2⅞	2⅛	1	$ 8.80
PV-20S	250-0-250	20	6.3	1.2	6.3	0.6	2⅝	3 5/16	2¼	1½	8.60
PV-40	225-0-225	40	5	2	6.3 C-T	1	3⅛	2½	2¼	2¼	7.15
PV-50	325-0-325	50	5	3	6.3 C-T	2	3¾	2⅞	3	3¾	8.05
PV-50A	117	50			6.3	1.75	2⅝	3 5/16	2¼	1½	4.15
PV-60	250-0-250	60	5	2	6.3 C-T	2	3⅛	2½	3	3	8.60
PV-70	350-0-350	70	5	3	6.3 C-T	3	4⅛	3⅛	3⅛	4½	9.25
PV-70A	300-0-300	70	5	3	6.3 C-T	3	3¾	2⅞	3⅛	4	9.15
PV-90	350-0-350	90	5	3	6.3 C-T	3.5	4⅛	3⅛	3½	5¼	10.30
PV-100	350-0-350	100	5	3	6.3 C-T	5	4⅞	3¾	3¾	7½	10.65
PV-120	300-0-300	120	5	3	6.3 C-T	5	4⅛	3⅛	3¾	5¾	10.85
PV-120A	350-0-350	120	5	3	6.3 C-T	4.5	4⅛	3⅛	3 7/16	6	11.95
PV-145	372-0-372	145	5	3	6.3 C-T	5	4⅞	3¾	4	7½	12.85
PV-200	400-0-400	200	5	4	6.3 C-T	5.5	4⅞	3¾	4¼	9	15.00

6.3-VOLT FILAMENTS—HORIZONTAL SHIELD MOUNTING (H)

Catalog No.	High Voltage Secondary A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Amps.	Other Filaments Volts	Amps.	Dimensions H	W	D	Wt. Lbs.	List Price
PH-20S	250-0-250	20	6.3	1.2	6.3	0.6	2⅜	2⅝	2 3/16	1	$9.50
PH-40	250-0-250	40	5	2	6.3 C-T	1.6	3	3	2½	2½	7.40
PH-50	250-0-250	50	5	2	6.3 C-T	2	3½	3	2½	3	7.50
PH-50A	280-0-280	50	5	3	6.3	1.5					
					6.3	.6	3¼	3	2½	3½	7.70
PH-70	300-0-300	70	5	3	6.3 C-T	3	3½	3⅜	2 13/16	4	7.80
PH-70B	350-0-350	70	5	3	6.3 C-T	2.5	3¼	3	2½	4½	7.95
PH-90	350-0-350	90	5	3	6.3 C-T	3.5	3¾	3¾	3⅛	5¼	8.35
PH-120	300-0-300	120	5	3	6.3 C-T	5	3⅞	3¾	3⅛	5¾	9.25
PH-120B	350-0-350	120	5	3	6.3 C-T	4.5	3⅞	4⅛	3½	6	9.25
PH-145	372-0-372	145	5	3	6.3 C-T	5	3⅞	4½	3¾	7½	10.85
PH-200	350-0-350	200	5	3	6.3 C-T	6	4	4½	3¾	8	13.30

2.5-VOLT FILAMENTS—HORIZONTAL SHIELD MOUNTING (H)

Catalog No.	High Voltage Secondary A.C. Volts	D.C. Ma.	Rectifier Filament Volts	Amps.	Other Filaments Volts	Amps.	Dimensions H	W	D	Wt. Lbs.	List Price
PH-70A	325-0-325	70	5	3	2.5 C-T	9	3⅝	3¾	3⅛	4½	$ 8.95
PH-120A	325-0-325	120	5	3	2.5 C-T	12.5					11.40
					2.5 C-T	3.5	3⅞	4⅛	3½	6	

FILAMENT TRANSFORMERS

Catalog No.	Secondary Volts	Amps.	Primary Volts	Cycles	Insulation Test Volts	Mounting Type	Dimensions H	W	D	Wt. Lbs.	List Price
FO-26	2.5 C-T	6	107/117	60	2000	U	2⅜	2⅞	1⅞	1	$3.80
FO-210H	2.5 C-T	10	107/117	60	7500	U	3	3⅝	2½	2½	6.15
FO-53	5.0 C-T	3	107/117	60	2000	U	2⅜	2⅛	2	1	4.15
FO-56	5.0 C-T	6	107/117	60	2000	U	2⅝	3 5/16	2	2	5.40
FO-513	5.0 C-T	13	107/117	60	2000	U*	3⅜	2 13/16	2½	4	6.65
FV-520H	5.0 C-T	20	117	50/60	9000	V	4½	3¾	3⅝	7	14.55
FV-530	5.0 C-T	30	117	50/60	2000	V	4½	3¾	4	6	14.05
FO-615	6.3 C-T	1.5	107/117	60	2000	U	1⅝	2⅞	1¾	¾	2.95
FO-63	6.3 C-T	3	107/117	60	2000	U	2⅜	2⅞	2	1¼	4.15
FO-66	6.3 C-T	6	107/117	60	2000	U	2¼	4¾	2½	2	5.65
FO-610	6.3 C-T	10	107/117	60	2000	U*	3⅜	2 13/16	2¾	3¼	7.05
FO-75	7.5 C-T	5	107/117	60	2000	U	3	3⅝	2½	2¼	5.15
FO-105	10 C-T	5	107/117	60	2000	U	3 1/16	2½	2½	3	7.15
FV-1010	10 C-T	10	117	50/60	2000	V	3¾	3⅛	3 9/16	5	9.35
FO-122	12.6 C-T	2	107/117	60	2000	U	2 3/16	3 11/16	2	1½	4.65

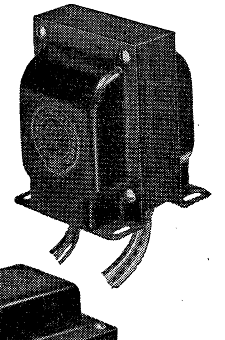
*Universal mounting frames.

FILTER REACTORS

Catalog No.	Inductance in Henries	Maximum D.C. Current Ma.	D.C. Resistance in Ohms	Insulation Test Volts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
R-1230	12	30	400	2000	L	1⅜	2⅜	1⅜	½	$1.65
R-1240	12	40	400	2000	L	1⅝	2⅞	1⅜	¾	1.70
R-650	6	50	300	1500	L	1⅝	2⅞	1⅜	¾	1.75
R-1365	13	65	500	2000	L	2¼	3¾	2¼	1½	2.70
R-885	8	85	250	2000	L	2¼	3¾	2¼	1½	2.95
R-23110	23	110	250	2000	V	3⅛	2½	2¾	2½	4.15
R-8120	8	120	350	1500	L	2½	4	2	2½	4.25
R-7150	7.5	150	160	2000	V	3⅛	2½	3⅛	2½	5.45
R-7200	8	200	125	3000	V	3⅜	2⅞	3⅛	3¾	6.85
R-8300	8	300	60	3500	V	4½	3¾	4	8	12.35

DRIVER TRANSFORMERS

Cat. No.	Typical Applications: From Driver Tubes	To Output Tubes	Class	Ratio Primary: ½ Sec.	Max. Pri. D.C. Ma.	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
D-15	Single 30	P-P 19 or 30's	B	2.5-1	15	L	1⅝	2⅞	1½	¾	$2.80
D-30	6C5, 6R7, or Triode 6F6	P-P 6L6's	AB	3:1	30	LS	2	3¼	2⅛	1	4.00
D-35	Triode Plate	P-P Grids		1:1, 1.5:1 or 2:1	35	L	2	3¼	1⅞	1	4.30
D-40	6C5, 6R7, or Triode 6F6	P-P 6L6's	AB	3:1	40	V	3⅛	2½	2½	2½	5.95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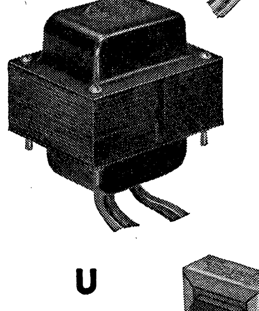
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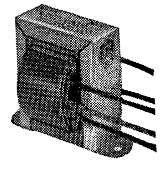
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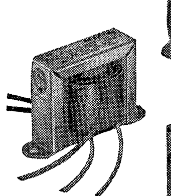
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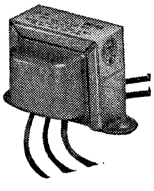
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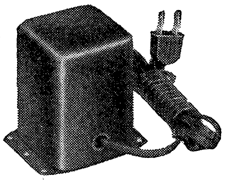
ISOLATION TRANSFORMERS



CHICAGO Isolation Transformers are designed for a dual purpose: (1) To supply 115 volts isolated from a line of above/below normal, or normal, voltage—primary switch sets for 125/115/105 volts, 50/60 cycles; or (2) For use in servicing to eliminate shock hazard, by isolating chassis ground from line ground (particularly important on "hot" AC-DC television sets). Also provide 125 and 105 volts on the secondary for locating doubtful tubes, etc.

Cat. No.	Capacity	List Price
IS-50	50 VA	$ 9.75
IS-100	100 VA	15.20
IS-150	150 VA	22.80
IS-250	250 VA	38.00

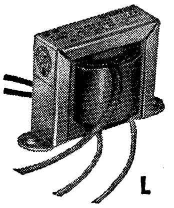
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CHICAGO

REPLACEMENT TYPE

TRANSFORMERS

Premium Quality—
Yet They Cost No More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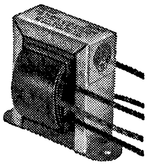
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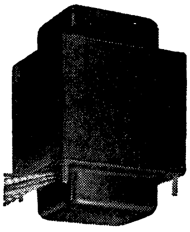
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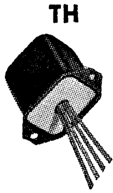
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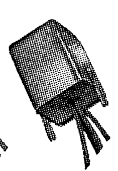
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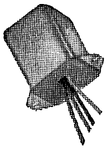
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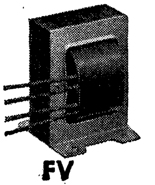
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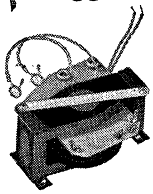
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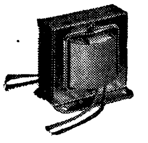
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Vertical Blocking Oscillator Transformers

No. TBO-1. Creates 60-cycle vertical sweep voltages. Pri. Induc.: 1.15 hy. @ 3 v., 1000 cycles. Ratio (Pri:Sec) 1:4.2 Type CC mounting. Wt., 1 lb. List Price, $2.95

No. TBO-2. Same as TBO-1, but in Type CB mounting. Wt. ½ lb. List Price, $2.70

No. TBO-3. Same function as TBO-1. Pri. Induc.: 3 hy. @ 3 v., 60 cycles. Type CA mtg. Wt., 1 lb. List Price, $3.25

TV Filter Reactors (Type L)

Low inductance chokes for use in TV power supplies. 2⅝"H. x 4" x 2". Mtg. 3 9/16".

Type TR-3300. Inductance 2.8 henries @ 300 ma. D.C. D.C. resistance 60 ohms. Insulation tests at 1250 V. Ship. Wt., 2½ lbs..........List, $4.25

Type TR-4200. Inductance 3.7 henries @ 200 ma. D.C. D.C. resistance 60 ohms. Insulation tests at 1250 V. Ship. Wt., 2½ lbs..........List, $4.25

OUTPUT TRANSFORMERS

SINGLE PLATE TO VOICE COIL

Catalog No.	Application Typical Output Tubes	Ohms Impedance Pri.	Sec.	Max. Primary D.C.Ma.	Max. Audio Watts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
RO-2	25L6 35A5, 2A3, 6B4	2000	3 to 6	50	4	L	1⅜	2⅜	1¼	½	$1.85
RO-3	25L6 (10-ohm tap on primary)	2000	3 to 6	50	4	L	3⅜	2⅜	1⅜	½	2.25
RO-6	12A5, 25A6, 45, 71A	4000	4-8-15	40	10	L	2	3¼	1¾	1	2.80
RO-8	2A5, 25A6, 43	4500	3 to 6	35	5	L	1⅜	2⅜	1¼	½	2.00
RO-9	6V6, 25A7G, 30, 31, 50	5000	4-8-15	50	8	L	2	3¼	1¾	1	2.80
RO-11	1S4	6000	3 to 6	5	2	L	1⅛	2⅛	1⅛	⅜	1.70
RO-13	7B5, 18, 31, 33, 42, 46, 47	7000	3 to 6	35	5	L	1⅜	2⅜	1¼	½	1.85
RO-16	1C5G, 1G5G, 1J6G, 6A4, 6A6	10000	3 to 6	30	5	L	1⅜	2⅜	1¼	½	1.95
RO-18	1A5G, 1E7G, 1N6G, 6V7G	25000	3 to 6	10	5	L	1⅝	2⅞	1⅜	⅝	1.80

PUSH-PULL PLATES TO VOICE COIL

RO-110	P-P 2A5, 6AC5G, 6A6, 6N7, 45	10000	4-8-15	80	12	U	2⅜	2⅞	1¾	1	$3.25
RO-111	P-P 6B5, 6K6, 6N6G, 7B5, 31	14000	4-8-15	80	15	U	2⅜	2⅞	1¾	1	3.45
RO-113	P-P 1A5G, 1E7G, 1N6G, 6V7G	50000	3 to 6	20	8	L	1⅝	2⅞	1½	⅝	3.15

UNIVERSAL TYPE—SINGLE PLATE TO VOICE COIL

Catalog No.	Range of Ohms Impedance Primary	Secondary	Primary D.C. Ma.	Max. Audio Watts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
RO-201	4000, 7000, or 100000	3 to 6	40	8	L	1⅝	2⅞	1½	⅝	$2.80

UNIVERSAL TYPE—SINGLE OR PUSH-PULL PLATES TO VOICE COIL

RO-301	2500 to 14000	2, 4, 6, 8, 15, etc.	30	4	L	1⅜	2⅜	1⅝	½	$2.85
RO-302	2500 to 15000	2, 4, 6, 8, 15	50	4	L	1⅜	2⅜	1⅝	⅝	2.85
RO-303	2500 to 14000	2, 4, 6, 8, 15, etc.	40	8	L	1⅝	2⅞	1⅞	⅝	2.95
RO-304	2500 to 13000	2, 4, 6, 8, 15	70	8	U	2	2½	1⅞	13/16	3.25
RO-305	2500 to 14000	2, 4, 6, 8, 15, etc.	60	12	L	2	3¼	2⅜	1	4.45
RO-307	2500 to 14000	2, 4, 6, 8, 15, etc.	50	10	U	2⅜	2⅞	2¼	1	3.45

UNIVERSAL TYPE—PUSH-PULL PLATES (ONLY) TO VOICE COIL

RO-401	2500 to 13000	2, 4, 6, 8, 15	70	15	U	2 5/16	2¾	2⅜	1½	$4.55

SPEAKER MATCHING TRANSFORMERS

SM-1	Sgl. Tube—500–1000–1500–2000	6	80	12	L	2⅜	2⅞	1⅞	1	$4.05
SM-2	Sgl. Tube—2500–4000–6000–8000	6	80	12	L	2⅜	2⅞	1⅞	1	4.35
SM-3	Sgl. Tube—500–1000–1500–2000	6	60	5	L	1⅞	2⅜	1½	¾	2.50

CHICAGO EXACT REPLACEMENT TELEVISION TRANSFORMERS

POWER TRANSFORMERS (Primary 117 volts, 60 cycles)

Catalog No.	HV Secondary A.C. Volts	D.C. Ma.	Filaments Rectifier	Others	Mtg. Type	Wt. Lbs.	List Price
TP-210	233-0-233	90	5 v. 2 a.	6.3 v. 5.3 a.	TH	4½	$ 9.50
TP-350	356-0-356	200	5 v. 3 a.	6.4 v. 8.7 a.; 6.4 v. 0.6 a.	C	15	38.00
	2380	2		1.25 v. 0.3 a.	(in case)		
TP-355	360-0-360	250	5 v. 3 a.	5 v. 2 a.; 6.4 v. 8 a.; 6.4 v. 0.6 a.	TH	13	20.10
TP-360	365-0-365	260	5 v. 6 a.	6.3 v. 9 a.; 6.3 v. 1.2 a.	TH	13½	20.10
TP-365	362-0-362	295	5 v. 6 a.	12.6 v. CT 5 a.; 5 v. 2 a.	TH	17	28.25
TP-370	348-0-348	215	5 v. 3 a.	6.3 v. 9 a.; 6.3 v. 1.2 a.	TH	12	20.10
TP-375	354-0-354	185	5 v. 3 a.	6.45 v. 12 a.	TH	11	18.45
	163-0-163	65					
TP-380	380-0-380	180	5 v. 3 a.	6.3 v. 9 a.	TH	9½	16.30
TP-383	383-0-383	230	5 v. 3 a.	5 v. 2 a.; 6.3 v. 9. a.	TH	13½	21.75
TP-390	400-330-0				V	11	
	330-400	180	5 v. 3 a.	5 v. 3 a.	Vert. Shield		19.55
TP-392	383-0-383	230	5 v. 3 a.	5 v. 2 a.; 6.45 v. 7.4 a.; 6.3 v. 1.6 a.	TH	13¼	21.75
TP-393	366-0-366	270	5 v. 6 a.	6.7 v. 4.5 a.	TH	10½	19.00
TP-395	360-0-360	260	5 v. 6 a.	5 v. 2 a.; 6.3 v. 8.85 a.	TH	13¼	22.80
TP-400	374-0-374	205	5 v. 3 a.	5 v. 2 a.; 6.3 v. 5.6 a.	TH	9	16.30
TP-405	350-0-350	270	5 v. 6 a.	5 v. 2 a.; 6.6 v. 7.8 a.; 6.3 v. 1.6 a.	TH	13¼	22.80
TP-409	360-0-360	240	5 v. 6 a.	6.5 v. 9.3 a.	TH	11½	19.00
TP-410	385-0-385	240	5 v. 3 a.	5 v. 2 a.; 6.3 v. 8.6 a.	TH	12	20.65
TP-450	364-0-364	195	5 v. 3 a.	5 v. 2 a.; 6.3 v. 8.25 a.			
	229-0-229	105	5 v. 2 a.	6.3 v. 0. 6 a.	TH	12	22.50

Vertical Scanning Output Transformers

No. TSO-1.	Type FV	List, $5.65
No. TSO-2.	Type FH	List, 5.10
No. TSO-3.	Type FV	List, 5.40
No. TSO-4.	Type FV	List, 4.55
No. TSO-5.	Type L	List, 3.80

Horizontal Deflection Output and H-V Transformers (Type TF)

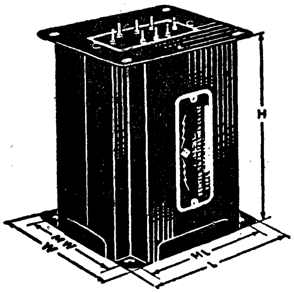
No. TFB-1.	7 and 10-inch tubes	List, $ 7.60
No. TFB-2.	10-inch tubes	List, 7.60
No. TFB-3.	12-inch tubes	List, 10.30
No. TFB-4.	16-inch tubes; has filament windings to supply 2 rectifiers.	List, 10.30

INTERSTAGE TRANSFORMERS

Cat. No.	Application	Class	Ohms Impedance Pri.	Sec.	Max. Primary D.C.Ma	Ratio Sec.: Pri.	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
IN-10	S. Pl. to P-P Gds.	A	10000	160,000	10	4-1	L	2	3¼	1¾	1	$3.45
IN-11	S. Pl. to P-P Gds.	A	10000	122,500	10	3.5:1	L	1⅝	2⅞	1½	⅝	2.80
IN-13	S. Pl. to P-P Gds.	A	10000	90,000	10	3:1	L	2	3¼	1⅞	1	3.45
IN-14	S. Pl. to P-P Gds.	A	10000	90,000	10	3:1	L	1⅝	2⅞	1½	⅝	3.15
IN-15	P-P Pls.-P-P Gds.	A	10000 *	90,000	10	3:1	L	2	3¼	1⅞	1	4.40
IN-16	Sgl. or P-P Input & Output	A				1:1, 3:1, or 6:1	L	2	3¼	2¼	1½	4.60

*Universal type: center-tapped primary, split secondary.

KENYON "T" LINE TRANSFORMERS



DIMENSIONS OF "T" LINE TRANSFORMERS

MOUNTING DIMENSIONS			OVERALL DIMENSIONS		
Case No.	ML	MW	Length (L)	Width (W)	Height (H)
1A	2-1/32	1-9/16	2-7/16	2	2⅞
2A	2⅛	1-13/16	2¾	2⅜	3-3/16
3A	2-7/16	1-15/16	3-1/16	2-9/16	3⅝
4A	3⅞	2-7/16	4½	3	3⅞
5A	4-5/16	3-3/16	5	3⅞	5
5½A	4-5/16	3-27/32	5	4½	5
6A	4-5/16	4½	5	5⅛	5
7A	5½	4-5/16	6-5/16	5-3/16	6⅜
8A	5¾	4-13/16	6-9/16	5-11/16	7⅛
9A	6-15/16	5¾	7¾	6⅝	7-3/16
10A	8⅝	7-11/32	9½	8¼	10⅝

LOW IMPEDANCE SOURCE TO GRID TRANSFORMERS

Type No.	From	Primary Ohms	Secondary Ohms	Case No.	Weight		List Price
					lbs.	ozs.	
T-2 (Hum bucking type)	Any line	500-333-250-200-125-50	80,000 Single Grid	1A	1	1	**$11.75**
T-3 (Hum bucking type)	Any line	500-333-250-200-125-50	80,000 P.P. Grids	1A	1	1	**12.10**
T-6 (Multiple Shielded)	Any line	500-333-250-200-125-50	20,000 Single Grid	1A	1		**15.95**

LINE-TRANSFORMERS — LINE TO LINE AND LINE TO VOICE COIL

Type No.	Primary Ohms	Secondary Ohms	Maximum Level	Case No.	Weight		List Price
					lbs.	ozs.	
T-26 (Hum bucking type)	500-333-250-200-125-50	500-333-250-200-125-50	+ 24 D.B.	1A	1	1	**$10.75**
T-28	500-200	15-8-4	30 watts	4A	5	10	**17.80**

DRIVER TRANSFORMERS

Type No.	Primary to Match	Class AB or Class B Tubes	Ratio (pri. to ½ Sec.)	Case No.	Weight		List Price
					lbs.	ozs.	
T-251	Single 53, 6A6, 6N7, 56, 6C5	53, 6A6, 6N7	2.3:1	2A	1	14	**$ 9.75**
T-252	Single 30, 49, 89	19, 30's, 49's	1.7:1	1A		13	**8.40**
T-255	P.P. 56, 6C5, 53, 6N7	6L6's	2.9:1	2A	1	14	**10.55**
T-271	P.P. 45's, 2A3's, 6F6's	6L6's, 809's, TZ40's	3.7:1	3A	2	13	**13.65**
T-264	7 Watts	Any Line or Single or Push		3A	2	12	**14.55**
T-263	18 Watts	Pull Plates to Class B Grids		4A	5	12	**21.80**

PREAMPLIFIER OUTPUT TRANSFORMERS

Type No.	From	Secondary Ohms	Case No.	Weight		List Price
				lbs.	ozs.	
T-101	Single 56, 76, 6C5	200-500	1A	1	4	**$ 8.35**
T-102	P.P. 56, 76, 6C5	200-500	1A	1	4	**8.90**

OUTPUT TRANSFORMERS TO 500-200 OR 15-8-4 OHMS

Type No.	From	Primary Ohms	Case No.	Weight		List Price
				lbs.	ozs.	
T-104	Single 2A5, 6F6, 42, 47, 89	7,000	2A	1	14	**$11.20**
T-105	Class "A," P.P. 2A5's, 6F6's, 42's, 47's, 89's	14,000	2A	2		**12.15**
T-301	Class "A," P.P. 6L6's, Class AB 45's, 2A3's	5,000 or 3,000	4A	4	5	**17.95**

Type No.			Case No.	Weight		List Price
				lbs.	ozs.	
T-108	Will match any set of Push-Pull or Push-Pull Parallel or a single plate to 500-200 or speaker voice-coils. Low impedance connection for speaker voice coils range from .5 to 25 ohms.	15 watts	3A	2	13	**$13.80**
T-109		30 watts	4A	5	2	**19.40**

KEN-O-TAP MODULATION TRANSFORMERS

Type No.	Audio Watts	Class C. W. Sec.	Max. Pri. D.C.	Max. Sec. D.C.	Max D.C. Voltage	Primary Range Ohms	Secondary Range Ohms	Case No.	Weight		List Price
									lbs.	ozs.	
T-489	15	30	120	120	600	2000-20000	200-20000	3A	2	13	**$13.15**
T-493	40	80	250	250	750	2000-20000	200-20000	4A	5	10	**19.10**
T-494	75	150	250	300	1250	2000-20000	200-20000	5A	9		**25.95**
T-441	125	250	250	250	1500	2000-20000	200-20000	6A	15	8	**36.05**
T-496	300	600	250	300	2500	500-18000	200-19000	8A	26	4	**80.60**
T-442	600	1200	400	400	3000	500-18000	200-19000	9A	45		**90.10**

FILAMENT TRANSFORMERS

Type No.	SECONDARY RATING						Case No.	Weight		List Price
								lbs.	ozs.	
T-365	10 V.-4 A. CT.	5000 V. Test					3A	2	13	**$11.55**
T-361	10 V.-8 A. CT.	5000 V. Test					4A	5	10	**18.00**
T-384	10, 10.5, 11 V.-5 A. CT.	2000 V. Test					4A	5		**16.75**
T-386	6.3 V.-3 A. CT.	2000 V. Test	5 V.-4 A. CT.	2000 V. Test			3A	2	13	**13.15**
T-368	6.3 V.-4 A. CT.	2000 V. Test	6.3 V.-4 A. CT.	2000 V. Test			4A	4	11	**17.55**
T-376	5 V.-3 A.	2000 V. Test	6.3 V.-4 A. CT.	2000 V. Test	6.3 V.-4 A. CT.	2000 V. Test	4A	5	10	**18.10**
T-377	5 V.-3 A. 2000 V. Test	5 V.-6 A. 2000 V. Test	6.3 V.-1 A. CT. 2000 V. Test	6.3 V.5 A. CT. 2000 V. Test	6.3 V.5 A. CT. 2000 V. Test		5A	10	1	**27.10**

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

KENYON "T" LINE TRANSFORMERS

PLATE TRANSFORMERS DESIGNED FOR BOTH CONTINUOUS AND INTERMITTENT DUTY

Type No.	Primary Conn.	Volts Secondary No. 1 D.C.	Volts Secondary No. 1 A.C.	55°C. Rise MA Cont.	55°C. Rise 15 Min. On 15 Min. Off MA Int.		Case No.	Weight lbs.	Weight ozs.	List Price
T-655	High	450	575-0-575	—	340					
	Low	350	460-0-460	250	375		5A	10	1	**$26.30**
T-656	High	750	925-0-925	—	320					
	Low	600	740-0-740	270	360		6A	15	9	**40.30**
T-665	High	1250	1470-0-1470	—	270					
	Low	1000	1180-0-1180	200	300		7A	23	4	**60.60**
T-666		1250	1460-0-1460	280	350		8A	32	2	**66.65**
T-652	High	1750	2080-0-2080	—	450					
	Low	1500	1760-0-1760	320	500		9A	50	8	**86.35**
T-663		2000	2360-0-2360	350	500	Primaries on these items for 115/230 volt series-parallel connection.	10A	82		**149.15**
T-673	High	3000	3400-0-3400	—	400					
	Low	2500	2840-0-2840	425	500		10A	82		**154.55**
T-674	High	3000	3400-0-3400	—	800					
	Low	2500	2840-0-2840	850	1000		Spec.	135		**219.40**

REACTORS

Type No.	Inductance At Rated D.C.	Rated D.C. MA	D.C. Resistance	Insulation Test R.M.S.	Case No.	Weight lbs.	Weight ozs.	List Price
T-155	280	10	5200	1500	2A	2		**$ 8.80**
T-156	30	25	800	1500	1A	1	4	**6.65**
T-157	10	50	200	1500	1A	1	4	**6.45**
T-153	20	90	360	1500	3A	2	12	**9.65**
T-154	12.5	165	220	1500	3A	3	2	**11.00**
T-151	7.5	250	100	1500	4A	5	10	**15.05**
T-152	7	200	140	1500	3A	2	13	**10.40**
T-164	13	250	120	1500	5A	10	1	**22.15**
T-166	10	300	120	1500	5A	10	1	**22.15**
T-159	10	500	70	1500	6A	15	9	**33.80**
T-160	11	300	120	3000	5A	10	1	**22.15**
T-167	11	400	70	3000	6A	15	9	**33.80**
T-175	10	200	140	5000	4A	5	10	**15.15**
T-176	10	300	103	5000	5A	10	11	**24.60**
T-178	10	400	90	5000	6A	15	2	**$35.15**
T-177	11	500	90	5000	7A	21	1	**47.85**
T-161	7.5	600	50	5000	7A	21	4	**46.40**
T-180	10	500	60	7000	8A	26	4	**61.55**
T-181	5	1000	18	7000	9A	50		**90.10**
T-515	6/21	165/30	220	1500	3A	3	2	**11.00**
T-506	4/16	200/30	140	1500	3A	2	13	**10.40**
T-501	5/15	250/30	100	1500	4A	5	10	**15.00**
T-510	6/20	300/30	120	1500	5A	10	1	**22.15**
T-502	6/22	500/50	70	1500	6A	15	9	**33.85**
T-512	6/22	300/30	103	5000	5A	10	1	**22.15**
T-521	6/26	500/60	90	5000	7A	21	1	**47.80**
T-516	6/22	400/50	70	3000	6A	15	9	**33.80**

OPERATING VOLTAGES FOR 1500 VOLT TEST — UP TO 600 VOLTS D.C.
OPERATING VOLTAGES FOR 3000 VOLT TEST — UP TO 1000 VOLTS D.C.
OPERATING VOLTAGES FOR 5000 VOLT TEST — UP TO 2000 VOLTS D.C.
OPERATING VOLTAGES FOR 7000 VOLT TEST — UP TO 3000 VOLTS D.C.

FILAMENT TRANSFORMERS

Type No.	Secondary Rating		Case No.	Weight lbs.	Weight ozs.	List Price
T-388	2.5; 5, 6.3 V.-3A	1000 V. Test	1A	1	7	**$ 8.75**
T-352	2.5 V.-10 A. CT.	2000 V. Test	2A	1	14	**9.55**
T-360	2.5 V.-10 A. CT.	5000 V. Test	3A	2	13	**11.70**
T-389	2.5 V.-10 A. CT.	9000 V. Test	4A	4	14	**16.80**
T-354	5 V.-3 A. CT.	2000 V. Test	2A	1	14	**9.35**
T-390	5 V.-20 A. CT.	10000 V. Test	5½A	11	9	**27.05**
T-382	5, 5.1, 5.25 V.-16 A. CT.	2000 V. Test	4A	5	10	**18.90**
T-351	6.3 V.-3 A. CT.	2000 V. Test	2A	1	14	**9.10**
T-378	6.3, 7.5 V.-7 A. CT.	2000 V. Test	3A	2	13	**12.10**
T-387	6.3, 6.45, 6.6 V.-8 A. CT.	2000 V. Test	3A	2	13	**12.55**
T-395	6.3 V.-20 A. CT.	2000 V. Test	5A	9		**21.90**
T-396	6.3 V.-30 A. CT.	2000 V. Test	5½A	12		**30.05**
T-397	6.3 V.-12 A. CT.	2000 V. Test	4A	5	12	**17.60**

PLATE AND FILAMENT TRANSFORMERS

Type No.	High Voltage — Volts	M.A.	Filament No. 1 Volts	Filament No. 1 Amps	Filament No. 2 Volts	Filament No. 2 Amps	Filament No. 3 Volts	Filament No. 3 Amps	Filament No. 4 Volts	Filament No. 4 Amps	Case No.	Weight lbs.	Weight ozs.	List Price
T-249*	235-0-235	20	6.3 C.T.	0.6	6.3 C.T.	0.9					2A	2		**$12.80**
T-245*	320-0-320	40	5	2	6.3 C.T.	2					3A	2	13	**14.30**
T-205*	350-0-350	75	5	2	6.3 C.T.	3					4A	5	10	**19.90**
T-222*	250-0-250	50	5	2	6.3 C.T.	2					3A	2	13	**13.70**
T-206*	325-0-325	100	5	3	6.3 C.T.	3	6.3 C.T.	2			5A	9		**27.05**
T-212	420-0-420	125	5	3	6.3 C.T.	3	2.5 C.T.	4			5A	9	2	**27.15**
T-244*	425-0-425	165	5	3	6.3 C.T.	3	6.3 C.T.	3			6A	13	11	**34.60**
T-213	520-110-0-520	180	5	3	2.5	3	6.3 C.T.	3	6.3 C.T.	3	5A	10	6	**32.05**
T-215	360-125-0-360	200	5	3	2.5 C.T.	3	2.5 C.T.	10	6.3 C.T.	2.1	5A	10	10	**32.15**
T-247	590-0-590	200	5	3	6.3 C.T.	3	6.3 C.T.	3			5A	12	8	**33.10**
T-220*	125-0-125	200	5	3							4A	5		**16.75**
T-246	625-0-625	250	5	3	6.3 C.T.	3	6.3 C.T.	3			6A	15	9	**39.10**
T-223	600-0-600	300	5	6	6.3 C.T.	3	6.3 C.T.	2			6A	15	9	**39.60**
T-221	High voltage secondary 520-390-105-390-520 to deliver 400 V. D.C. at 400 M.A. and 300 V. D.C. at 160 M.A.										7A	21	10	**61.70**
	Filament No. 1 5 V.-6A		Filament No. 2 5 V.-3A		Filament No. 3 2.5 V.-3A		Filament No. 4 6.3 V. C.T.-4A		Filament No. 5 6.3 V. C.T.-4A					

* Indicates unit designed for condenser input. All other units should be used choke input. If used with condenser input, the D.C. current rating of these items should be reduced to 70% of that specified.

POWER LINE AUTO TRANSFORMERS

Type No.	Input	Output	Volt-Amperes Capacity	Case No.	Weight lbs.	Weight ozs.	List Price
T-219	88 to 130 volts	115 volts	500	5A	10	1	**$30.00**

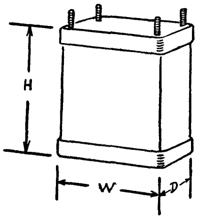
All power transformers are designed for 115 volt, 50 to 60 cycle operation. For any other voltage 50 to 60 cycle operation add 25% to list prices. For 115 volt 25 cycle operation, add 60% to list prices. For any other voltage 25 cycle operation add 100% to list prices. Case sizes for 25 cycle application are different from those specified for standard 115 volt 50 to 60 cycle operations.

Prices and Specifications Subject to Change Without Notice

for PRECISION **FREED TRANSFORMERS** *for* QUALITY

HIGH FIDELITY COMPONENTS

INPUT TRANSFORMERS



CASE DIMENSIONS NO. DC-2AT

Mtg. Centers	Dimensions W	D	H
2″ x 1¾″	2⅝″	2¼″	3″

Knockout	Mtg. Studs	Wgt.
1½″ x 1⅜″	8-32	1

L after case number indicates leads.
T after case number indicates terminals.

Modern high fidelity broadcasting and transcription apparatus require the utmost performance and reliability in the audio transformers used in their circuitry. The Freed "Quality Grade" audio transformers are wide band, high fidelity components featuring astatic construction, longitudinal balance, low harmonic distortion, uniform response, high efficiency, and constant impedance match throughout the audio frequency spectrum. Maximum neutralization of stray fields is accomplished by use of humbalanced coil structures and multiple alloy shielding. High fidelity is achieved on every tap of universal impedance winding without line reflection of transverse coupling.

All Quality Grade Components are thoroughly impregnated in a special non-hygroscopic varnish, and fully encapsulated in a moisture proof, high-melting point compound.

U-60 IMPEDANCES IN OHMS

2.5, 5, 10, 15, 20, 30, 40, 60

U-500 IMPEDANCES IN OHMS

50, 125, 200 CT, 250, 330, 500 CT.
125 and 500 ohms can be used for 150 and 600 ohms.

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 1	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 2	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	90	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 3	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 4	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	90	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 5	Universal low impedance microphone, pickup or line to single or push-pull grids	U-60	60,000 split	+10	1:31.6	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 6	Universal low impedance microphone, pickup or line to single or push-pulll grids	U-60	60,000 split	+10	1:31.6	90	0	0	±1.0 DB 20-20,000	DC-2AT

HYBRID AND REPEAT COILS

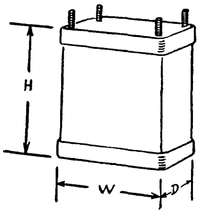
CASE DIMENSIONS
Same as Input Transformers above

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 7	Hybrid. Unbalanced 500/600 ohm lines to 600 ohms.	Total Pri 1200/1000 split 300/250 300/250	600/150 or 500/125 split	+10	1.41:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 8	Hybrid. Balanced 500/600 ohm lines to 600 ohms. Longitudinal balance 70 DB	Total Pri 1200/1000 split 300/250C.T. 300/250C.T.	600/150 or 500/125 split	+10	1.41:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 9	Hybrid. Unbalanced 500/600 ohm lines to triode plate. No D.C. in secondary.	Total Pri 1200/1000 split 300/250 300/250	15,000 or 12,500	+10	1:3.54	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 10	Hybrid. Balanced 500/600 ohm lines to triode plate. No D.C. in secondary. Longitudinal balance 70 DB.	Total Pri 1200/1000 split 300/250C.T. 300/250C.T.	15,000 or 12,500	+10	1:3.54	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 11	Repeat coil for low frequency ringing. Longitudinal balance 70 DB.	600/500 split	600/500 split Balanced	+10	1:1	90	0	0	±1.0 DB 20-20,000	DC-2AT

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

HIGH FIDELITY COMPONENTS

INTERSTAGE TRANSFORMERS



CASE DIMENSIONS

Case #	Mtg. Centers	Dimensions W	D	H	Knockout	Mtg. Studs	Wgt.
DC-2AT	2″ x 1¾″	2⅝″	2¼″	3″	1½″ x 1⅜″	8-32	2¾
DC-4AT	2½″ x 2½″	3⅛″	3″	3¾″	2″ x 1¾″	8-32	4½

L after case number indicates leads.
T after case number indicates terminals.

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 12	Bridging line to single or push-pull grids.	10,000	60,000 split	+10	1:2.45	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 13	Single 6C4, 6J5, ½ 6SN7 triode to push-pull grids. Shunt feed.	15,000	60,000 split	+18	1:2	45	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 14	Single 6C4, 6J5, ½ 6SN7 triode to push-pull grids.	15,000	60,000 split	+18	1:2	45	8	8	±1.0 DB 50-20,000	DC-2AT
QGA 15	Push-pull triode plates to push-pull class A grids.	20,000 split	45,000 split	+25	1:1.5	30	8	0.5	±1.0 DB 20-20,000	DC-4AT

LOW LEVEL OUTPUT, MIXING, MATCHING TRANSFORMERS

CASE DIMENSIONS
See DC-2AT above

U-500 IMPEDANCES IN OHMS
50, 125, 200 CT, 250, 330, 500C.T.
125 and 500 ohms can be used for 150 and 600 ohms

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 16	Single plate or bridging line to Universal 500 ohm line. Shunt feed.	15,000	U-500	+18	5.5:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 17	Single plate to Universal 500 ohm line.	15,000	U-500	+18	5.5:1	70	8	8	±1.0 DB 50-20,000	DC-2AT
QGA 18	Push-pull triode plates to Universal 500 ohm line.	20,000 C.T.	U-500	+25	6.3:1	70	8	0.5	±1.0 DB 20-20,000	DC-2AT
QGA 19	Mixing, low impedance microphone or line to Universal 500 ohm line.	U-500	U-500	+12	1:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 20	Line level mixing and matching.	U-500	U-500	+30	1:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 21	High mu triode photo-cell to Universal 500 ohm line.	100,000	U-500	+12	14.1:1	70	0	0	±1.0 DB 20-20,000	DC-2AT

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

HIGH FIDELITY COMPONENTS

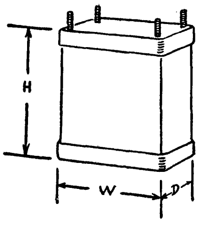
DRIVER TRANSFORMERS

Catalog No.	Application	Primary Impedance Ohms	Maximum Power Level V.U.*	Turn Ratio Pri: ½ Sec.	Max. Pri. D.C. per Side Ma.	D.C. Un-balance Ma.	Frequency Response C.P.S.	Case Number
QGA 22	Universal 500 ohm line to Class B grids.	U-500	+40	1:1	0	0	±1.0 DB 20-20,000	DC-4AT
QGA 23	Push-pull 6J5, etc. to push-pull 2A3's, 6L6's, etc.	20,000 C.T.	+30	3.2:1	8	0.5	±1.0 DB 20-20,000	DC-2AT
QGA 24	Push-pull 2A3, 6B4 to push-pull 809, T2-40, 4/125A.	5,000 C.T.	+40	3.1:1	50	5	±1.0 DB 20-20,000	DC-4AT

HIGH LEVEL OUTPUT TRANSFORMERS

TUBES TO LINE, TUBES TO VOICE COIL, LINE TO LINE, LINE TO VOICE COIL

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level V.U.*	Ratio	Max. D.C. per Side Ma.	D.C. Un-bal-ance Ma.	Frequency Response C.P.S.	Case Number
QGA 25	PP 2A3, 6B4, 6L6, 300A, 275A to Universal 500 ohm line.	5,000 split	U-500	+42 (15 watts)	3.16:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 26	As above to Universal voice coil.	5,000 split	U-16	+42	17.7:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 27	Push-pull 6V6, 6AQ5, 7C5, 6N7 to Universal 500 ohm line.	8,000 split	U-500	+42	4:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 28	As above to Universal voice coil.	8,000 split	U-16	+42	22.4:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 29	P.P. 6F6, 6V6, 6AQ5, 7C5, 7B5, 6AR5, 6K6, 6L6 to Universal 500 ohm line.	10,000 split	U-500	+42	4.47:1	40	4	±0.5 DB 20-30,000	DC-5BT
QGA 30	As above to Universal voice coil.	10,000 split	U-16	+42	25:1	40	4	±0.5 DB 20-30,000	DC-5BT
QGA 31	PP. 807, 1614, KT-66, (Williamson Amplifier) to Universal 500 ohm line.	10,000 split	U-500	+45.5 (36 watts)	4.47:1	50	5	±0.5 DB 20-30,000	DC-6AT
QGA 32	As above to Universal voice coil.	10,000 split	U-16	+45.5	25:1	50	5	±0.5 DB 20-30,000	DC-6AT
QGA 33	P.P. Parallel 2A3, 6A5G, 300A to Universal 500 ohm line.	2,500 split	U-500	+45.5	2.24:1	100	10	±0.5 DB 20-30,000	DC-6AT
QGA 34	As above to Universal voice coil.	2500 split	U-16	+45.5	12.5:1	100	10	±0.5 DB 20-30,000	DC-6AT
QGA 35	P.P. 6L6 or P.P. Parallel 6L6 to Universal 500 ohm line.	3800 split	U-500	+47 (50 watts)	2.75:1	130	13	±0.5 DB 20-30,000	DC-7BT
QGA 36	As above to Universal voice coil.	3800 split	U-16	+47	15.4:1	130	13	±0.5 DB 20-30,000	DC-7BT
QGA 37	High level multiple line to Universal voice coil.	U-500	U-16	+42	5.6:1	0	0	±0.5 DB 20-30,000	DC-5BT
QGA 38	High level multiple line to Universal voice coil.	U-500	U-16	+47	5.6:1	0	0	±0.5 DB 20-30,000	DC-7BT



CASE DIMENSIONS

Case #	Mtg. Centers	Dimensions W	D	H	Knockout	Mtg. Studs	Wgt.
DC-2AT	2″ x 1¾″	2⅝″	2¼″	3″	1½″ x 1⅜″	8-32	2½
DC-4AT	2½″ x 2½″	3⅛″	3″	3¾″	2″ x 1¾″	8-32	4½
DC-5BT	3⅛″ x 2⅝″	4⅛″	3½″	4½″	2½″ x 2″	10-32	10
DC-6AT	3¾″ x 3″	5″	4⅛″	4⅞″	3″ x 2½″	10-32	15
DC-7BT	4⅜″ x 3¾″	5½″	5″	6¾″	3″ x 2½″	¼-20	22

When supplied with leads: DC-L
When supplied with terminals: DC-T

U-16 IMPEDANCE IN OHMS

2, 4, 8, 12, 16

U-500 IMPEDANCES IN OHMS

50, 125, 200CT, 250, 330, 500CT.
125 and 500 ohms can be used for 150 and 600 ohms.

*A 70 volts level can be obtained for the folowing impedances:

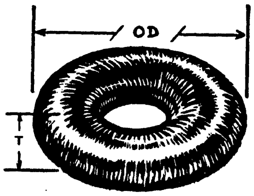
500 ohms — 10 watts + 40 VU
330 ohms — 15 watts + 42 VU
250 ohms — 20 watts + 43 VU
200 ohms — 25 watts + 44 VU
125 ohms — 40 watts + 46 VU
50 ohms — 100 watts + 50 VU

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-1	11/16″	1 13/16″
TI-2	11/16″	1 9/16″
TI-3	¾″	1 ⅝″
TI-3A	1″	2 ⅛″

TYPE TI-1

DC CASE

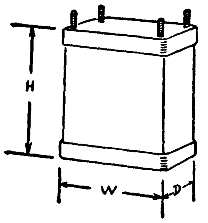
Frequency Range — Up to 15 KC
Non-stabilized

Maximum Inductance — 20 HY
Maximum "Q" 185 @ 7.5 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-800	5 MHY	F-811	1000 MHY	F-822	4500 MHY
F-801	10 MHY	F-812	1250 MHY	F-823	5000 MHY
F-802	15 MHY	F-813	1500 MHY	F-824	6000 MHY
F-803	30 MHY	F-814	1750 MHY	F-825	7000 MHY
F-804	50 MHY	F-815	2000 MHY	F-826	8000 MHY
F-805	75 MHY	F-816	2250 MHY	F-827	9000 MHY
F-806	100 MHY	F-817	2500 MHY	F-828	10000 MHY
F-807	150 MHY	F-818	2750 MHY	F-829	15000 MHY
F-808	200 MHY	F-819	3000 MHY	F-830	20000 MHY
F-809	500 MHY	F-820	3500 MHY		
F-810	750 MHY	F-821	4000 MHY		

TYPE TI-2ˢ

DC CASE



DC CASE
8-32 Studs

Frequency Range — Up to 75 KC
Stabilized

Maximum Inductance — 500 MHY
Maximum "Q" 270 @ 23 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1800	1 MHY	F-1806	15 MHY	F-1812	200 MHY
F-1801	2 MHY	F-1807	30 MHY		
F-1802	3 MHY	F-1808	50 MHY	F-1813	300 MHY
F-1803	4 MHY	F-1809	75 MHY	F-1814	400 MHY
F-1804	5 MHY	F-1810	100 MHY		
F-1805	10 MHY	F-1811	150 MHY	F-1815	500 MHY

TYPE TI-3ˢ

DC CASE

Frequency Range — Up to 200 KC
Stabilized

Maximum Inductance — 10 MHY
Maximum "Q" 280 @ 75 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1846	.1 MHY	F-1850	.5 MHY	F-1854	4 MHY
F-1847	.2 MHY	F-1851	1 MHY	F-1855	5 MHY
F-1848	.3 MHY	F-1852	2 MHY	F-1845	7.5 MHY
F-1849	.4 MHY	F-1853	3 MHY	F-1844	10 MHY

CASED DIMENSIONS		
TYPE TI-1		
H	W	D
2 ½″	2 1/16″	1 13/16″
Mtg. Centers 1 ½″ x 1 ¼″		
TYPE TI-2		
H	W	D
2 ½″	2 1/16″	1 13/16″
Mtg. Centers 1 ½″ x 1 ¼″		
TYPE TI-3		
H	W	D
2 ½″	2 1/16″	1 13/16″
Mtg. Centers 1 ½″ x 1 ¼″		
TYPE TI-3A		
H	W	D
3″	2 ⅝″	2 ¼″
Mtg. Centers 2″ x 1 ¾″		

TYPE TI-3Aˢ

DC CASE

Frequency Range — Up to 200 KC
Stabilized

Maximum Inductance — 100 MHY
Maximum "Q" 300 @ 37 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1856	10 MHY	F-1859	30 MHY	F-1862	75 MHY
F-1857	15 MHY	F-1860	40 MHY		
F-1858	20 MHY	F-1861	50 MHY	F-1863	100 MHY

NOTE: When ordering Freed Inductors in Commercial Type Cases, add "C" to Catalog Number. When ordering Hermetically Sealed units, add "H."

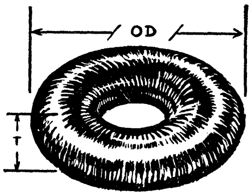
Freed Toroidal Inductors can also be supplied on special order to tolerances of ±1%.

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-4	⅝″*	1 5/16″
TI-5	⅜″	1″
TI-6	⅝″*	1 5/16″
TI-7	⅜″	1″

*Wedding Ring Size

TYPES TI-4 & 4^s

DM CASE

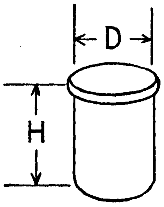
TYPE TI-4

Frequency Range — Up to 15 KC
Non-stabilized
Maximum Inductance — 5 HY
Maximum "Q" 175 @ 7.5 KC

TYPE TI-4^s

Frequency Range — Up to 15 KC
Stabilized
Maximum Inductance — 5 HY
Maximum "Q" 175 @ 7.5 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-850	5 MHY	F-860	400 MHY	F-870	2.00 HY
F-851	10 MHY	F-861	500 MHY	F-871	2.25 HY
F-852	15 MHY	F-862	600 MHY	F-872	2.50 HY
F-853	30 MHY	F-863	700 MHY	F-873	2.75 HY
F-854	50 MHY	F-864	800 MHY	F-874	3.00 HY
F-855	75 MHY	F-865	900 MHY	F-875	3.50 HY
F-856	100 MHY	F-866	1.00 HY	F-876	4.00 HY
F-857	150 MHY	F-867	1.25 HY	F-877	4.50 HY
F-858	200 MHY	F-868	1.50 HY	F-878	5.00 HY
F-859	300 MHY	F-869	1.75 HY		



TYPES TI-5 & 5^s

DM CASE

TYPE TI-5

Frequency Range — Up to 15 KC
Non-stabilized
Maximum Inductance — 2 HY
Maximum "Q" 115 @ 10 KC

TYPE TI-5^s

Frequency Range — Up to 15 KC
Stabilized
Maximum Inductance — 2 HY
Maximum "Q" 115 @ 10 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1700	5 MHY	F-1707	150 MHY	F-1714	800 MHY
F-1701	10 MHY	F-1708	200 MHY	F-1715	900 MHY
F-1702	15 MHY	F-1709	300 MHY	F-1716	1.00 HY
F-1703	30 MHY	F-1710	400 MHY	F-1717	1.25 HY
F-1704	50 MHY	F-1711	500 MHY	F-1718	1.50 HY
F-1705	75 MHY	F-1712	600 MHY	F-1719	1.75 HY
F-1706	100 MHY	F-1713	700 MHY	F-1720	2.00 HY

CASED DIMENSIONS

TYPE TI-4*
H 1½″ D 1⅜″
Mtg. Centers ⅞″
6-32 Inserts

TYPE TI-5*
H 1″ D 1⅛″
Mtg. Centers ⅝″
4-40 Inserts

TYPE TI-6*
H 1½″ D 1⅜″
Mtg. Centers ⅞″
6-32 Inserts

TYPE TI-7*
H 1″ D 1⅛″
Mtg. Centers ⅝″
4-40 Inserts

*Commercial type cases have Bakelite cover with solder lugs.

TYPES TI-6 & 6^s

DM CASE

TYPE TI-6

Frequency Range — Up to 75 KC
Non-stabilized
Maximum Inductance — 1 HY
Maximum "Q" 250 @ 17 KC

TYPE TI-6^s

Frequency Range — Up to 75 KC
Stabilized
Maximum Inductance — 1 HY
Maximum "Q" 250 @ 17 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1726	1 MHY	F-1732	10 MHY	F-1738	100 MHY
F-1727	2 MHY	F-1733	15 MHY	F-1739	150 MHY
F-1728	3 MHY	F-1734	20 MHY	F-1740	200 MHY
F-1729	4 MHY	F-1735	30 MHY	F-1741	250 MHY
F-1730	5 MHY	F-1736	50 MHY	F-1742	300 MHY
F-1731	7.5 MHY	F-1737	75 MHY	F-1743	500 MHY

TYPE TI-7

DM CASE

Frequency Range — Up to 75 KC
Non-stabilized

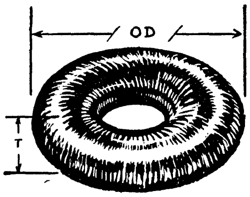
Maximum Inductance — 200 MHY
Maximum "Q" 170 @ 30 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1781	.5 MHY	F-1787	10 MHY	F-1793	50 MHY
F-1782	1 MHY	F-1788	15 MHY	F-1794	75 MHY
F-1783	2 MHY	F-1789	20 MHY	F-1795	100 MHY
F-1784	3 MHY	F-1790	25 MHY	F-1796	150 MHY
F-1785	5 MHY	F-1791	30 MHY	F-1797	200 MHY
F-1786	7.5 MHY	F-1792	40 MHY		

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

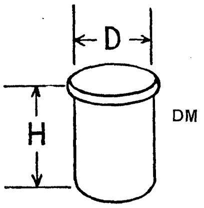
FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-8	3/8"*	1"
TI-9	1"	2 1/8"
TI-10	3/4"	1 5/8"
TI-11	15/16"	2 5/8"

*Wedding Ring Size



CASED DIMENSIONS

TYPE TI-8*

H		D
1"		1 1/8"

Mtg. Centers 5/8"
4-40 Inserts

TYPE TI-9

H	W	D
3"	2 5/8"	2 1/4"

Mtg. Centers 2" x 1 3/4

TYPE TI-10

H	W	D
2 1/2"	2 1/16"	1 13/16"

Mtg. Centers 1 1/2" x 1 1/4"

TYPE TI-11
(Commercial Case)

H	W	D
3 1/2"	2 5/8"	2 1/4"

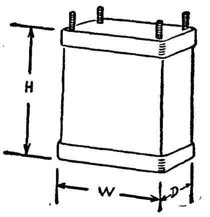
Mtg. Centers 2" x 1 3/4"

TYPE TI-11
(Hermetically Sealed Case)

H	W	D
3 9/16"	1 9/16"	3 1/16"

Mtg. Centers 2 1/2" x 1"

*Commercial type cases have Bakelite cover with solder lugs.



DC

8-32 Studs

TYPES TI-8 & 8^s

DM CASE

TYPE TI-8

Frequency Range — Up to 60 KC
Non-stabilized

Maximum Inductance — 100 MHY
Maximum "Q" 150 @ 50 KC

TYPE TI-8^s

Frequency Range — Up to 60 KC
Stabilized

Maximum Inductance — 100 MHY
Maximum "Q" 150 @ 50 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1821	.1 MHY	F-1828	3 MHY	F-1835	25 MHY
F-1822	.2 MHY	F-1829	4 MHY	F-1836	30 MHY
F-1823	.3 MHY	F-1830	5 MHY	F-1837	40 MHY
F-1824	.4 MHY	F-1831	7.5 MHY	F-1838	50 MHY
F-1825	.5 MHY	F-1832	10 MHY	F-1839	75 MHY
F-1826	1 MHY	F-1833	15 MHY	F-1840	100 MHY
F-1827	2 MHY	F-1834	20 MHY		

TYPE TI-9^s

DC CASE

Frequency Range — Up to 60 KC
Stabilized

Maximum Inductance — 500 MHY
Maximum "Q" 270 @ 17.5 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1554	1 MHY	F-1560	10 MHY	F-1566	150 MHY
F-1555	2 MHY	F-1561	15 MHY	F-1567	200 MHY
F-1556	3 MHY	F-1562	30 MHY	F-1568	300 MHY
F-1557	4 MHY	F-1563	50 MHY	F-1569	400 MHY
F-1558	5 MHY	F-1564	75 MHY	F-1570	500 MHY
F-1559	7.5 MHY	F-1565	100 MHY		

TYPE TI-10^s

DC CASE

Frequency Range — Up to 60 KC
Stabilized

Maximum Inductance — 200 MHY
Maximum "Q" 180 @ 40 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1579	1 MHY	F-1584	7.5 MHY	F-1589	75 MHY
F-1580	2 MHY	F-1585	10 MHY	F-1590	100 MHY
F-1581	3 MHY	F-1586	15 MHY	F-1591	150 MHY
F-1582	4 MHY	F-1587	30 MHY	F-1592	200 MHY
F-1583	5 MHY	F-1588	50 MHY		

TYPE TI-11^s

DC CASE

Frequency Range — Up to 15 KC
Stabilized

Maximum Inductance — 50 HY
Maximum "Q" 255 @ 4 KC

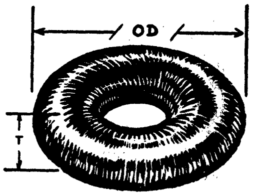
Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1747	1 MHY	F-1759	200 MHY	F-1771	4.50 HY
F-1748	2 MHY	F-1760	300 MHY	F-1772	5.00 HY
F-1749	3 MHY	F-1761	400 MHY	F-1773	7.50 HY
F-1750	4 MHY	F-1762	500 MHY	F-1774	10.00 HY
F-1751	5 MHY	F-1763	750 MHY	F-1775	15.00 HY
F-1752	10 MHY	F-1764	1.00 HY	F-1776	20.00 HY
F-1753	15 MHY	F-1765	1.50 HY	F-1777	25.00 HY
F-1754	30 MHY	F-1766	2.00 HY	F-1778	30.00 HY
F-1755	50 MHY	F-1767	2.50 HY	F-1779	40.00 HY
F-1756	75 MHY	F-1768	3.00 HY	F-1780	50.00 HY
F-1757	100 MHY	F-1769	3.50 HY		
F-1758	150 MHY	F-1770	4.00 HY		

NOTE: When ordering Freed Toroidal Inductors in Commercial Type Cases, add "C" to catalog number. When ordering Hermetically Sealed units, add "H."

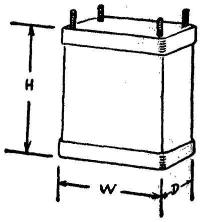
For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-12	15/16″	2⅛″
TI-13	1″	2⅛″



DC

CASED DIMENSIONS

TYPE TI-12

H	W	D
3″	2⅝″	2¼″

Mtg. Centers 2″ x 1¾″
8-32 Studs

TYPE TI-13

H	W	D
3″	2⅝″	2¼″

Mtg. Centers 2″ x 1¾″
8-32 Studs

TYPES TI-12 & 12^{s}

DC CASE

TYPE TI-12

Frequency Range — Up to 15 KC
Non-stabilized

Maximum Inductance — 30 HY
Maximum "Q" 200 @ 5 KC

Cat. No. Uncased	Inductance Value
F-1655	1 MHY
F-1656	2 MHY
F-1657	3 MHY
F-1658	4 MHY
F-1659	5 MHY
F-1660	7.5 MHY
F-1661	10 MHY
F-1662	15 MHY
F-1663	30 MHY
F-1664	50 MHY
F-1665	75 MHY
F-1666	100 MHY
F-1667	150 MHY
F-1668	200 MHY
F-1669	300 MHY
F-1670	400 MHY
F-1671	500 MHY
F-1672	600 MHY
F-1673	750 MHY
F-1674	100 MHY

TYPE TI-12^{s}

Frequency Range — Up to 15 KC
Stabilized

Maximum Inductance — 30 HY
Maximum "Q" 200 @ 5 KC

Uncased Cat. No.	Value Inductance
F-1675	1.50 HY
F-1676	2.00 HY
F-1677	2.50 HY
F-1678	3.00 HY
F-1679	3.50 HY
F-1680	4.00 HY
F-1681	4.50 HY
F-1682	5.00 HY
F-1683	6.00 HY
F-1684	7.00 HY
F-1685	8.00 HY
F-1686	9.00 HY
F-1687	10.00 HY
F-1688	12.00 HY
F-1689	15.00 HY
F-1690	17.00 HY
F-1691	20.00 HY
F-1692	25.00 HY
F-1693	30.00 HY

TYPE TI-13^{s}

DC CASE

Frequency Range — Up to 75 KC
Non-stabilized

Maximum Inductance — 500 MHY
Maximum "Q" 340 @ 15 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1629	1 MHY	F-1638	50 MHY
F-1630	2 MHY	F-1639	75 MHY
F-1631	3 MHY	F-1640	100 MHY
F-1632	4 MHY	F-1641	150 MHY
F-1633	5 MHY	F-1642	200 MHY
F-1634	7.5 MHY	F-1643	300 MHY
F-1635	10 MHY	F-1644	400 MHY
F-1636	15 MHY	F-1645	500 MHY
F-1637	30 MHY		

All Freed Toroidal Inductors can be supplied in tolerances of ±1% on special order. . . . Complete Toroid Catalog with curves for each unit is available on request. . . . Jobbers and Engineers are urged to send for it.

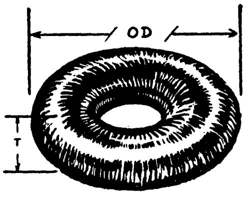
NOTE: When ordering Freed Toroidal Inductors in Commercial Type cases, add "C" to catalog number.

When ordering Hermetically Sealed units, add "H."

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-14	3/8"	1"
TI-15	5/8"*	1 15/16"

*Wedding Ring Size

TYPE TI-14^s

DM CASE

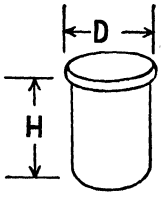
Temperature Stabilized

Frequency Range — Up to 50 KC

Maximum Inductance — 300 MHY

Maximum "Q" 140 @ 25 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1920	1 MHY	F-1929	30 MHY
F-1921	2 MHY	F-1930	50 MHY
F-1922	3 MHY	F-1931	75 MHY
F-1923	4 MHY	F-1932	100 MHY
F-1924	5 MHY	F-1933	150 MHY
F-1925	7.5 MHY	F-1934	200 MHY
F-1926	10 MHY	F-1935	250 MHY
F-1927	15 MHY	F-1936	300 MHY
F-1928	20 MHY		



DM CASE

TYPE TI-15^s

DM CASE

Temperature Stabilized

Frequency Range — Up to 50 KC

Maximum Inductance — 100 MHY

Maximum "Q" 140 @ 25 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1870	0.1 MHY	F-1880	7.5 MHY
F-1871	0.2 MHY	F-1881	10 MHY
F-1872	0.3 MHY	F-1882	15 MHY
F-1873	0.4 MHY	F-1883	20 MHY
F-1874	0.5 MHY	F-1884	25 MHY
F-1875	1 MHY	F-1885	30 MHY
F-1876	2 MHY	F-1886	40 MHY
F-1877	3 MHY	F-1887	50 MHY
F-1878	4 MHY	F-1888	75 MHY
F-1879	5 MHY	F-1889	100 MHY

CASED DIMENSIONS	
TYPE TI-14*	
H	D
1"	1 1/8"
Mtg. Centers 5/8" 4-40 Inserts	
TYPE TI-15*	
H	D
1 1/2"	1 3/8"
Mtg. Centers 7/8" 4-40 Inserts	

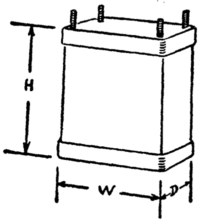
*Commercial type cases have Bakelite cover with solder lugs.

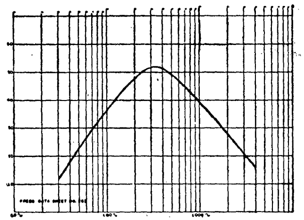
NOTE: When ordering Freed Inductors in Commercial Type Cases, add "C" to Catalog Number.
When ordering Hermetically Sealed units, add "H."

Freed Toroidal Inductors can also be supplied on special order to tolerances of ±1%.

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

QUALITY GRADE HIGH Q REACTORS





HIGH Q, LOW FREQUENCY REACTORS

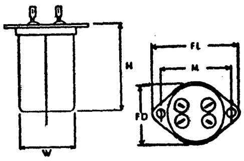
Whenever there is need for a stable reactor with high Q at the lower audio frequencies, these reactors will be ideally suited. Units up to 400 henries can be supplied with inductance tolerance of ±2%.

CASE DIMENSIONS

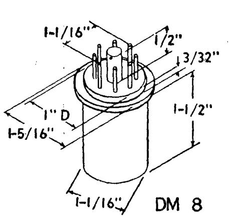
Case #	Mtg. Centers	Dimensions W	D	H
DC-2AT	2″ x 1¾″	2⅝″	2¼″	3″
Knockout	**Mtg.**	**Wgt.**		
1½″ x 1⅜″	8-32's	2¾		

Catalog Number	Inductance in Henries	Case Size
QGC-1	100	DC-2AT
QGC-2	75	DC-2AT
QGC-3	50	DC-2AT
QGC-4	25	DC-2AT
QGC-5	10	DC-2AT
QGC-6	5	DC-2AT
QGC-7	1	DC-2AT

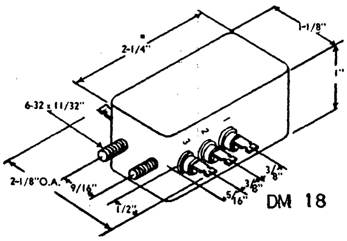
MILITARY PULSE TRANSFORMERS



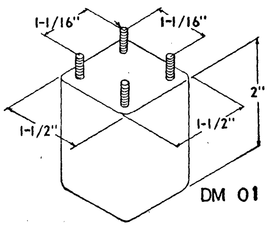
DM-12



DM 8



DM 18



DM 01

CASE DIMENSIONS

CASE #	FL	FD	W	H	M	Screws	Cutout	Wgt.
DM-12	1½	1 1/32	15/16	1 15/32	1 7/32	4-40	⅞	1.5 oz.
DM-8	Dimensions shown on drawing.							
DM-18	Dimensions shown on drawing.							
DM-01	Dimensions shown on drawing (knockout 1¼″ diam.)							

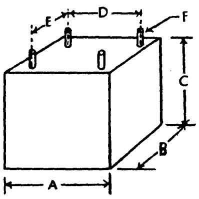
HERMETICALLY SEALED PULSE TRANSFORMERS for use in blocking oscillators, low level interstage coupling, and modulator outputs. Made in accordance with MIL-T-27 specifications. These pulse transformers are designed for maximum power, efficiency and optimum pulse performance. Balanced coil structures permit series or parallel connection of windings for turn ratios other than unity. Pulse charactertistics, voltages and impedance levels will depend upon interconnections made.

Catalog Number	Application	Pulse Voltage Kilovolts	Pulse Duration Microseconds	Duty Ratio	Test Voltage KV., RMS	Characteristic Impedance Ohms	Case Size
MPT-1	Blocking oscillator or interstage coupling.	0.25/0.25/0.25	0.2-1.0	.004	0.7	250	DM-12
MPT-2	Blocking oscillator or interstage coupling.	0.25/0.25	0.2-1.0	.004	0.7	250	DM-12
MPT-3	Blocking oscillator or interstage coupling.	0.5/0.5/0.5	0.2-1.5	.002	1.0	250	DM-18
MPT-4	Blocking oscillator or interstage coupling.	0.5/0.5	0.2-1.5	.002	1.0	250	DM-18
MPT-5	Blocking oscillator or interstage coupling.	0.5/0.5/0.5	0.5-2.0	.002	1.0	500	DM-12
MPT-6	Blocking oscillator or interstage coupling.	0.5/0.5	0.5-2.0	.002	1.0	500	DM-12
MPT-7	Blocking oscillator, interstage coupling or low power output.	0.7/0.7/0.7	0.5-1.5	.002	1.5	200	DM-18
MPT-8	Blocking oscillator, interstage coupling or low power output.	0.7/0.7	0.5-1.5	.002	1.5	200	DM-18
MPT-9	Blocking oscillator, interstage coupling or low power output.	1.0/1.0/1.0	0.7-3.5	.002	2.0	200	DM-18
MPT-10	Blocking oscillator, interstage coupling or low power output.	1.0/1.0	0.7-3.5	.002	2.0	200	DM-18
MPT-11	Blocking oscillator, interstage coupling or low power output.	1.0/1.0/1.0	1.0-5.0	.002	2.0	500	DM-01
MPT-12	Blocking oscillator, interstage coupling or low power output.	0.15/0.15 0.3/0.3	0.2-1.0	.004	0.7	700	DM-8

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

STANDARD MILITARY AUDIO TRANSFORMERS



A group of hermetically sealed audio transformers designed in accordance with MIL-T-27 specifications. The functional characteristics of these transformers were established by the Armed Services.

#AJ CASE DIMENSIONS

A	B	C	D	E	F
1⅝″	1⅝″	2⅜″	1 1/16″	1 1/16″	6-32

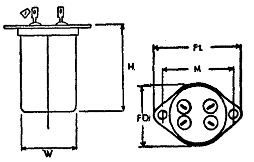
Cat. No.	Application	Type Designation	Impedance Level in Ohms Primary	Impedance Level in Ohms Secondary	Ratio	Max. Power Level V.U.	Pri. D.C. Per Side in MA	Max. D.C. Unbalance	Frequency Response	Case
MGA 1	Transformer; interstage, single or P.P. plates to single or P.P. grids	TF1A15AJ0	10,000 CT	90,000 split and CT	1:3 overall	+15	10	10	±1 DB 300-10,000	AJ
MGA 2	Transformer; matching, 600 ohm line to voice coil	TF1A16AJ0	600 split	4, 8, 16	6.12:1 overall	+33	0	0	±1 DB 300-10,000	AJ
MGA 3	Transformer; input, 600 ohm line to single or P.P. grids	TF1A10AJ0	600 split	135,000 CT	1:15	+15	0	0	±2 DB 300-10,000	AJ
MGA 4	Transformer; matching, 600 ohm line to 600 ohm line	TF1A16AJ0	600 split	600 split	1:1	+15	0	0	±1 DB 300-10,000	AJ
MGA 5	Transformer; output, single plate 7600 ohm, 4800 ohm to 600 ohm line	TF1A13AJ0	7600 tap @ 4800	600 split	3.56:1	+33	40	40	±2 DB 300-10,000	AJ
MGA 6	Transformer; output, single plate 7600 ohm, 4800 ohm to voice coil	TF1A13AJ0	7600 tap @ 4800	4, 8, 16	21.8:1	+33	40	40	±2 DB 300-10,000	AJ
MGA 7	Transformer; output, single or P.P. plates to 600 ohm line	TF1A13AJ0	15,000 CT	600 split	5:1	+33	10	10	±1 DB 300-10,000	AJ
MGA 8	Transformer; output, P.P. plates to 600 ohm line	TF1A13AJ0	24,000 CT	600 split	6.32:1	+30	10	1	±1 DB 300-10,000	AJ
MGA 9	Transformer; output, P.P. plates to 600 ohm line	TF1A13AJ0	60,000 CT	600 split	10:1	+27	10	1	±2 DB 300-10,000	AJ

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

for PRECISION **FREED TRANSFORMERS** *for* QUALITY

PROFESSIONAL GRADE COMPONENTS

MINIATURE AUDIO TRANSFORMERS



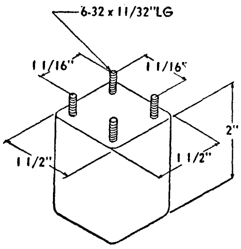
DM-12 CASE DIMENSIONS

FL — 1½"
FD — 1 1/32"
W — 15/16"
H — 1 15/32"
M — 1 7/32"

These high quality, minature transformers feature hermetic sealing for maximum protection from moisture penetration with subsequent electrolysis and corrosion of fine wires. While primarily intended for non-military equipment, these units are constructed in accordance with MIL-T-27 Specifications.

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PMA 1	Line or microphone to single or push-pull grids.	50/200/500	60,000 C.T.	+8	1:11		0	0	±2.0 DB 30-20,000	DM-12
PMA 2	Dynamic microphone or speaker voice coil to single or P.P. grid.	4/8	60,000 C.T.	+8	1:86.6		0	0	±2.0 DB 30-20,000	DM-12
PMA 3	Line or microphone to single or push-pull grids. Magnetically shielded.	50/200/500	60,000 C.T.	+8	1:11	30	0	0	±2.0 DB 30-20,000	DM-12
PMA 4	Single triode plate to single or push-pull grids.	15,000	60,000 C.T.	+8	1:2		0	0	±2 DB 30-10,000	DM-12
PMA 5	Single triode plate to push-pull grids.	15,000	60,000 C.T.	+8	1:2		2	2	±2 DB 200-10,000	DM-12
PMA 6	Single triode plate to multiple line.	15,000	50/200/500	+8	5.48:1		0	0	±2 DB 20-20,000	DM-12
PMA 7	Single triode plate to multiple line.	15,000	50/200/500	+8	5.48:1		2	2	±1 DB 200-10,000	DM-12
PMA 8	Push-pull triode plates to multiple line.	30,000 C.T.	50/200/500	+8	7.75:1		2	0.25	±2 DB 20-20,000	DM-12
PMA 9	Crystal mike or pickup to multiple line.	60,000	50/200/500	+8	11:1		0	0	±2 DB 30-20,000	DM-12
PMA 10	Mixing or matching.	50/200	50/200/500	+8	1:1.50		0	0	±2 DB 30-20,000	DM-12
PMA 11	Parallel Feed Reactor.	40 hy, 3 ma dc, 3500 ohms d.c. resistance								DM-12

*1 mw. reference level.



PROFESSIONAL GRADE AUDIO TRANSFORMERS

For popular priced high fidelity amplifiers, professional equipment and receivers, for home and public address service. Freed has developed this series of audio transformers using the latest design techniques and the best commercially available materials. Except for units carrying unbalanced direct current, the frequency response is better than ±1 DB from 30 to 15,000 cycles. All units feature excellent performance characteristics with minimum size aand weight.

INPUT TRANSFORMERS

DM-01 CASE DIMENSIONS

Mtg. Centers	Dimensions W	Dimensions W	Dimensions H	Knockout	Mtg. Studs	Wgt.
1 1/16" x 1 1/16"	1½"	1½"	2"	1⅜" diam.	6-32	½

U-500 IMPEDANCES IN OHMS

50, 125, 200CT, 250, 330, 500 CT.

125 and 500 ohms can be used for 150 and 60 ohms.

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 1	Universal 500 ohm line to single grid.	U-500	50,000	+12	1:10	50	0	0	±1.0 DB 30-15,000	DM-01T
PGA 2	Universal 500 ohm line to push-pull grids.	U-500	60,000 split	+12	1:11	50	0	0	±1.0 DB 30-15,000	DM-01T
PGA 3	Universal 500 ohm line to push-pull grids.	U-500	100,000 split	+12	1:14.1	50	0	0	±1.0 DB 30-15,000	DM-01T
PGA 4	Bridging line to single grid.	10,000	60,000	+12	1:2.45	50	0	0	±1.0 DB 30-15,000	DM-01T
PGA 5	Bridging line to push-pull grids.	10,000	60,000 split	+12	1:2.45	50	0	0	±1.0 DB 30-15,000 30-15,000	DM-01T
PGA 6	Low level line matching.	U-500	U-500	+18	1:1	50	0	0	±1 DB	DM-01T

*1 mw. reference level.

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

for PRECISION FREED TRANSFORMERS *for* QUALITY

PROFESSIONAL GRADE COMPONENTS

LOW LEVEL OUTPUT AND MIXING TRANSFORMERS

Cat. No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.* or Power in Watts	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 7	Single triode plate to Universal 500 ohm line. Shunt feed.	15,000	U500	+18	5.48:1	0	0	±1.0 DB 30-15,000	DM-01T
PGA 8	Single triode plate to Universal 500 ohm line.	15,000	U500	+18	5.48:1	8	8	±1.0 DB 100-15,000	DM-01T
PGA 9	Push-pull triode plate to Universal 500 ohm line.	20,000 CT	U500	+30	6.32:1	8	0.5	±1.0 DB 30-15,000	DM-01T
PGA 10	Low level line matching.	U500	U500	+18	1:1	0	0	±1.0 DB 30-15,000	DM-01T

*1 mw. reference level.

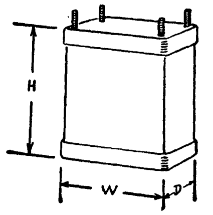
U-500 IMPEDANCES IN OHMS 50, 125, 200 CT, 250, 330, 500 CT — 125 and 500 ohms can be used for 150 and 600 ohms

DRIVER TRANSFORMERS

Cat. No.	Application	Primary Impedance Ohms	Turn Ratio Pri: ½ Sec.	Max. Level V.U.*	Max. Pri. D.C. Per Side Ma.	Max. D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 11	Universal 500 ohm line to push-pull grids.	U500	1:1	+40	0	0	±1.0 DB 30-15,000	DC-2AL
PGA 12	Push-pull 6C4, 6SN7 triodes to push-pull 2A3, 6L6 grids.	20,000 C.T.	3.0:1	+30	10	0	±1.0 DB 30-15,000	DC-1AL
PGA 13	Push-pull 2A3, 6B4, 6A5G to push-pull 809, TZ-40, 4/125A	5,000 C.T.	3.2:1	+40	50	5	±1.0 DB 30-15,000	DC-2AL

U-500 IMPEDANCES IN OHMS 50, 125, 200 CT, 250, 330, 500 CT — 125 and 500 ohms can be used for 150 and 600 ohms

HIGH LEVEL OUTPUT TRANSFORMERS



CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	Dimensions D	Dimensions H	Knockout	Mtg. Studs	Wgt.
DC2AL	2 x1¾	2⅝	2¼	3	1½x1⅜	8-32	2¾
DC2BL	2 x1¾	2⅝	2¼	3½	1½x1⅜	8-32	3
DC4AL	2½x2½	3⅛	3	3¾	2 x1¾	8-32	4½
DC5AL	3⅛x2⅝	4⅛	3½	3⅞	2½x2	10-32	9
DC6AL	3¾x3	5	4⅛	4⅞	3 x2½	10-32	15

L after case number indicates Leads.
T after case number indicates Terminals.

U-16 IMPEDANCES IN OHMS

2, 4, 8, 12, 16

U-500 IMPEDANCES IN OHMS

50, 125, 200CT, 250, 330, 500CT. 125 and 500 ohms can be used for 150 and 600 ohms.

A 70 volts level can be obtained for the following impedances:

500 ohms — 10 watts + 40 VU
330 ohms — 15 watts + 42 VU
250 ohms — 20 watts + 43 VU
200 ohms — 25 watts + 44 VU
125 ohms — 40 watts + 46 VU
50 ohms — 100 watts + 50 VU

Cat. No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.* or Power in Watts	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 14	P.P. 6K6, 6AR5, 7B5 Class A to Universal voice coil.	12,000 C.T.	U16	+40 (10 watts)	27.4:1	40	4	±1.0 DB 30-15,000	DC-2BL
PGA 15	P.P. 6F6 Cl. AB_2, P.P. 6V6, 6AQ5, 7C5, 6L6 Cl. AB_1 to Universal voice coil.	10,000 C.T.	U16	+43 (20 watts)	25:1	50	5	±1.0 DB 30-15,000	DC-4AL
PGA 16	P.P. 6L6 Cl. AB_1, self bias to Universal 500 ohm line.	9,000	U500	+44.8	4.23:1	50	5	±1.0 DB 30-15,000	DC-4AL
PGA 17	As above to Universal voice coil.	9,000	U16	+44.8	23.7:1	50	5	±1.0 DB 30-15,000	DC-4AL
PGA 18	P.P. 6N7 Cl. B, P.P. 6V6, 6AQ5, 7C5 Cl. AB_1 to Universal voice coil.	8,000 C.T.	U16	+41.8 (15 watts)	22.3:1	45	5	±1.0 DB 30-15,000	DC-4AL
PGA 19	P.P. 6L6, fixed bias, Cl. AB_1 to Universal 500 ohm line.	6,600 C.T.	U500	+44.8 (30 watts)	3.63:1	70	7	±1.0 DB 30-15,000	DC-4AL

*1 mw. reference level.

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

PROFESSIONAL GRADE COMPONENTS

HIGH LEVEL OUTPUT TRANSFORMERS

Continued from previous page — See same for case sizes

Cat. No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.* or Power in Watts Maximum	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 20	As above to Universal voice coil.	6600	U16	+44.8	20.3:1	70	7	±1.0 DB 30-15,000	DC-4AL
PGA 21	P.P. 6L6 Cl. A, P.P. 2A3, 6A5G, 6B4 self bias Par. 6V6 Cl. AB_1 to Universal voice coil.	5000 C.T.	U16	+43	17.7:1	80	8	±1.0 DB 30-15,000	DC-4AL
PGA 22	P.P. Par 6L6 Cl. AB_1 self bias P.P. 6L6 Cl. AB_2 fixed bias PP807 Cl. AB_2 to Universal 500 ohm line.	4000 C.T.	U500	+47 (50 watts)	2.83:1	100	10	±1.0 DB 30-15,000	DC-5AL
PGA 23	As above to Universal voice coil.	4000 C.T.	U16	+47	15.8:1	100	10	±1.0 DB 30-15,000	DC-5AL
PGA 24	P.P. 6A5G, 6B4, 2A3, fixed bias Universal voice coil.	3000 C.T.	U16	+41.8	13.7:1	75	7.5	±1.0 DB 30-15,000	DC-4AL
PGA 25	P.P. Par. 807 Cl. AB_2 to Universal 500 ohm line.	2100 C.T.	U500	+51.8 (150 watts)	2.05:1	120	12	±1.0 DB 30-15,000	DC-6A
PGA 26	P.P. Par 2A3, 6A5G, fixed bias 6B4, 300A Cl. AB_1, P.P. Par 6L6 Cl. A to Universal 500 ohm line.	1500 C.T.	U500	+44.8	1.73:1	150	15	±1.0 DB 30-15,000	DC-4AL
PGA 27	As above to Universal voice coil.	1500 C.T.	U16	+44.8	9.7:1	150	15	±1.0 DB 30-15,000	DC-4AL
PGA 28	Matching line to Universal voice coil.	U500	U16	+44.8	5.6:1	0	0	±1.0 DB 30-15,000	DC-4AT
PGA 29	Matching line to Universal voice coil.	U500	U16	+47	5.6:1	0	0	±1.0 DB 30-15,000	DC-5AT
PGA 30	Matching line to Universal voice coil.	U500	U16	+50 (100 watts)	5.6:1	0	0	±1.0 DB 30-15,000	DC-6AT

*1 mw. reference level.

U-16 IMPEDANCES IN OHMS

2 ohms, 4 ohms, 8 ohms, 12 ohms, 16 ohms

U-500 IMPEDANCES IN OHMS

50, 125, 200 CT, 250, 330 500 CT

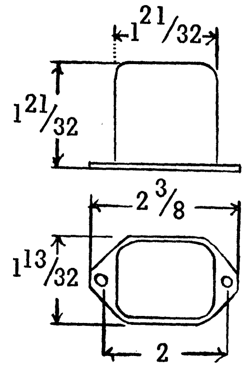
125 and 500 ohms can be used for 150 and 600 ohms

A 70 volts level can be obtained for the following impedances:

500 ohms	10 watts	+ 40 VU
330 ohms	15 watts	+ 42 VU
250 ohms	20 watts	+ 43 VU
200 ohms	25 watts	+ 44 VU
125 ohms	40 watts	+ 46 VU
50 ohms	120 watts	+ 51 VU

HIGH Q REACTORS

High Q Reactors for use in resonant wave traps and dynamic noise suppression circuits.



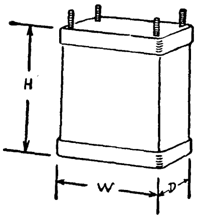
DM-02

Cat. No.	Application	Rated Ind. in Henries	Q	Tuning Capacitor (Mf)	Case Size
PQC 1	60 cps resonant trap	14.00	10	.5	DM-02
PQC 2	400 cps resonant trap	1.58	15	.1	DM-02
PQC 3	1000 cps resonant trap	1.00	20	.025	DM-02
PQC 4	Dynamic noise suppression inductor	2.40	20 @ 4 KC		DM-02
PQC 5	Dynamic noise suppression inductor	2.00	20 @ 4 KC		DM-02
PQC 6	Dynamic noise suppression inductor	1.30	20 @ 4 KC		DM-02
PQC 7	Dynamic noise suppression inductor	.80	20 @ 4 KC		DM-02
PQC 8	Dynamic noise suppression inductor	.60	20 @ 4 KC		DM-02
PQC 9	Dynamic noise suppression inductor	.40	20 @ 4 KC		DM-02

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

REACTORS—PROFESSIONAL GRADE COMPONENTS



CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	D	H	Mtg. Studs	Wgt.
DM-01	1 1/16x1 1/16	1½	1½	2	6-32	½
DC1A	1½x1¼	2 1/16	1 13/16	2½	8-32	1
DC2A	2 x1¾	2⅝	2¼	3	8-32	2¾
DC2B	2 x1¾	2⅝	2¼	3½	8-32	3
DC4A	2½x2½	3⅛	3	3¾	8-32	4½
DC5B	3⅛x2⅝	4⅛	3½	4½	10-32	10

Inductance measured at 50V, 60 cycles with rated direct current in the winding.

T following case number indicates Terminals.

L following case number indicates Leads.

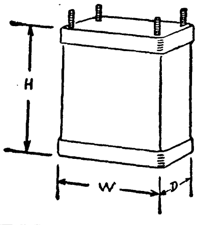
Cat. No.	Inductance in Hy.	Rated Current D.C. Ma.	D.C. Resistance	Dielectric Test Voltage	Case Number
PGC 1	40	15	2000	1000	DM-01
PGC 2	12	40	400	1000	DC-1AL
PGC 3	8	50	300	1000	DC-1AL
PGC 4	20	50	425	1500	DC-2AL
PGC 5	10	70	250	1500	DC-2AL
PGC 6	6	100	160	1500	DC-2AL
PGC 7	6	150	115	1500	DC-2BL
PGC 8	10	150	160	1500	DC-4AL
PGG 9	5.5	200	95	1500	DC-4AL
PGC 10	10	200	150	1500	DC-4AL
PGC 11	10	250	135	1500	DC-5BL
PGC 12	8	300	95	1500	DC-5BL
PGC 13	7	400	60	1500	DC-5BL
		Parallel Feed Audio Chokes			
PGC 14	100	10	3500	1000	DM-01L
PGC 15	30	50	650	1500	DC-2AL
PGC 16	400	1	6000	1000	DM-01L

SWINGING INPUT REACTORS

Cat. No.	Inductance in Hy.*	Rated Current D.C. Ma.	D.C. Resistance	Dielectric Test Voltage	Case Number	
PGC 17	5 - 20	150	160	1500	DC-4AL	
PGC 18	5 - 20	250	135	1500	DC-5BL	See Above
PGC 19	3 - 15	300	95	1500	DC-5BL	
PGC 20	3 - 15	400	60	1500	DC-5BL	

* Inductance values for 100% and 10% of rated Direct Current.

PROFESSIONAL GRADE POWER TRANSFORMERS



CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	D	H	Mtg.	Wgt.
DC2B	2 x1¾	2⅝	2¼	3½	8-32s	3
DC4A	2½x2½	3⅛	3	3¾	8-32s	4½
DC5A	3⅛x2⅝	4⅛	3½	3⅞	10-32s	9
DC5B	3⅛x2⅝	4⅛	3½	4½	10-32s	10
DC6A	3¾x3	5	4⅛	4⅞	10-32s	15
DC7B	4⅜x3¾	5½	5	6¾	¼-20s	22

Fully impregnated and sealed in heavy gauge cases. Temperature rises range from 45° to 50°C.

T following case number indicates Terminals.

L following case number indicates Leads.

Cat. No.	Pri. Va	Hi Volt	Choke Input D.C. V.	Choke Input D.C. Ma.	Cond. Input D.C. V.	Cond. Input D.C. Ma.	Rectifier	Fil. #1	Fil. #2	Case Number
PGP 1	15	440V. C.T.	Low flux density, hum-bucking. For Preamplifier service.		270	15	6X4	6.3 CT @ 0.6A.	6.3 @ 0.3A.	DC-2BL
PGP 2	30	550V. C.T.	Low flux density, hum-bucking. For Preamplifier service.		310	35	6X4	6.3 CT @ 0.6A.	6.3 CT @ 0.9A.	DC-4AL
PGP 3	45	500V. C.T.			270	40	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 2A.	DC-4AL
PGP 4	57	600V. C.T.			330	50	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 2.5A.	DC-4AL
PGP 5	64	650V. C.T.			370	50	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 3A.	DC-4AL
PGP 6	73	600V. C.T.			320	70	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 3A.	DC-4AL

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

for PRECISION FREED TRANSFORMERS *for* QUALITY

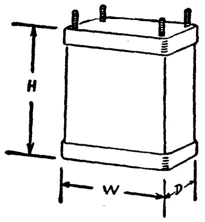
PROFESSIONAL GRADE POWER TRANSFORMERS

Continued from previous page — See same for case sizes

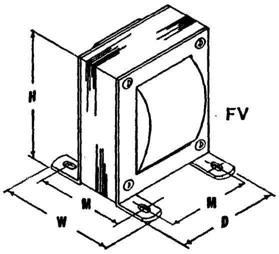
Cat. No.	Py Va	Hi Volt	Choke Input D.C. V.	Choke Input D.C. Ma.	Cond. Input D.C. V.	Cond. Input D.C. Ma.	Bias Tap.	Rectifier	Fil. #1	Fil. #2	Fil. #3	Case Number
PGP 7	110	650V. C.T.	225	140	330	100		5Y3, 5U4	5 @ 3A.	6.3 @ 5A.		DC-5BL
PGP 8	76	700V. C.T.	260	100	385	70		5Y3	5 @ 2A.	6.3 @ 2.5A.		DC-5AL
PGP 9	108	700V. C.T.	250	125	370	90		5Y3, 5U4	5 @ 3A.	6.3 @ 5A.		DC-5BL
PGP 10	127	700V. C.T.	260	170	350	120		5U4	5 @ 3A.	6.3 @ 5A.		DC-5BL
PGP 11	146	700V. C.T.	260	210	350	150		5U4	5 @ 3A.	6.3 @ 5A.	6.3 @ 1A.	DC-6AL
PGP 12	207	800V. C.T.	295	280	400	200		5U4, 2-5Y3	5 @ 4A.	6.3 @ 6A.		DC-6AL
PGP 13	225	800V. C.T.	295	280	400	200	80	5U4, 2-5Y3	5 @ 4A.	6.3 @ 6A.	5/6.3 @ 2A.	DC-6AL
PGP 14	268	840V. C.T.	330	350	450	250	80	2-5U4	5 @ 6A.	6.3 @ 6A.	5/6.3 @ 2A.	DC-6AL
PGP 15	320	900V. C.T.	340	420	490	300	80	2-5U4	5 @ 6A.	6.3 @ 6A.	5/6.3 @ 2A.	DC-6AL
PGP 16	127	900V. C.T.	360	150				5U4	5 @ 3A.	6.3 @ 5A.		DC-6AL
PGP 17	150	900V. C.T.	350	200				5U4	5 @ 3A.	6.3 @ 5A.		DC-6AL
PGP 18	203	1100V. C.T.	400	250				5R4GY	5 @ 3A.	6.3 @ 5A.		DC-6AL
PGP 19	248	1100V. C.T.	420	300				2-5R4GY	5 @ 4A.	6.3 @ 7A.		DC-6AL
PGP 20	310	1280V. C.T.	480	350				2-5R4GY	5 @ 4A.	6.3 @ 7A.		DC-7BL

FILAMENT TRANSFORMERS

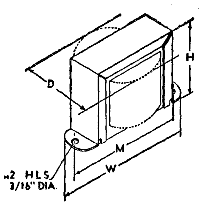
ALL PRIMARIES ARE FOR 115 V., 50/60 c.p.s.



DC



FV



CH

L after case number indicates Leads
T after case number indicates Terminals

Cat. No.	Secondary Voltage	Secondary Current Amps.	Secondary Test Voltage RMS	Case Size
TF 1	2.5 (C.T.)	7.5	1500	CH60
TF 2	2.5 (C.T.)	10	1500	CH70
TF 3	2.5 (C.T.)	5	7500	DC2BT
TF 4	2.5 (C.T.)	10	7500	DC4AT
TF 5	5.0 (C.T.)	4	1500	CH60
TF 6	5.0 (C.T.)	6	1500	CH70
TF 7	5.0 (C.T.)	10	1500	CH80
TF 8	5.0 (C.T.)	10	1500v	FV10
TF 9	5.0 (C.T.)	20	2500	FV30
TF 10	5.0 (C.T.)	20	10,000	DC6AT
TF 11	6.3 (C.T.)	1.35	1500	CH50
TF 12	6.3 (C.T.)	3	1500	CH60
TF 13	6.3 (C.T.)	5	1500	CH70
TF 14	6.3 (C.T.)	7	1500	FV12
TF 15	6.3 (C.T.)	10	1500	FV22
TF 16	10 (C.T.)	5	2500	CH80
TF 17	10 (C.T.)	5	2500	FV10
TF 18	10 (C.T.) or 11 (C.T.) (tapped primary)	12 or 11	7500	DC5CT
TF 19	12.6 (C.T.)	2	1500	CH62

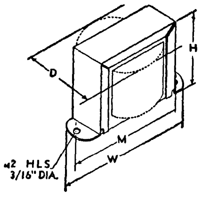
CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	Dimensions D	Dimensions H	Knockout	Mtg. Studs	Wgt.
DC2B2	2 x1¾	2⅝	2¼	3½	1½x1⅜	8-32	3
DC4AT	2½x2½	3⅛	3	3¾	2 x1¾	8-32	4½
DC5CT	3⅛x2⅝	4⅛	3½	4⅞	2½x2	10-32	12
DC6AT	3¾x3	5	4⅛	4⅞	3 x2½	10-32	15
FV10	2 x2	2½	2½	3 1/16			2½
FV12	2 x2⅛	2½	2⅝	3 1/16			2¾
FV22	2¼x2¼	2 13/16	2⅞	3 7/16			4
FV30	2½x2¼	3⅛	3¼	3 13/16			5½
CH50	2⅜	2 13/16	1¾	1 11/16			¾
CH60	2 13/16	3¼	2	2			1½
CH62	2 13/16	3¼	2⅛	2			1¾
CH70	3⅛	3 11/16	2¼	2 5/16			2
CH80	3 9/16	4	2⅝	2⅝			2¾

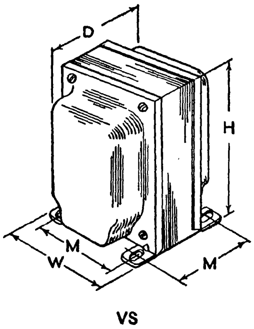
For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

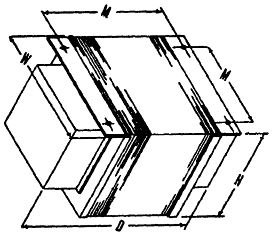
AUTO TRANSFORMERS



CH



VS



HB

To be used as a step-down transformer. Equipped with standard receptacle and line cord.

CATALOG NUMBER	TRANSFORMATION	VA RATING	CASE SIZE
SDT 1*	230/115 V. 50/60 c.p.s.	25	CH-60
SDT 2*	230/115 V. 50/60 c.p.s.	50	CH-62
SDT 3	230/115 V. 50/60 c.p.s.	50	VS-300
SDT 4	230/115 V. 50/60 c.p.s.	100	VS-401
SDT 5	230/115 V. 50/60 c.p.s.	200	VS-501
SDT 6	230/115 V. 50/60 c.p.s.	300	VS-601
SDT 7	230/115 V. 50/60 c.p.s.	400	VS-604
SDT 8	230/115 V. 50/60 c.p.s.	500	VS-611
SDT 9	230/115 V. 50/60 c.p.s.	750	VS-706
SDT 10	230/115 V. 50/60 c.p.s.	1000	VS-718
SDT 11	230/115 V. 50/60 c.p.s.	1500	VS-728
SDT 12*	230/115 V. 50/60 c.p.s.	2000	HB-718
SDT 13*	230/115 V. 50/60 c.p.s.	2500	HB-728
SDT 14*	230/115 V. 50/60 c.p.s.	3000	HB-828
SDT 15*	230/115 V. 50/60 c.p.s.	5000	HB-920

*Supplied with leads without line cord and receptacle.

CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	Dimensions D	Dimensions H	Wgt. (lbs.)
CH60	2 13/16	3¼	2	2	1½
CH62	2 13/16	3¼	2⅛	2	1¾
HB718	4¾x4¾	6⅜	8½	6¼	36
HB728	4¾x6	6⅜	9¾	6¼	45
HB828	5⅝x5⅞	7¼	9⅞	6⅝	54
HB920	5⅜x4¾	7¼	8⅝	10	75
VS300	2 x1 11/16	2 19/32	2¾	3 3/32	2¾
VS401	2¼x1¾	2 29/32	3	3 15/32	4½
VS501	2½x2 1/16	3 7/32	3 5/16	3 27/32	6¼
VS503	2½x2 5/16	3 7/32	3⅝	3 27/32	5¼
VS601	3 x2 7/16	3 27/32	3⅝	4 19/32	7¼
VS604	3 x2 11/16	3 27/32	3⅞	4 19/32	7⅜
VS611	3 x3 11/16	3 27/32	4⅞	4 19/32	12
VS700	3½x3 5/16	4½	4¾	5 11/32	14
VS706	3½x3 13/16	4½	5¼	5 11/32	16
VS714	3½x4 13/16	4½	6¼	5 11/32	25
VS718	3½x5 5/16	4½	6¾	5 11/32	29
VS728	3½x6 9/16	4½	8	5 11/32	36

ISOLATION TRANSFORMERS

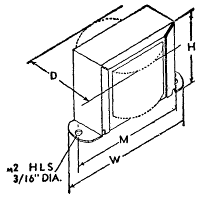
Electrostatic shield between primary and secondary. Equipped with standard receptacle and line cord.

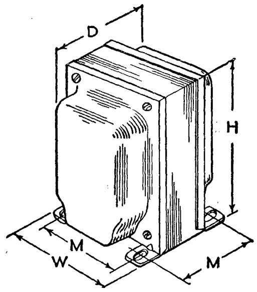
CATALOG NUMBER	PRIMARY VOLTAGE 50/60 c.p.s.	SECONDARY VOLTAGE	VA RATING	CASE SIZE
IT 1	115	115	50	VS-401
IT 2	115	115	100	VS-503
IT 3	115	115	300	VS-700
IT 4	115	115	500	VS-714

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

for PRECISION {FREED TRANSFORMERS} *for* QUALITY

REPLACEMENT GRADE AUDIO TRANSFORMERS





CASE DIMENSIONS

Case Number	Mtg. Centers	Dimensions W	D	H	Wgt. (lbs.)
CH-40	2"	2⅜"	1⅝"	1 7/16"	½
CH-50	2⅜"	2 13/16"	1¾"	1 11/16"	¾
CH-60	2 13/16"	3¼"	2"	2"	1½
CH-80	3 9/16"	4"	2⅝"	2⅝"	2¾
VS-100	1½" x 1 7/16"	1⅞"	2¼"	2 11/32"	1½
VS-300	2" x 1 11/16"	2 19/32"	2¾"	3 3/32"	2¾

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Max. Power Level V.U.* or Power in Watts	Ratio	Max. Pri. D.C. per Side Ma.	D.C. Un-balance Ma.	Freq. Response C.P.S.	Case Number
RGA 1	Input; multiple line or double button mike to single or push-pull grids.	500 CT 200 CT	100.000 CT	+20	1:14.1	50	5	±1 DB 200-5000 ±1 DB	CH-40
RGA 2	Input; single button mike to single or push-pull grids.	100	100.000 CT	+20	1:31.6	50		200-5000 ±1 DB	CH-40
RGA 3	Input; voice coil to grid.	3.2	100.000	+20	1:179			200-5000	CH-40
RGA 4	Mixing and matching line to line.	600 CT 500 CT 200 CT 150/125/50	600 CT 500 CT 200 CT 150/125/50	+20	1:1			±1 DB 100-5000	CH-40
RGA 5	Interstage; single triode plate to single or P.P. grids.	10.000	90.000	+30	1:3	10		±1 DB 200-5000	CH-40
RGA 6	Output; single plate to line or mixer.	10.000	600 CT 500 CT 200 CT 150/125/50	+30	4.8:1	10		±1 DB 200-5000	CH-40
RGA 7	Output; Push-pull plate to line or mixer.	20.000 CT	600 CT 500 CT 200 CT 150/125/50	+30	6.32:1	10	1	±1 DB 200-5000	CH-40
RGA 8	Output; plate to V.C. 6AL6, 6L6, 6Y6, 25B6, 25C6, 35A5, 35B5, 35C5, 50B5, 50C5, 50C6, 50L6, 117N7.	2500	3.2	5W		70		±3 DB 200-10000 ±1 DB	CH-40
RGA 9	Output; plate to V.C. 6V6, 6AQ5, 6AS5, 7C5.	5000	3.2	5W		50		±3 DB 200-10000	CH-40
RGA 10	Output; plate to V.C. 6AR5, 6K6, 6V6, 7B5, 14A5, 3S4, 3U4, 3Q4, 3Q5, 3C5, 3A4.	10.000 or 7500	3.2	5W		30		±3 DB 200-10000	CH-40
RGA 11	Output; P.P. plates to V.C. P.P. 6V6, PP6K6.	12.000 CT or 8000 CT	3.2	15W		50	5	±2 DB 200-8000	CH-60

REPLACEMENT GRADE CHOKES

CATALOG No.	INDUCTANCE IN HENRIES	RATED CURRENT D.C. Ma.	D.C. RESISTANCE	DIELECTRIC TEST VOLTAGE	CASE No.
RGC 1	4	40	200	1000	CH-40
RGC 2	9	40	400	1000	CH-40
RGC 3	6	50	400	1000	CH-40
RGC 4	10	55	400	1500	CH-50
RGC 5	10	75	250	1500	CH-60
RGC 6	10	75	250	1500	VS-100
RGC 7	6	100	150	1500	CH-60
RGC 8	6	100	150	1500	VS-100
RGC 9	3.5	150	100	1500	CH-60
RGC 10	3.5	150	100	1500	VS-100
RGC 11	2	200	60	1500	CH-60
RGC 12	2	200	60	1500	VS-100
RGC 13	3.7	200	65	1500	CH-80
RGC 14	3.7	200	65	1500	VS-300
RGC 15	2.8	300	65	1500	CH-80
RGC 16	2.8	300	65	1500	VS-300

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

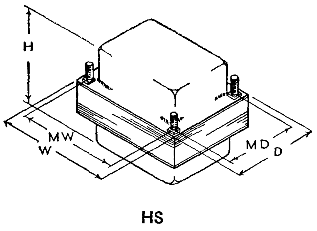
See pages N-80, 81 for FREED Prices

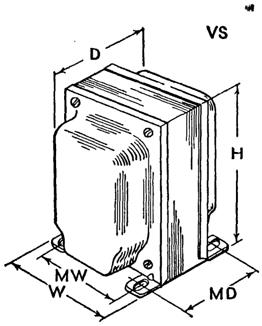
for PRECISION FREED TRANSFORMERS *for* QUALITY

REPLACEMENT GRADE POWER TRANSFORMERS

CASE DIMENSIONS

CASE #	MTG. CENTERS	DIMENSIONS W	D	H	WGT. (lbs.)
VS-300	2″ x 1 11/16″	2 19/32″	2 ¾″	3 3/32″	2 ¾
VS-303	2″ x 1 15/16″	2 19/32″	3″	3 3/32″	3 ½
VS-306	2″ x 2 5/16″	2 19/32″	3 ⅜″	3 3/32″	4 ½
VS-307	2″ x 2 7/16″	2 19/32″	3 ¾″	3 3/32″	4 ¾
VS-503	2 ½″ x 2 5/16″	3 7/32″	3 ⅝″	3 27/32″	5 ¼
VS-505	2 ½″ x 2 9/16″	3 7/32″	3 ⅞″	3 27/32″	6
VS-604	3″ x 2 11/16″	3 27/32″	3 ⅞″	4 19/32″	7 ⅜
VS-605	3″ x 2 15/16″	3 27/32″	4 ⅛″	4 19/32″	8 ¾
VS-606	3″ x 3 1/16″	3 27/32″	4 ¼″	4 19/32″	9 ¼
VS-609	3″ x 3 7/16″	3 27/32″	4 ⅝″	4 19/32″	11
VS-611	3″ x 3 11/16″	3 27/32″	4 ⅞″	4 19/32″	12
VS-612	3″ x 3 13/16″	3 27/32″	5″	4 19/32″	13
VS-709	3 ½″ x 4 3/16″	4 ½″	5 ⅝″	5 11/32″	19
HS-300	2 ½″ x 2″	3″	2 ½″	2 ⅝″	2 ¾
HS-303	2 ½″ x 2″	3″	2 ½″	2 ⅞″	3 ½
HS-306	2 ½″ x 2″	3″	2 ½″	3 ¼″	4 ½
HS-307	2 ½″ x 2″	3″	2 ½″	3 ⅜″	4 ¾
HS-503	3 ⅛″ x 2 ½″	3 ¾″	3 ⅛″	3 ⅜″	5 ¼





CASE DIMENSIONS

CASE #	MTG. CENTERS	DIMENSIONS W	D	H	WGT. (lbs.)
HS-505	3 ⅛″ x 2 ½″	3 ¾″	3 ⅛″	3 ⅝″	6
HS-604	3 ¾″ x 3″	4 ½″	3 ¾″	3 ⅝″	7 ⅜
HS-605	3 ¾″ x 3″	4 ½″	3 ¾″	3 ⅞″	8 ¾
HS-606	3 ¾″ x 3″	4 ½″	3 ¾″	4″	9 ¼
HS-609	3 ¾″ x 3″	4 ½″	3 ¾″	4 ⅜″	11
HS-611	3 ¾″ x 3″	4 ½″	3 ¾″	4 ⅝″	12
HS-612	3 ¾″ x 3″	4 ½″	3 ¾″	4 ¾″	13
HS-709	4 ⅜″ x 3 ½″	5 ¼″	4 ⅜″	5 ⅞″	19

Cat. No.	Py Va	Hi Volt	Choke Input D.C. V.	Choke Input D.C. Ma.	Cond. Input D.C. V.	Cond. Input D.C. Ma.	Bias Tap.	Rectifier	Fil. #1	Fil. #2	Fil. #3	Case Number
RGP 1	45	500V. CT			270	40		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 2A		VS300
RGP 2	“	“										HS300
RGP 3	57	600V. CT			330	50		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 2.5A		VS303
RGP 4	“	“										HS303
RGP 5	64	650V. CT			370	50		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 3A		VS303
FGP 6	“	“										HS303
RGP 7	73	600V. CT			320	70		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 3A		VS306
RGP 8	“	“										HS306
RGP 9	110	650V. CT	225	140	330	100		5Y3, 5U4	5 @ 3A	6.3 @ 5A		VS503
RGP 10	“	“										HS503
RGP 11	76	700V. CT	260	100	385	70		5Y3	5 @ 2A	6.3 @ 8.5A		VS307
RGP 12	“	“										HS307
RGP 13	108	700V. CT	250	125	370	90		5Y3, 5U4	5 @ 3A	6.3 @ 5A		VS503
RGP 14	“	“										HS503
RGP 15	127	700V. CT	260	170	350	120		5U4	5 @ 3A	6.3 @ 5A		VS505
RGP 16	“	“										HS505
RGP 17	146	700V. CT	260	210	350	150		5U4	5 @ 3A	6.3 @ 5A	6.3 @ 1A	VS604
RGP 18	“	“										HS604
RGP 19	207	800V. CT	295	280	400	200		5U4, 2-5Y3	5 @ 4A	6.3 @ 6A		VS606
RGP 20	“	“										HS606
RGP 21	225	800V. CT	295	280	400	200	80V.	5U4, 2-5Y3	5 @ 4A	6.3 @ 6A	5/6.3 @ 2A	VS606
RGP 22	“	“										HS606
RGP 23	268	840V. CT	330	350	450	250	80V.	2-5U4	5 @ 6A	6.3 @ 6A	5/6.3 @ 2A	VS612
RGP 24	“	“										HS612
RGP 25	320	900V. CT	295	280	400	200	80V.	2-5U4	5 @ 6A	6.3 @ 6A	5/6.3 @ 2A	VS709
RGP 26	“	“										HS709
RGP 27	127	900V. CT	360	150				5U4	5 @ 3A	6.3 @ 5A		VS604
RGP 28	“	“										HS604
RGP 29	150	900V. CT	350	200				5U4	5 @ 3A	6.3 @ 5A		VS605
RGP 30	“	“										HS605
RGP 31	203	1100V. CT	400	250				5R4GY	5 @ 3A	6.3 @ 5A		VS611
RGP 32	“	“										HS611
RGP 33	248	1100V. CT	420	300				2-5R4GY	5 @ 4A	6.3 @ 7A		VS612
RGP 34	“	“										HS612
RGP 35	310	1280V. CT	480	350				2-5R4GY	5 @ 4A	6.3 @ 7A		VS709
RGP 36	“	“										HS709

For Freed Precision Laboratory Test Instruments see Section G Page G-120 to 124

See pages N-80, 81 for FREED Prices

for PRECISION **FREED TRANSFORMERS** *for* QUALITY

HIGH FIDELITY COMPONENTS

Input Transformers

Catalog No.	List Price†
OGA 1	28.00
QGA 2	35.00
QGA 3	25.00
QGA 4	35.00
QGA 5	32.00
QGA 6	37.00

Hybrid and Repeat Coils

Catalog No.	List Price†
QGA 7	25.00
QGA 8	35.00
QGA 9	35.00
QGA 10	40.00
QGA 11	30.00

Interstage Transformers

Catalog No.	List Price†
QGA 12	30.00
QGA 13	25.00
QGA 14	26.00
QGA 15	32.00

Low Level Output, Mixing Matching Transformers

Catalog No.	List Price†
QGA 16	26.00
QGA 17	26.00
QGA 18	28.00
QGA 19	26.00
QGA 20	33.00
QGA 21	30.00

Driver Transformers

Catalog No.	List Price†
QGA 22	50.00
QGA 23	35.00
QGA 24	35.00

High Level Output Transformers

Catalog No.	List Price†
QGA 25	35.00
QGA 26	35.00
QGA 27	35.00
QGA 28	35.00
QGA 29	35.00
QGA 30	35.00
QGA 31	45.00
QGA 32	45.00
QGA 33	45.00
QGA 34	45.00
QGA 35	49.50
QGA 36	49.50
QGA 37	30.00
QGA 38	49.50

TOROIDAL INDUCTORS

Prices given are Net for Hermetically Sealed Units. For Commercial Cased units deduct $.75 from net. For Uncased units deduct $1.50 from net.

Tolerances are adjusted to within 1% or 2% depending on the inductance value.

Type TI - 1

Catalog No.	Net Price
F-800	7.00
F-801	7.00
F-802	7.00
F-803	7.50
F-804	8.00
F-805	8.00
F-806	9.00
F-807	9.00
F-808	9.00
F-809	10.00
F-810	10.00
F-811	11.00
F-812	11.00
F-813	11.00
F-814	11.00
F-815	11.00
F-816	11.50
F-817	12.00
F-818	12.50
F-819	13.00
F-820	13.30
F-821	13.50
F-822	13.75
F-823	14.00
F-824	14.50
F-825	15.00
F-826	15.30
F-827	15.60
F-828	16.00
F-829	17.00
F-830	18.00

Type TI - 2s

Catalog No.	Net Price
F-1800	14.95
F-1801	14.95
F-1802	14.95
F-1803	14.95
F-1804	14.95
F-1805	15.40
F-1806	15.40
F-1807	15.40
F-1808	15.40
F-1809	15.40
F-1810	15.40
F-1811	15.70
F-1812	15.70
F-1813	15.70
F-1814	15.70
F-1815	15.70

Type TI - 3s

Catalog No.	Net Price
F-1844	15.00
F-1845	15.00
F-1846	15.00
F-1847	15.00
F-1848	15.00
F-1849	15.00
F-1850	15.00
F-1851	15.00
F-1852	15.00
F-1853	15.00
F-1854	15.00
F-1855	15.00

Type TI - 3As

Catalog No.	Net Price
F-1856	21.00
F-1857	21.50
F-1858	21.50
F-1859	23.50
F-1860	24.00
F-1861	24.00
F-1862	24.50
F-1863	25.50

Type TI - 4 and 4s

Catalog No.	Net Price
F-850	8.30
F-851	8.30
F-852	8.30
F-853	8.30
F-854	8.30
F-855	8.30
F-856	8.70
F-857	9.05
F-858	9.23
F-859	9.35
F-860	9.50
F-861	9.70
F-862	9.85
F-863	10.00
F-864	10.30
F-865	10.80
F-866	11.20
F-867	11.20
F-868	11.20
F-869	11.70
F-870	11.70
F-871	11.70
F-872	12.10
F-873	12.10
F-874	12.60
F-875	13.10
F-876	13.60
F-877	14.10
F-878	14.60

Type TI - 5

Catalog No.	Net Price
F-1700	6.00
F-1701	6.00
F-1702	6.00
F-1703	6.50
F-1704	7.00
F-1705	7.25
F-1706	7.50
F-1707	7.75
F-1708	8.00
F-1709	8.25
F-1710	8.50
F-1711	8.75
F-1712	9.50
F-1713	10.10
F-1714	10.30
F-1715	10.80
F-1716	11.20
F-1717	11.40
F-1718	11.80
F-1719	12.10
F-1720	12.50

Type TI - 5s

Catalog No.	Net Price
F-1700	8.30
F-1701	8.30
F-1702	8.30
F-1703	8.30
F-1704	8.30
F-1705	8.60
F-1706	8.70
F-1707	9.05
F-1708	9.25
F-1709	9.35
F-1710	9.50
F-1711	9.70
F-1712	9.80
F-1713	10.10
F-1714	10.30
F-1715	10.80
F-1716	11.20
F-1717	11.40
F-1718	11.80
F-1719	12.10
F-1720	12.50

Type TI - 6 and 6s

Catalog No.	Net Price
F-1726	8.60
F-1727	8.60
F-1728	8.60
F-1729	8.60
F-1730	8.60
F-1731	8.60
F-1732	8.90
F-1733	8.90
F-1734	9.00
F-1735	9.00
F-1736	9.00
F-1737	9.50
F-1738	10.50
F-1739	10.50
F-1740	10.50
F-1741	10.50
F-1742	11.00
F-1743	12.50

Type TI - 7

Catalog No.	Net Price
F-1781	8.30
F-1782	8.30
F-1783	8.30
F-1784	8.30
F-1785	8.30
F-1786	8.30
F-1787	8.50
F-1788	8.50
F-1789	8.70
F-1790	8.70
F-1791	8.90
F-1792	9.10
F-1793	9.10
F-1794	9.10
F-1795	9.50
F-1796	9.75
F-1797	10.50

Type TI - 8 and 8s

Catalog No.	Net Price
F-1821	9.10
F-1822	9.10
F-1823	9.10
F-1824	9.10
F-1825	9.10
F-1826	9.10
F-1827	9.10
F-1828	9.10
F-1829	9.10
F-1830	9.10
F-1831	9.10
F-1832	9.20
F-1833	9.30
F-1834	9.50
F-1835	9.50
F-1836	9.50
F-1837	9.60
F-1838	9.70
F-1839	10.00
F-1840	10.20

Type TI - 9s

Catalog No.	Net Price
F-1554	17.50
F-1555	17.70
F-1556	17.90
F-1557	18.20
F-1558	18.30
F-1559	18.40
F-1560	18.50
F-1561	18.75
F-1562	19.00
F-1563	19.25
F-1564	19.50
F-1565	19.50
F-1566	20.00
F-1567	20.50
F-1568	21.00
F-1569	21.50
F-1570	22.50

Type TI - 10s

Catalog No.	Net Price
F-1579	14.90
F-1580	14.90
F-1581	15.10
F-1582	15.20
F-1583	15.30
F-1584	15.40
F-1585	15.50
F-1586	15.60
F-1587	15.70
F-1588	15.80
F-1589	15.90
F-1590	16.10
F-1591	16.20
F-1592	16.40

Type TI - 11s

Catalog No.	Net Price
F-1747	14.95
F-1748	14.95
F-1749	14.95
F-1750	14.95
F-1751	14.95
F-1752	16.00
F-1753	16.00
F-1754	16.00
F-1755	16.00
F-1756	16.00
F-1757	14.95
F-1758	14.95
F-1759	15.45
F-1760	15.45
F-1761	16.00
F-1762	16.50
F-1763	17.00
F-1764	17.50
F-1765	18.00
F-1766	18.50
F-1767	18.75
F-1768	19.00
F-1769	19.45
F-1770	19.45
F-1771	19.45
F-1772	20.00
F-1773	20.50
F-1774	21.00
F-1775	21.50
F-1776	22.00
F-1777	23.00
F-1778	24.00
F-1779	25.00
F-1780	26.00

Type TI - 12 and 12s

Catalog No.	Net Price
F-1655	14.30
F-1656	14.30
F-1657	14.30
F-1658	14.80
F-1659	14.80
F-1660	14.80
F-1661	15.40
F-1662	15.40
F-1663	15.90
F-1664	15.90
F-1665	14.50
F-1666	14.50
F-1667	14.90
F-1668	14.90
F-1669	15.40
F-1670	15.40
F-1671	15.40
F-1672	15.90
F-1673	16.40
F-1674	16.90
F-1675	16.90
F-1676	17.40
F-1677	17.40
F-1678	17.90
F-1679	17.90
F-1680	18.40
F-1681	18.40
F-1682	18.40
F-1683	18.90
F-1684	18.90
F-1685	18.90
F-1686	19.40
F-1687	19.90
F-1688	20.50
F-1689	21.00
F-1690	21.50
F-1691	22.00
F-1692	22.50
F-1693	23.00

Type TI - 13

Catalog No.	Net Price
F-1629	17.50
F-1630	17.70
F-1631	17.90
F-1632	18.20
F-1633	18.30
F-1634	18.40
F-1635	18.50
F-1636	18.75
F-1637	19.00
F-1638	19.25
F-1639	19.50
F-1640	19.50
F-1641	20.00
F-1642	20.50
F-1643	21.00
F-1644	21.50
F-1645	22.50

Type TI - 14s

Catalog No.	Net Price
F-1920	7.95
F-1921	7.95
F-1922	7.95
F-1923	7.95
F-1924	7.95
F-1925	7.95
F-1926	8.25
F-1927	8.25
F-1928	8.35
F-1929	8.35
F-1930	8.35
F-1931	8.85
F-1932	9.20
F-1933	9.20
F-1934	9.50
F-1935	9.75
F-1936	10.25

Type TI - 15s

Catalog No.	Net Price
F-1870	7.65
F-1871	7.65
F-1872	7.65
F-1873	7.65
F-1874	7.65
F-1875	7.65
F-1876	7.65
F-1877	7.65
F-1878	7.65
F-1879	7.65
F-1880	7.65
F-1881	7.85
F-1882	7.85
F-1883	8.05
F-1884	8.05
F-1885	8.25
F-1886	8.45
F-1887	8.45
F-1888	8.45
F-1889	8.85

HIGH Q REACTORS

Catalog No.	Net Price
QGC 1	20.00 ea.
QGC 2	20.00 ea.
QGC 3	20.00 ea.
QGC 4	20.00 ea.
QGC 5	20.00 ea.
QGC 6	20.00 ea.
QGC 7	20.00 ea.

MIL. PULSE TRANSFORMERS

Catalog No.	Net Price
MPT-1	17.50
MPT-2	15.00
MPT-3	22.50
MPT-4	20.00
MPT-5	17.50
MPT-6	15.00
MPT-7	17.50
MPT-8	15.00
MPT-9	22.50
MPT-10	20.00
MPT-11	17.50
MPT-12	27.50

MILITARY AUDIO TRANSFORMERS

Catalog No.	Net Price
MGA 1	12.50
MGA 2	12.50
MGA 3	12.50
MGA 4	12.50
MGA 5	12.50
MGA 6	12.50
MGA 7	12.50
MGA 8	12.50
MGA 9	12.50

†TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

FREED TRANSFORMERS (CONT.)

PROFESSIONAL GRADE COMPONENTS

Miniature Audio Transformers

Catalog No.	List Price†
PMA 1	16.50
PMA 2	13.50
PMA 3	19.00
PMA 4	13.50
PMA 5	13.50
PMA 6	16.50
PMA 7	16.50
PMA 8	16.50
PMA 9	16.50
PMA 10	15.50
PMA 11	12.00

Input Transformers

Catalog No.	List Price†
PGA 1	16.00
PGA 2	18.50
PGA 3	16.00
PGA 4	15.00
PGA 5	17.50
PGA 6	16.00

Low Level Output and Mixing Transformers

Catalog No.	List Price†
PGA 7	16.00
PGA 8	17.00
PGA 9	16.00
PGA 10	16.00

Driver Transformers

Catalog No.	List Price†
PGA 11	22.50
PGA 12	16.00
PGA 13	22.50

High Level Output Transformers

Catalog No.	List Price†
PGA 14	22.50*
PGA 15	23.75*
PGA 16	25.00*
PGA 17	25.00*
PGA 18	22.50*
PGA 19	25.00*
PGA 20	25.00*
PGA 21	23.75*
PGA 22	30.00*
PGA 23	30.00*
PGA 24	22.50*
PGA 25	50.00*
PGA 26	25.00*
PGA 27	25.00*
PGA 28	23.75*
PGA 29	27.50*
PGA 30	40.00*

*5.00 off list price supplied in vertical shells.

High Q Reactors

Catalog No.	List Price†
PQC 1	10.00
PQC 2	10.00
PQC 3	10.00
PQC 4	10.00
PQC 5	10.00
PQC 6	10.00
PQC 7	10.00
PQC 8	10.00
PQC 9	10.00

Filter Reactors

Catalog No.	List Price†
PGC 1	6.50
PGC 2	7.00
PGC 3	7.00
PGC 4	7.50
PGC 5	7.50
PGC 6	7.50
PGC 7	8.00
PGC 8	9.00
PGC 9	9.00
PGC 10	9.50
PGC 11	10.50
PGC 12	13.00
PGC 13	16.00

Parallel Feed Audio Chokes

Catalog No.	List Price†
PGC 14	10.00
PGC 15	11.00
PGC 16	10.50

Swinging Input Reactors

Catalog No.	List Price†
PGC 17	9.00
PGC 18	10.50
PGC 19	13.00
PGC 20	16.00

Power Transformers

Catalog No.	List Price†
PGP 1	12.50
PGP 2	18.50
PGP 3	4.00
PGP 4	9.50
PGP 5	10.00
PGP 6	11.00
PGP 7	12.50
PGP 8	11.75
PGP 9	12.50
PGP 10	14.00
PGP 11	19.00
PGP 12	22.50
PGP 13	25.00
PGP 14	30.00
PGP 15	35.00
PGP 16	16.00
PGP 17	18.50
PGP 18	25.00
PGP 19	30.00
PGP 20	37.50

FILAMENT TRANSFORMERS

Catalog No.	List Price†
TF 1	4.00
TF 2	4.50
TF 3	15.00
TF 4	18.50
TF 5	4.00
TF 6	5.50
TF 7	6.00
TF 8	6.40
TF 9	10.40
TF 10	24.00
TF 11	2.70
TF 12	4.00
TF 13	5.50
TF 14	6.60
TF 15	6.95
TF 16	6.00
TF 17	6.40
TF 18	24.00
TF 19	4.50

STEP-DOWN TRANSFORMERS

Catalog No.	List Price†
SDT 1	3.25
SDT 2	3.75
SDT 3	7.50
SDT 4	10.20
SDT 5	11.55
SDT 6	14.70
SDT 7	18.40
SDT 8	20.05
SDT 9	26.75
SDT 10	37.60
SDT 11	55.00
SDT 12	66.00
SDT 13	77.00
SDT 14	89.35
SDT 15	105.00

ISOLATION TRANSFORMERS

Catalog No.	List Price†
IT 1	10.00
IT 2	14.30
IT 3	36.10
IT 4	44.00

REPLACEMENT GRADE COMPONENTS

Chokes

Catalog No.	List Price†
RGC 1	2.00
RGC 2	2.00
RGC 3	2.00
RGC 4	2.20
RGC 5	2.75
RGC 6	4.00
RGC 7	2.75
RGC 8	4.00
RGC 9	2.75
RGC 10	4.00
RGC 11	2.75
RGC 12	4.00
RGC 13	4.25
RGC 14	5.50
RGC 15	4.25
RGC 16	5.50

Audio Transformers

Catalog No.	List Price†
RGA 1	5.00
RGA 2	4.00
RGA 3	4.00
RGA 4	7.00
RGA 5	4.00
RGA 6	4.75
RGA 7	5.00
RGA 8	2.25
RGA 9	2.25
RGA 10	2.75
RGA 11	5.00

Power Transformers

Catalog No.	List Price†
RGP 1	7.50
RGP 2	7.50
RGP 3	7.50
RGP 4	7.50
RGP 5	8.00
RGP 6	8.00
RGP 7	9.00
RGP 8	9.00
RGP 9	10.00
RGP 10	10.00
RGP 11	9.00
RGP 12	9.00
RGP 13	10.00
RGP 14	10.00
RGP 15	11.00
RGP 16	11.00
RGP 17	13.50
RGP 18	13.50
RGP 19	13.70
RGP 20	13.70
RGP 21	18.50
RGP 22	18.50
RGP 23	25.00
RGP 24	25.00
RGP 25	30.00
RGP 26	30.00
RGP 27	11.00
RGP 28	11.00
RGP 29	13.50
RGP 30	13.50
RGP 31	20.00
RGP 32	20.00
RGP 33	25.00
RGP 34	25.00
RGP 35	32.50
RGP 36	32.50

FREED TEST INSTRUMENTS

See Radio's Master pages G-120 to G-124 for complete descriptions, illustrations and specifications.

Type No.	Description	Net Prices
1010	Comparison & Limit Bridge	$ 185.00
1020-B	Megohmmeter	225.00
1030	Low Frequency "Q" Indicator	1050.00
1040	Vacuum Tube Voltmeter	195.00
1060	Vacuum Tube Voltmeter	265.00
1110-A	Incremental Inductance Bridge	345.00
1140	Null Detector	234.00
1150	Universal Bridge	275.00
1160	Decade Inductor	172.00
1161	Decade Inductor	191.00
1162	Decade Inductor	197.00
1163	Decade Inductor	172.00
1164	Decade Inductor	210.00
1170	DC Supply for No. 1110-A Bridge	294.00
1180	AC Supply for No. 1110-A Bridge	108.00
1195	Variable Condenser Decade	160.00

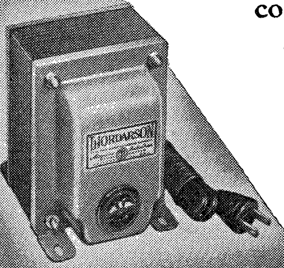
Type No.	Description	Net Prices
1206-A	Frequency Standard	$ 750.00
1207	Frequency Standard	750.00
1210	Null Detector & Vacuum Tube Voltmeter	325.00
1220	Decade Inductor	55.00
1230	Decade Inductor	51.00
1240	Decade Inductor	55.00
1250	Condenser Decade	160.00
1260	Decade Inductor	215.00
1270	Decade Inductor	65.00
1280	Decade Inductor	210.00
1290	Decade Inductor	265.00
1310	Decade Inductor	195.00
1341	Decade Inductor	75.00
1342	Decade Inductor	205.00
1350	Condenser Decade	250.00

All prices are F.O.B. Brooklyn, New York

THORDARSON-

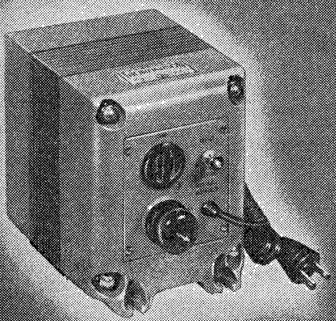
TRANSFORMERS

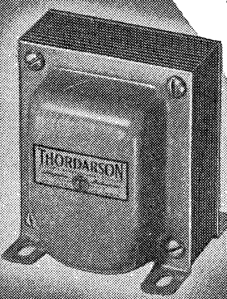
Over half a century of leadership in precision built transformers and coils has placed THORDARSON-MEISSNER products in the "blue book" of electronics. Among the many important companies who regularly depend on THORDARSON-MEISSNER products are RCA, GE, Collins, Hallicrafters, the Army, Navy, Air Force and a host of others.

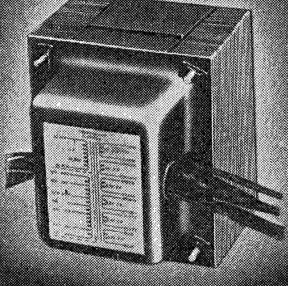


MEET ALL MIL SPECIFICATIONS

THORDARSON-MEISSNER is equipped to handle all MIL specifications, and has a resident government inspector on the premises. In addition, THORDARSON - MEISSNER has designed more than 50,000 different transformers for various civilian uses—and still has these active specifications on file. Because THORDARSON-MEISSNER quality controls are the most rigid in the industry — there are no finer products sold anywhere — at any price!







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IMMEDIATE DELIVERY FROM STOCK ON TRANSFORMERS & COILS

By scrupulously maintaining more than a half million dollars in stock on current catalog items, THORDARSON-MEISSNER is the only leading supplier that can make *prompt* deliveries on transformers and coils to customers anywhere.

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MT. CARMEL, ILLINOIS

TRANSFORMERS

REPLACEMENT TRANSFORMERS

OUTPUT TRANSFORMERS Receiver Replacement Type

To couple the plate or plates of the output stage to the speaker voice coil. Sec. impedance—3.5 ohms.

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-3025	$1.50	7A5, 35A5, 35C5, 50C5, 32L7, 35L6, 50B5	A	2500	50	3	1¾	1 3/16	2 1/16	⅞	A
A-3026	1.50	6V6, 7C5, 25AC5, 35A5, 35B5, 35L6	A	5000	40	3	1¾	1 3/16	2 1/16	⅞	A
A-2927	1.60	Single 1C5-G, 1G5-G, 1G5, 1S4, 3Q4, 3Q5, 3S4, 6A4	A	8000	20	3	1½	1⅜	1⅞	1	B
A-2928	1.75	Single 2A3, 6A3, 6B4, 6Y6, 25AC5, 25B6, 25N6, 25L6, 35A5, 35L6, 50L6, 48, 50B5, 35B5, 50A5	A	2000	60	5	2	1⅜	2⅜	1¼	A
A-3018	2.75	Single 6A3, 6L6, 6Y6, 7A5, 12A5, 25A6, 25B6, 25C6, 25L6, 50, 50A5, 50B5, 50C5, 50L6	A	3500	60	8	2⅜	1⅝	2 13/16	1½	A
A-2930	1.80	Single 6V6, 7C5, 12A, 12A5, 25A6, 25A7, 35A5, 35L6, 31, 45, 50, 59	A	5000	40	5	2	1⅜	2⅜	1¼	A
A-3019	2.75	Single 6L6, 6V6, 6AQ5, 6AS5, 7C5, 25A6, 35A5, 35L6, 50	A	5000	50	8	2⅜	1⅝	2 13/16	1½	A
A-2935	3.60	PP 6L6	A	5000 c.t.	150	18	2 13/16	2	3¼	1⅝	A
A-2931	1.80	Single 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5, 20, 31, 42, 47, 50, 6V5	A	7000	30	5	2	1⅜	2⅜	1¼	A
A-3020	2.75	Single 2A5, 6AC5, 6AD7, 6AR5, 6B5, 6F6, 6K6, 6N6, 6Y7, 7B5, 12A6, 14A5, 41, 47	A	7000	40	8	2⅜	1⅝	2 13/16	1½	A
A-2932	1.80	Single 1C5, 1Q5, 3C5, 6A4, 6G6, 6N7, 6R7, 12A, 38, 41, 49, 3V4	A	10000	30	5	2	1⅜	2⅜	1¼	A
A-2938	2.50	Single 19, 1G6, 1J6 PP 1H4, 30, 49	B	10000 c.t.	40	5	2	1⅜	2⅜	1¼	A
A-2936	2.88	PP 6AC5 PP 6V6, 7C5	B AB_1	10000 c.t.	75	10	2⅜	1⅝	2 13/16	1½	A
A-2933	2.20	Single 1D8, 7B5, 6K6, 6G6	A	12000	10	5	2	1⅜	2⅜	1¼	A
A-3021	3.60	PP2A5, 6E6, 6K6 PP6AD7, 47, 49 Single 6Y7, 6Z7, 79	A B B	14000 c.t.	35	12	2 13/16	2	3¼	1⅝	A
A-2934	1.85	Single 1D8, 1F4, 1F5, 1J5, 1T5, 6V7, 12A7, 85	A	15000	10	5	2	1⅜	2⅜	1¼	A
A-2937	2.40	Single 1A5, 1N6, 6V7, 85 PP 1E7, 1J5, 6G6, 3A4, 3V4	A	25000 c.t.	10	5	2	1⅜	2⅜	1¼	A
A-3017	2.50	PPIA5, IAC5, IN6, ILA4	A	50000 c.t.	10	5	2	1⅜	2⅜	1¼	A

FILTER TAPPED OUTPUT TRANSFORMERS Pri. has 3% and 6% Humbucking Taps Sec. Impedance 3-4 ohms

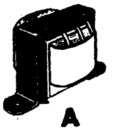
Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-3031	$2.20	Single 2A3, 6A3, 7A5, 25L6, 35A5, 35B5, 35L6, 45, 50B5, 50L6	A	3000	50	5	2	1⅜	2⅜	1¼	A
A-3032	2.20	Single 6V6, 6B5, 7C5, 6F6	A	6000	40	5	2	1⅜	2⅜	1¼	A

SPECIAL OUTPUT TRANSFORMERS To Couple Push Pull Plates to Line or Voice Coil Sec. Impedance 2-4-8-15-250-500 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-3027	$6.60	PP2A5, 6V6, 7C5, 19, 6F6 PP1H4G, 1J6, 6AC5, 49	A AB_1 B	10000 c.t.	45	15	2 13/16	2	3¼	1¾	F
A-3028	7.50	PP6L6 PP2A3	A_1 AB_1	5000 c.t.	70	20	3⅛	2 3/16	3 11/16	2	F

All prices subject to trade discount, and change without notice.

Products of Merit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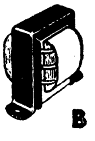
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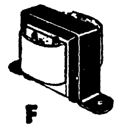
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TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

TRANSFORMERS

VERTICAL OUTPUT TRANSFORMER

Type No.	List Price	Turns Ratio Primary to Secondary	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg. Type
★A-3035	$6.00	10:1	1 19/32x2	3 1/8	2 11/16	2 1/2	EV
★A-3036	4.00	10:1	2 13/16	2	3 1/4	2	A
★A-3037	4.00	11.4:1*	2 13/16	2	3 1/4	1 5/8	A
★A-3038	5.50	10:1	3 1/8	2 1/4	3 11/16	2 1/4	A
★A-3039	5.50	18:1*	3 1/8	2 1/4	3 11/16	2 1/8	A
★A-3080	6.00	25:1, 50:1	3 1/8	3	3 9/16	2 1/4	B
★A-3081	6.00	30:1, 50:1*	3 1/8	2 1/4	3 11/16	2 1/4	A

★Indicates TV Replacements. *Auto Transformer.

DUAL PRIMARY OUTPUT TRANSFORMERS

For Use with AC-DC Battery Portable Receivers—Sec. Impedance 3-4 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-3029	$2.20	Single 25AC5, 25B6, 25L6, 25N6, 35A5, 35B5, 35L6, 50A5, 50B5, 50L6 OR Single 1S4, 1Q5, 3Q4, 3Q5, 3V4	A A	2000 or 6000	60 or 10	5	2	1 3/8	2 3/8	1 1/4	A
A-3030	2.20	Single 25AC5, 25B6, 25L6, 25N6, 35A5, 35L6, 50A5, 50B5, 50L6 OR Single 1S4, 1Q5, 3Q4, 3Q5, 3V4	A A	2000 or 10000	60 or 10	5	2	1 3/8	2 3/8	1 1/4	A

UNIVERSAL OUTPUT TRANSFORMERS

To Provide Correct Coupling Between a Variety of Output Tubes and Any Speaker Voice Coil

Type No.	List Price	Tube	Ohms Impedance Pri.	Sec.	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-2900	$2.60	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	35	4	2	1 3/8	2 3/8	1 1/4	F
A-2901	2.75	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	40	8	2 3/8	1 5/8	2 13/16	1 1/2	F
A-2902	2.75	Single	1500-2000-4000-5000-7000-10000	.1 to 40	55	10	2 3/8	1 5/8	2 13/16	1 1/2	F
A-2903	2.50	Single	2000-4500-7000-10000	3.2	30	4	2	1 3/8	2 3/8	1 1/4	F
A-2904	3.75	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	40	18	2 3/8	2 1/4	2 7/8	1 7/8	G
A-2905	5.25	Single or Push-pull	3000-5000-7000-8000-10000 c.t.	.17 to 32	70	24	3 1/8	2 1/4	3 11/16	2 1/8	F
A-2998	2.50	Single	3500-5000-7000-10000	3.2	35	3	1 3/4	1 1/8	2 1/8	1 1/8	F
A-2999	2.65	Single	12000-15000-18000-25000	3.2	10	3	1 3/4	1 1/8	2 1/8	1 1/8	F

HEAVY DUTY OUTPUT TRANSFORMERS

High Level Type to Couple to Line or Speaker. Sec. Impedance: 4-8-15-250-500 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-3127	$ 6.00	Single 6L6, 2A3, 6A3, 6Y6	A	2500	80	8	3 1/8	2 5/8	2 1/2	D
A-3128	10.00	PP6V6, 6F6	AB_1	8000 c.t.*	50	14	3 1/2	2 15/16	3 1/8	D
A-3129	10.00	PP6L6	AB_1	4300 c.t.*	95	25	3 1/2	2 15/16	3 1/8	D
A-3130	10.50	PP6L6	AB_1	6600 c.t.*	80	34	3 7/8	3 3/16	3 3/8	D
A-3131	8.50	PP6L6, 6Y6, PP2A3, 6A3, 6B4, 45, PP6N7, 46	A AB B	5000 c.t.	80	30	3 1/2	2 15/16	3 1/8	D
A-3132	8.50	PP6F6, 2A5, 7C5, Single 6N7, 6A6	AB_2 B	10000 c.t.	40	25	3 1/2	2 15/16	3 1/8	D
A-3133	13.75	P.P. Par. 6L6, P.P. 807	AB_1	3300 c.t.	240	55	4 5/8	3 13/16	4	D†

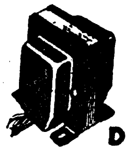
* 10% Feedback Winding. † Mtg. Centers 3 x 2 13/16.

OUTPUT TRANSFORMERS—HIGH FIDELITY TYPE

Frequency Response ± 1 DB 30-20000 Cycles

A-3100	$18.00	PP2A3, 6A5G, 275A, 6A3, 6L6, etc.	5000 and 3000 c.t.	Sec. 4-8-16	20	3 7/8	3 3/16	3 5/8	D
A-3101	18.00	PP6F6, 6L6, 6V6, etc.	10000 and 6600 c.t.		20	4 1/4	3 1/2	3 7/8	D

All prices subject to trade discount, and change without notice.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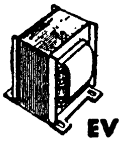
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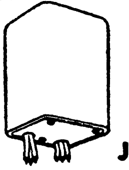
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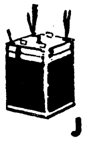
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Products of Merit

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Since 1924
FINE RADIO PARTS

TRANSFORMERS

UNIVERSAL LINE TRANSFORMERS To Couple Various Line Impedances to a Voice Coil

Type No.	List Price	Ohms Impedance		Watts	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2906	$3.00	500-1000-1500-2000	3.2, 6-8	10	2 3/8	1 5/8	2 13/16	1 1/2	F
A-2907	5.00	500-1000-1500-2000	3.2, 6-8	18	2 3/8	2 1/4	2 7/8	1 7/8	G
A-2908	5.25	500-1000-1500-2000	6-8, 16	24	3 1/8	2 1/4	3 11/16	2 1/8	F
A-2909	2.75	45-50	3.2, 6-8	8	2	1 5/8	2 13/16	1 1/2	G
A-3005	2.10	500	3.2, 6-8	5	2	1 3/8	2 3/8	1 1/4	A

For Use With Constant 70.7V. Line as Recommended by the RMA. Rated Power is Furnished on Lowest Tap. Other Taps Provide Reduction in Power in Steps of 3DB.

A-3013	$3.00	1000-2000-4000-8000-16000	3.5, 7	5	2	1 5/16	2 3/8	1 1/2	F
A-3014	3.60	500-1000-2000-4000-8000	4-8-16	10	2 3/8	1 5/8	2 13/16	1 1/2	F
A-3015	5.25	275-550-1100-2200-4400-8800	4-8-16	18	2 3/8	2 1/4	2 7/8	1 7/8	G
A-3016	6.25	210-420-840-1680-3360-6720	4-8-16	24	3 1/8	2 1/4	3 11/16	2 1/8	F

TUBE TO LINE TRANSFORMERS For Coupling Single or Push-Pull Plates to Line or Mixer

Type No.	List Price	Ohms Impedance		Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2925	$4.75	20000 c.t.	500/125	10	2 13/16	2	3 1/4	1 5/8	A
A-2926	4.75	20000 c.t.	200/50	10	2 13/16	2	3 1/4	1 5/8	A
†A-3023	5.00	5000-10000-20000 c.t.	500/333/200/125/50	15	2 13/16	2	3 1/4	1 3/4	F
†A-3024	11.00	5000-10000-20000 c.t.	500/333/200/125/50	50	2x1 11/16	3 3/16	2 5/8	2 3/4	DL

†20,000 ohm only center tapped.

INPUT TRANSFORMERS For Coupling Microphone or Line to Single or Push-Pull Grids. Static Shielded.

Type No.	List Price	Ohms Impedance		Turns Ratio	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2923	$2.75	3.2	50000	1:125	2	1 3/8	2 3/8	1 1/4	A
A-2918	4.25	100	400000 c.t.	1:64	2 13/16	2	3 1/4	1 5/8	A
A-2919	4.25	200/50	100000	1:22	2 13/16	2	3 1/4	1 5/8	A
A-2924	4.75	500/125	100000 c.t.	1:14	2 13/16	2	3 1/4	1 5/8	A

INTERSTAGE TRANSFORMERS To Couple a Single Plate to a Single Grid

Type No.	List Price	Ohms Impedance		Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.				H.	W.	D.	
A-2910	$2.75	10000	90000	3:1	10	2	1 3/8	2 3/8	1 1/4	A
A-2911	2.75	10000	90000	3:1	10	2 3/8	1 5/8	2 13/16	1 1/2	A

To Couple a Single Plate to Push-Pull Grids

A-2914	$2.75	10000	90000 c.t.	3:1	10	2	1 3/8	2 3/8	1 1/4	A
A-2915	3.00	10000	90000 c.t.	3:1	10	2 3/8	1 5/8	2 13/16	1 1/2	A
A-2916	3.60	10000	90000 c.t.	3:1	10	2 13/16	2	3 1/4	1 5/8	A

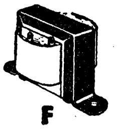
To Couple Push-Pull Plates to Push-Pull Grids

A-2912	$4.25	10000 c.t.	90000*	3:1	10 per side	2 13/16	2	3 1/4	1 5/8	A
A-2913	3.60	20000 c.t.	20000 c.t.	1:1	10 per side	2 3/8	1 5/8	2 13/16	1 1/2	A
A-2917	4.25	20000 c.t.	45000 c.t.	1.5:1	10 per side	2 13/16	2	3 1/4	1 5/8	A

*Split secondary.

All prices subject to trade discount, and change without notice.

Products of Merit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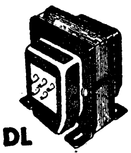
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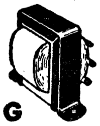
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TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

MERIT
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FINE
RADIO
PARTS

TRANSFORMERS

POWER TRANSFORMERS[1] Receiver Replacement Type — Primary for 115 V., 60 Cy. Leads R.M.A. Color Coded—Mtg. Fig. C

Type No.	List Price	H. V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Dimensions		
		Volts	D.C. M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.
*P-3045 •	$ 4.65	120	50			6.3	2	3⅛	2 3/16	2⅝	2
*P-3046 ▲	3.00	150	25	....	....	6.3 c.t.	.5	2	2	2½	1¾
P-3047	5.50	240-240	50			6.3	2.5	2 x 2½	2½	3	2
P-3048	6.50	260-260	90			6.3	4.7	2 x 2½	2½	3	3 3/16
P-2949	6.00	240-240	40	5	2	6.3 c.t.	2	2 x 2½	2½	3	2½
P-2958	6.00	240-240	50	5	2	6.3	2.6	2 x 2½	2½	3	3
P-3051	7.70	260-260	70	5	2	6.3	3	2 x 2½	2½	3	3
P-3052	8.50	280-280	90	5	2	6.3	5	2¼ x 2 13/16	2 13/16	3⅜	3½
P-2957	7.25	350-350	50	5	2	6.3 c.t.	2.6	2¼ x 2 13/16	2 13/16	3⅜	3
P-2966†	8.00	350-350	70	5	3	2.5 c.t. 2.5 c.t.	9 3.5	2¼ x 2 13/16	2 13/16	3⅜	3⅝
P-2967	10.00	350-350	90	5	3	2.5 c.t.	12.5	2½ x 3⅛	3⅛	3¾	4 1/16
P-2968	12.50	400-400	110	5	3	2.5 c.t. 2.5 c.t.	15 3.5	3 x 3¾	3¾	4½	3 13/16
P-2950	6.25	325-325	40	5	2	6.3 c.t.	2	2 x 2½	2½	3	2⅞
P-2951	7.25	325-325	70	5	3	6.3 c.t.	3.5	2 x 2½	2½	3	3⅛
P-2952	8.00	350-350	90	5	3	6.3 c.t.	3.5	2¼ x 2 13/16	2 13/16	3⅜	3¾
P-2953	9.25	350-350	120	5	3	6.3 c.t.	4.7	2½ x 3⅛	3⅛	3¾	3 13/16
P-2954	12.00	375-375	150	5	3	6.3 c.t.	5	2½ x 3⅛	3⅛	3¾	4 5/16
P-2955	14.00	400-400	200	5	3	6.3 c.t.	5	3 x 3¾	3¾	4½	4⅛
P-2956	17.50	435-435 (80-volt Bias Tap)	250	5 2.5	3 10	6.3 c.t. 6.3 or 5	3 3	3 x 3¾	3¾	4½	4¾
★P-3079	14.00	140 tap 117	300			6.3 6.3 6.3	9 2 1	3 x 3¾	3¾	4½	3¾
★P-3071‡	22.50	360-360	180	5	3	6.3	9	2¾ x 3 7/16	3 7/16	4⅛	4 9/16
★P-3072	21.25	360-360	180	5	3	6.3	9	2¾ x 3 7/16	3 7/16	4⅛	4 5/16
★P-3069‡	22.50	350-350	225	5	3	6.3 6.3	10 2.7	3 x 3¾	3¾	4½	4¼
★P-3070	21.25	350-350	225	5	3	6.3 6.3	10 2.7	3 x 3¾	3¾	4½	4
★P-3077	17.50	300-300	250	5	3	6.3	9	3 x 3¾	3¾	4½	4¼
★P-3059	25.00	360-360	250	5 5	2 3	6.3 6.3	2.7 9	3 x 3¾	3¾	4½	5⅛
★P-3063	22.50	360-360	250	5	3	6.3 6.3 5	9 1.2 2	3 3/16 x 4 1/16	3 13/16	4⅝	5½
★P-3078	22.50	360-360	275	5	3	6.3 6.3 6.3 or 5	9 1.5 2.7	3 x 3¾	3¾	4½	4¾
★P-3061	27.50	362-362	295	5	6	12.6 c.t. 5	5 2	3 3/16 x 4 1/16	3 13/16	4⅝	6⅝
★P-3073‡	27.50	† 322-322 205-205	180 70	5	3	6.3 6.3	10 2.7	3 x 3¾	3¾	4½	5
★P-3066	25.00	† 375-375 325-325	170 130	5 5 5	3 3 2	12.6 c.t. 6.3	5 2.6	3 x 3¾	3¾	4½	5⅜
★P-3067	25.00	† 400-400 212-212	220 90	5 5 5	3 3 2	6.3 6.3	10 2.6	3 x 3¾	3¾	4½	5⅜
★P-3076	23.00	† 270-270 180-180	300 200	5	3	6.3 6.3	6.5** 6.5**	3 x 3¾	3¾	4½	5

* For use with Half-Wave Rectifier. † Replaces P2965.
‡ Socket Type. See Figure CS.o
[1] All TV Powers are Fully Flux and Static Shielded.
• Type A Mtg.
▲ Shielded to meet Underwriters approval for pre-amp use. Mtg B.

	P-3066	P-3067	P-3073	P-3076
†Max. MA High Tap Only	320	300	220	435
Max MA Low Tap Only	340	340	325	500

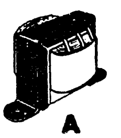
**Can be used in series for 12.6 V.

REPLACEMENT TYPE FILTER CHOKES Inductance Ratings are at 10 V. 60 cy. with Rated Current Flowing as Recommended by the R.M.A.

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Mtg. Centers	Dimensions			Mtg.
							H.	W.	D.	
★C-2973	$1.55	1.5	10	95	1500	1¾	1 3/16	1 7/16	1	A
★C-2994	2.00	1.5	200	90	1500	2⅜	1⅝	2 13/16	1⅝	A
C-2974	3.85	2.0	200	50	1500	2 13/16	2	3¼	1⅝	A
C-2977	2.20	4.5	50	200	1500	2⅜	1⅝	2 13/16	1½	A
C-2975	1.80	5.5	50	330	1500	2	1 5/16	2⅜	1⅛	A
C-2976	1.80	8	40	500	1500	2	1⅜	2⅜	1¼	A
★C-2995	2.75	8.0	100	375	1500	2 13/16	2	3¼	1⅝	A
C-2981	2.20	8.5	50	400	1500	2⅜	1⅝	2 13/16	1½	A
C-2985	2.20	20	15	900	1500	2⅜	1⅝	2 13/16	1½	A
C-2987	2.50	16	50	550	1500	2 13/16	2	3¼	1⅝	A
C-2990	3.30	15	75	400	1500	3⅛	2¼	3 11/16	2⅛	A
★C-2991	4.40	2	250	53	2000	3 5/16	2 3/16	3 11/16	2	A
C-2993	4.40	10.5	110	220	1500	3 9/16	2 9/16	4	2¼	A
★C-2996	3.30	1.0	300	60	1500	3⅛	2¼	3 11/16	2	A

★Indicates TV replacements.

All prices subject to trade discount, and change without notice.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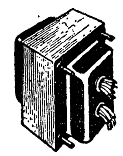
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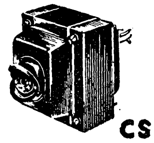
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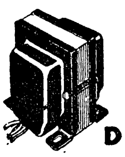
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Products of Merit

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

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TRANSFORMERS

POWER TRANSFORMERS[1]

Receiver Replacement Type—Primary for 115 V., 60 Cy. Leads R.M.A. Color Coded
Fully Shielded Upright Mounting Type—Mtg. Fig. D

Type No.	List Price	H. V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Dimensions		
		Volts	D.C. M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.
P-3147	$5.50	240-240	50	-------	-------	6.3	2.5	2 x 1 9/16	3 1/8	2 5/8	2 1/2
P-3148	6.50	260-260	90	-------	-------	6.3	4.7	2 x 2 3/16	3 1/8	2 5/8	3 1/4
P-3149	6.00	240-240	40	5	2	6.3 c.t.	2	2 x 1 11/16	3 1/8	2 5/8	2 5/8
P-3150	6.25	325-325	40	5	2	6.3 c.t.	2	2 x 1 7/8	3 1/8	2 5/8	2 13/16
P-3154	8.25	275-275	50	5	2	6.3	2.6	2 x 2 1/16	2 1/2	4 5/8	2 1/16
P-3160	7.25	350-350	50	5	2	6.3 c.t.	2.6	2 1/4 x 1 7/8	3 1/2	2 15/16	3 1/16
P-3151	7.25	325-325	70	5	3	6.3 c.t.	3.5	2 1/2 x 1 15/16	3 7/8	3 3/16	3 3/16
P-3152	8.00	350-350	90	5	3	6.3 c.t.	3.5	2 3/4 x 2 5/16	2 1/2	4 5/8	2 5/16
P-3153	9.25	350-350	110	5	3	6.3 c.t.	4.5	3 x 2 1/4	4 5/8	3 13/16	3 7/16
P-3173	11.25	350-350	150	5	3	6.3	6.5	2 1/2 x 2 7/8	3 7/8	3 1/4	4 1/8
P-3155	14.00	400-400	200	5	3	6.3 c.t.	5	3 x 3 3/16	4 5/8	3 13/16	4 1/4
P-3156	17.50	435-435	250	5	3	6.3 c.t.	3	3 x 3 13/16	4 5/8	3 13/16	4 7/8
		(80-volt Bias Tap)		2.5	10	6.3 or 5	3				
★P-3165	18.00	350-350	200	5	2	6.3	.6	3 x 3 7/8	4 5/8	3 3/4	5
				5	3	6.3	7				
★P-3169	27.00	† 390-390	160	5	3	6.3	8	3 x 3 5/8	4 5/8	3 13/16	4 3/4
		325-325	130	5	3	6.3	4				
				5	2						
★P-3166	30.00	400-400	300	5	3	12.6 c.t.	10	3 1/2 x 4 1/4	5 1/2	4 5/8	5 5/16
				5	6						
★P-3174	40.00	† 450-450	240	5	3	6.3	6	3 5/8 x 3 7/8	5 15/16	4 7/16	5 5/8
		325-325	200	5	3	6.3	6				
				5	3	6.3	2.6				
★P-3170	10.50	1750	2	2.5	2	6.3	.9	2 x 1 15/16	3 1/8	2 5/8	2 7/8
						or 2.5	2				
★P-3171	14.00	2500	5	2.5	2	6.3	3	2 1/2 x 2 3/16	3 7/8	3 3/16	3 3/8
						or 2.5	3				

[1] All TV Powers are Fully Flux and Static Shielded.

†Max. M. A. High Tap Only P-3169: 270 P-3174: 400
Max. M.A. Low Tap Only P-3169: 290 P-3174: 430

FILAMENT TRANSFORMERS

For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles

Type No.	List Price	Sec. Volts	Sec. Amp.	Insulation Volts	Dimensions			Mtg.
					H.	W.	D.	
P-2939	$ 3.75	2.5 c.t.	5	2500	2	3 1/4	1 5/8	A
P-2940	5.75	2.5 c.t.	10	7500	3	3 5/8	2 1/4	B
P-3042	6.25	2.5 c.t.	10	10000	2 7/8	3 3/8	2 3/4	EH
P-3040	4.25	5 c.t.	3	2500	2	3 1/4	2 1/8	A
P-2941	5.00	5 c.t.	6	2500	2 1/4	3 11/16	1 7/8	A
P-2942	11.00	5 c.t.	15	10000	4 1/2	3 3/4	3 1/2	EV
P-2943	11.00	5 c.t.	30	2500	3 7/8	3 1/8	3	DL
P-2944	2.80	6.3 c.t.	1	2500	1 5/8	2 13/16	1 1/2	A
★P-3074	3.60	6.3	1.2	5000	2	3 1/4	2	A
P-2945	3.60	6.3 c.t.	2	2500	2	3 1/4	1 5/8	A
P-2946	4.25	6.3 c.t.	3	2500	2	3 1/4	1 7/8	A
P-2947	5.50	6.3 c.t.	6	2500	3	3 5/8	2 1/4	B
P-2948	7.50	6.3 c.t.	10	2500	3 7/16	2 13/16	2 7/8	EV
P-2960	5.00	7.5 c.t.	4	2500	2 5/8	3 1/8	1 7/8	B
P-2961	6.90	6.3 c.t.	3	2500	3	3 5/8	2 1/4	B
		6.3 c.t.	3					
P-3041	6.90	5 c.t.	3	2500	2 1/2	4	2 1/8	A
		6.3 c.t.	3.6					
P-3143	8.50	7.5 c.t.	8	2500	3 1/2	2 15/16	3 1/8	D
P-3145	8.50	10 c.t.	5	2500	3 1/2	2 15/16	3	D
P-3146	10.00	10 c.t.	10	3000	3 7/8	3 3/16	3 5/8	D
P-2959	4.50	12.6 c.t.	2	2500	2	3 1/4	1 7/8	A
P-2962	4.50	25.2	1	2500	2	3 1/4	1 7/8	A
P-2963	10.00	12.6	7	2500	3 1/8	2 5/8	3 1/2	D
		or 25.2	3.5					

TV COMPONENTS

TV ISOLATION FILAMENT TRANSFORMER

Isolates damper tube from other filaments. Secondary insulated for 5000 V.

Type No.	List Price	Pri. Volts	Sec.		Mtg. Centers	Dimensions			Mtg.
			Volts	Amps.		H	W	D	
P-3097	$3.70	6.3	12.6	1	2 13/16	1 7/8	3 1/4	2	A
			or 6.3	1.2					

TV AUTOTRANSFORMER

Provides TV picture tube booster voltage.

Type No.	List Price	Input Volts	Output		Mtg. Centers	Dimensions			Mtg.
			Volts	Amps.		H	W	D	
P-3098	$2.75	6.3	12.6 taps at 9.45–6.3	1	2 3/8	1 5/8	2 13/16	1 1/4	A

TV CONVERSION—REPLACEMENT—IMPROVEMENT KIT

KIT No. 1000	$25.25	1 EA. HVO-7, MDF-70, MWC-1 CONVERSION AND REPLACEMENT DATA INCLUDED

BLOCKING OSCILLATOR TRANSFORMERS

Type No.	List Price	Turns Ratio Primary to Secondary	Mtg. Centers	Dimensions			Mtg. Type
				H.	W.	D.	
★A-3000 Vertical	$2.50	1:4.2	2	1 3/8	2 3/8	1 1/4	A
★A-3001 Vertical	3.75	†	2 3/8	1 5/8	2 13/16	1 1/2	A
★A-4000 Vertical	3.25	1:4.2	1 15/16	1 3/4	2 5/16	1 1/2	J
★A-3002 Horizontal	2.75	2:1	2	1 3/8	2 3/8	1 1/4	A
★A-3003 Vertical	2.25	1:42	1 3/4	1 3/16	2 1/8	7/8	A
★A-4002 Horizontal	3.75	2:1	1 15/16	1 3/4	2 5/16	1 1/2	J
★A-4003 Vertical	3.00	1:4.2	1 3/16	1 9/16	1 3/16	1 3/16	JL

† Pri./Sec. 1—1:2.08, Pri./Sec. 2—1:1.

TRANSFORMERS

TV COMPONENTS

HORIZONTAL OUTPUT AND HI-VOLTAGE TRANSFORMERS

Type No.	List Price	Picture Tube	Equivalent Type	Mtg. Type
HVO-3	$ 8.00	7DP4—10 BP4 Etc.	RCA 211T1—211T3	M
HVO-5	10.00	16 AP4 Etc.	RCA 211T5	M
HVO-7	12.00	10" to 24"	GE 77J1 plus AGC-AFC	N
HVO-X7•	6.00	10" to 24"	GE 77J1 plus AGC-AFC	N
HVO-8	6.50	10" to 24"	Air Core	T
HVO-9	10.00	17" to 24"	RCA 230T1	Exact Replac.
HVO-10	10.00	10" to 21"	Fast retrace plus AGC-AFC	N
HVO-11	9.00	10" to 19" Rnd.	Zenith under chassis	Exact Replac.

•"CORONA-FREE" Insulation.

WIDTH OR LINEARITY COILS

Type No.	List Price	Range	Resistance-Ohms.	Equivalent Type	Mtg. Type
MWC-1‡	$2.25	4-29 M.H.	28.3—29.4	None	O
MWC-2	1.10	.2—4.0 M.H.	7.15	RCA 208R1, 201R1, 201R4	O
MWC-3	1.90	20-60 M.H.	47.5	None	O

‡Secondary provided for AGC-AFC.

FOCUS COILS

Type No.	List Price	Tube Size	Dimensions–Depth	Equivalent Type	M.A.	DC. Res. Ohms	Mtg. Type
★MF-1•	$8.25	10"–12"	1"–15/32"	202D1	100	247	P
★MF-2	11.00	16"	1"–3/16"	202D2	100	470	S
★MF-3•	8.25	10"–12"	1"–15/32"		100	360	P
★MF-4	11.00	14"–20"	1"–3/16"		75	1000	S
★MF-5	11.00	14"–20"	1"–3/16"		75	1500	S

•Equipped with lugs on each side and universal mtg. plate.

DEFLECTION YOKES

Type No.	List Price	Tube Size	Inductance		Equivalent RCA Type	Def. Angle
			Horizontal	Vertical		
★MD-12	$9.00	10"–16"	8 mh. ±10%	48 mh. ±10%	201D1–D3–D12	53°
★MD-13	9.00	10"–16"	30 mh. ±10%	48 mh. ±10%		53°
★MDF-30▲	10.00	10"–24"	30 mh. ±10%	3 mh. ±10%	211D1	70°
★MDF-70▲	10.00	12"–24"	10 mh. ±10%	45 mh. ±10%		70°
★MDF-71▲	10.00	12"–24"	30 mh. ±10%	50 mh. ±10%		70°

INDUSTRIAL—AMATEUR

OUTDOOR TYPE UNIVERSAL LINE TRANSFORMER

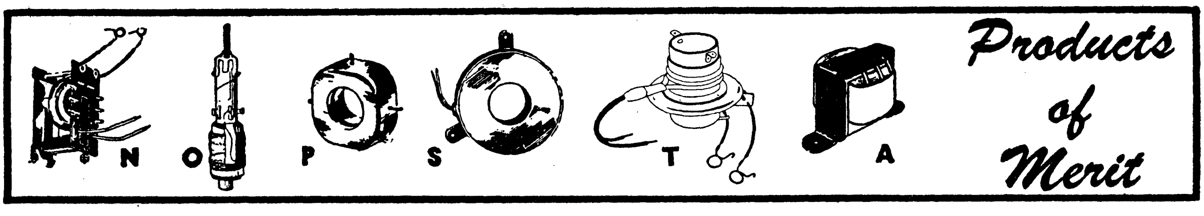
To Couple Various Line Impedances to a Voice Coil
Universal Mounting Bracket

Type No.	List Price	Ohms Impedance		Watts	Mtg. Center Case	Dimensions			Mtg. Type
		Primary	Sec.			H.	W.	D.	
A-4040	$11.00	250-500-1000-1500-2000	4-8-16	8	2¾ x 3⅞	4¼	4 7/16	3 9/16	JO
A-4041	11.75	250-500-1000-1500-2000	4-8-16	12	2¾ x 3⅞	4¼	4 7/16	3 9/16	JO
A-4042	16.25	250-500-1000-1500-2000	4-8-16	25	2¾ x 3⅞	4¼	4 7/16	3 9/16	JO
A-4043	11.75	45-50	4-8	12	2¾ x 3⅞	4¼	4 7/16	3 9/16	JO

DRIVER TRANSFORMERS To Couple Driver Plate to Amplifier Grids

Type No.	List Price	Driver	Output	Ratio, Pri. to ½ Sec.	Class	Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-2920	$3.00	6C5, 1H4, 30, 49	Single 1J6, 19, Push-pull 30, 49	2.5:1	B	10	2⅜	1⅝	2 13/16	1½	A
A-2921	4.25	6F6, 2A5, 42	PP6F6, 2A5, 6L6	1.7:1, 1.5:1, 1.3:1	AB	35	2 13/16	2	3¼	1⅝	A
A-2922	5.00	6A6, 6C5 6N7, 46	Single 6A6, 6N7, Push-pull 46	5:1, 4:1, 3:1, 2.5:1	B	20	2 13/16	2	3¼	1⅝	A
A-3120	12.75	500 ohm line	Class B Grids 15 Watt Capacity	1:.75, 1:.85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3	B	------	2 3/16 x 2	3 3/16	2⅝	3⅜	DL
A-3121	14.50	500 ohm line	Class B Grids 30 Watt Capacity		B	------	2¼ x 2¼	3 9/16	3	3¾	DL
A-3123	6.00	PP6A6, 53, PP6C5, 6N7, 6J5	PP6N7, 6A6, 53, PP6L6, T21	5:1*	B AB_2	15	2 x 1 11/16	3⅛	2⅝	2⅝	D
A-3124	6.00	6F6, 46, 59, 2A5, 42	PP46, 59, PP6L6, 807	2.2:1	B AB_2	30	2 x 1 11/16	3⅛	2⅝	2⅝	D
A-3125	8.50	6F6, 2A5, 47, 42	PP6L6	1.4:1*	AB_2	40	2¼ x 2	3½	2 15/16	3⅛	D
A-3126	6.90	PP2A3, 6L6, 45, 6V6, 6F6	PP800, 203A, 811, 812, 812A, RK18, RK58, T20, TZ40, T55, 807, 809, 838, 845, 35, 100TH	2:1	B	40	2 x 1 11/16	3⅛	2⅝	2⅝	D

★Indicates TV Replacement. *Split secondary. ▲Cosine-Ferrite core. *All prices subject to trade discount, and change without notice.*



TRANSFORMERS

MODULATION TRANSFORMERS For Specific Applications

Type No.	List Price	Output Tubes	Ohms Impedance		Max. M.A.		Watts	Dimensions			Mtg.
			Pri.	Sec.	Pri.	Sec.		H.	W.	D.	
A-3008	$3.60	PP6AQ5, 6V6, 6F6, Single 6A6, 6N7, 53	10000 c.t.	4000-5000 7500-10000 12000	70	60	10	2¼	2⅞	2⅛	B
A-3109	8.50	PP2A3, 6A3, 6B4, 6L6, 45, 46, 59	6000 c.t. 3800 c.t. 3000 c.t.	5000-8000 10000	80	100	25	3⅛	2⅝	2¾	D
A-3110	14.50	PP6L6, 807, RK41, HY56, HY61, HK24	6600-3800 c.t.	4000-5000 7500-10000 12000	175	150	60	4¼	3½	3¾	D
A-3113	22.00	PP 800, 809, TZ-40, T-55, HK-54, RK-31, HY-40, 811A, 807, 812A, 5514	15000-6900c.t.	3000-4000 5000-6000	250	300	175	4⅝	3¹³⁄₁₆	5⅝	D

UNIVERSAL MODULATION TRANSFORMERS Tapped Series-Parallel Coils Provide a Wide Range of Modulation Ratios

Type No.	List Price	Pri. Impedance	Pri. M.A. per Side	Sec. Impedance	Max. Sec. M.A. ‡	Watts	Dimensions			Mtg.
							H.	W.	D.	
A-3104	$10.75	2000-20000	50	2000-20000	50/100	15	3³⁄₁₆	2⅝	2¾	DL
A-3105	16.00	2000-20000	150	2000-20000	150/300	60	3⅞	3⅛	4⅛	DL
A-3106	22.50	2000-20000	220	2000-20000	220/440	125	4⅝	3¹³⁄₁₆	4⅝	DL

‡Series/Parallel

PLATE TRANSFORMERS For Small Transmitters. DC Voltage Ratings are Approx. Values Obtained at Output of a 2 Section Choke Input Filter Using Mercury Vapor Rectifier Tubes. Pri. is for 115 V. 60 cy.

Type No.	List Price	Sec. Rms. Volts	Sec. DC Volts	DC Sec. M.A.	Dimensions			Mtg.
					H.	W.	D.	
P-3175	$10.50	550-550	400	150	3⁹⁄₁₆	3	3⅞	D
P-3157	13.75	660-660† 550-550	500 400	250	4⅝	3¹³⁄₁₆	4⅜	D
P-3158	17.00	1080-1080 500-500	1000‡ 400	125 150	4⅝	3¹³⁄₁₆	5	D
P-3159	16.50	900-900 800-800	750 600	225	4⅝	3¹³⁄₁₆	5⅛	D
P-3167	41.00	1450-1450 1175-1175	1200 1000	300	5¾	6⅛	5	EH
P-3168	52.00	2100-2100 1800-1800	1750 1500	300	5¾	6⅛	6	EH
P-4062	80.00	2900-2900 2385-2385	2500 2000	300	8½	6½	6¹⁄₁₆	H

‡For dual operation with simultaneous use of both sec. ratings. †Has 40-volt bias tap.

FILTER CHOKES For Small Transmitter and Amplifier Applications

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Dimensions			Mtg.
						H.	W.	D.	
C-3192	$5.00	15	85	325	1500	3⅛	2⅝	2⅝	D
C-3193	5.00	10	110	200	1500	3⅛	2⅝	2⅝	D
C-3194	6.00	12	150	230	1500	3½	2¹⁵⁄₁₆	3⅛	D
C-3195	8.75	15	150	180	2000	3⅞	3³⁄₁₆	3⅜	D
C-3196	7.00	5	200	80	1500	3½	2¹⁵⁄₁₆	3⅛	D

FILTER SMOOTHING CHOKES For Transmitter Power Supplies

C-3180	$6.50	10	150	210	3000	3⅛	2⅝	2¾	D
C-3181	8.00	10	200	140	3000	3½	2¹⁵⁄₁₆	3½	D
C-3182	11.00	10	250	125	3000	3⅞	3³⁄₁₆	3¾	D
C-3183	11.50	8	300	80	3000	3⅞	3³⁄₁₆	3¾	D

FILTER INPUT OR SWINGING CHOKES

C-3187	$6.50	4-16	150	210	3000	3⅛	2⅝	2¾	D
C-3188	8.00	4-16	200	140	3000	3½	2¹⁵⁄₁₆	3½	D
C-3189	11.00	4-16	250	125	3000	3⅞	3³⁄₁₆	3¾	D
C-3190	11.50	3-14	300	80	3000	3⅞	3³⁄₁₆	3¾	D

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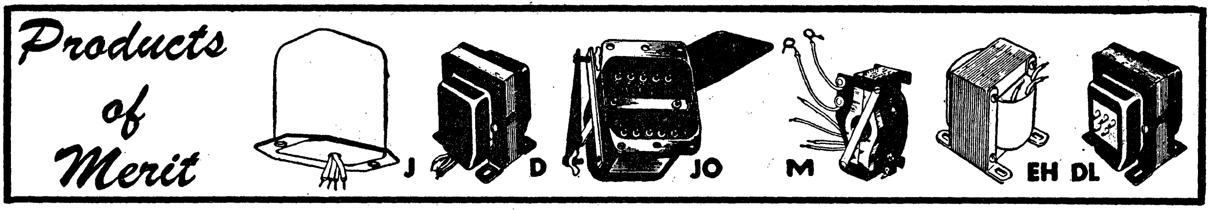

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TRANSFORMERS

VIBRATOR TRANSFORMERS For Operation From 6 V. Battery and Vibrator

Type No.	List Price	Sec. DC Volts to Filter	Sec. M.A.	Dimensions			Mtg.
				H.	W.	D.	
P-2969	$5.25	150	40	2 1/4	2 7/8	1 3/4	B
P-2970	5.75	225	40	2 5/8	3 5/16	2 1/8	B
P-2971	6.00	250	50	2 5/8	3 1/8	2 1/4	B
P-2972	6.90	260	60	3	3 5/8	2 1/8	B
P-3068	5.00	260	60	2 3/16	2 5/8	1 7/8	C
P-4071	7.50	250	50	3	2 3/8	2 3/16	JT
†P-4076	7.00	265	55	3 1/4	2 5/8	2 5/8	JG
†P-4077	7.50	280	65	3 7/8	2 1/4	2 3/8	JT
P-4078	6.90	270	60	2 5/8	2 3/16	2 3/4	JT
P-4079	8.00	270	75	3 1/32	2 3/8	2 1/2	JT

★Indicates TV Replacement. †Has Built-in Hash Filter.

All prices subject to trade discount, and change without notice.

AC-DC VIBRATOR TRANSFORMER For Operation from 6 V. Battery and Vibrator or 115 V. 60 cy. Line

Type No.	List Price	H.V. Secondary		Filament		Dimensions			Mtg.
		DC Volts	MA	Volts	Amps	H.	W.	D.	
P-3176	$15.00	300	160	6.3 or 5 6.3	3 4.5	4 5/8	3 13/16	4 1/4	D
P-3075	10.00	330	100	6.3	4	3 7/8	3 3/16	3 3/8	D

PHOTO-FLASH POWER TRANSFORMER Primary for 117 V. 60 Cy. Line or 4 V. Battery Vibrator (or Charger Winding)

Type No.	List Price	Secondary		Mtg. Centers	Dimensions			Mtg.
		AC Volts	DC M.A.		H.	W.	D.	
P-3065	$8.00	1100	1.5	2 11/16	2 5/8	3 1/8	2	B

STEP-DOWN AUTOTRANSFORMERS Input 220—250 V. 60 cy. Output 110—125 V. Pri. Cord and Plug. Sec. Receptacle.

Type No.	List Price	Output Watts	Dimensions			Mtg.
			H.	W.	D.	
P-3161	$9.75	80	3 1/2	2 15/16	3	D
P-3162	13.25	150	3 7/8	3 3/16	3 5/8	D
P-3163	17.75	250	4 5/8	3 13/16	4	D
P-3164	21.50	500	4 5/8	3 13/16	4 3/8	D
P-4065	50.00	1000	7 1/4	6 5/8	5 5/8	H

ISOLATION TRANSFORMERS Equipped with Pri. Cord and Plug—Sec. Standard Receptacles. Static Shielded

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3177	$27.50	117	105–115–125	350	5 5/16	4 1/2	5 1/4	D

ISOLATION TRANSFORMERS To Provide Isolation Between Line and Associated Circuits. Primary for 50-60 Cy. Static Shielding Between Primary and Secondary.

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3096	$ 6.90	117	117	40	3 1/8	2 5/8	2 5/8	B
P-3197	10.00	117	117	80	3 7/8	3 3/16	3 1/2	D

ISOLATION TRANSFORMERS Equipped with Line Cord and Standard Receptical

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3172	$50.00	117	117	500	5 3/8	4 5/8	6 1/2	D
P-3198	18.75	117	117	100	4 1/4	3 9/16	3 3/4	D
P-3199	35.00	117	117	250	4 5/8	3 13/16	4 7/8	D

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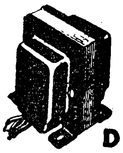
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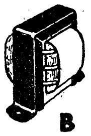
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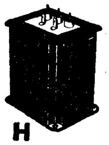
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Products of Merit

IF-RF COILS

★TELEVISION UNITS—IF Transformers—Permeability Tuned

Type No.	List Price	Function	Freq. MC.	Mtg. Centers	Dimensions	Mtg.
TV-100	$2.75	1st Pix Amp.	25.3	⅞	⅞x ⅞x2⅛	A
TV-101	2.10	2nd Pix Amp.	22.3	⅞	⅞x ⅞x2¼	A
TV-102	.80	3rd Pix Amp.	25.2	7/16 Hole	½x1½	B
TV-103	.80	4th Pix Amp. (Detector)	23.4	7/16 Hole	½x1½	B
TV-104	2.20	1st Sound (Amplifier)	21.25	⅞	⅞x ⅞x2¼	A
TV-105	2.20	2nd Sound (Amplifier)	21.25	⅞	⅞x ⅞x2¼	A
TV-106	2.60	Sound Discrim.	21.25	1⅛	1⅛x1⅛x2½	A
TV-107	2.75	Converter	21.8	⅞	⅞x ⅞x2¼	A
TV-108	2.75	Input Amp.	4.5	1 1/16	1⅛x1⅛x2⅛	A
TV-109	3.00	Sound Disc.	4.5	1 1/16	1⅛x1⅛x2⅛	A
TV-110	3.30	Sound Ratio Det.	4.5	1 1/16	1⅛x1⅛x2⅛	A
TV-111	3.30	Sound Ratio Det.	21.25	1⅛	1⅛x1⅛x2½	A
TV-112	1.00	Tunable Choke	21-25 MC	7/16	½x1½	B
TV-113	2.75	Sound Amp.	4.5	Clip	¾x ¾x2	K
TV-114	3.30	Sound Disc.	4.5	Clip	¾x ¾x2	K
TV-115	3.30	Sound Ratio Det.	4.5	Clip	¾x ¾x2	K

TRAPS—Permeability Tuned

Type No.	List Price	Function	Freq. MC.	Mtg. Centers	Dimensions	Mtg.
TV-150	$2.00	Cathode Trap*	21.25	7/16 Hole	½ O.D.x1½	B
TV-151	1.00	Sound Trap	4.5	7/16 Hole	½ O.D.x1½	B

*Includes Condenser.

HORIZONTAL "SYNC." TRANSFORMERS

Type No.	List Price	System	Mtg. Centers	Dimensions	Mtg.
TV-160	$2.75	"Sync." Lock	1 7/16	1 7/16x1 7/16x2	C
TV-161	2.00	"Sync." Guide	1 7/16	1 7/16x1 7/16x2	C
TV-162	2.50	"Sync." Freq. and Phase	1 7/16	1 7/16x1 7/16x2	C
TV-163	2.00	Ringing Coil	7/16 Hole		B

ANTENNA COUPLING TRANSFORMERS

Type No.	List Price	Impedance Ratio	Mtg.	Dimensions	Mtg.
TV-170	$2.75	52/300 or 300/52	"L" Bracket	¾x¾x1⅜	D
TV-171	2.75	72/300 or 300/72	"L" Bracket	¾x¾x1⅜	D

PEAKING COILS

Type No.	List Price	Inductance Microhenries	Color Code	Shunt Resistor	Mtg.
TV-180	$0.45	36	Black	—	E
TV-181	.45	93	Red	—	E
TV-182	.45	120	Blue	22K	E
TV-183	.45	180	White	39K	E
TV-184	.50	180	Yellow	—	E
TV-185	.50	250	Green	—	E
TV-189	.50	.8	Orange	—	E
TV-186	.50	73	—	10 meg.	E
TV-187	.50	250	—	22K	E
TV-188	.50	500	—	10 meg.	E

HIGH-PASS FILTERS

Type No.	List Price	Line Impedance	Mtg.	Dimensions	Mtg.
TV-210	$5.50	72 Ohm	L-Bracket	1 7/16x1⅞x3½	F
TV-211	5.50	300 Ohm	L-Bracket	1 7/16x1⅞x3½	F

★ IF-RF television units prefix "TV."

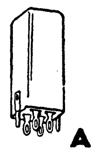
WAVE TRAPS TV-FM

Type No.	List Price	Freq. Range	Mtg. Centers	Dimensions	Mtg.
TV-220	$4.40	150-250 MC.	1 7/16	1⅜x1⅞x3⅜	D
TV-221	4.40	75-150 MC.	1 7/16	1⅜x1⅞x3⅜	D
TV-222	4.40	40- 80 MC.	1 7/16	1⅜x1⅞x3⅜	D
TV-223	4.40	20- 40 MC.	1 7/16	1⅜x1⅞x3⅜	D

HI-VOLT OSCILLATOR TRANSFORMERS

Type No.	List Price	Output Volts	Mtg. Centers	Dimensions	Mtg.
TV-230	$ 8.25	To 4000	1¼	1¼ dia. x 3¾ high	H
TV-231	13.75	To 30000	2¼	2¼ dia. x 6 high	H

Products of Merit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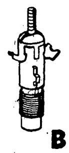
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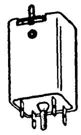
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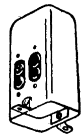
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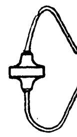
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TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

MERIT
Since 1934
FINE RADIO PARTS

IF-RF COILS

FM

IF TRANSFORMERS (Permeability Tuned)

Type No.	List Price	Description	Freq.	Mtg. Centers	Dimensions	Mtg.
FM-250	$3.30	Discriminator	10.7 MC.	1 1/16	1⅛x1⅛x2⅛	A
FM-251	2.20	Amp. Interstage	10.7 MC.	1 1/16	1⅛x1⅛x2⅛	A
FM-252	2.20	Ratio Detect.	10.7 MC.	1 1/16	1⅛x1⅛x2⅛	A
FM-253	2.75	Disc.—Min.	10.7 MC.	Clip	¾x¾x2	K
FM-254	3.30	Amp.—Min.	10.7 MC.	Clip	¾x¾x2	K
FM-255	3.30	Ratio Det.—Min.	10.7 MC.	Clip	¾x¾x2	K

ANTENNA—OSCILLATORS—RF (Slug Tuned)

Type No.	List Price	Description	Freq. MC.	Mtg. Centers	Dimensions	Mtg.
FM-280	$2.20	Antenna	88–108	7/16" Hole	½x1½	B
FM-281	2.20	RF	88–108	7/16" Hole	½x1½	B
FM-282	2.20	Osc.	88–108	7/16" Hole	½x1½	B

BROADCAST

IF TRANSFORMERS (Capacity Tuned)

Type No.	List Price	Function	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-300	$2.50	Input	175 KC	1⅜	1⅜x1⅜x2⅝	I
BC-301	2.50	Interstage	175 KC	1⅜	1⅜x1⅜x2⅝	I
BC-302	2.50	Full Wave Output	175 KC	1⅜	1⅜x1⅜x2⅝	I
BC-303	2.50	Half Wave Output	175 KC	1⅜	1⅜x1⅜x2⅝	I
BC-304	2.20	Input	262 KC	1⅜	1⅜x1⅜x2⅝	I
BC-305	2.20	Interstage	262 KC	1⅜	1⅜x1⅜x2⅝	I
BC-306	2.20	Full Wave Output	262 KC	1⅜	1⅜x1⅜x2⅝	I
BC-307	2.20	Half Wave Output	262 KC	1⅜	1⅜x1⅜x2⅝	I
BC-308	2.20	Input	455 KC	1⅜	1⅜x1⅜x2⅝	I
BC-309	2.20	Interstage	455 KC	1⅜	1⅜x1⅜x2⅝	I
BC-310	2.20	Full Wave Output	455 KC	1⅜	1⅜x1⅜x2⅝	I
BC-311	2.20	Half Wave Output	455 KC	1⅜	1⅜x1⅜x2⅝	I
BC-312	2.20	Input	1500 KC	1⅜	1⅜x1⅜x2⅝	I
BC-313	2.20	Interstage	1500 KC	1⅜	1⅜x1⅜x2⅝	I
BC-314	2.20	Full Wave Output	1500 KC	1⅜	1⅜x1⅜x2⅝	I
BC-315	2.20	Half Wave Output	1500 KC	1⅜	1⅜x1⅜x2⅝	I

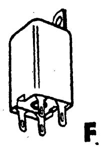
IF TRANSFORMERS (Iron Core—Capacity Tuned)

Type No.	List Price	Function	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-330	$3.30	Input	175 KC	1⅜	1⅜x1⅜x3¼	I
BC-331	3.30	Interstage	175 KC	1⅜	1⅜x1⅜x3¼	I
BC-332	3.30	Full Wave Output	175 KC	1⅜	1⅜x1⅜x3¼	I
BC-333	3.30	Half Wave Output	175 KC	1⅜	1⅜x1⅜x3¼	I
BC-334	2.75	Input	262 KC	1⅜	1⅜x1⅜x3¼	I
BC-335	2.75	Interstage	262 KC	1⅜	1⅜x1⅜x3¼	I
BC-336	2.75	Full Wave Output	262 KC	1⅜	1⅜x1⅜x3¼	I
BC-337	2.75	Half Wave Output	262 KC	1⅜	1⅜x1⅜x3¼	I
BC-338	2.75	Input	455 KC	1⅜	1⅜x1⅜x3¼	I
BC-339	2.75	Interstage	455 KC	1⅜	1⅜x1⅜x3¼	I
BC-340	2.75	Half Wave Output	455 KC	1⅜	1⅜x1⅜x3¼	I
BC-341	2.75	Full Wave Output	455 KC	1⅜	1⅜x1⅜x3¼	I

IF TRANSFORMERS (Capacity Tuned)

Type No.	List Price	Description	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-360	$2.20	Input Midget	175 KC	1⅛	1⅛x1⅛x2	I
BC-361	2.20	Interstage—Midget	175 KC	1⅛	1⅛x1⅛x2	I
BC-362	2.20	Full Wave—Midget	175 KC	1⅛	1⅛x1⅛x2	I
BC-363	2.20	Half Wave—Midget	175 KC	1⅛	1⅛x1⅛x2	I
BC-364	1.95	Input—Midget	262 KC	1⅛	1⅛x1⅛x2	I
BC-365	1.95	Interstage—Midget	262 KC	1⅛	1⅛x1⅛x2	I
BC-366	1.95	Full Wave—Midget	262 KC	1⅛	1⅛x1⅛x2	I
BC-367	1.95	Half Wave—Midget	262 KC	1⅛	1⅛x1⅛x2	I
BC-368	1.95	Input—Midget	455 KC	1⅛	1⅛x1⅛x2	I
BC-369	1.95	Interstage—Midget	455 KC	1⅛	1⅛x1⅛x2	1
BC-370	1.95	Full Wave—Midget	455 KC	1⅛	1⅛x1⅛x2	I
BC-371	1.95	Half Wave—Midget	455 KC	1⅛	1⅛x1⅛x2	I
BC-372	1.95	Output—Midget*	262 KC	1⅛"	1⅛x1⅛x2	I

*Includes output filter.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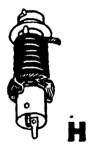
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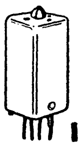
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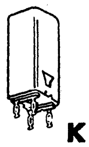
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Since 1934
FINE RADIO PARTS

IF-RF COILS

BROADCAST (Cont.)

IF TRANSFORMERS (Permeability Tuned)

Type No.	List Price	Description	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-350	$2.75	Input—Miniature	262 KC	¾	¾x¾x2	K
BC-351	2.75	Output—Miniature	262 KC	¾	¾x¾x2	K
BC-352	2.40	Input—Miniature	455 KC	¾	¾x¾x2	K
BC-353	2.40	Output—Miniature	455 KC	¾	¾x¾x2	K
BC-354	2.65	Output—Miniature*	262 KC	Clip	¾x ¾x2	K
BC-355	2.35	Output—Miniature*	455 KC	Clip	¾x ¾x2	K

*Includes output filter.

IF TRANSFORMERS—Special

Type No.	List Price	Description	Freq.	Mtg.	Dimensions	Mtg.
BC-375	$1.95	Cartwheel	455 KC	6-32 Screw	1⅜x1½	
BC-376	2.75	Std. IF (Tweet Filter)	455 KC	1⅜-Mtg. Center	1⅜x1⅜x2½	A
BC-377	4.75	AM-FM	455 KC-10.7 MC	1⁷⁄₁₆-Mtg. Center	1⁷⁄₁₆x1⁷⁄₁₆x2½	A

RF—ANTENNA—OSCILLATOR (Permeability Tuned) Univ. Replac.

Type No.	List Price	Description	Mtg.	Cond. Max.	Dimensions	Mtg.
BC-380	$2.20	Antenna	L Bracket	250–450-MMF	⅞ Dia. x 2	B
BC-381	2.20	Oscillator*	L Bracket	250–450-MMF	⅞ Dia. x 2	B
BC-382	2.20	RF	L Bracket	250–450-MMF	⅞ Dia. x 2	B
BC-383	2.75	Antenna (Shielded)	1⅜ Centers	250–450-MMF	1⅜x1⅜x2½	A
BC-384	2.75	Oscillator* (Shielded)	1⅜ Centers	250–450-MMF	1⅜x1⅜x2½	A
BC-385	2.75	RF (Shielded)	1⅜ Centers	250–450-MMF	1⅜x1⅜x2½	A

*Used with any "IF" (100 to 550 KC) Tapped Pri. and Sec.

MINIATURE (IRON CORE) TYPE K

Type No.	List Price	Description	Operating Freq. KC	Cond. Size	Dimensions	Mtg.
BC-390	$1.65	Antenna†	540–1700	365 MMF	¾x¾x2	Spring Clips
BC-391	1.65	RF	540–1700	365 MMF	¾x¾x2	Spring Clips
BC-392	1.65	Oscillators†	540–1700	365 MMF	¾x¾x2	Spring Clips

†Tapped Secondaries.

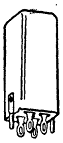
MIDGET—OSCILLATORS (Screw Mounting) (For use with 365 MMF Cond.)

Type No.	List Price	Description	Operating Freq.	Dimensions	Mtg.
BC-395	$1.10	Oscillator	175 KC	1" Dia. x 1" High	L
BC-396	1.10	Oscillator	262 KC	1" Dia. x 1" High	L
BC-397	1.10	Oscillator	455 KC	1" Dia. x 1" High	L
BC-398	1.10	Oscillator (Autoformer)	175 KC	1" Dia. x 1" High	L
BC-399	1.10	Oscillator (Autoformer)	262 KC	1" Dia. x 1" High	L
BC-400	1.10	Oscillator (Autoformer)	455 KC	1" Dia. x 1" High	L

BEAT FREQUENCY OSCILLATORS (Capacity Tuned) Type M

Type No.	List Price	Frequency Range	IF Freq.	Dimensions	Mtg. Centers
BC-430	$2.50	165–185 KC	175 KC	1⅛x1⅛x2⅛	1⅛
BC-431	2.50	250–275 KC	262 KC	1⅛x1⅛x2⅛	1⅛
BC-432	2.50	450–475 KC	455 KC	1⅛x1⅛x2⅛	1⅛
BC-433	2.50	500–550 KC	525 KC	1⅛x1⅛x2⅛	1⅛
BC-434	2.50	1500–1600 KC	1500 KC	1⅛x1⅛x2⅛	1⅛

Products of Merit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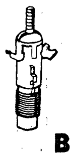
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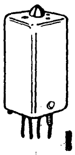
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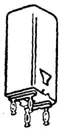
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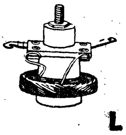
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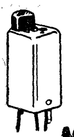
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IF-RF COILS

BROADCAST (Cont.)

TRF UNITS

Type No.	List Price	Description	Freq. Range	Dimensions	Mtg.
BC-410	$1.00	Antenna†	540–1700 KC	1⅜ Dia. x 2	N
BC-411	1.00	RF†	540–1700 KC	1⅜ Dia. x 2	N
BC-412	.95	Antenna†	540–1700 KC	⅝ Dia. x 2⅛	N
BC-413	.95	RF†	540–1700 KC	⅝ Dia. x 2⅛	N
BC-414	.95	Band—Pass†	540–1700 KC	⅝ Dia. x 2⅛	N
BC-415	1.25	Antenna (Shielded)	540–1700 KC	1⅜x1⅜x2½	A
BC-416	1.25	RF (Shielded)	540–1700 KC	1⅜x1⅜x2½	A
BC-417	1.25	Band—Pass (Shielded)	540–1700 KC	1⅜x1⅜x2½	A

OSCILLATOR—Special

Type No.	List Price	Description	Freq.	Mtg. Center	Dimensions	Mtg.
BC-460	$3.30	Phono—Osc.	540–700 KC	1 7/16	1 7/16x1 7/16x2½	A

FILTERS

Type No.	List Price	Description	Voltage	Watts	Dimensions	Mtg.
BC-450	$7.70	Appliance Type	115	550	2¼x2¼x4	O
BC-451	1.65	Fluorescent Light	220	20	1¼ Dia. x 1½	P
BC-452	1.65	Fluorescent Light	220	40	1¼ Dia. x 1½	P
BC-453	1.65	Fluorescent Light	220	80	1¼ Dia. x 1½	P
BC-454	1.65	Fluorescent Light	220	160	1¼ Dia. x 1½	P
BC-455	7.70	All-Wave Filter	115	150	2¼x2¼x4	O

CHOKES

UNSHIELDED AIR CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-500	$0.45	.25	125	8	R
BC-501	.45	.75	125	17	R
BC-502	.45	1.50	125	21	R
BC-503	.55	2.50	125	28	R
BC-504	.55	5.0	125	41	R
BC-505	.55	7.5	125	53	R
BC-506	.65	10.0	125	64	R
BC-507	.65	12.5	125	74	R
BC-508	.65	15.0	125	83	R
BC-509	.85	20.0	125	97	R
BC-510	.85	30.0	125	120	R
BC-511	1.10	60.0	100	175	R
BC-512	1.40	80.0	100	230	R

*Single Bolt Mtg. Dimen.—1⅛ Dia. x ⅝.

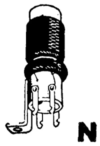
SHIELDED AIR CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-515	$0.85	.5	125	10	S
BC-516	.85	1.0	125	17	S
BC-517	.95	2.5	125	30	S
BC-518	.95	5.0	125	49	S
BC-519	.95	7.5	125	61	S
BC-520	1.05	10.0	125	75	S
BC-521	1.20	25.0	125	125	S
BC-522	1.50	50.0	125	186	S

*1¼ Mtg. Centers Dimen.—1¼ Dia. x 1⅛.

RF TYPE

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-549	$ 0.85	2.5	200	26	E
BC-550	66.00	100—BC-549 Bulk Packed			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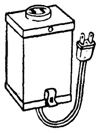
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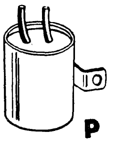
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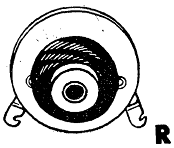
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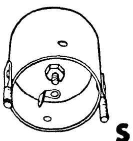
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Products of Merit

IF-RF COILS

CHOKES (Cont.)

UNSHIELDED IRON CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-525	$1.00	.5	125	6.8	R
BC-526	1.10	1.0	125	10.9	R
BC-527	1.15	2.5	125	19.5	R
BC-528	1.30	5.0	125	23.0	R
BC-529	1.40	7.5	125	37.0	R
BC-530	1.45	10.0	125	45.0	R
BC-531	1.75	25.0	100	78.0	R
BC-532	1.95	50.0	100	130.0	R
BC-533	2.20	75.0	100	172.0	R
BC-534	2.50	100.0	100	210.0	R
BC-535	2.75	150.0	100	268.0	R

*Single Bolt Mtg. Dimen. 1⅛ Dia. x ⅝.

SHIELDED IRON CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-538	$1.40	.5	125	8.6	S
BC-539	1.50	1.0	125	11.5	S
BC-540	1.55	2.5	125	22.0	S
BC-541	1.70	5.0	125	31.0	S
BC-542	1.75	7.5	125	42.0	S
BC-543	1.80	10.0	125	47.0	S
BC-544	2.15	25.0	125	100.0	S
BC-545	2.30	50.0‡	100	160.0	S
BC-546	2.60	75.0‡	100	222.0	S
BC-547	2.85	100.0‡	100	348.0	S
BC-548	3.15	150.0‡	100	520.0	S

*1¼ Mtg. Centers Dimen. 1¼ Dia. x 1⅛.
‡1⅝ Mtg. Centers Dimen. 1⅝ Dia. x 1⅛.

FILAMENT

Type No.	List Price	Inductance UH	Current Amps	Resistance Ohms	Mtg.
BC-537	$0.70	10.0	8	.02	E

SHORT WAVE

IF TRANSFORMERS

Type No.	List Price	Description	Freq.	Mtg. Center	Dimensions	Mtg.
SW-600	$2.20	Input	1400–1600	1⅜	1⅜x1⅜x2⅝	I
SW-601	2.20	Interstage	1400–1600	1⅜	1⅜x1⅜x2⅝	I
SW-602	2.20	Interstage (Miniature)	1400–1600	¾	¾x ¾x2	K
SW-603	2.20	Output (Miniature)	1400–1600	¾	¾x ¾x2	K
SW-604	2.20	Input Midget	1400–1600	1⅛	1⅛x1⅛x2	I
SW-605	2.20	Interstage Midget	1400–1600	1⅛	1⅛x1⅛x2	I
SW-606	2.20	Full Wave Output	1400–1600	1⅛	1⅛x1⅛x2	I
SW-607	2.20	Half Wave Output	1400–1600	1⅛	1⅛x1⅛x2	I

SW CHOKES

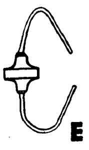
Type No.	List Price	Description	Ohms	Micro Henries	Dimensions	M.A.	Mtg.
SW-630	$0.65	Choke	.07	2.5	¼ Dia. x 1½	200	P
SW-631	.65	Choke	.25	5.0	¼ Dia. x 1½	200	P

RF—ANTENNA—OSCILLATORS—Miniature Type

Type No.	List Price	Description	Freq.	Mtg.	Dimensions	Mtg.
SW-620	$1.65	Antenna	2.1–6.3 MC	Clip	¾x¾x2	K
SW-621	1.65	RF	2.1–6.3 MC	Clip	¾x¾x2	K
SW-622	1.65	Oscillator*	2.1–6.3 MC	Clip	¾x¾x2	K

*1600 MMF Series pad.

Products of Merit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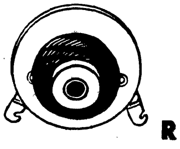
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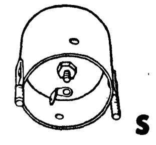
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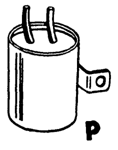
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MICROTRAN®

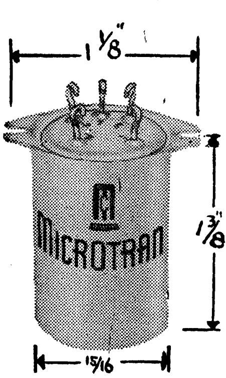
hermetically sealed transformer

These ruggedized military type units were developed to meet demands of a growing miniaturization program.

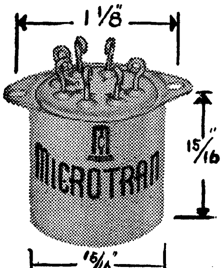
All units are available from stock in hermetically sealed cans, although open frame units may be ordered. Open frame units are Resin impregnated to provide thorough protection from adverse climatic conditions and are supplied with flexible 4" color cooded leads.

Also available on special order for MIL applications are standard MIL type cases.

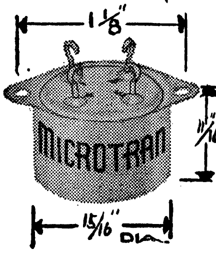
AF - ¾"x¾"x1⅛"
AG - 1"x1"x1⅜"



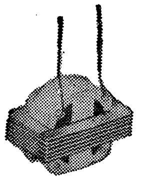
Miniature size



sub-miniature size



micro-miniature size



OPEN FRAME

MINIATURE TRANSFORMERS

PART* NO.	MIL TYPE	APPLICATION	PRIMARY IMPED.	SEC. IMPED.	RES. +2 db.	LIST PRICE
M1	TF1A10YY	Mike pickup or line to 1 grid	50, 200, 600 C.T.	50,000	20-20,000	$15.40
M2	TF1A10YY	Mike pickup or line to 2 grids	50, 200, 600 C.T.	50,000	20-10,000	15.40
M3	TF1A10YY	Dynamic mike to 1 grid	7.5, 30	50,000	20-20,000	14.30
M4	TF1A15YY	Single plate to 1 grid	15,000	60,000	20-15,000	12.10
M5	TF1A15YY	Single plate to 1 grid	15,000 4MA.D.C.	60,000	200-20,000	12.10
M6	TF1A15YY	Single plate to 2 grids	15,000	95,000	20-15,000	14.30
M7	TF1A15YY	Single plate to 2 grids	15,000 4MA.D.C.	95,000	200-20,000	14.30
M8	TF1A13YY	Single plate to line	15,000	50, 200, 600 C.T.	20-20,000	15.40
M9	TF1A13YY	Single plate to line	15,000 4MA.D.C.	50, 200, 600 C.T.	150-20,000	15.40
M10	TF1A13YY	Push pull plates to line	30,000 ohms P.-P.	50, 200, 600 C.T.	30-50,000	15.40
M11	TF1A10YY	Crystal mike to line	50,000	50, 200, 600 C.T.	20-20,000	15.40
M12	TF1A16YY	Mixing and matching	50, 200	50, 200, 600 C.T.	30-40,000	14.30
M13	TF1A20YY	Reactor 300 HYS. - No. D.C.:	50 HYS - 3MA. D.C.	6.000 ohms D.C. res.		11.00
M14	TF1A10YY	50: 1 mike or line to 1 grid	200	½ Megohm	80-3,000	15.40
M15	TF1A15YY	10: 1 single plate to 1 grid	10,000	1 Megohm	100-2,500	15.40

SUB MINIATURE TRANSFORMERS

PART* NO.	MIL TYPE	APPLICATION	PRIMARY IMPED.	SEC. IMPED.	RES. +2 db.	LIST PRICE
SM1	TF1A10YY	Input	200, 50	250,000, 62,500	80-10,000	$12.90
SM2	TF1A15YY	Interstage 3:1	10,000	90,000	100-10,000	12.90
SM3	TF1A13YY	Plate to line	10,000 3MA.	200	150-10,000	12.90
SM4	TF1A13YY	Output	30,000 1MA.D.C.	50	70-10,000	12.90
SM5	TF1A20YY	Reactor 50 HY 1 MA.	4,000 ohms.D.C. res.			10.90
SM6	TF1A13YY	Output	100,000 .5MA.D.C.	60	100-10,000	12.90

MICRO MINIATURE TRANSFORMERS

PART NO.	MIL TYPE	APPLICATION	PRIMARY IMPED.	SEC. IMPED.	RES. +2 db.	LIST PRICE
MM1	TF1A10YY	Input	200, 50	250,000, 62,500	200-10,000	$12.90
MM2	TF1A15YY	Interstage 3:1	10,000	90,000	150-10,000	12.90
MM3	TF1A13YY	Plate to line	10,000 3MA.	200	150-10,000	12.90
MM4	TF1A13YY	Output	30,000 1MA.D.C.	50	150-10,000	12.90
MM5	TF1A20YY	Reactor 50 HY 1 MA.	3,500 ohms.D.C. res.			10.90
MM6	TF1A13YY	Output	100,000 .5MA.D.C.	60	200-10,000	12.90

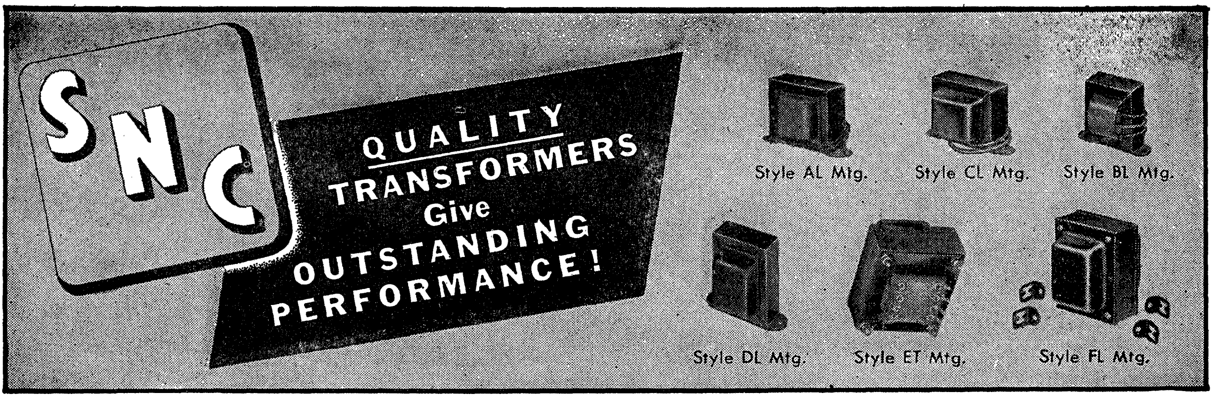
TRANSISTOR TRANSFORMERS

PART NO.	MIL TYPE	APPLICATION	PRIMARY IMPED.	SEC. IMPED.	LIST PRICE	
					M	SM & MM
*T1	TF1A10YY	Input-Line to emitter	500	500	$14.50	$14.15
*T3	TF1A15YY	Interstage-collector to emitter	50,000	500	15.70	14.15
*T5	TF1A13YY	Output-collector to speaker	50,000	6	14.50	14.15
*T6	TF1A15YY	Collector to PP emitter	100,000	1200 C.T.		
*T7	TF1A15YY	Collector to PP emitter	25,000	1200 C.T.	16.00	14.35
*T8	TF1A15YY	PP collector to PP emitter	50,000 C.T.	1200 C.T.	16.20	
*T9	TF1A10YY	Line to PP emitter	600/150 C.T.	1200 C.T.	16.50	
*T10	TF1A15YY	Collector to emittter	25,000	600	15.75	14:15
*T11	TF1A13YY	PP collector to line	4000 C.T.	600/150 C.T.	16.50	
*T12	TF1A13YY	Collector to speaker	2K	3.4	15.70	14.15
*T13	TF1A13YY	PP collector to speaker	4K C.T.	3.4	16.00	14.35

* Add M prefix to denote Miniature size, SM for sub-miniature size, MM for micro-miniature size. Size to be used depends on D.C. current, frequency response, and power output requirements.

Add—AG suffixe for minature unit in MIL AG can; — AF suffix for Sub-Miniature unit in AF can.

Write for full details.



Skillful Engineering, latest production techniques and highest quality materials . . . backed by careful workmanship, exacting step-by-step inspection and rigorous final testing . . . are combined in every SNC transformer to provide a quality product that gives MORE in dollar value.

AUDIO TRANSFORMERS—THE "ONE" SERIES

AUDIO INPUT

Type Number	Application	Impedance		Pri. Mils (D.C.)	Max. Turns Ratio	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions				Net Wt.	List Price
		Primary	Secondary			50	200	1M	5M	10M		A	B	C	D		
1P121	P.M. Speaker to Grid	4	100,000	0	1:158	−4.0	−1.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.50
1P124	S.B. Mic. to Sgl. or P.P. Grids	100	400,000 C.T.	50	1:63		−6.0	0	−2.0	−6.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.70
1P125	Low Z to Sgl. or P.P. Grids	50	100,000 C.T.	0	1:45		−3.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.40
1P128	Sgl. or D.B. Mic. or Line to Sgl. or P.P. Grids	200*/50	100,000 C.T.	50	1:45	−2.0	−0.3	0	−0.7	−2.0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.3	5.40
1P136	Line to Sgl. or P.P. Grids	500*/125	100,000 C.T.	0	1:28	−3.0	−0.4	0	−0.4	−1.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.4	5.40
1P145	Sgl. or P.P. Plates to Line	20,000 C.T.	500*/125	8	12.6:1	−3.5	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.45
1P152	Sgl. or P.P. Plates to Line	20,000 C.T.	200*/50	8	20:1	−4.0	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.45
1P161	Line to Line	500	500*/125	0	2:1	−0.4	−0.1	0	−0.4	−1.0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.80

*Indicates Balanced Center Tap

AUDIO INTERSTAGE

1P323	Sgl. Plate to Sgl. Grid	10,000	90,000	8	1:3	−5.0	−1.5	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.25
1P331	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−6.0	−2.0	0	0	−1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.50
1P339	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−3.0	−0.5	0	+0.1	+0.5	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.90
1P342	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−2.5	−0.5	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.05
1P346	P.P. Plates to P.P. Grids	20,000 C.T.	45,000 C.T.	10	1:1.5	−1.0	−0.2	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.20
1P351	Universal	Universal		8	1:3	−2.0	−0.4	0	0	0	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.15
3P363	Sgl. Type 30 to 19, 1J5 or P.P. 30 Class B	10,000	7,000 C.T.	8	2.4:1	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.80

TELEVISION REPLACEMENT (VERTICAL BLOCKING OSCILLATOR)

Type Number	Primary Inductance	Leakage Inductance	Turns Ratio	Mounting Style	Mounting	Dimensions				Net Wt.	List Price
						H	W	D	Ctrs.		
1P412	1.15 Hy. ±20%	.008 Hy. ±25 −15%	1:42	Comp. Filled Case	Flange	1-7/8	2-5/16	1-1/2	1-15/16	.5	3.60
1P416	1.15 Hy. ±20%	.008 Hy. ±25 −15%	1:42	Comp. Filled Case	Studs	1-5/8	1-3/16	1-3/16	1-13/64	.4	3.35

CHOKES AND REACTORS—THE "TWO" SERIES

AUDIO REACTORS

Type Number	D.C. Mils		Inductance				Insul. Test Voltage	D.C. Res.	Mtg. Style	Dimensions					Net Weight	List Price
	Nom.	Max.	0-D.C.	50% Nom. D.C.	Nom. D.C.	Max. D.C.				A	B	C	D	E		
2P123	5-0.5	15	550	–	300-500	80	2000	5500	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	3.50
2P124	5-0.5	15	550	–	300-500	80	2000	5500	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.90
2P126	35-15	45	65	–	25-35	20	2000	800	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	2.75
2P127	35-15	45	65	–	25-35	20	2000	800	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.25

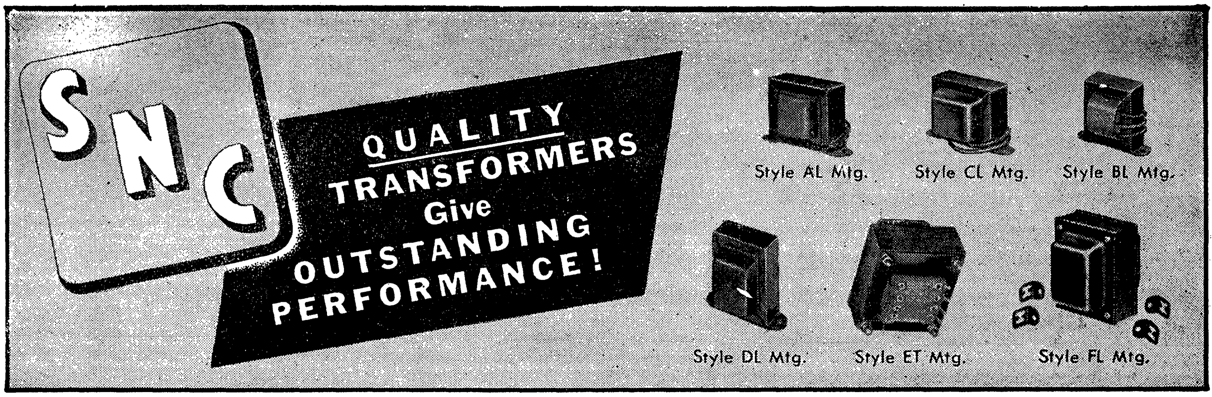
FILTER AND SWINGING CHOKES

2P132	40	50	22	13	8	6	2000	450	AL	1-5/16	1-5/8	1-1/8	2		.3	1.80
2P135	65	80	18	11	8	7	2000	300	AL	1-9/16	1-7/8	1-3/8	2-3/8		.5	2.15
2P138	85	100	30	16	8	7	2000	350	AL	1-7/8	2-1/4	1-7/8	2-13/16		1.2	2.80
2P141	110	135	20	10.5	8	7	2000	200	BL	2-5/8	2-3/16	1-7/8	2-13/16		1.5	3.70
2P142	110	135	20	10.5	8	7	2000	200	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	3.90
2P144	150	180	26	13	8	5.5	2000	190	BL	3	2-1/2	2-1/8	3-1/8		2.1	3.70
2P145	150	180	26	13	8	5.5	2000	190	GL	3-4/8	2-1/2	2-5/8	2	1-11/16	2.2	5.05
2P147	200	250	16	10	8	6.5	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	6.50
2P148	200-20	—	—	—	3-15	—	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	6.50
2P151	300	350	18	11	8	7	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	11.10
2P152	300-30	—	—	—	3-15	—	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	11.10
2P155	500	600	16	10	8	5.5	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	31.20
2P156	500-50	—	—	—	3-15	—	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	31.20

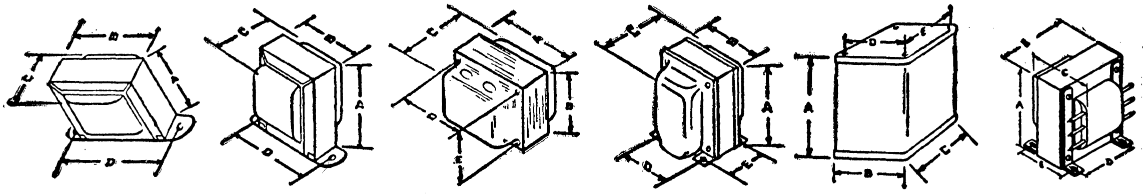
DRIVER TRANSFORMERS—THE "THREE" SERIES

Type Number	Primary Impedance	Watts	Ratio, Pri. to 1/2 Sec. or Sec. Z	Pri. D.C. Mils	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
					50	200	1M	5M	10M		A	B	C	D	E		
3P323	6,000 C.T. to 10,000 C.T.	25	6, 5.5, 5:1	60	−0.5	0	0	0	−0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.30
3P328	3,000 C.T. to 5,000 C.T.	25	6, 5.5, 5:1	60	−0.4	0	0	0	−0.1	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.30
3P334	6,000 C.T. to 10,000 C.T.	25	4.5, 4, 3.5:1	60	−1.0	−0.3	0	+0.1	+0.6	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.15
3P338	3,000 C.T. to 5,000 C.T.	25	4.5, 4, 3.5:1	60	−1.7	−0.5	0	0	0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.35
3P342	6,000 C.T. to 10,000 C.T.	25	3, 2, 1:1	60	−0.7	−0.1	0	+0.1	+0.4	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.75
3P347	3,000 C.T. to 5,000 C.T.	25	3, 2, 1:1	60	−0.8	0	0	0	−0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.60
3P353	6,000 C.T. to 10,000 C.T.	25	500 Ohms	60	−1.1	−0.3	0	0	+0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.40
3P358	3,000 C.T. to 5,000 C.T.	25	500 Ohms	60	−0.9	−0.1	0	−0.4	−1.0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.40
3P363	10,000	5	2.4:1	10	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2		.5	2.80

See Page N-57 for Dimensional Illustrations.



DIMENSIONAL ILLUSTRATIONS



OUTPUT TRANSFORMERS—THE "SIX" SERIES

SPECIFIC DUTY REPLACEMENT TYPES—TUBE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
						A	B	C	D		
6P300	Single 2,000 Plate	50	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.80
6P306	Single 4,000 Plate	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.80
6P312	Single or P.P. 7,500 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.40
6P316	Single or P.P. 10,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.40
6P319	Push-Pull 15,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45
6P321	Push-Pull 20,000 Plates	30	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45
6P325	Push-Pull 25,000 Plates	20	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45

UNIVERSAL REPLACEMENT TYPES—TUBE TO VOICE COIL—TUBE TO LINE—LINE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
						A	B	C	D		
6P165	Sgl. or P.P. 4M to 14M Plates	40	1.1 to 14	4	ATL	1-5/16	1-5/8	1-3/8	2	.3	2.80
6P166	Sgl. or P.P. 4M to 14M Plates	50	1.1 to 14	8	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.80
6P167	Sgl. or P.P. 3M to 10M Plates	50	1.2 to 13	15	BTL	1-7/8	1-9/16	1-3/4	2	.5	3.50
6P169	Sgl. 1500 to 7M Plate	55	.8 to 19	10	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.80
6P172	P.P. 3500 to 12M Plates	60	1.3 to 14	20	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.10
6P701	Single 2500 to 7500 Plate	45	165 to 1500	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	4.45
6P710	P.P. 7500 to 15M Plates	45	250 to 1000	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.05
6P714	Sgl. or P.P. 2500 to 12M Plates	45	150 to 2400	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.30
6P717	125 to 500 Line	0	1 to 32	35	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.40
6P722	500 to 3M Line in 500-Ohm Steps	0	1.3 to 48	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.10

AMPLIFIER AND EQUIPMENT TYPES—TUBE TO LINE AND VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Secondary Imp.—Ohms	Watts	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
					50	200	1M	5M	10M		A	B	C	D	E		
6P726	P.P. 3300 or 3800 Plates	90	4-8-16-250-500	60	−0.3	0	0	+0.1	+0.5	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	10.70
6P731	P.P. 4500 or 6800 Plates	90	4-8-16-250-500	60	−0.3	0	0	+0.2	0	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	10.70
6P736	P.P. 5000 Plates	70	4-8-16-250-500	25	−0.9	−0.2	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P740	P.P. 4300 Plates	70	4-8-16-250-500	25	−0.9	−0.3	0	+0.3	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P743	P.P. 6600 Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P746	P.P. 8000 Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.1	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P749	P.P. 10,000 Plates	60	4-8-16-250-500	25	−0.4	−0.1	0	+0.2	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.55
6P752	Sgl. 2500 Plate	60	4-8-16-250-500	10	−3.0	−0.4	0	+0.3	+0.5	DL	2-1/4	1-7/8	2-1/8	2-3/8		1.0	5.70

TELEVISION REPLACEMENT (VERTICAL DEFLECTION)

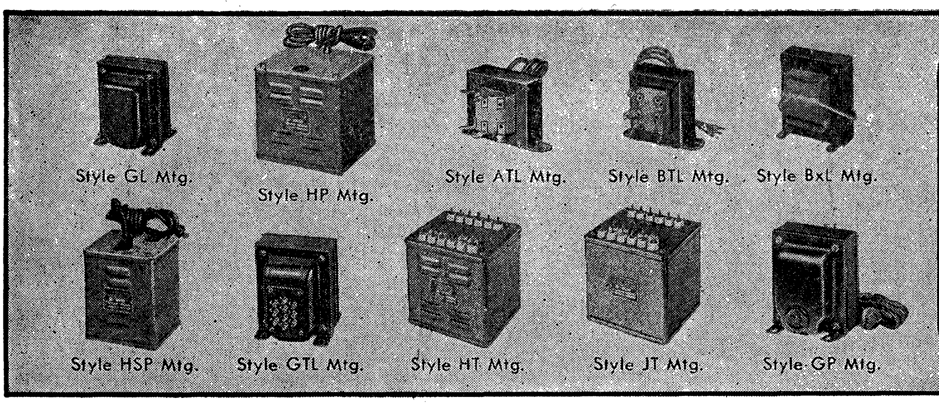
Type Number	Ratio Pri. to Sec.	Primary Imp.—Ohms	Leakage Inductance	Mounting Style	Dimensions					Net Wt.	List Price
					A	B	C	D	E		
6P860	10:1	19,000 Min.	0.33 Hy. Max.	B x L	3-3/16	2-3/4	2-9/16	1-19/32	2	2.2	6.70

MODULATION TRANSFORMERS—THE "FIVE" SERIES

SNC universal modulation transformers are specifically designed to provide maximum application possibilities per type. All units are provided with two indentical secondary windings, permitting series or parallel operation. Changes in the ratio can be readily accomplished, when desired, without removing the unit from the chassis. Most units available in either air cooled or compound filled cases.

UNIVERSAL TYPES

Type Number	Watts	Primary Current Mils	Secondary Characteristics				Primary Impedance Ohms	Mtg. Style	Dimensions					Net Weight	List Price
			Series Sec.		Parallel Sec.										
			Impedance	Mils	Impedance	Mils			A	B	C	D	E		
5P341	15	60		50		100	3M to 8M	DL	2-5/8	2-3/16	2-3/8	2-13/16		1.5	9.00
5P346	50	80	2M to 18M	75	500 to 4500	150	3M to 15M	GTL	3-7/8	3-1/8	3-3/8	2-1/2	2-3/16	4	14.10
5P352	100	120	2M to 18M	100	500 to 4500	200	3M to 15M	GTL	4-5/8	3-3/4	3-7/8	3	2-13/16	9.7	22.50
5P354 5P355	200	200	2M to 18M	150	500 to 4500	300	3M to 15M	HT JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	24 32	51.60 56.40
5P357 5P358	300	250	2M to 18M	250	500 to 4500	500	3M to 15M	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	62.40 67.20
5P363 5P364	500	300	2M to 18M	300	500 to 4500	600	3M to 15M	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	51 64	126.00 138.00



NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols

L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

POWER TRANSFORMERS—THE "EIGHT" SERIES

All units conservatively rated for operation on either 50 or 60 cycles and contain an electrostatic shield between primary and all other windings

REPLACEMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
8P040	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	2-3/4	2-1/2	2	2.3	5.40
8P055	117	300-0-300	55	5V. @ 2A.	6.3V. @ 2.5A.	FL	3	2-1/2	3-1/8	2-1/2	2	2.8	5.45
8P070	117	325-0-325	70	5V. @ 2A.	6.3V. @ 3A.	FL	3	2-1/2	3-1/2	2-1/2	2	3.2	6.90

HEAVY DUTY REPLACEMENT AND NEW EQUIPMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
8P180 8P180G	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL GL	3 3-1/16	2-1/2 2-7/32	3-1/4 3-1/8	2-1/2 2	2 2-3/16	3.2	7.40
8P183 8P183G	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-7/16 3-1/4	2-13/16 2-1/4	2-1/4 2-1/8	3.5	7.80
8P186 8P186G	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-11/16 3-1/2	2-13/16 2-1/4	2-1/4 2-3/8	4.0	8.20
8P189 8P189G	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	3-3/4 3-5/8	3-1/8 2-1/2	2-1/2 2-7/16	5.0	9.00
8P192 8P192G	117	350-0-350	90	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.7	9.90
8P194 8P194G	117	375-0-375	110	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/8 4	3-1/8 2-1/2	2-1/2 2-13/16	6.0	11.10
8P196 8P196G	117	350-0-350	150	5V. @ 3A.	6.3V. @ 4.8A.	FL GL	4-1/8 4-3/16	3-7/16 3-15/32	4-3/8 4-3/8	3-7/16 2-3/4	2-3/4 3-5/16	7.7	11.70
8P199 8P199G	117	400-0-400	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	10.50
8P202 8P202G	117	450-0-450	200	5V. @ 3A.	6.3V. @ 5A.	FL GL	4-1/2 4-9/16	3-3/4 3-25/32	4-3/4 4-3/8	3-3/4 3	3 3-11/16	10.7	15.00
8P205	117	450-0-450	325	5V. @ 6A.	6.3V. @ 8A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.3	40.80
8P208	117	550-0-550	275	5V. @ 6A.	6.3V. @ 6A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	40.80

REPLACEMENT TYPES (2.5 Volt Heater Winding)

8P287	117	350-0-350	70	5V. @ 3A.	2.5V. @ 6A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	9.00
8P293	117	350-0-350	90	5V. @ 3A.	2.5V. @ 8A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.6	9.80
8P295	117	350-0-350	150	5V. @ 3A.	2.5V. @ 12A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.3	11.70

REPLACEMENT TYPES (Two 2.5 Volt Heater Windings)

8P487 8P487G	117	350-0-350	70	5V. @ 3A.	No. 1=2.5V. @ 3.5A. No. 2=2.5V. @ 8A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	10.80
8P494 8P494G	117	375-0-375	110	5V. @ 3A.	No. 1=2.5V. @ 3.5A. No. 2=2.5V. @ 10A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/4 4-1/8	3-1/8 2-1/2	2-1/2 2-15/16	6.2	11.80

GENERAL PURPOSE TYPES WITH CONVENIENT LUG TERMINALS (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
8P382	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	ET	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.2	7.10
8P385	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	ET	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	7.60
8P388	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	ET	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	4.7	8.30

BIAS TYPES

8P510	117	40-0-40	25	5V. @ 2A.		CL	1-7/8	2-1/4	1-3/4	2-13/16		1.0	4.50
8P511	117	0-90-150-200-250	50	5V. @ 2A.		GL	3-1/16	2-7/32	2-5/8	2	1-11/16	2.0	6.55

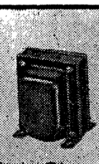
VIBRATOR TYPES

8P610	6	225-0-225	40			AL	2-3/16	2-5/8	2	3-1/8	....	1.3	5.10
8P611	6	320-0-320	40			GL	3-1/16	2-7/32	2-1/2	2	1-9/16	2.1	6.10
8P612	6	390-0-390	60			GL	3-7/16	2-27/32	3-5/16	2-1/4	2-3/16	3.7	6.90

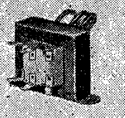
TELEVISION REPLACEMENT TYPES

8P803	117	375-0-375	210	5V.@ 3A.	No. 1-5V.@ 2A. No. 2-6.3V.@ 5.6A.	FL	4-1/2	3-3/4	4-3/4	3-3/4	3	10.7	17.75
8P805	117	235-0-235	90	5V.@ 2A.	6.3V.@ 5.5A.	FL	3-3/8	2-13/16	4	2-13/16	2-1/4	5.1	10.20
8P807	117	365-0-365	300	5V.@ 6A.	No. 1-12.6V.@ 5A. No. 2-5V.@ 2A.	FL	4-23/32	3-27/32	6-3/4	4-1/16	3-3/16	16.0	30.60

See Page N-57 for Dimensional Illustrations.


Style GL Mtg.

Style HP Mtg.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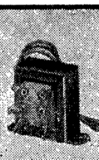
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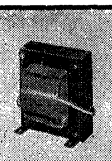
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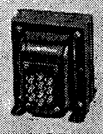
Style HSP Mtg.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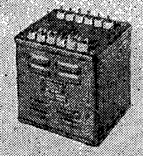
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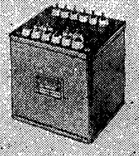
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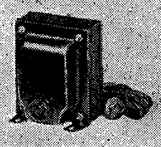

Style GP Mtg.

NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols
L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

PLATE TRANSFORMERS—THE "SEVEN" SERIES

All SNC plate transformers have dual secondary ratings. Most units available in either air cooled or compound filled cases. All units contain electrostatic shields between primary and high voltage windings.

Type Number	Primary Voltage	Pri. V.A.	Secondary R.M.S. Voltage	D.C. Voltage From Filter*	D.C. Current	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
7P530	115–230	220	920–0–920 or 740–0–740	750 or 600	200MA	GL	4-3/4	3-3/4	5-1/8	3	4-1/16	12	18.00
7P535 7P536	115–230	320	930–0–930 or 750–0–750	750 or 600	300MA	HT JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22 30	42.00 48.00
7P542 7P543	115–230	530	1470–0–1470 or 1220–0–1220	1250 or 1000	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	50.40 55.20
7P551 7P552	115–230	750	2050–0–2050 or 1740–0–1740	1750 or 1500	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	43 51	54.00 66.00
7P557 7P558	115–230	1060	2880–0–2880 or 2350–0–2350	2500 or 2000	300MA	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	53 69	74.40 80.40
7P563 7P564	115–230	1760	2900–0–2900 or 2370–0–2370	2500 or 2000	500MA	HT JT	10-3/4	9	7-1/4	7	5-13/16	96 126	108.00 150.00

*All units may be operated with simultaneous loads—provided the total D.C. current of the two loads does not exceed the rating listed.

FILAMENT TRANSFORMERS—THE "FOUR" SERIES

Most SNC Filament Transformers are constructed to provide two identical center tapped secondary windings and offer a minimum of three applications. They provide three-fold the number of possible applications of ordinary filament types. A few are single secondary units and are so designated. All have 117 V. 50/60 cycle primary.

Type Number	Applications: Parallel Secondaries	Series Secondaries	Independent Identical Secondaries	Test Voltage	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
4P222	2.5V. C.T. @ 5 A.	5 V. C.T. @ 2.5 A.	Two of 2.5V. C.T. @ 2.5 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	3.55
4P226*	2.5V. C.T. @ 10 A.*			7500	BL	3	2-1/2	2-3/8	3-1/8		2.0	5.50
4P227	2.5V. C.T. @ 10 A.	5 V. C.T. @ 5 A.	Two of 2.5V. C.T. @ 5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	4.80
4P234	2.5V. C.T. @ 15 A.	5 V. C.T. @ 7.5 A.	Two of 2.5V. C.T. @ 7.5 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	5.70
4P239	5 V. C.T. @ 6.5A.	10 V. C.T. @ 3.25A.	Two of 5 V. C.T. @ 3.25A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	5.10
4P242*	5 V. C.T. @ 20 A.*			10000	BxL	4-1/8	3-7/16	2-3/4	2-3/4	2-1/8	4.6	10.20
4P243	5 V. C.T. @ 20 A.	10 V. C.T. @ 10 A.	Two of 5 V. C.T. @ 10 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.3	9.00
4P244*	6.3V. C.T. @ 0.6A.*			2000	BL	1-7/8	1-9/16	1-1/2	2		.6	3.50
4P245*	6.3V. C.T. @ 1.2A.*			2000	BL	1-7/8	1-9/16	1-5/8	2		.7	3.80
4P246	6.3V. C.T. @ 2 A.	12.6V. C.T. @ 1 A.	Two of 6.3V. C.T. @ 1 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	4.20
4P251	6.3V. C.T. @ 6 A.	12.6V. C.T. @ 3 A.	Two of 6.3V. C.T. @ 3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	4.85
4P256	6.3V. C.T. @ 10 A.	12.6V. C.T. @ 5 A.	Two of 6.3V. C.T. @ 5 A.	2000	BxL	3-3/8	2-13/16	2-1/2	2-1/4	2-1/8	2.9	6.30
4P260	7.5V. C.T. @ 3 A.	15 V. C.T. @ 1.5 A.	Two of 7.5V. C.T. @ 1.5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	5.10
4P267	7.5V. C.T. @ 4.5A.	15 V. C.T. @ 2.3 A.	Two of 7.5V. C.T. @ 2.3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	6.30
4P272	11 V. C.T. @ 10 A.	22 V. C.T. @ 5 A.	Two of 11 V. C.T. @ 5 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.1	9.00

*Single secondary units

VOLTAGE CHANGER AND ISOLATION—THE "NINE" SERIES

All Units Have Primary Cord and Secondary Plug and Are For 50/60 Cycle Operation

VOLTAGE CHANGER (ISOLATION)

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	Dimensions A	B	C	D	E	Net Wt.	List Price
9P707	220–250	110–125	75	GP	3-13/16	3-5/32	3-1/8	2-1/2	1-15/16	3.9	9.30
9P713	220–250	110–125	150	GP	4-9/16	3-25/32	3-7/8	3	2-13/16	8.0	13.80
9P718	220–250	110–125	350	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	36.00

ISOLATION TYPES

9P721	110–250	110–250	150	GP	4-9/16	3-25/32	4-5/8	3	3-9/16	12.1	18.00
9P725	110–250	110–250	250	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	29.40
9P728	110–250	110–250	500	HP	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	34.8	41.40

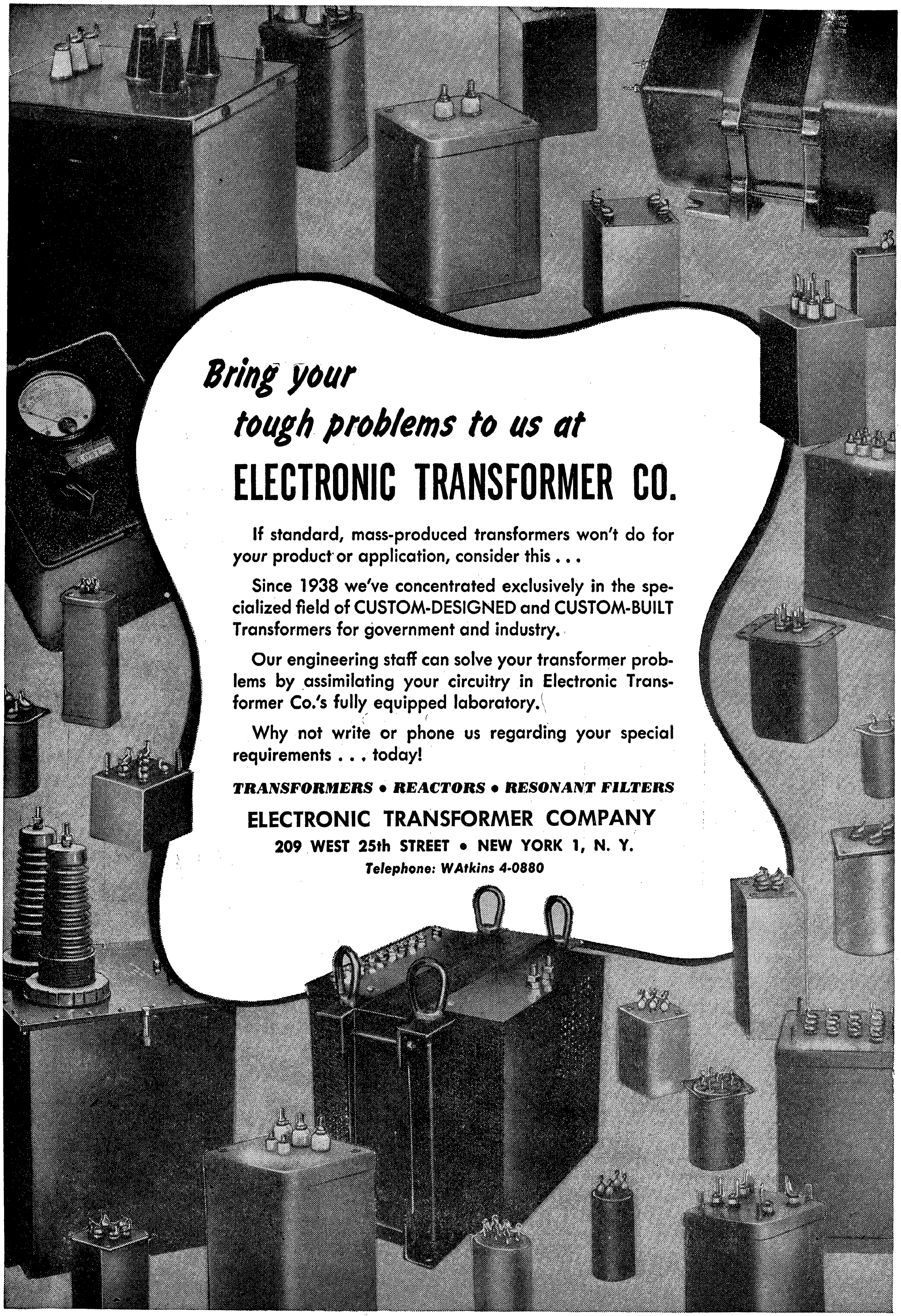
VOLTAGE ADJUSTMENT TYPES WITH TAP CHANGE SWITCH

9P732	95–130 in 5V. Steps	115	150	HSP	4-7/8	3-7/8	3-7/8	3-1/8	3-1/8	4.7	25.80
9P737	95–130 in 5V. Steps	115	250	HSP	5-3/8	4-3/8	4-1/4	3-5/8	3-1/2	8.0	33.00
9P739	80–130 in 5V. Steps	115	500	HSP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	49.20

All list prices given are subject to regular trade discounts and may be changed without notice.

S N C MANUFACTURING CO., INC., OSHKOSH, WISCONSIN

See Page N-57 for Dimensional Illustrations.



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- Fosterite

APPLICATION
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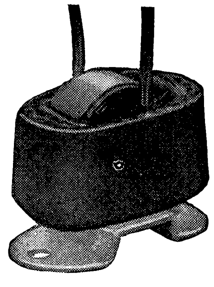
- Guided Missile
- Communications
- Radio
- Television
- Sound Installation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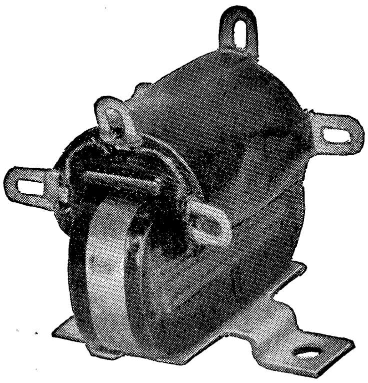
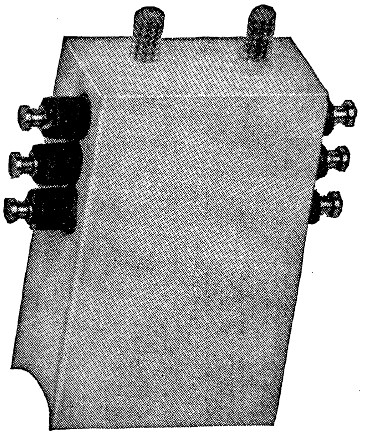
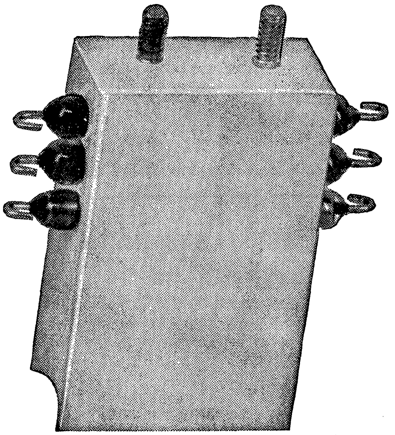
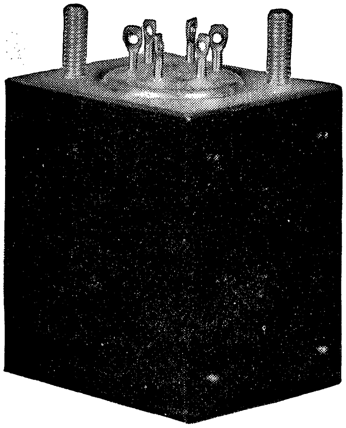

PULSE—Varnished
Actual Size


PULSE—Ceramic Terminals
Hermetically Sealed
Actual Size


PULSE—Glass Bead Terminals
Hermetically Sealed
Actual Size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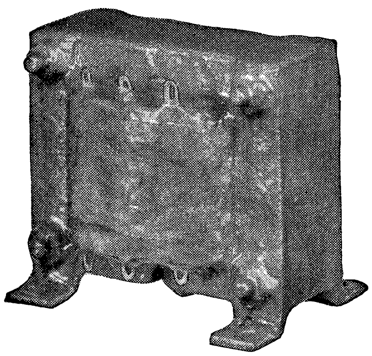
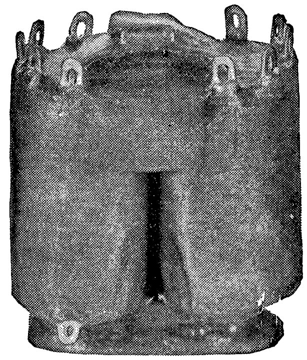

POWER PLATE
Fosterite


INTERSTAGE
Fosterite

STANDARD ELECTRICAL PRODUCTS CO.
Staco
A QUALITY PRODUCT
DAYTON, O.
U.S.A.

TRANSFORMERS

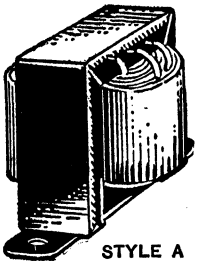
SPECIAL PURPOSE AND OPERATION OF WAR SURPLUS EQUIPMENTS

MULTI-USE FILAMENT TRANSFORMERS

For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles.
All windings center tapped except those marked*

Type No.	Use #1	Use #2	Use #3	Volt Insul.	Style Mtg.	Mtg. Dimensions			Ship. Wt.	Net Price
						H.	W.	D.		
F5049	Two Sec. of 2.5 V. @ 2.5 A	5 V. @ 2.5 A	2.5 V. @ 5 A	2000	D	2 5/16"	2"	1 7/8"	3	$3.00
F5050	Two Sec. of 2.5 V. @ 5 A	5 V. @ 2.5 A	2.5 V. @ 10 A	10000	E	3 1/8"	2 1/2"	3 1/4"	3	5.16
F5051	Two Sec. of 2.5 V. @ 5 A	5 V. @ 5 A	2.5 V. @ 10 A	2000	E	3 1/8"	2 1/2"	2 3/8"	3	3.90
F5052	Two Sec. of 2.5 V. @ 7.5 A	5 V. @ 7.5 A	2.5 V. @ 15 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.20
F5053	Two Sec. of 5 V. @ 3.25 A	10 V. @ 3.25 A	5 V. @ 6.5 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.05
F5054	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	10000	E	4 3/16"	3 7/16"	3 7/16"	7	6.45
F5055	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	2000	E	4 13/16"	3 1/8"	3 3/8"	7	6.00
F5056			6.3 V. @ .6 A	2000	D	1 5/8"	1 3/8"	1 1/2"	2	3.00
F5057			6.3 V. @ 1.2 A	2000	D	1 7/8"	1 5/8"	1 11/16"	2	3.30
F5007			6.3 V. @ 3 A	2000	D	2 5/16"	2"	1 7/8"	3	3.90
F5058	Two Sec. of 6.3 V. @ 1 A	12.6 V. @ 1 A	6.3 V. @ 2 A	2000	D	2 5/16"	2"	1 7/8"	3	3.60
**F5006	Two Sec. of 6.3 V. @ 3 A	12.6 V. @ 3 A	6.3 V. @ 6 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.50
**F5004	Two Sec. of 6.3 V. @ 6.5 A	12.6 V. @ 6.5 A	6.3 V. @ 13 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	5.82
F5059	Two Sec. of 7.5 V. @ 1.5 A	15 V. @ 1.5 A	7.5 V. @ 3 A	2000	D	2 3/4"	2 5/16"	2 3/16"	3	4.05
F5060	Two Sec. of 7.5 V. @ 2.3 A	15 V. @ 2.3 A	7.5 V. @ 4.6 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.65
F5061	Two Sec. of 11 V. @ 5 A	22 V. @ 5 A	11 V. @ 10 A	2000	E	3 13/16"	3 1/8"	3 1/4"	7	6.00
**F5005*	Two Sec. of 12 V. @ 4 A	24 V. @ 4 A	12 V. @ 8 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	5.67
**F5069*	One Sec. of 24 V. @ 3 A	War Surplus Equipment		2000	E	3 1/8"	3 3/4"	2 5/8"	2 1/2	4.80
**F5075*	One Sec. of 24 V. @ 1 A	War Surplus Equipment		2000	D	2 3/4"	3 1/4"	2"	1 1/4	3.90

** Types F5004, F5005, F5006, F5069, and F5075 designed for operation of 12 and 24 volt War Surplus Equipment.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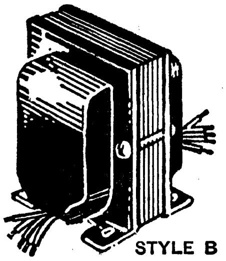
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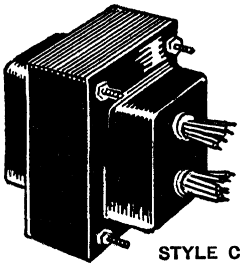
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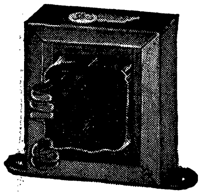
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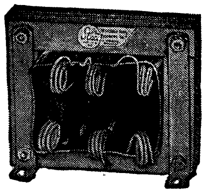

STYLE E

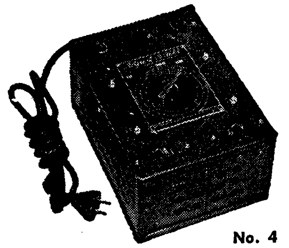
SPECIALS TO YOUR ORDER

- **Special transformers can be manufactured to your order in the styles illustrated above on a job-lot basis. Small industrial users need not purchase so-called "stock" transformers and compromise their designs. Our prices are reasonable and delivery is good. Your inquiries on "specials" are solicited—give us complete information and we will quote on your requirements.**

AUTO-TRANSFORMERS • ISOLATED PRIMARY TRANSFORMERS • METERED TRANSFORMERS

STANDARD ELECTRICAL PRODUCTS CO.
Staco
DAYTON, O. U.S.A.
A QUALITY PRODUCT

Adjust-A-Volt
VARIABLE TRANSFORMER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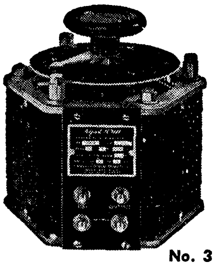
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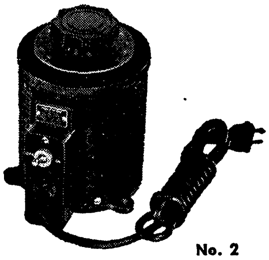
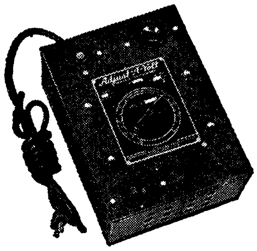

No. 2

No. 1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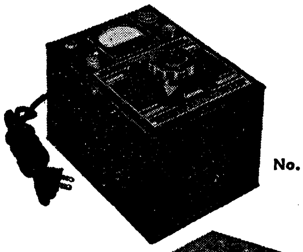
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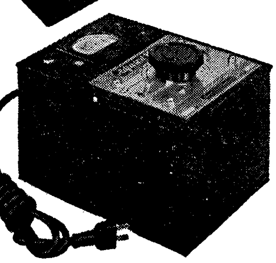
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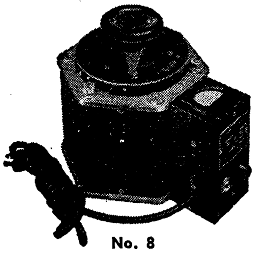
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AUTO-TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
300BU	TREED	115	0-135	3.0	400	1	6 lbs.	$ 12.50	300BU
500BU	FIVED	115	0-135	7.5	1000	1	11 lbs.	19.00	500BU
500B	FEDEN	115	0-135	7.5	1000	2	12 lbs.	23.00	500B
1500B	TOODE	115	0-135	15.0	2000	3	23 lbs.	46.00	1500B
3000B	THIRT	115	0-135	30.0	4000	2	27 lbs.	55.00	3000B
5000B	SIXEN	115	0-135	50.0	6100	3	80 lbs.	118.00	5000B
CA-5	CADDY	115	0-280	3.5	430	4	30 lbs.	27.50	CA-5
CA-10	CAMMY	115	0-280	7.5	860	4	40 lbs.	52.50	CA-10
520BU	BRANY	230	0-270	3.0	810	1	11 lbs.	20.00	520BU
520B	CRANY	230	0-270	3.0	810	2	12 lbs.	26.00	520B
1520B	DANNY	230	0-270	9.0	2400	3	27 lbs.	46.00	1520B
3020B	RANNY	230	0-270	18.0	4850	2	27 lbs.	55.00	3020B
5020B	TANNY	230	0-270	28.0	7500	3	80 lbs.	126.00	5020B
NA-5	NADDY	230	0-140	7.5	860	4	27 lbs.	28.50	NA-5
NA-10	NAMMY	230	0-140	15.0	1500	4	40 lbs.	55.50	NA-10

Electro-Statically Shielded

Television-Servicing **Servicing—Radio & Laboratory**

ISOLATION TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
LR-5	LARKE	115	70-140	5.0	500	5	27 lbs.	$ 29.50	LR-5
LR-10	LAMBE	115	70-140	10.0	1000	5	40 lbs.	57.50	LR-10
LR-22	LOOSE	230	70-140	5.0	500	5	27 lbs.	31.50	LR-22
LR-24	LOOKE	230	70-140	10.0	1000	5	40 lbs.	61.50	LR-24

METERED AUTO-TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
PAL-7	PADDE	115	0-135	7.5	1000	6	15 lbs.	$ 40.50	PAL-7
1500-BD	LATTE	115	0-135	15.0	2000	8	35 lbs.	64.00	1500-BD
CAL-5	MALLE	115	0-280	3.5	430	7	32 lbs.	38.50	CAL-5
CAL-10	NALLE	115	0-280	7.5	860	7	42 lbs.	64.50	CAL-10
MAL-7	QUALM	230	0-270	3.0	810	6	15 lbs.	49.50	MAL-7
1520-BD	RALEN	230	0-270	9.0	2400	8	35 lbs.	64.00	1520-BD
NAL-5	TALLE	230	0-140	7.5	860	7	27 lbs.	40.50	NAL-5
NAL-10	SALLE	230	0-140	15.0	1500	7	40 lbs.	67.50	NAL-10

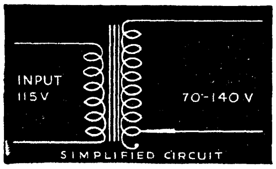
Electro-Statically Shielded

Television-Servicing **Servicing—Radios & Laboratory**

METERED ISOLATION TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
LRL-5	BARKE	115	0-140	5.0	500	7	29 lbs.	$ 41.50	LRL-5
LRL-10	BAMBE	115	0-140	10.0	1000	7	42 lbs.	69.50	LRL-10
LRL-22	BOOSE	230	0-140	5.0	500	7	29 lbs.	43.50	LRL-22
LRL-24	BOOKE	230	0-140	10.0	1000	7	42 lbs.	73.50	LRL-24

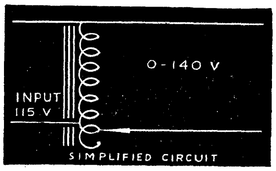
ISOLATION TRANSFORMER



ADJUST-A-VOLT FEATURES:

- **Smooth Continuous Control**
- **No Waveform Distortion**
- **High Efficiency**
- **Rugged Construction**
- **Excellent Regulation**
- **Conservatively Rated**
- **50/60 Cycle Operation**
- **Standard Mountings**

AUTO-TRANSFORMER



The Adjust-A-Volt combines the ease of control of the Rheostat with the high efficiency of the transformer and provides smooth, continuous control of voltage for the control of AC lines, Power, Heat, Light and Speed.

Other models available. Ask for complete catalog.

MANUFACTURED UNDER U. S. PATENT 2,009,013 AND OTHER PATENTS PENDING

Staco
STANDARD ELECTRICAL PRODUCTS CO.
A QUALITY PRODUCT
DAYTON, O.
U.S.A.

TRANSFORMERS

STEP DOWN
STEP UP

ISOLATION AND LINE CORRECTION

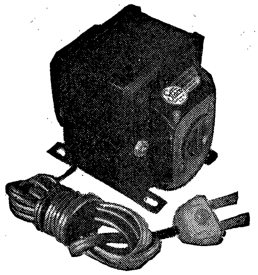


FIG. 1

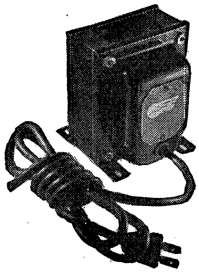


FIG. 2

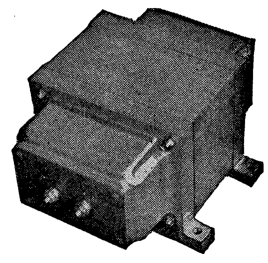


FIG. 3

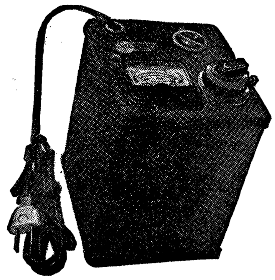


FIG. 4

STEP-DOWN AUTOTRANSFORMERS

Input 220-240 V. 60 cy. Output 115 V. Pri. Cord and Plug Sec. Receptacle

Cat. No.	Code	Mount Fig. No.	Cap. in Watts	Input, Volts	Output, Volts	Cycles	Dimensions in Inches			Net Wt. in Lbs.	Net Price	Cat. No.
							H.	W.	D.			
SB-0075	STEBA	1	75	200/240	115	50/60	3⅛″	2⅝″	3¾″	3½	$ 5.40	SB-0075
SB-0150	STECA	1	150	200/240	115	50/60	3⅞″	3¼″	3⅝″	4½	7.35	SB-0150
SB-0250	STEDA	1	250	200/240*	115	50/60	4¾″	3⅞″	4⅜″	8½	9.60	SB-0250
SB-0500	STEFA	1	500	200/240*	115	50/60	4¾″	3⅞″	6⅛″	12½	15.60	SB-0500
SB-1000	STEGA	3	1000	200/240*	115	50/60	4⅞″	7¼″	9″	22½	28.50	SB-1000
SB-2000	STELA	3	2000	200/240*	115	50/60	5¼″	8⅝″	11¼″	40¼	47.40	SB-2000

* These models have primary taps of 200–220–240 Volts. Simply remove cover plate (see Figure 2) and connect to required taps.

TELEVISION LINE CORRECTION STEP-UP AUTOTRANSFORMERS

Models SU 100/105Volt. Input. Models RU 200/210 Volt Input
All SU Models Boost Input 10 Volts. All RU Models Boost Input 20 Volts

SU-0100	SUBAT	1	100	100/110	110/120	50/60	3⅛″	2⅝″	2⅞″	2¾	$ 5.15	SU-0100
SU-0250	SUCAT	1	250	100/110	110/120	50/60	3⅛″	2⅝″	3¾″	3½	7.35	SU-0250
SU-0500	SUDAT	1	500	100/110	110/120	50/60	3⅞″	3¼″	3¼″	4½	8.85	SU-0500
SU-1000	SUFAT	1	1000	100/110	110/120	50/60	4⅝″	3⅞″	4⅛″	8½	17.65	SU-1000
SU-2000	SUGAT	1	2000	100/110	110/120	50/60	4⅝″	3⅞″	5⅝″	14½	35.40	SU-2000
RU-0100	SREBA	1	100	200/210	220/230	50/60	3⅛″	2⅝″	2⅞″	2¾	5.15	RU-0100
RU-0250	SRECA	1	250	200/210	220/230	50/60	3⅛″	2⅝″	3¾″	3½	7.35	RU-0250
RU-0500	SREDA	1	500	200/210	220/230	50/60	3⅞″	3¼″	3¼″	4½	8.85	RU-0500
RU-1000	SREFA	1	1000	200/210	220/230	50/60	4⅝″	3⅞″	4⅛″	8½	17.65	RU-1000
RU-2000	SREGA	1	2000	200/210	220/230	50/60	4⅝″	3⅞″	5⅝″	14½	35.40	RU-2000

RADIO — ISOLATION TRANSFORMERS — TELEVISION

All Models 115 V. Input. 115 V. Output. Electrostatically Shielded.

SI-050	SICAR	1	50	115	115	50/60	3¹⁷⁄₃₂″	2⅞″	3″	4½	$ 6.00	SI-050
SI-100	SICER	1	100	115	115	50/60	3²⁹⁄₃₂″	3⁵⁄₃₂″	3⅝″	7¼	11.70	SI-100
SI-250	SICOR	1	250	115	115	50/60	4¾″	3⅞″	5⅛″	14½	21.00	SI-250

TELEVISION LINE VOLTAGE ADJUSTORS, METERED

8 Position Rotary Switch Corrects Low or High Line to 115 V. from 85-95-105-115-125-135 V-AUTOTRANSFORMER

LC-150	LABAD	4	150	85–135	115	50/60	6½″	4⅜″	5″	7¾	$17.40	LC-150
LC-350	LAFAD	4	350	85–135	115	50/60	6½″	4⅜″	5″	10¾	21.00	LC-350
LC-500	LAJAD	4	500	85_135	115	50/60	6½″	4⅜″	5″	11½	25.50	LC-500

STACO Transformers are compact and modern in design. Only the highest quality silicon lamination steel is used which assures cool operating transformers. Each coil is layer wound with the best quality enameled wires, each layer is insulated with heavy insulating material, each coil is varnished impregnated and high temperature baked. High Voltage Breakdown Test is performed on each coil and transformer in accordance with existing RMA Specs. This combination of high quality materials plus the finest workmanship is assurance of better and lasting performance at highest operating efficiency, yet costs no more than average.

Finishes: Mount type #1, Black baked enamel, Mount type #2, Black baked enamel, Mount type #3, Natural Buffed Aluminum, Mount type #4, Black Wrinkle baked enamel.

FERRANTI TRANSFORMERS

This group of transformers are hermetically sealed in standard Mil-T-27 case sizes, and are designed to meet the full requirements of the Mil-T-27 specification. They provide the highest standard of quality necessary for professional and military requirements.

The range includes the specific types standardized by the Armed Services Electro Standards Agency for universal military use, as well as a group of standard types for 400 cycle power supplies.

Use of these standard high quality components in experimental equipment will avoid the necessity for redesign for production.

Military Standard Filament Transformers *Input 105/115/125 Volts 50/60 Cycles*

Cat. No.	MIL Type	Military Standard #	Sec. Volts	Sec. Amps	Test Volts	Net Price	Case
FMF 20	TF1A01EB002	MS90016	2.5	3	2500	$ 6.80	EB
FMF 21	TF1A01GB003	MS90017	2.5	10	2500	8.70	GB
FMF 22	TF1A01FB004	MS90018	5.0	3	2500	7.80	FB
FMF 23	TF1A01HB005	MS90019	5.0	10	2500	9.80	HB
FMF 24	TF1A01FB006	MS90020	6.3	2	2500	7.80	FB
FMF 25	TF1A01GB007	MS90021	6.3	5	2500	8.70	GB
FMF 26	TF1A01JB008	MS90022	6.3	10	2500	12.50	JB
FMF 27	TF1A01KB009	MS90023	6.3	20	2500	16.50	KB
FMF 28	TF1A01JB012	MS90024	2.5	10	10,000	14.50	JB
FMF 29	TF1A01KB013	MS90025	5.0	10	10,000	19.50	KB

Military Standard Plate and Filament Transformers *Input 105/115/125 Volts 50/60 Cycles Choke Input Filter*

Cat. No.	MIL Type	Military Standard#	FIL 1	FIL 2	Plate (RMS)	Current	Net Price	Case
FMP 30	TF1A03HA001	MS90026	6.3/5v 2a	6.3v 3a	200-100-0-100-200	.07A.DC	$13.50	HA
FMP 31	TF1A03JB002	MS90027	6.3/5v 2a	6.3v 4a	325-0-325	.07A.DC	16.80	JB
FMP 32	TF1A03KB006	MS90028	5v 3a	6.3v 5a	325-0-325	.150A.DC	19.80	KB
FMP 33	TF1A03LB003	MS90029	5v 3a	6.3v 8a	400-0-400	.175A.DC	22.50	LB
FMP 34	TF1A03MB003	MS90030	5v 3a	6.3v 8a	450-0-450	.250A.DC	24.80	MB
FMP 35	TF1A03KB001	MS90031			350-0-350	.250A.DC	18.50	KB
FMP 36	TF1A02LB002	MS90032			550-0-550	.250A.DC	20.80	LB
FMP 37	TF1A02NB002	MS90036			800-0-800	.250A.DC	31.50	NB

400 Cycle Transformers

Filament Transformers

Input 115 Volts 380-1200 Cycles

Cat. No.	Sec. Volts	Sec. Amps.	Test Volts	Case	Net Price
FF 40	6.3 ct	2	1500	AJ	$ 8.20
FF 41	6.3 ct	5	1500	EA	10.80
FF 42	6.3 ct 6.3	5 5	2500 2500	FA	12.25
FF 43	5/6.3	3	2500	EB	10.50
FF 44	5 ct	6	2500	EA	10.90
FF 45	2.5 ct	10	7500	HB	13.80

Plate and Filament Transformers

Input 115 Volts 380-1200 Cycles

Cat. No.	Plate RMS	DC Amps	Filaments	Case	Net Price
FP 40	250-0-250	.070	5/6.3V 2A 6.3Vct 3A	GB	$14.50
FP 41	325-0-325	.120	5V 3A 6.3 ct 5A	JB	18.50
FP 42	400-0-400	.200	5 V 3A 6.3V 6A	KB	32.00
FP 43	350-0-350	.250	——	JB	16.80
FP 44	500-0-500	.250	——	KB	23.50

FERRANTI ELECTRIC, INC.

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Net

FERRANTI TRANSFORMERS

Military Standard Audio Transformers

The Armed Services Electro Standards Agency has specified these types of audio transformers for universal military use. All units are hermetically sealed in Mil-T-27 case size AJ and are designed to meet the full requirements of the Mil-T-27 specification.

Use of these standard units in equipment at the experimental stage will avoid the necessity for redesign for production.

See dimension chart for AJ case details.

Cat. No.	Function	Military Standard #	Type Designation	Impedance Level (in ohms) Primary	Impedance Level (in ohms) Secondary	Ratio	Max. Power Level V.U.	Pri. D.C. Per Side in MA	Max. D.C. Unbalance	Frequency Response	Net Price
FMA 10	Interstage, Single or P.P plates to single or P.P. grids	MS90000	TF1A15AJ001	10,000 CT	90,000 split and CT	1:3 overall	+15	10	10	±1 DB 300-10,000	$11.80
FMA 11	Matching, 600 ohm line to voice coil	MS90001	TF1A16AJ002	600 split	4,8,16	6,12:1 overall	+33	0	0	±1 DB 300-10,000	11.80
FMA 12	Input, 600 ohm line to single or P.P grids	MS90002	TF1A10AJ001	600 split	135,000 CT	1:15	+15	0	0	±2 DB 300-10,000	11.80
FMA 13	Matching 600 ohm line to 600 ohm line	MS90003	TF1A16AJ001	600 split	600 split	1:1	+15	0	0	±1 DB 300-10,000	11.80
FMA 14	Output, single plate 7600 ohm or 4800 ohm to 600 ohm line	MS90004	TF1A13AJ001	7600 tap @ 4800	600 split	3,56:1	+33	40	40	±2 DB 300-10,000	11.80
FMA 15	Output, single plate 7600 ohm or 4800 ohm to voice coil	MS90005	TF1A13AJ002	7600 tap @ 4800	4,8,16	21.8:1	+33	40	40	±2 DB 300-10,000	11.80
FMA 16	Output, single or P.P. plates to 600 ohm line	MS90006	TF1A13AJ003	15,000 CT	600 split	5:1	+33	10	10	±1 DB 300-10,000	11.80
FMA 17	Output, P.P. plates to 600 ohm line.	MS90007	TF1A13AJ004	24,000 CT	600 split	6.32:1	+30	10	1	±1 DB 300-10,000	11.80
FMA 18	Output, P.P. plates to 600 ohm line	MS90008	TF1A13AJ005	60,000 CT	600 split	10:1	+27	10	1	±2 DB 300-10,000	11.80

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FERRANTI TRANSFORMERS

Filter Reactors

To match the power and audio transformers, these reactors are of the same high quality in design and construction, and are hermetically sealed in standard Mil-T-27 cases. Types particularly suitable for 400 cycle power supplies are included.

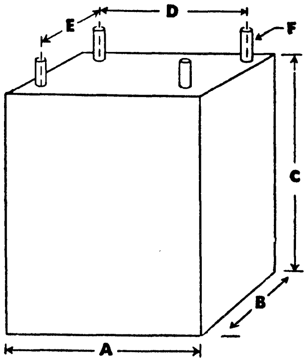
For 50-60 Cycle Power Supplies

Cat. No.	DC Amps	Inductance Henries	Resistance Ohms	Test Volts	Case	Net Price
FC 10	.020	30	1000	1500	AJ	$ 6.50
FC 11	.070	15	300	2500	GB	7.40
FC 12	.150	10	120	2500	JB	9.20
FC 13	.200	8	90	2500	KB	11.50
FC 14	.300	10	87	2500	LB	15.40

For 400-Cycle Power Supplies

Cat. No.	DC Amps	Inductance Henries	Resistance Ohms	Test Volts	Case	Net Price
FC 40	.070	3	235	1500	AJ	$ 6.50
FC 41	.120	3	150	2000	EB	7.20
FC 42	.200	3	110	2000	FB	8.70
FC 43	.250	3	65	2000	GB	9.20

Mil-T-27 Case and Mounting Dimensions



Case	A	B	C	D	E	F
AJ	1 5/8	1 5/8	2 3/8	1 1/16	1 1/16	6-32
EA	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	6-32
EB	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	6-32
FA	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	6-32
FB	2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6-32
GB	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6-32
HA	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	8-32
HB	3 1/16	2 5/8	3 3/16	2 19/64	1 55/64	8-32
JB	3 9/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32
KB	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32
LB	4 5/16	3 11/16	4 1/2	3 5/16	2 11/16	10-32
MB	4 11/16	4	4 15/16	3 11/16	3	1/4-20
NB	5 1/16	4 5/16	5 1/2	4 1/16	3 5/16	1/4-20

FERRANTI ELECTRIC, INC.

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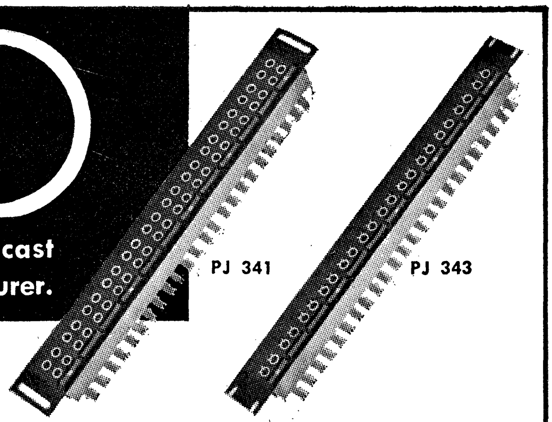
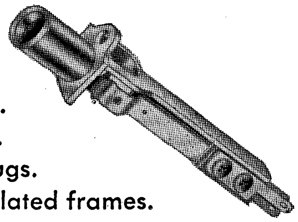
ADC

TRUE! — more ADC Plugs and Jacks in broadcast use today than those of any other manufacturer.



JACKS

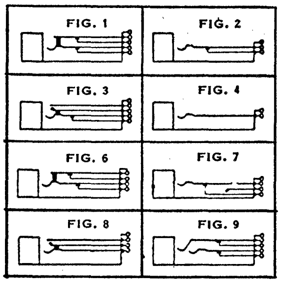


Nickel silver springs.
Silver alloy contacts.
Tinned connecting lugs.
Die formed, nickel plated frames.

Standard dimensions, interchangeable with any telephone type jack using a ¼-inch plug.

Spring arrangements available as follows:

Figures



TYPE	FIG.	LIST
PJ 116	1	$1.70
PJ 318	2	1.27
PJ 125	3	1.70
PJ 123	4	1.16
PJ 117	6	1.60
PJ 203	7	1.38
PJ 115	8	1.48
PJ 638	9	1.70
PJ 339	9	1.92

For use with plugs PJ-5 PL-55 WE-47 except PJ 339, use with WE-291.

JACK PANELS

Constructed of solid bakelite, reinforced with steel.

Slotted mounting brackets for use in 19" relay racks.

Spacing prevents cross connection of adjacent circuits with double plug.

Designation strip included on all panels.

Single panel holds 24 jacks, requires 1¾" panel space.

Double panel holds 48 jacks, requires 2⅛" panel space.

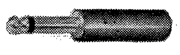
TYPE	DESCRIPTION	LIST
PJ 31	Double, less Jacks	$15.75
PJ 33	Single, less Jacks	14.20
PJ 341	Double, with 48 PJ 318 Jacks	75.00
PJ 343	Single, with 24 PJ 318 Jacks	44.10

PLUGS

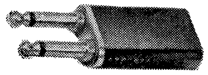
Interchangeable with standard plugs as shown.

Designed for easy assembly and cord replacement.

Insulated for 500 V. RMS. breakdown.

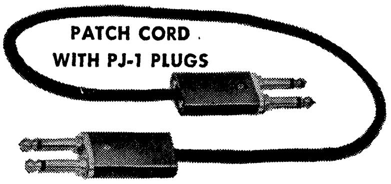


PJ-5



PJ-1

TYPE	EQUIVALENT	NO. COND. (Ea. Plug)	LIST
PJ-1	WE 241	3	$4.60
PJ-5	PL55, WE47	2	1.30



Best quality tinned copper 2 conductor stranded wire.

Heavy braided cover, with 6 inch reinforcement at each end.

Shield normally grounded both ends.

PATCH CORDS

LENGTH	CORD WITH PJ-1 PLUGS	LIST	CORDS WITH PJ 5	LIST	REPLACEMENT CORDS ONLY	LIST
1-Foot	PJ 11	$12.10	PJ 51	$6.05	PJ 21	$2.50
2-Foot	PJ 12	12.35	PJ 52	6.38	PJ 22	2.75
3-Foot	PJ 13	12.65	PJ 53	6.82	PJ 23	2.90
4-Foot	PJ 14	13.10	PJ 54	7.37	PJ 24	3.00
5-Foot	PJ 15	13.45	PJ 55	7.92	PJ 25	3.15

Net Price is List Less 40%

CUSTOM BUILDERS OF QUALITY TRANSFORMERS

AUDIO DEVELOPMENT COMPANY

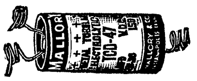
Minneapolis 7, Minnesota

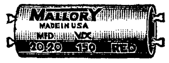
MALLORY
P. R. MALLORY & CO. Inc.

DRY ELECTROLYTIC CAPACITORS

P. R. MALLORY & CO., INC. • INDIANAPOLIS

Metal Tubular Dry Electrolytic Capacitors





For filter and audio by-pass circuits. Sealed aluminum tube with external insulating sleeve. 3" bare, tinned-copper or insulated leads at each end, except TCS styles which have solder lugs. For use up to 85°C except types designated (†).

Single Section

Catalog Number	Cap. Mfd.	DC Wkg. Volts	Size Dia. Length	List Price
TC310	1000	3	15/16 x 1¾	$1.70
TC605	500	6	13/16 x 1¾	1.55
TC610	1000	6	15/16 x 2	1.90
TC1502	200	15	13/16 x 1½	1.40
TC1505	500	15	15/16 x 2	1.75
TC22	10	25	9/16 x 1¼	1.00
TC26	25	25	9/16 x 1¼	1.00
TC29	50	25	11/16 x 1½	1.10
TC2501	100	25	11/16 x 1¾	1.35
TC2505	500	25	1 1/16 x 2⅞	2.30
TC302	2	50	9/16 x 1¼	.90
TC30	5	50	9/16 x 1¼	1.00
TC31	1	50	9/16 x 1¼	.90
TC32	10	50	9/16 x 1¼	1.00
TC36	25	50	11/16 x 1¼	1.05
TC39	50	50	13/16 x 1¼	1.20
TC3501	100	50	13/16 x 2	1.40
TC40	5	150	9/16 x 1¼	1.40
TC41	8	150	11/16 x 1¼	1.05
TC42	10	150	11/16 x 1¼	1.05
TC43	12	150	11/16 x 1½	1.10
TC44	16	150	11/16 x 1½	1.15
TC45	20	150	13/16 x 1½	1.20
TC47	30	150	13/16 x 1½	1.30
TC48	40	150	15/16 x 1¾	1.35
TC49	50	150	15/16 x 1¾	1.40
TC492	80	150	15/16 x 2¼	1.60
TC495	150	150	1 1/16 x 2⅞	1.90
TC50X	5	250	11/16 x 1¼	1.05
TC51	8	250	11/16 x 1¾	1.15
TC52	10	250	11/16 x 1¾	1.20
TC53	12	250	13/16 x 1¾	1.25
TC54	16	250	13/16 x 1¾	1.30
TC55	20	250	13/16 x 1¾	1.35
TC58	40	250	1 1/16 x 1¾	1.55
TC59	50	250	1 1/16 x 2	1.70
TC60	5	350	11/16 x 1¾	1.05
TC61	8	350	13/16 x 1¾	1.20
TC62	10	350	13/16 x 1¾	1.25
TC63	12	350	15/16 x 1¾	1.30
TC64	16	350	15/16 x 1¾	1.40
TC65	20	350	15/16 x 1¾	1.45
TC68	60	350	1 1/16 x 2⅞	1.95
TC70	5	450	11/16 x 1¾	1.20
TC71	8	450	13/16 x 1¾	1.25
TC72	10	450	13/16 x 1¾	1.30
TC73	12	450	13/16 x 1¾	1.35
TC74	16	450	15/16 x 1¾	1.40
TC75	20	450	1 1/16 x 1¾	1.55
TC77	30	450	1 1/16 x 2¼	1.70
TC78	40	450	1 1/16 x 2⅞	1.80
†TC81	10	500	15/16 x 1¾	1.35
TC82	10	500	1 1/16 x 2 15/16	2.70
†TC83	20	500	1 1/16 x 2 15/16	1.60
†TC84	30	500	1 1/16 x 2¼	1.75
TC92	10	600	1 1/16 x 2 15/16	2.95
TC50025	250	50	1 1/16 x 2⅞	1.75
TC308	.5Z @ 15750 Cycles 3 V.N.P.		1 1/16 x 2	2.20
TC420	1.5Z @ 60 Cycles 4 V		1 1/16 x 2⅞	3.50
TC421	1.5Z @ 120 Cycles 6 V		1 1/16 x 2	3.00

Dual Common Negative

Catalog Number	Cap. Mfd.	DC Wkg. Volts	Size Dia. Length	List Price
TCD26	25-25	25	13/16 x 1¼	$1.40
TCD45	20-20	150	13/16 x 2	1.65
TCD47	30-30	150	15/16 x 2	1.80
TCD48	40-40	150	1 1/16 x 2	1.85
TCD485	40-20	150	1 1/16 x 2	1.75
TCD49	50-50	150	1 1/16 x 3 1/16	2.10
TCD497	50-30	150	1 1/16 x 2¼	1.95
TCD498	80-50	150	1 1/16 x 2¼	2.35
TCD52	10-10	250	15/16 x 2	1.65
TCD55	20-20	250	1 1/16 x 2	1.85
TCD62	10-10	350	15/16 x 2	1.70
TCD65	20-20	350	1 1/16 x 3 1/16	2.25
TCD71	8-8	450	15/16 x 2	1.70
TCD72	10-10	450	1 1/16 x 2	1.85
TCD74	15-15	450	1 1/16 x 3 1/16	2.20
TCD75	20-20	450	1 1/16 x 3 1/16	2.50

Dual Separate Section

Catalog Number	Cap. Mfd.	DC Wkg. Volts	Size Dia. Length	List Price
TCS44	15-15	150	13/16 x 2⅜	$2.00
TCS45	20-20	150	15/16 x 2⅜	2.10
TCS47	30-30	150	1 1/16 x 2⅜	2.25
TCS48	40-40	150	1 1/16 x 2⅞	2.35
TCS505	70-70	175	1 1/16 x 3⅞	3.60
TCS52	10-10	250	15/16 x 2⅜	2.10
TCS55	20-20	250	1 1/16 x 2⅞	2.35
TCS61	8-8	350	15/16 x 2⅜	2.10
TCS64	15-15	350	1 1/16 x 2⅞	2.75
TCS71	8-8	450	1 1/16 x 2⅜	2.15
TCS74	15-15	450	1 1/16 x 2⅞	2.75
TCS75	20-20	450	1 1/16 x 3½	3.15

FP-WP Dry Electrolytic Capacitors

For use at ambient temperatures up to 85°C in filter and by-pass circuits in radio, TV and industrial electronics. Sealed in aluminum cans with twist-prong, lug construction. FP types have Mallory exclusive Fabricated Plates. WP have special etched plates. All feature low RF impedance and minimum coupling between sections. Separate anode terminals. Case is common cathode. For hardware, see page 11, Mallory Capacitors Section, of this catalog.

FP-WP—Singles

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
WP510	.5Z/15750 cycles	3V	1 x 2	$2.20
WP540	1.0Z/60 cycles	3V	1⅜ x 3	4.00
WP505	10Z/30 cycles	3V	¾ x 2	2.00
WP032*	3000	10	1⅜ x 2½	3.20
WP039	1000	15	1 x 2½	2.55
WP041	2000	15	1⅜ x 2½	3.45
WP042	3000	15	1⅜ x 3	3.50
WP052	40	25	¾ x 2	1.35
WP055	100	25	1 x 2	1.60
WP057	500	25	1 x 2½	2.55
WP059	1000	25	1⅜ x 2	3.55
WP063	4	50	¾ x 2	1.25
WP065	500	50	1⅜ x 2	2.65
WP068	1500	50	1⅜ x 4	3.85
FP113	30	150	¾ x 2	1.55
FP115	50	150	1 x 2	1.65
FP116	100	150	1 x 2½	2.00
FP117	150	150	1 x 3	2.15
FP119	300	150	1⅜ x 3	2.80
FP125	15	250	¾ x 2	1.55
FP135	30	350	1 x 2	1.90
FP137	50	350	1 x 2½	2.10
FP138	80	350	1⅜ x 2½	2.85
FP140	125	350	1⅜ x 3	3.95
FP142	10	450	¾ x 2	1.55
FP143	15	450	1 x 2	1.70
FP144	20	450	1 x 2	1.80
FP145	30	450	1 x 2½	1.95
FP146	40	450	1 x 2½	2.05
FP149	80	450	1⅜ x 2½	3.05

FP-WP—Duals

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
WP204	250-1000	10-6	1⅜ x 2	$2.85
WP205	.5Z-2.5Z/ 15750C-60C	12-6V	1⅜ x 3	3.60
WP200	1000-1000	15-15	1⅜ x 2½	4.40
WP206	50-150	150-25	1 x 2½	2.20
FP208	20-20	150-150	1 x 2	1.70
FP211	30-30	150-150	1 x 2	1.85
FP210	40-20	150-150	1 x 2	1.80
FP212	40-40	150-150	1 x 2½	1.90
FP213	50-30	150-150	1 x 2½	2.00
FP214	50-50	150-150	1 x 2½	2.15
FP214.5	75-75	150-150	1⅜ x 2	2.60
FP216	80-40	150-150	1 x 3	2.30
FP215	125-100	150-150	1⅜ x 2½	3.40
FP216.1	200-5	150-150	1⅜ x 2½	2.75
FP216.3	200-150	150-150	1⅜ x 4	3.75
FP216.4	200-200	150-150	1⅜ x 4	4.00
FP217	20-20	250-250	1 x 2	1.90
FP221	40-40	250-250	1 x 3	2.50
FP217.7	150-150	250-250	1⅜ x 4	5.15
FP217.9	75-75	300-300	1⅜ x 3	3.80
FP218	120-20	300-300	1⅜ x 3	4.00
FP225	15-15	350-350	1 x 2	2.25
FP227	20-20	350-350	1 x 2½	2.30
FP227.3	30-30	350-350	1 x 3	2.90
FP227.6	80-80	350-350	1⅜ x 4	4.70
FP229	35-100	400-50	1 x 3	2.60
FP229.3	75-75	400-400	1⅜ x 4	4.85

See next page for additional values

* See Table of Recommended Replacements for Modified and Discontinued FP and WP Types, page 11, Mallory Capacitors section, this catalog.

DRY ELECTROLYTIC CAPACITORS

FP-WP—Duals—Continued from Preceding Page

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
FP229.6	50-100	450-50	1⅜ x 2½	**$3.00**
FP244	80-50	450-50	1⅜ x 3	**3.50**
FP230	20-50	450-250	1 x 3	**2.80**
FP235	20-80	450-350	1⅜ x 2½	**3.65**
FP550*	10-80	450-400	1⅜ x 3	**3.45**
WP230.9	5-5	450-450	¾ x 2	**1.70**
FP231	10-10	450-450	1 x 2	**1.90**
FP234	20-20	450-450	1 x 3	**2.55**
FP237	30-30	450-450	1⅜ x 2½	**3.05**
FP238	40-40	450-450	1⅜ x 3	**3.45**
FP239	50-40	450-450	1⅜ x 3	**3.65**
FP240††	50-50	450-450	1⅜ x 3	**3.85**
FP245	80-10	450-450	1⅜ x 3	**3.60**
FP245.3	80-30	450-450	1⅜ x 4	**4.15**
FP250	40-80	475-200	1⅜ x 2½	**3.65**
FP255	20-100	475-300	1⅜ x 3	**3.95**
FP258	15-15	475-475	1 x 2½	**2.35**
FP260	40-10	475-475	1⅜ x 3	**3.10**
FP262	40-40	475-475	1⅜ x 3	**4.30**
FP266	80-50	475-475	1⅜ x 4	**5.20**
FP277	60-80	500-150	1⅜ x 3	**3.75**
FP280	40-50	500-200	1⅜ x 2½	**3.30**
FP288	40-40	500-500	1 x 3⅜	**4.30**

FP-WP—Triples

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
WP520	40-40-40	25-25-25	1 x 2	**$2.15**
FP303	20-250-100	150-15-15	1⅜ x 2	**2.90**
FP312	100-50-25	150-50-25	1 x 3	**3.00**
WP302*	15-15-1000	150-150-2	1 x 2	**3.00**
WP302.1	15-15-1200	150-150-2	1 x 2	**3.00**
FP302.7	80-30-300	150-150-10	1⅜ x 2	**3.15**
FP306	40-20-20	150-150-25	1 x 2	**2.30**
FP307	40-20-100	150-150-25	1 x 2½	**2.50**
FP304	40-20-200	150-150-25	1 x 2½	**2.70**
FP310	40-40-20	150-150-25	1 x 2½	**2.40**
FP314	40-40-200	150-150-25	1 x 3	**2.80**
FP309	50-30-100	150-150-25	1 x 2½	**2.70**
FP311	50-50-20	150-150-25	1 x 3	**2.65**
FP311.2 †	20-20-20	150-150-150	1 x 2	**2.30**
FP311.4 †	40-20-20	150-150-150	1 x 2½	**2.40**
FP311.5 †	40-40-40	150-150-150	1 x 3	**2.60**
FP311.7 †	80-40-20	150-150-150	1⅜ x 2	**2.90**
FP311.9 †	120-120-40	150-150-150	1⅜ x 3	**4.05**
FP313*	30-20-20	200-200-25	1 x 2	**2.55**
FP318*	90-90-20	200-200-50	1⅜ x 3	**3.85**
FP319	80-40-50	250-150-50	1⅜ x 2½	**3.30**
FP360*	15-20-20	250-150-150	1 x 2	**2.40**
FP316*	20-15-20	250-250-25	1 x 2	**2.35**
FP319.5	90-90-20	250-250-50	1⅜ x 3	**4.60**
FP320†	40-20-20	250-250-250	1⅜ x 2	**2.90**
FP326	100-60-20	300-150-25	1⅜ x 3	**4.20**
FP334*	20-80-10	300-250-200	1⅜ x 2½	**3.45**
FP335	100-60-20	300-250-250	1⅜ x 3	**4.90**
FP336	200-60-20	300-250-250	1⅜ x 4	**5.80**
FP331	30-30-20	350-300-25	1 x 3	**3.15**
FP328	15-10-20	350-350-25	1 x 2	**2.50**
FP330	30-20-20	350-350-25	1 x 3	**3.10**
FP330.3 †	20-10-5	350-350-250	1 x 2½	**2.55**
FP330.5 †	10-10-10	350-350-350	1 x 2	**2.40**
FP330.7	30-20-10	350-350-350	1 x 3	**3.25**
FP331.3	80-60-60	350-350-350	1⅜ x 4	**5.55**
FP333	10-50-30	400-350-25	1⅜ x 2	**3.10**
FP333.8	80-20-10	400-400-350	1⅜ x 3	**4.30**
FP342*	40-40-130	450-150-50	1⅜ x 2½	**3.70**
FP343	40-100-50	450-150-50	1⅜ x 3	**3.95**
FP340	20-50-100	450-150-75	1⅜ x 2	**3.40**
FP341	40-90-50	450-150-150	1⅜ x 3	**4.00**
FP341.5 †	20-60-100	450-250-25	1⅜ x 2½	**3.65**
FP353*	20-40-10	450-250-250	1⅜ x 2	**3.15**
FP343.1	15-20-20	450-350-250	1 x 3	**2.95**
FP343.4 †	20-15-15	450-350-350	1 x 3	**3.25**
FP343.6	20-40-10	450-350-350	1⅜ x 2½	**3.50**
FP343.9	10-30-150	450-400-5	1 x 3	**3.00**
FP344.5	10-30-40	450-400-300	1⅜ x 2½	**3.65**
FP345.2 †	10-10-20	450-450-25	1 x 2	**2.40**
FP345.5	15-15-40	450-450-25	1 x 2½	**2.75**
FP345.8 †	20-20-20	450-450-25	1 x 3	**3.05**
FP346	40-40-20	450-450-25	1⅜ x 3	**3.95**
FP364	80-40-100	450-450-25	1⅜ x 4	**5.10**
FP366	20-10-50	450-450-50	1 x 3	**2.85**
FP368	60-40-75	450-450-50	1⅜ x 4	**4.60**
FP369.1 †	40-40-40	450-450-150	1⅜ x 3	**4.15**
FP370†	40-10-80	450-450-200	1⅜ x 3	**3.90**
FP373*	40-10-100	450-450-200	1⅜ x 3	**4.20**
FP375	40-40-100	450-450-200	1⅜ x 4	**4.95**
FP376*	10-10-40	450-450-250	1⅜ x 2½	**2.90**
FP375.8 †	10-10-10	450-450-450	1 x 2½	**2.60**
FP376.1 †	15-15-10	450-450-450	1 x 3	**2.90**
FP376.3	20-10-10	450-450-450	1 x 3	**2.90**
FP376.5	20-20-20	450-450-450	1⅜ x 2½	**3.60**

FP-WP—Triples—Continued

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
FP376.8 †	40-40-10	450-450-450	1⅜ x 3	**$4.15**
FP377	40-40-40	450-450-450	1⅜ x 4	**4.90**
FP378	80-40-20	450-450-450	1⅜ x 4	**5.40**
FP379*	10-100-40	475-200-50	1⅜ x 2½	**3.35**
FP384	20-20-40	475-300-25	1⅜ x 2	**3.10**
FP385	10-40-100	475-450-200	1⅜ x 3	**4.20**
FP386	10-10-5	475-475-25	1 x 2½	**2.45**
FP387.1	10-10-150	475-475-50	1 x 3	**3.00**
FP391.1	20-20-60	475-475-450	1⅜ x 4	**4.85**
FP394	10-10-10	475-475-475	1 x 3	**2.70**
FP396	30-30-20	475-475-475	1⅜ x 3	**4.45**
FP396.2	40-10-10	475-475-475	1⅜ x 2½	**3.85**
FP397	40-35-10	475-475-475	1⅜ x 3	**4.55**
FP398	10-40-40	500-450-450	1⅜ x 3	**4.15**

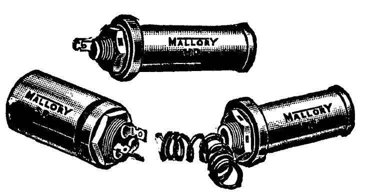
FP-WP—Quads

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
FP405	20-20-160-40	150-150-25-25	1⅜ x 2	**$3.20**
FP407	30-20-20-200	150-150-150-10	1⅜ x 2	**3.10**
FP408	60-40-20-200	150-150-150-10	1⅜ x 2	**3.45**
FP409	40-40-30-20	150-150-150-25	1⅜ x 2	**3.10**
FP409.4	50-20-20-200	150-150-150-25	1⅜ x 2	**3.50**
FP410	50-50-50-20	150-150-150-25	1⅜ x 2½	**3.55**
FP411	80-40-30-100	150-150-150-25	1⅜ x 2½	**3.70**
FP411.3	80-40-40-20	150-150-150-25	1⅜ x 2½	**3.50**
FP411.5	100-90-60-200	150-150-150-25	1⅜ x 3	**4.95**
FP411.7	125-125-40-100	150-150-150-25	1⅜ x 4	**4.85**
FP412	100-80-60-40	150-150-150-150	1⅜ x 3	**4.65**
FP412.2	40-40-50-80	250-250-150-50	1⅜ x 2½	**4.10**
FP417	100-40-80-20	300-50-25-25	1⅜ x 2½	**4.55**
FP418*	120-20-100-20	300-250-30-25	1⅜ x 3	**5.25**
FP418.3	120-20-100-20	300-250-50-25	1⅜ x 4	**5.05**
FP419	200-20-100-20	300-250-50-25	1⅜ x 4	**5.80**
FP423*	40-40-40-40	300-250-250-25	1⅜ x 2½	**4.40**
FP419.7	60-40-20-50	300-300-300-25	1⅜ x 3	**4.65**
FP420*	40-40-20-10	300-300-300-300	1⅜ x 2½	**4.55**
FP414	15-80-40-200	350-200-200-25	1⅜ x 3	**4.50**
FP419.3	40-40-20-20	350-350-350-25	1⅜ x 3	**4.65**
FP419.4	100-10-200-30	300-300-150-150	1⅜ x 4	**5.90**
FP419.9	15-15-15-50	350-350-350-50	1⅜ x 2	**3.75**
FP420.2	50-40-40-160	350-350-350-50	1⅜ x 4	**5.75**
FP420.6	80-40-100-20	400-400-50-25	1⅜ x 4	**5.65**
FP421	5-5-50-80	400-400-300-250	1⅜ x 3	**4.65**
FP422.1†	20-80-20-50	450-200-200-50	1⅜ x 2½	**4.10**
FP422.7	60-80-40-20	450-250-250-150	1⅜ x 4	**5.65**
FP413X	40-40-40-20	450-300-300-150	1⅜ x 3	**4.90**
FP422*	10-40-80-100	450-350-200-50	1⅜ x 3	**4.75**
FP423.4	10-40-100-100	450-350-250-50	1⅜ x 3	**5.55**
FP424.1	10-100-10-20	450-350-350-25	1⅜ x 3	**5.20**
FP425*	30-40-40-10	450-350-350-200	1⅜ x 3	**5.15**
FP425.1	80-10-40-30	450-400-300-300	1⅜ x 4	**5.80**
FP426	20-15-20-20	450-450-25-25	1⅜ x 2	**3.45**
FP426.5	20-20-60-100	450-450-150-25	1⅜ x 2½	**4.25**
FP426.9	40-40-125-125	450-450-150-25	1⅜ x 4	**5.70**
FP427.5	10-10-60-100	450-450-200-50	1⅜ x 2½	**3.85**
FP428	40-10-35-10	450-450-350-350	1⅜ x 3	**4.60**
FP428.4	40-40-30-30	450-450-350-350	1⅜ x 4	**5.90**
FP424	15-15-10-20	450-450-450-25	1⅜ x 2	**3.50**
FP432	40-10-10-250	450-450-450-25	1⅜ x 3	**4.70**
FP431	40-15-10-25	450-450-450-25	1⅜ x 2½	**4.10**
FP430.2	40-20-20-25	450-450-450-25	1⅜ x 3	**4.60**
FP436	40-20-20-40	450-450-450-25	1⅜ x 3	**4.65**
FP429	40-30-10-20	450-450-450-25	1⅜ x 3	**4.50**
FP430.6	40-40-40-40	450-450-450-25	1⅜ x 4	**5.50**
FP430.9	60-40-40-10	450-450-450-25	1⅜ x 4	**6.00**
FP437	20-20-20-100	450-450-450-50	1⅜ x 2½	**4.55**
FP431.4	60-40-10-25	450-450-450-50	1⅜ x 4	**5.25**
FP433	60-10-10-20	450-450-450-150	1⅜ x 3	**4.60**
FP432.4	40-40-30-10	450-450-450-200	1⅜ x 4	**5.35**
FP432.9	40-20-10-100	450-450-450-250	1⅜ x 4	**5.85**
WP433.6	5-5-5-5	450-450-450-450	1⅜ x 2	**3.00**
FP434	10-10-10-10	450-450-450-450	1⅜ x 2	**3.35**
FP434.5	20-10-10-10	450-450-450-450	1⅜ x 2	**3.70**
FP444	20-20-20-20	450-450-450-450	1⅜ x 3	**4.70**
FP444.4	30-15-15-15	450-450-450-450	1⅜ x 2½	**4.45**
FP444.8	30-30-20-20	450-450-450-450	1⅜ x 3	**5.20**
FP444.9	30-30-30-15	450-450-450-450	1⅜ x 4	**5.30**
FP445	35-35-10-5	450-450-450-450	1⅜ x 3	**4.60**
FP447	40-40-20-20	450-450-450-450	1⅜ x 4	**5.55**
FP450	80-10-10-10	450-450-450-450	1⅜ x 4	**5.05**
FP453	20-40-80-100	475-350-200-100	1⅜ x 4	**5.45**
FP456	25-20-40-100	475-450-300-50	1⅜ x 3	**4.95**
FP456.5	10-60-30-125	475-450-400-50	1⅜ x 4	**5.55**
FP455	10-50-30-30	475-450-450-25	1⅜ x 3	**4.75**
FP457*	10-40-10-20	475-450-450-50	1⅜ x 2½	**3.95**
FP461	15-15-80-40	475-475-300-50	1⅜ x 3	**4.80**
FP465*	10-10-20-100	475-475-400-25	1⅜ x 2	**3.70**
FP467	20-10-20-100	475-475-450-25	1⅜ x 2½	**4.20**
FP473	20-20-10-10	475-475-475-300	1⅜ x 2½	**4.30**
FP474	10-10-10-10	475-475-475-475	1⅜ x 2	**3.50**
FP476	40-20-10-10	475-475-475-475	1⅜ x 4	**5.10**

***†See Table of Recommended Replacements for Modified and Discontinued FP and WP Types, page 11, Mallory Capacitors section, this catalog.**

††FP240 recommended for photoflash applications. Can is ungrounded. △ pin should be used as ground.

DRY ELECTROLYTIC CAPACITORS



Aluminum Can Threaded Neck Dry Electrolytic Capacitors

For replacement of wet and dry electrolytic capacitors. RS, RM and HS have flexible, insulated leads. HD and SR have solder lug anode connections; cathodes are connected to case.

Catalog Number	Capacity Mfd.	Volts DC	Size Dia. Length	List Price
RS207	30	250	1 x 3½	$2.05
RS212	8	450	1⅜ x 3	2.20
RS213	8	450	1 x 2¾	2.20
RS214	12	450	1⅜ x 3	2.40
RS215	12	450	1 x 2¾	2.40
RS216	16	450	1 x 3½	2.45
RS217	16	450	1⅜ x 3	2.45
RS219	20	450	1⅜ x 3	2.70
RS223	30	450	1⅜ x 3	3.00
RS224	40	450	1⅜ x 3	3.15
HD684	10	450	1 x 3	2.30
HS691	4	600	1⅜ x 4	2.95
HS693	8	600	1⅜ x 4	3.15
HS696	20	600	1⅜ x 4¼	3.85
RM262	8-8	450	1⅜ x 3	3.00
RM265	8-8-8	450	1⅜ x 4¼	5.00
SR638	8-8	450	1⅜ x 2¾	3.00
SR645	8-8	450	1⅜ x 2¾	3.00

Cardboard Tubular Dry Electrolytic Capacitors

Economical, cardboard tube, wax-sealed filter and by-pass units. Have flexible, insulated leads out one end except those marked (*) which have negative leads out opposite ends. All units (except TN111) are supplied with mounting strap; in addition all units marked (†) have special feet for vertical mounting.

Catalog Number	Capacity Mfd.	Volts DC	Size D L	List Price
Single Section				
ST595†	8	450	13/16 x 2⅛	$1.25
ST597†	16	450	⅞ x 2¾	1.40
ST598†	20	450	1 x 2¾	1.55
ST599†	30	450	1 x 3¼	1.70
ST645	60	450	1 3/16 x 3⅜	2.35
ST845	80	450	1 3/16 x 4⅜	2.80
Dual Common Negative				
TN111§	10-10	25-25	⅝ x 1¾	$1.40
2N501	250-1000	10-6	1 1/16 x 2⅝	2.80
2N509*	20-20	150-150	⅞ x 2⅛	1.65
2N513*	30-30	150-150	⅞ x 2⅜	1.80
2N514*	40-20	150-150	⅞ x 2½	1.75
2N511*	40-40	150-150	15/16 x 2½	1.85
2N520*	50-30	150-150	15/16 x 2⅜	1.95
2N521†	50-50	150-150	1 x 2⅞	2.10
2N523	100-100	150-150	1⅛ x 3⅜	3.20
2N525	30-30	200-200	1 x 2⅝	2.20
2N527	50-75	250-50	1¼ x 2⅝	2.40
2N529	100-150	250-50	1⅜ x 3⅜	3.60
2N516*	8-8	250-250	⅞ x 2⅛	1.60
2N531	40-40	300-300	1⅛ x 3⅜	2.95
2N533	40-50	450-50	1⅛ x 3⅜	2.50
2N535	30-60	450-300	1¼ x 3⅜	3.20
2N518†	8-8	450-450	15/16 x 2¾	1.70
2N537	40-40	450-450	1⅜ x 3⅜	3.40
Dual Separate Section				
2S556†	30-30	150-150	1 x 2¾	$2.25
2S567†	8-8	450-450	1⅛ x 2¾	2.15
2S569†	16-16	450-450	1¼ x 3⅞	2.80

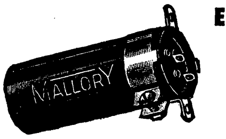
Cardboard Tubular Dry Electrolytic Capacitors

(Continued from Preceding Column)

Catalog Number	Capacity Mfd.	Volts DC	Size D L	List Price
Triple Common Negative				
3N527*	20-20-20	150-150-25	15/16 x 2¼	$2.05
3N533*	30-30-20	150-150-25	1 x 2⅜	2.20
3N529	50-30-200	150-150-25	1 x 2⅜	2.75
TN125*	20-10-10	150-150-150	⅞ x 2⅜	2.00
3N528	20-20-20	150-150-150	13/16 x 2¾	2.15
TN129†	40-20-20	150-150-150	15/16 x 2⅞	2.25
3N534	30-30-30	150-150-150	⅞ x 2¾	2.35
3N532	40-40-20	150-150-150	1 x 2⅞	2.35
3N536	40-40-40	150-150-150	1 x 3	2.45
3N538	80-40-20	150-150-150	1 x 3¼	2.75
3N540	80-50-50	150-150-150	1 1/16 x 3½	3.10
3N535	40-30-40	350-250-150	1 3/16 x 3⅜	3.30
3N537	30-50-100	450-150-25	1¼ x 3⅛	3.20
3N539	30-30-30	450-350-250	1 5/16 x 3⅜	3.75
3N541	40-20-10	450-450-450	1 5/16 x 3⅜	3.55
Triple Separate Section				
3S579†	8-8-20	450-450-25	1 3/16 x 2⅞	$2.65
3S584†	8-8-8	450-450-450	1 3/16 x 2⅞	2.85
Quad Common Negative				
4N723	10-10-10-150	450-450-450-50	1 3/16 x 3⅜	$3.60
4N727	10-10-10-10	450-450-450-450	1⅛ x 3⅜	3.25
Quad Separate Section				
4S715†	16-16-10-10	150-150-25-25	1⅛ x 2⅝	$3.25

§ Has bare tinned leads out both ends.

Plastic Cased High Capacity and Non-Polarized Electrolytic Capacitors



HC types are for use with dry disc rectifiers, in such applications as; movie equipment and electric fence power supplies. NP types are non-polarized for intermittent AC service.

Catalog Number	Capacity Mfd.	DC Wkg. Volts	Size D L	List Price
HC1020	2000	10	1 7/16 x 3⅜	$5.15
HC1040	4000	10	1 13/16 x 3⅜	7.25
HC1060A*	6000	10	1½ x 4⅛	7.50
HC1520	2000	15	1 7/16 x 3⅜	5.80
HC1540	4000	15	1 13/16 x 3⅜	8.10
HC1560	6000	15	1 13/16 x 4⅜	10.00
HC2510	1000	25	1 7/16 x 3⅜	4.85
HC2520	2000	25	1 13/16 x 3⅜	7.20
HC2540	4000	25	1 13/16 x 4⅜	9.85
HC5005	500	50	1 7/16 x 3⅜	4.80
HC5010	1000	50	1 13/16 x 3⅜	7.00
HC5020	2000	50	1 13/16 x 4⅜	9.10
HC15010	1000	150	2 1/16 x 4⅜	10.50
HC20005	500	200	2 1/16 x 4⅜	9.80
HC45003**	300	450	2 1/16 x 4⅜	12.00
NP1225	200	125	1 13/16 x 4⅜	5.00
NP1235	300	125	2 1/16 x 4⅜	5.75
NP1255	500	125	2 1/16 x 4⅜	7.50
NP3003	15	300	1 7/16 x 3⅜	3.75
NP3014	100	300	1 13/16 x 4⅜	6.75
NP3025	200	300	2 1/16 x 4⅜	9.50
NP4505	50	450	1 13/16 x 3⅜	7.50
NP4510	100	450	2 1/16 x 4⅜	11.60

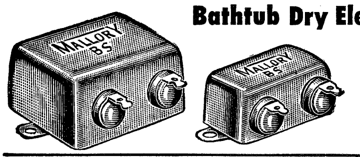
* This unit in Aluminum Case
** Designed for Photoflash Application

Electrolytic Capacitors for Photoflash Enthusiasts

Catalog Number	Capacity Mfd.	DC Wkg. Volts	Size D L	List Price
FF45052	525	450	2 1/16 x 4⅜	$22.50
FP240	50-50	450	1⅜ x 3	3.85
HC45003	300	450	2 1/16 x 4⅜	12.00

DRY ELECTROLYTIC AND PLASTIC TUBULAR CAPACITORS

Bathtub Dry Electrolytic Capacitors

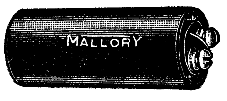


Hermetically sealed for marine, aircraft and geophysical service. Will operate, without derating, from —40°F to 185°F. Have mounting flanges and solder lugs.

Catalog Number	Cap. Mfd.	DC Wkg. Volts	Size* H W L Y	List Price
BS26	25	25	¾ x 1 x 1¾ x 2⅛	$4.50
BS29	50	25	¾ x 1 x 1¾ x 2⅛	4.60
BS36	25	50	¾ x 1 x 1¾ x 2⅛	4.55
BS39	50	50	⅞ x 1 x 1¾ x 2⅛	4.70
BS45	20	150	⅞ x 1 x 1¾ x 2⅛	4.70
BS48	40	150	1 x 1¼ x 1¾ x 2⅛	4.85
BS62	10	300	⅞ x 1 x 1¾ x 2⅛	4.75
BS65	20	300	1⅛ x 1¼ x 1¾ x 2⅛	4.90
BS81	8	500	1 x 1¾ x 2 x 2⅜	5.75
BS91	8	600	1 x 1¾ x 2 x 2⅜	5.85

* H—Height; W—Width; L—Length; Y—Mounting Centers

AC Motor Starting Capacitors

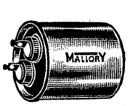


PS type—round, moisture-proof, plastic case. For mounting accessories, see page 11, Mallory Capacitors section, this catalog.

Catalog Number	Mfd. New	Rating Old	Volts AC	Size D L	List Price
PS2010*	20	20-24	110	1 7/16 x 2¾	$2.05
PS2610*	26	26-30	110	1 7/16 x 2¾	2.10
PS3210*	32	32-36	110	1 7/16 x 2¾	2.10
PS3810*	38	38-42	110	1 7/16 x 2¾	2.10
PS4310*	43	43-48	110	1 7/16 x 2¾	2.10
PS5310	53	53-60	110	1 7/16 x 3⅜	2.15
PS6410	64	64-72	110	1 7/16 x 3⅜	2.25
PS7010	70	70-78	110	1 7/16 x 3⅜	2.40
PS7510	75	75-84	110	1 7/16 x 3⅜	2.55
PS8610	86	86-96	110	1 7/16 x 3⅜	2.65
PS9710	97	97-107	110	1 7/16 x 3⅜	2.80
PS10810	108	108-120	110	1 7/16 x 3⅜	2.85
PS12410	124	124-138	110	1 7/16 x 3⅜	2.95
PS13010	130	130-157	110	1 7/16 x 3⅜	2.95
PS14510	145	145-162	110	1 7/16 x 3⅜	3.20
PS16110	161	161-180	110	1 7/16 x 3⅜	3.25
PS19410	194	194-216	110	1 7/16 x 3⅜	3.90
PS20010*	200	200-220	110	1 7/16 x 4⅜	3.90
PS21610	216	216-240	110	1 13/16 x 3⅜	4.05
PS24310	243	243-270	110	1 13/16 x 3⅜	4.70
PS27010	270	270-300	110	1 13/16 x 4⅜	4.75
PS32410	324	324-360	110	1 13/16 x 4⅜	5.40
PS34010	340	340-412	110	1 13/16 x 4⅜	5.55
PS37810	378	378-420	110	2 1/16 x 4⅜	6.00
PS40010	400	400-450	110	2 1/16 x 4⅜	6.05
PS43010	430	430-485	110	2 1/16 x 4⅜	6.95
PS48510	485	485-540	110	2 1/16 x 4⅜	7.60
PS2520	25	25-30	220	1 7/16 x 3⅜	4.60
PS3220	32	32-36	220	1 13/16 x 3⅜	4.90
PS3820	38	38-42	220	1 13/16 x 3⅜	5.30
PS4320	43	43-48	220	1 13/16 x 3⅜	5.55
PS5320	53	53-60	220	1 13/16 x 3⅜	5.75
PS6420	64	64-72	220	1 13/16 x 4⅜	6.75
PS7020	70	70-78	220	2 1/16 x 4⅜	7.00
PS7520	75	75-84	220	2 1/16 x 4⅜	7.35
PS8620	86	86-96	220	2 1/16 x 4⅜	7.65

* Cases will not accommodate PL caps and HB brackets.

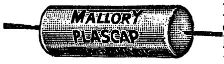
AC Motor Running Capacitors



Have sealed metal cases. Non-inflammable oil impregnation. All welded terminals. For continuous AC duty. Not suitable for DC.

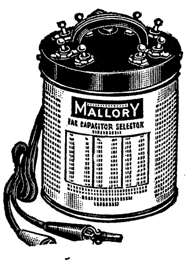
Catalog Number	Cap. Mfd.	Volts AC	Size Dia. Length	List Price
RP-3301	1	330	1⅜ x 1 15/16	$4.20
RP-3302	2	330	1⅜ x 3 3/16	5.20
RP-3303	3	330	2 x 2⅜	5.55
RP-3304	4	330	2 x 2¾	6.20
RP-3305	5	330	2 x 3¼	6.80
RP-3306	6	330	2 x 3⅞	7.50
RP-3307	7	330	2 x 4¼	7.90
RP-3308	8	330	2 x 5⅛	8.35
RP-3310	10	330	2½ x 4 9/16	9.55
RP-3312	12	330	2½ x 5 3/16	10.90
RP-3315	15	330	2½ x 6 1/16	13.80

Plascap®—Plastic Tubular Paper Capacitors



Have moisture-proof, plastic cases, Mallocene-sealed leads, low power-factor and high insulation resistance. For use in bypass, coupling and auto set buffer circuits.

Catalog Number	Capacity Mfd.	Size Dia. Length	List Price
	400 Volts DC		
PT411	.01	⅜ x 1	$0.25
PT412	.02	⅜ x 1¼	.25
PT4122	.022	⅜ x 1¼	.30
PT413	.03	7/16 x 1¼	.30
PT4133	.033	7/16 x 1¼	.30
PT4147	.047	½ x 1¼	.30
PT415	.05	½ x 1¼	.30
PT401	.1	½ x 1½	.35
PT4015	.15	⅝ x 1⅞	.40
PT402	.2	⅝ x 1⅞	.45
PT4022	.22	⅝ x 1⅞	.45
PT4025	.25	⅝ x 1⅞	.45
PT4047	.47	¾ x 2¼	.60
PT405	.5	¾ x 2¼	.60
PT41	1.0	13/16 x 2 11/16	1.25
	600 Volts DC		
PT621	.001	5/16 x 1	$0.25
PT622	.002	5/16 x 1	.25
PT6222	.0022	5/16 x 1	.25
PT623	.003	5/16 x 1	.25
PT6233	.0033	5/16 x 1	.25
PT624	.004	⅜ x 1	.25
PT6247	.0047	⅜ x 1	.25
PT625	.005	⅜ x 1	.25
PT626	.006	⅜ x 1	.25
PT611	.01	⅜ x 1¼	.30
PT612	.02	7/16 x 1¼	.30
PT6122	.022	7/16 x 1¼	.30
PT613	.03	½ x 1¼	.35
PT6133	.033	½ x 1¼	.35
PT614	.04	½ x 1½	.35
PT6147	.047	½ x 1½	.40
PT615	.05	½ x 1½	.40
PT616	.06	½ x 1½	.40
PT601	.1	⅝ x 1⅞	.45
PT602	.2	¾ x 2¼	.70
PT6022	.22	¾ x 2¼	.70
PT6025	.25	¾ x 2¼	.55
PT6047	.47	⅞ x 2 11/16	.80
PT605	.5	13/16 x 2 11/16	.80
PT61	1.0	1 x 3	1.25
	1600 Volts DC		
PT1621	.001	⅜ x 1	$0.55
PT1622	.002	⅜ x 1	.55
PT16222	.0022	⅜ x 1¼	.55
PT1623	.003	⅜ x 1¼	.55
PT16233	.0033	⅜ x 1¼	.55
PT1624	.004	⅜ x 1¼	.55
PT16247	.0047	⅜ x 1¼	.55
PT1625	.005	⅜ x 1¼	.55
PT1626	.006	7/16 x 1¼	.55
PT1627	.007	7/16 x 1¼	.55
PT16275	.0075	7/16 x 1¼	.55
PT1628	.008	7/16 x 1¼	.60
PT1611	.01	½ x 1¼	.60
PT16115	.015	½ x 1½	.60
PT1612	.02	½ x 1½	.60
PT16122	.022	⅝ x 1⅞	.60
PT1613	.03	⅝ x 1⅞	.60
PT1614	.04	⅝ x 1⅞	.70
PT1615	.05	⅝ x 1⅞	.70
PTD16115	.015-.015	⅝ x 1⅞	.80



Capacitor Selector

For determining correct capacity to use in making replacements of defective motor starting capacitors which have lost their identity. For checking capacity ranges from 25 to 645 mfd. 110-125 VAC.

Catalog No. **MSS-101** **$15.00 Net**

Paper, Oil, Wax Impregnated and Wax Filled Capacitors

Wax-Impregnated, Cardboard Cased Tubular Paper Capacitors

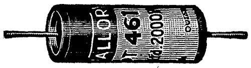
For use in by-pass and coupling circuits where temperature is not a problem.

Cap. Mfd.	400 Volts DC			600 Volts DC			1000 Volts DC		
	Catalog Number	S*	List Price	Catalog Number	S*	List Price	Catalog Number	S*	List Price
.0001				**TP401**	1	**$0.23**			
.00025				**TP402**	1	**.23**			
.0005				**TP403**	1	**.23**			
.001				**TP404**	19	**.23**	**TP455**	19	**$0.45**
.002				**TP405**	19	**.23**	**TP456**	19	**.45**
.003				**TP406**	19	**.23**	**TP457**	20	**.45**
.004				**TP407**	19	**.23**	**TP458**	20	**.45**
.005				**TP408**	19	**.23**	**TP459**	3	**.45**
.006				**TP409**	19	**.23**	**TP460**	3	**.45**
.007				**TP445**	2	**.27**	**TP461**	5	**.45**
.008				**TP450**	2	**.27**	**TP462**	5	**.45**
.01	**TP421**	19	**$0.23**	**TP410**	2	**.27**	**TP434**	3	**.45**
.015	**TP400**	2	**.23**	**TP411**	3	**.27**	**TP463**	7	**.45**
.02	**TP423**	3	**.23**	**TP412**	5	**.27**	**TP435**	8	**.45**
.025				**TP451**	5	**.32**			
.03	**TP424**	5	**.27**	**TP413**	6	**.32**	**TP464**	9	**.45**
.04	**TP425**	5	**.27**	**TP414**	8	**.32**	**TP465**	9	**.54**
.05	**TP426**	7	**.27**	**TP415**	8	**.36**	**TP437**	10	**.54**
.06	**TP427**	7	**.32**	**TP416**	8	**.36**	**TP466**	10	**.54**
.075				**TP452**	9	**.41**	**TP467**	11	**.63**
.1	**TP428**	8	**.32**	**TP418**	9	**.41**	**TP439**	12	**.68**
.15				**TP417**	11	**.45**			
.2	**TP429**	10	**.36**	**TP419**	12	**.50**			
.25	**TP430**	11	**.41**	**TP420**	13	**.50**			
.3	**TP444**	11	**.45**	**TP453**	14	**.59**			
.4	**TP442**	12	**.50**	**TP454**	15	**.68**			
.5	**TP431**	14	**.54**	**TP432**	16	**.72**			
1.0	**TP422**	17	**.81**	**TP433**	18	**1.13**			

*Type TP Size Chart

To save space in the main chart, the various sizes have been listed below. Column "S" refers to these sizes.

S	Size Dia. Length
1	11/32 x 1
2	7/16 x 1
3	7/16 x 1 1/4
4	1/2 x 1 1/16
5	1/2 x 1 1/4
6	9/16 x 1 1/4
7	1/2 x 1 1/2
8	17/32 x 1 1/2
9	5/8 x 1 9/16
10	5/8 x 1 7/8
11	11/16 x 1 7/8
12	3/4 x 1 7/8
13	13/16 x 1 7/8
14	7/8 x 1 7/8
15	7/8 x 2
16	1 x 2 1/4
17	1 x 2 1/2
18	1 1/4 x 2 1/2
19	.390 x 1
20	.390 x 1 1/4



Metal Cased Oil Impregnated Paper Capacitors

For vibrator buffer, coupling and other electronic circuits where highest quality, tubular-type capacitors are required. Mineral oil-impregnated, hermetically sealed, aluminum-cased tubulars with external insulating sleeves. 2 3/8″ leads. For operation at 85°C.

Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. Length	List Price
OT101	.01	600	5/8 x 1 3/16	**$0.95**
OT103	.02	600	5/8 x 1 3/16	**1.05**
OT106	.05	600	11/16 x 1 3/8	**1.10**
OT110	.1	600	11/16 x 1 11/16	**1.25**
OT113	.25	600	13/16 x 2 1/8	**1.70**
OT116	.5	600	1 1/16 x 2 1/4	**2.20**
OT301	.01	1000	5/8 x 1 3/16	**1.10**
OT303	.02	1000	11/16 x 1 3/8	**1.20**
OT306	.05	1000	11/16 x 2 3/16	**1.30**
OT310	.1	1000	13/16 x 2 3/16	**1.50**
OT370	.002	1600	5/8 x 1 3/8	**1.20**
OT377	.003	1600	5/8 x 1 3/8	**1.20**
OT371	.005	1600	5/8 x 1 3/8	**1.20**
OT372	.008	1600	5/8 x 1 3/8	**1.20**
OT373	.01	1600	11/16 x 1 3/8	**1.20**
OT375	.015	1600	11/16 x 1 11/16	**1.25**
OT376	.02	1600	11/16 x 1 11/16	**1.30**
OT378	.03	1600	11/16 x 2 3/16	**1.30**
OT379	.04	1600	11/16 x 2 3/16	**1.30**
OT380	.05	1600	11/16 x 2 7/16	**1.40**
OT458	.0025	2000	11/16 x 1 3/8	**1.25**
OT459	.005	2000	11/16 x 1 11/16	**1.25**
OT460	.0075	2000	11/16 x 1 5/8	**1.25**
OT461	.01	2000	11/16 x 1 5/8	**1.25**
OT462	.0125	2000	11/16 x 1 7/8	**1.30**
OT463	.015	2000	11/16 x 1 7/8	**1.30**
OT464	.02	2000	11/16 x 2	**1.35**
OT465	.03	2000	13/16 x 2	**1.40**
OT466	.04	2000	13/16 x 2 9/16	**1.40**
OT467	.05	2000	13/16 x 2 9/16	**1.45**

NEW!

THE 53 MALLORY VIBRATOR GUIDE

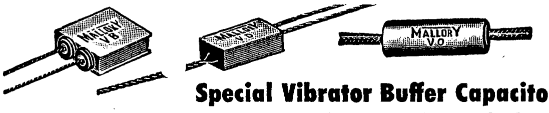
Contains Vibrator Replacement Information.
See Your Mallory Distributor.

Oil Impregnated Cardboard Cased Tubular Paper Capacitors

Ideal for auto set buffer circuits.

Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. Length	List Price
OW340	.0005	1600	1/2 x 1 1/8	**$0.55**
OW341	.001	1600	1/2 x 1 1/8	**.55**
OW331	.002	1600	9/16 x 1 1/8	**.55**
OW342	.003	1600	5/8 x 1 1/8	**.55**
OW343	.004	1600	9/16 x 1 5/16	**.55**
OW332	.005	1600	9/16 x 1 5/16	**.55**
OW344	.006	1600	9/16 x 1 9/16	**.55**
OW345	.007	1600	9/16 x 1 9/16	**.55**
OW346	.0075	1600	9/16 x 1 9/16	**.60**
OW333	.008	1600	9/16 x 1 9/16	**.60**
OW334	.01	1600	5/8 x 1 9/16	**.60**
OW335	.015	1600	11/16 x 1 9/16	**.60**
OW336	.02	1600	3/4 x 1 9/16	**.60**
OW337	.03	1600	3/4 x 2	**.60**
OW338	.04	1600	13/16 x 2	**.70**
OW339	.05	1600	7/8 x 2	**.70**
OWD335*	.015 .015	1600	3/4 x 2	**.80**
OW635*	.0005	6000	9/16 x 1 3/4	**1.10**
OW621*	.001	6000	11/16 x 1 3/4	**1.10**
OW622*	.002	6000	27/32 x 1 3/4	**1.10**
OW623*	.003	6000	1 x 1 3/4	**1.15**
OW625*	.005	6000	27/32 x 2 1/2	**1.15**
OW6275*	.0075	6000	15/16 x 2 1/2	**1.20**
OW611*	.01	6000	1 1/32 x 2 1/2	**1.20**
OW612*	.02	6000	1 7/32 x 3	**1.25**
OW613*	.03	6000	1 1/4 x 3 3/4	**1.25**
OW615*	.05	6000	1 3/8 x 4 3/8	**1.75**

* Packaged in Individual Display Carton with Mounting Strap.
All others packed 25, 50 or 100 capacitors per display carton.



Special Vibrator Buffer Capacitors

Intended for replacement of original vibrator buffer and hash suppressor capacitors of similar design.

Catalog Number	Capacity Mfd.	Working Volts DC	Size* W L H	List Price
VB470	.0075	1600	5/16 x 5/8 x 7/8	**$1.10**
VB471	.01	1600	5/16 x 5/8 x 7/8	**1.15**
VD491	.0008 .0008	1600	5/16 x 5/8 x 1 1/16	**.65**
VO480	.5	120	7/16 x 3/4 x 2 1/8	**.65**

* H—Height; W—Width; L—Length.

Paper, Oil and Wax Impregnated, and Ceramic Capacitors

P. R. MALLORY & CO., INC. · INDIANAPOLIS

P.R. MALLORY & CO. Inc. MALLORY

Miniature Metal Tubular Capacitors

MALLORY
MT-105
.001 100V

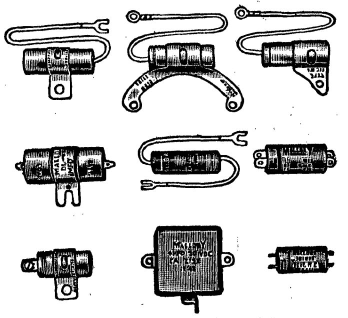
For hearing aid, personal radio, and other uses where very small size tubulars are desirable. Wax impregnated (100 volt units) or oil impregnated (600 volt units) tubular capacitors in minute hermetically sealed metal tubes with insulating sleeve. Tinned copper leads.

Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. Length	List Price
MT105*	.001	100	9/32 x ½	**$0.90**
MT107*	.002	100	9/32 x ½	**.90**
MT115*	.005	100	9/32 x ½	**.90**
MT125*	.01	100	19/64 x ½	**.90**
MT127*	.02	100	19/64 x 11/16	**.95**
MT135*	.05	100	19/64 x 1 1/16	**.95**
MT145*	.1	100	5/16 x 1¾	**1.00**
MT605†	.001	600	9/32 x 13/16	**.95**
MT607†	.002	600	9/32 x 15/16	**.95**
MT615†	.005	600	9/32 x 15/16	**.95**
MT625†	.01	600	21/64 x 1 9/16	**.95**

* Wax impregnated

† Oil impregnated

Automotive Noise Suppression Capacitors



Top Row: AG Types; FM442; FM441
Center Row: DL445X; AM454; RF482
Bottom Row: AS types; CA275X; RF481

For suppressing radio interference emanating from auto generators, oil gauges, ammeters and other automotive, aircraft or marine equipment.

AM—For ammeter and gauge suppression.

FM—For Ford generator suppression.

DL—For domelight suppression.

RF—For vibrator hash suppression.

CA—For general suppression in aircraft and marine applications.

AS, AG—For generator, ammeter and contact spark suppression.

Wax impregnated cartridges assembled in various style housings. Type AG is hermetically sealed, provides low impedance and is ideal for extreme climatic conditions.

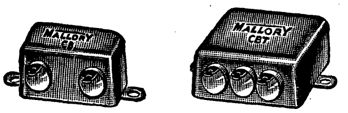
Catalog Number	Cap. Mfd.	Working Volts DC	Size D L	Signal Corps No.	List Price
RF481	.5	50	¾ x 1⅜		**$0.90**
RF482	1.0	50	⅞ x 1⅝		**1.15**
CA275X	4.0	50	2 x 2 x 1		**3.00**
AS125‡	.01	100	.675 x 15/16	CA-432	**1.20**
AG442*	.05	100	⅜ x 1¼		**.80**
AG443	.05	100	7/16 x 1 3/16		**1.00**
AS145‡	.1	100	.675 x 1⅜	CA-442	**1.40**
AS165‡	.25	100	¾ x 1½	CA-452	**1.50**
AS185‡	.5	100	1 x 1⅝	CA-462	**1.75**
FM441	.5	100	.675 x 1⅞		**.85**
RF480	.5	100	13/16 x 1 5/16		**.80**
AG450	.5-.5	100	⅞ x 2		**1.50**
FM442	.5	160	.675 x 1⅞		**.65**
AG444	.25	200	⅝ x 1¾		**.60**
DL445X	.4	200	1 x 2⅜		**2.25**
AM454	.5	200	11/16 x 2		**.65**
AG451	.5	200	¾ x 2		**.65**
AG453†	.5	200	¾ x 2		**1.50**
AG452	1.0	200	1 x 2 3/16		**.90**
AS525‡	.01	500 AC-DC	.675 x 1	CA-472	**1.35**
AS545‡	.1	500 AC-DC	1 x 2½	CA-482	**1.60**
AS565‡	.25	500 AC-DC	1 x 2½	CA-502	**2.00**

* For Midget Aircraft Motors.

† Has shielded lead.

‡ Also marked with Signal Corps Number as shown.

Steel-Cased, Oil-Filled Capacitors



For general use in aircraft, marine, geophysical and industrial electronic equipment where extreme dependability under severe conditions is desired. Oil impregnated, single, dual, and triple section units housed in rugged, hermetically sealed, hot-tinned steel cases. Single sections have two terminals. Dual section units have three terminals with left terminal common, and both are internally insulated from case. Triple units have three terminals with common ground to case. All terminals protrude in a row on one long side of case.

Catalog Number	Cap. Mfd.	Working Volts DC	Size* H W L X	List Price
CB403	.25	400	¾ x ⅞ x 1¾ x 2⅛	**$2.25**
CB404	.5	400	⅞ x 1 x 1¾ x 2⅛	**2.40**
CB405	1.0	400	¾ x 1¾ x 2 x 2⅜	**2.85**
CB406	2.0	400	1⅛ x 2 x 2 x 2⅜	**3.60**
CB602	.1	600	¾ x ⅞ x 1¾ x 2⅛	**2.65**
CB603	.25	600	¾ x 1 x 1¾ x 2⅛	**2.80**
CB604	.5	600	⅞ x 1¼ x 1¾ x 2⅛	**3.00**
CB605	1.0	600	⅞ x 1¾ x 2 x 2⅜	**3.40**
CB1002	.1	1000	¾ x ⅞ x 1¾ x 2⅛	**2.85**
CB1003	.25	1000	¾ x 1¼ x 1¾ x 2⅛	**2.95**
CB1004	.5	1000	⅞ x 1¾ x 2 x 2⅜	**3.20**
CBD403	.25-.25	400	¾ x 1¼ x 1¾ x 2⅛	**3.25**
CBD404	.5-.5	400	¾ x 1¾ x 2 x 2⅜	**3.75**
CBD602	.1-.1	600	¾ x ⅞ x 1¾ x 2⅛	**3.35**
CBT403	3X .25	400	¾ x 1¾ x 2 x 2⅜	**4.00**
CBT404	3X .5	400	1 x 1¾ x 2 x 2⅜	**4.75**
CBT602	3X .1	600	⅞ x 1 x 1¾ x 2⅛	**3.80**

* H—Height; W—Width; L—Length; X—Mounting Centers.

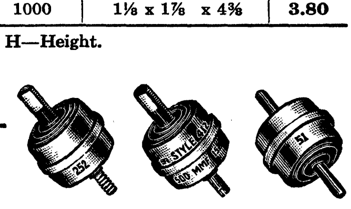
Uncased Wax Impregnated Capacitors

Designed for replacement of defective sections in large paper capacitor blocks.

Catalog Number	Cap. Mfd.	Working Volts DC	Size* W L H	List Price
UB351	1	200	½ x 1⅜ x 2⅛	**$1.00**
UB352	2	200	¾ x 1 9/16 x 2⅛	**1.50**
UB353	4	200	1 1/16 x 2 1/16 x 2⅛	**2.60**
UB354	1	400	9/16 x 1⅝ x 2⅛	**1.15**
UB355	2	400	1 x 1¾ x 2⅛	**1.80**
UB356	4	400	15/16 x 1⅝ x 4⅜	**3.00**
UB357	.5	600	½ x 1⅜ x 2⅛	**1.05**
UB358	1	600	¾ x 1 9/16 x 2⅛	**1.40**
UB359	2	600	1⅛ x 2 1/16 x 2⅛	**2.10**
UB364	4	600	1 1/16 x 1⅞ x 4¼	**3.90**
UB362	1	1000	11/16 x 1½ x 4⅜	**2.30**
UB363	2	1000	1⅛ x 1⅞ x 4⅜	**3.80**

* W—Width; L—Length; H—Height.

High Voltage Ceramic Capacitors— 500 MMFD/ 20KV WVDC



Designed for exact replacements as filters in high voltage circuits of television sets. The three capacitors have identical electrical characteristics and case styles, but differ in terminal arrangements. High quality ceramic dielectric materials and low loss plastic cases assure consistent operating results. Combinations of plain copper, internally threaded, slotted, or externally threaded studs are offered.

Catalog Number	Stud Description	List Price
HV-20035	Plain No. 6 copper, ½″ long equipped with universal adapter..........	**$2.25**
HV-20035A	(1) Internally threaded for 6-32 MS with .187 flat.................. (2) Externally threaded for 6-32 MS with .187 flat..................	**2.25**
HV-20035B	(1) Internally threaded for 6-32 MS with .187 flat.................. (2) No. 6 gauge with 1/16″ slot.......	**2.25**

CERAMIC CAPACITORS

P. R. MALLORY & CO. Inc.
MALLORY
P. R. MALLORY & CO., INC. · INDIANAPOLIS

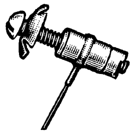


*Fig. 1

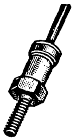


*Fig. 2

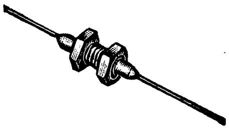


*Fig. 3

Mallory Ceramic Tubular Trimmers

Have high quality, silvered, steatite tubes; screw adjustment; low minimum capacitance and tinned-copper leads. 500 wkg. V. DC.

Cat. No.	mmf	Length of Body	Fig. No.*	List Price
CT565A	.5-3	3/8″	1	**$0.50**
CT565	.5-3	5/8″	1	**.50**
CT551	1-4	5/8″	1	**.50**
CT552	2-6	5/8″	1	**.50**

Stand-Off Ceramic Capacitors

Recommended for the dual purpose of by-passing R.F. current to ground, and of mechanically supporting other circuit elements. They are especially suited for VHF and UHF applications because of their low inductance and high resonant frequency.

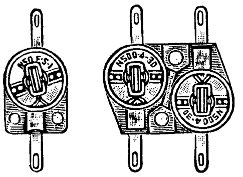
Cat. No.	Cap. mmfd	Tolerance	Fig. No.*	List Price
SC-521	1000	20%	2	**$1.00**
SC-535	500	20%	2	**1.00**

Feed-Thru Ceramic Capacitor

A well built, sturdy, feed-thru capacitor used to by-pass R.F. to ground in feed-thru applications. Wire terminals are rugged and will serve as tie points for several connections for supporting other circuit elements, and are sufficiently long for point-to-point wiring.

Cat. No.	Cap. mmfd	Tolerance	Fig. No.*	List Price
FC5215	1500	20%	3	**$1.00**

Ceramic Trimmer Capacitors



Small, electrically stable capacitors for use in high frequency FM-TV circuits. Each capacitor consists of fired silver electrodes on a ceramic rotor and base. They have a 360° rotor with a substantially constant capacity change and are completely sealed from dust and dirt. Single or dual units are available.

Solder type lugs at each end of capacitor.

Two clearance holes are provided in each capacitor for screw mounting.

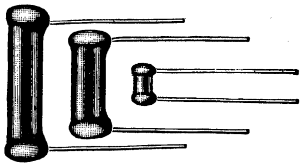
Single Units—Overall size 2 1/32″ x 27/32″ x 3/8″ thick.
Voltage Rating—600 VDC

Catalog No.	Cap. Range (mmfd)	Temperature Coefficient	List Price
ST-5515-Z	1.5 to 7	Zero	**$1.50**
ST-553-Z	3 to 12	Zero	**1.50**
ST-554-N	4 to 30	Neg. 500 Parts/Million/°C.	**1.50**
ST-557-N	7 to 45	Neg. 500 Parts/Million/°C.	**1.50**

Dual Units—Overall size 1 19/64″ x 7/8″ x 3/8″ thick.
Voltage Rating—600 VDC

Catalog No.	Cap. Range Each Section (mmfd)	Temperature Coefficient	List Price
DT-5515-Z	1.5 to 7	Zero	**$2.50**
DT-553-Z	3 to 12	Zero	**2.50**
DT-554-N	4 to 30	Neg. 500 Parts/Million/°C.	**2.50**
DT-557-N	7 to 45	Neg. 500 Parts/Million/°C.	**2.50**

Fixed Ceramic Capacitors



Mallory tubular, fixed, ceramic capacitors are manufactured in 3 types. UC is general purpose type for by-passing, coupling and other applications where a moderate capacitance change with temperature change can be tolerated. ZT is zero temperature type, the nominal capacitance of which remains substantially constant over a temperature variation from −55°C to 85°C. NT is negative temperature type with a negative coefficient of 750 parts/million/degrees C. These capacitors are supplied with a dipped phenolic insulation for protection against moisture and have radially placed bare, tinned-copper leads approximately 1¼″ long.

Voltage Rating—600VDC.

General Purpose
±20% Tolerance

Cat. No.	Capacity (mmfd)	Size*	List Price
UC-541	10	1	**$0.25**
UC-5412	12	1	**.25**
UC-5415	15	1	**.25**
UC-5418	18	1	**.25**
UC-5422	22	1	**.25**
UC-5425	25	1	**.25**
UC-5427	27	1	**.25**
UC-5433	33	1	**.25**
UC-5439	39	1	**.25**
UC-5447	47	1	**.25**
UC-545	50	1	**.25**
UC-5456	56	1	**.25**
UC-5468	68	1	**.25**
UC-5475	75	1	**.25**
UC-531	100	1	**.25**
UC-5312	120	1	**.25**
UC-5315	150	1	**.25**
UC-532	200	1	**.25**
UC-5322	220	1	**.25**
UC-5325	250	1	**.25**
UC-5327	270	1	**.25**
UC-533	300	1	**.25**
UC-5333	330	1	**.25**
UC-5339	390	1	**.25**
UC-5347	470	1	**.25**
UC-535	500	1	**.25**
UC-5356	560	1	**.25**
UC-5368	680	1	**.25**
UC-5375	750	2	**.25**
UC-521	1000	2	**.25**
UC-5212	1200	2	**.25**
UC-5215	1500	2	**.25**
UC-5218	1800	3	**.25**
UC-522	2000	3	**.25**
UC-5222	2200	3	**.25**
UC-5225	2500	3	**.25**
UC-5227	2700	3	**.25**
UC-523	3000	3	**.25**
UC-5233	3300	3	**.25**
UC-5240	4000	3	**.25**
UC-5247	4700	3	**.25**
UC-525	5000	3	**.30**

Zero Temperature Coefficient
±10% Tolerance

Cat. No.	Capacity (mmfd)	Size*	List Price
ZT-5675	.75	1	**$0.75**
ZT-5515	1.5	1	**.50**
ZT-553	3	1	**.50**
ZT-5533	3.3	1	**.50**
ZT-5547	4.7	1	**.50**
ZT-555	5	1	**.50**
ZT-5568	6.8	1	**.50**
ZT-541	10	1	**.50**
ZT-542	20	1	**.50**
ZT-5425	25	2	**.50**
ZT-5433	33	2	**.50**
ZT-545	50	3	**.55**
ZT-5475	75	3	**.55**
ZT-531	100	3	**.55**
ZT-5315	150	4	**.60**
ZT-53175	175	4	**.60**

Negative Temperature Coefficient
750 Parts/Million/°C
±10% Tolerance

Cat. No.	Capacity (mmfd)	Size*	List Price
NT-555	5	1	**$0.50**
NT-541	10	1	**.50**
NT-5447	47	2	**.50**
NT-5475	75	3	**.50**
NT-531	100	3	**.50**

*** SIZE CHART**

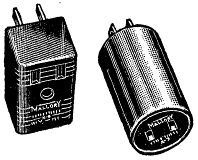
Sizes	Diameter	Length
1	.240	.460
2	.240	.710
3	.315	1.250
4	.415	1.213

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

NOISE FILTERS • CERAMIC CAPACITORS • CHOKE COILS

P. R. MALLORY & CO., INC. • INDIANAPOLIS

Mallory Noise Filters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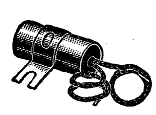
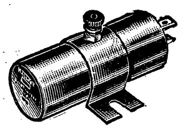
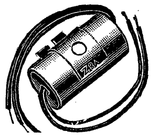
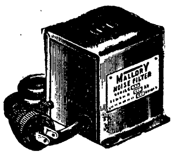
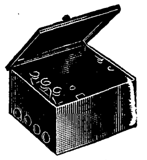

Type W


Type Z


Type Z8A

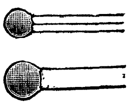

Type LC


Type LB

For reducing or eliminating radio frequency interference caused by various electrical appliances.
Type W has dual capacitors housed in metal tubes. Common lead of capacitors connected to case, except WSP type which has shock-limiting capacitor from common lead to case. Designed for direct mounting. **Type X** has single and dual capacitors housed in round metal case, except X6 which is housed in rectangular plastic case. Designed for plug-in mounting. **Type Z**—Single and dual inductance-capacity filters housed in round metal container and designed for insertion between appliance and electrical outlet. Types Z6 and Z8 have terminal for return lead to ground of appliance. Type Z8A designed for direct mounting and is equipped with 5″ flexible leads. **Type LC**—combination inductance-capacity filter housed in rectangular metal case. Equipped with line cord and plug as well as outlet for appliance. **Type LB**—heavy duty choke-capacity, combination filters sealed in rectangular, standard, heavy-gauge metal cut-out boxes. Equipped with heavy, flexible insulated wire leads for splicing with house or motor wiring.

Catalog Number	Amps	Volts	Size	Intensity or Degree of Interference	Source of Interference	List Price
W7		110-220 AC-DC	⅞ x 2	Light	Compressors, Sewing Machines, Vacuum Cleaners	**$1.35**
W9		115-220 AC-DC	1 x 3	Medium	Air-Conditioners, Dental Equipment, Fans, Signs	**1.75**
W11		115-220 AC-DC	1⅜ x 3	Severe	Grinders, Thermostats, Motors	**2.10**
W7SP		115-220 AC-DC	⅞ x 2	Light	Adding Machines, Cash Registers, Dishwashers	**1.80**
W9SP		115-220 AC-DC	1 x 2⅝	Medium	Vacuum Cleaners, Washing Machines	**2.20**
X1	5	110	1⅜ x 1¾	Slight	Heating Pads, Radio Receivers	**1.60**
X3	5	110-220	1⅜ x 2 3/16	Medium	Barber Clippers, Hair Dryers (small)	**1.80**
X5	5	110-220	1⅜ x 2 3/16	Medium	Floor Polishers, Refrigerators	**2.70**
X6	15	125 AC-DC	1¼ x 2 x 1	Light	Electric Razors, Food Mixers and Grinders	**1.60**
X6D	15	125 AC-DC	1¼ x 2 x 1	Light	Electric Razors, Food Mixers and Grinders	**9.60**
Z2	3	110-220	1⅜ x 2 13/16	Medium	Violet Ray, Radio Receivers, Barber Clippers	**2.20**
Z4	3	110-220	1⅜ x 2 13/16	Severe	Heating Pads, Humidifiers (plug type)	**2.50**
Z6	3	110-220	1⅛ x 3¼	Severe	Electric razors, Radio Receivers	**3.60**
Z8	3	110-220	1⅛ x 3¼	Severe	Sewing Machines, Hair Dryers (small)	**3.60**
Z8A	3	115-220 AC-DC	1 7/16 x 2¾	Severe	Fans (plug type) Vacuum Cleaners	**3.60**
LC5	5	115-220 AC-DC	2 15/16 x 3 1/16 x 3 9/16	Heavy	Air Conditioners, Cash Registers	**11.25**
LC10	10	115-220 AC-DC	2 15/16 x 3 1/16 x 3 9/16	Heavy	Dictating Machines, Ironing Machines	**15.00**
LB10	10	220	6½ x 6½ x 4	Heavy	Sign Flashers, Oil Burners, Neon Signs	**17.50**
LB20	20	220	10¼ x 10¼ x 6	Heavy	Stokers, Garbage Grinders, Fans, Compressors	**47.50**
LB40	40	220	12 x 10¼ x 6	Heavy	Motors, Sign Flashers	**58.75**
NF1-115	1	115 AC—500 DC	1¾ x 1¼ x ⅞		NF type filters are designed for professional-	**8.90**
NF3-220	3	220 AC	2 x 1¾ x 1		industrial noise filtering problems. May be used	**13.20**
NF5-115	5	115 AC—500 DC	2 x 1¾ x ⅞		in such applications as; electric motors, lighting	**7.30**
NF10-115	10	115 AC—500 DC	2 x 2 x 1⅛		systems, make and break relay systems and fans.	**9.75**
NF15-220	15	220 AC	2 11/16 x 2½ x 1 15/16		Should be installed and used exactly as suggested	**27.10**
NF25-230	25	230 AC	2 x 2 x 1¼		on applicable instruction sheets.	**12.10**

Disc Ceramic Capacitors

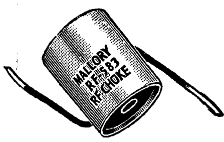


Small physical size, rugged construction, and excellent electrical characteristics. These unique capacitors are particularly suitable for replacement of molded mica and paper tubular units. They have dipped phenolic coating for maximum protection from moisture.

600 Working Volts DC

Catalog Number	Capacity (mfd)	Size Dia. Thickness	List Price
DC-521	.001	19/32 x 5/32	**$0.25**
DC-5215	.0015	19/32 x 5/32	**.25**
DC-522	.002	19/32 x 5/32	**.30**
DC-525	.005	19/32 x ⅛	**.25**
DC-511	.01	¾ x ⅛	**.25**
DCD-521	.001-.001	19/32 x 5/32	**.40**
DCD-5215	.0015-.0015	19/32 x 5/32	**.40**
DCD-522	.002-.002	19/32 x 5/32	**.40**
DCD-524	.004-.004	¾ x 5/32	**.45**

Radio Frequency Choke Coil



General purpose radio frequency choke coils for all circuits. Hour-glass wound for low distributed capacity. Housed in compact insulating tubes. Two bare tinned copper wire leads, one at each end.

Catalog Number	Turns	Wire	Inductance Microhenries	Size Dia. Length	List Price
RF581	90	16	25*	1 x 1½	**$0.60**
RF582	55	16	12*	1 x 1 3/16	**.60**
RF583	55	12	12*	1 5/16 x 1⅝	**1.25**

* Measured at 2.5 mc.

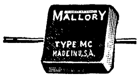
MALLORY PLASCAP!

Plastic tubular capacitor with Moisture-Proof Construction.

For complete description and listing see page 4, Mallory Capacitor section, this catalog.

Mica Receiver Capacitors

MALLORY
TYPE MC
MADE IN U.S.A.



Designed for use in radio, TV and industrial electronic circuits. Made with carefully selected mica and foil. Phenolic case with RTMA color coding for identification.

Case Size—7/16″ x 25/32″ x 7/32″
with 1⅛″ Wire Leads

Voltage Rating
=500 VDC Working—1000 VDC Test

Capacity Mfd.	Standard Mica ±20% Cap. Tolerance		Silver Mica ±10% Cap. Tolerance		Silver Mica ±2% Cap. Tolerance	
	Catalog Number	List Price	Catalog Number	List Price	Catalog Number	List Price
.000005	MC205	$0.25	MCB205	$0.45		
.00001	MC215	.25	MCB215	.40	MCE215	$0.50
.000025	MC220	.25	MCB220	.40	MCE220	.50
.00004	MC223	.20	MCB223	.40	MCE223	.50
.00005	MC225	.20	MCB225	.40	MCE225	.50
.000075	MC230	.20	MCB230	.40	MCE230	.50
.0001	MC235	.20	MCB235	.40	MCE235	.50
.00015	MC236	.20	MCB236	.45	MCE236	.55
.0002	MC237	.20	MCB237	.45	MCE237	.55
.00025	MC240	.25	MCB240	.45	MCE240	.55
.0003	MC241	.25	MCB241	.55	MCE241	.70
.0004	MC243	.25	MCB243	.65	MCE243	.80
.0005	MC245	.25	MCB245	.70	MCE245	.85
.0008	MC251	.25	MCB251	.95	MCE251	1.10
.001	MC255	.30	MCB255	1.10	MCE255	1.35
.0015	MC256	.30				

Case Size—13/16″ x 13/16″ x 5/16″
with 1⅛″ Wire Leads

Voltage Rating
=500 VDC Working—1000 VDC Test

Capacity Mfd.	Standard Mica Catalog Number	List Price	Silver Mica ±10% Catalog Number	List Price	Silver Mica ±2% Catalog Number	List Price
.0005	MC445	.30	MCB445	.70	MCE445	.85
.0008	MC451	.30	MCB451	.95	MCE451	1.15
.0015			MCB456	1.35	MCE456	1.65
.002	MC457	.40	MCB457	1.35	MCE457	1.65
.0025	MC460	.45	MCB460	1.80	MCE460	2.20
.003	MC461	.50	MCB461	2.05	MCE461	2.45
.004	MC463	.55	MCB463	2.15	MCE463	2.60
.005	MC465	.60	MCB465	2.25	MCE465	2.70
.006	MC467	.75	MCB467	2.60	MCE467	3.15
.007	MC469	.90	MCB469	2.90	MCE469	3.50
.008	MC471	1.00	MCB471	3.20	MCE471	3.85
.01	MC475	1.20	MCB475	3.50	MCE475	4.20

High-Voltage Mica Capacitors for TV Replacement

Catalog Number	Capacity mmfd	Working Volts DC	Size	List Price
MCP550	5	3000	1 x 5/8 x 11/32	$0.35
MCP410	10	3000	1 x 5/8 x 11/32	.35
MCM422	22	2500	25/32 x 7/16 x 7/32	.30
MCM433	33	2500	25/32 x 7/16 x 7/32	.35
MCL447	47	2000	25/32 x 7/16 x 7/32	.30
MCL468	68	2000	25/32 x 7/16 x 7/32	.35
MCK475	75	1500	25/32 x 7/16 x 7/32	.30
MCK310	100	1500	25/32 x 7/16 x 7/32	.35
MCK315	150	1500	25/32 x 7/16 x 7/32	.35
MCK318	180	1500	25/32 x 7/16 x 7/32	.35
MCK322	220	1500	25/32 x 7/16 x 7/32	.40
MCK327	270	1500	25/32 x 7/16 x 7/32	.45
MCK333	330	1500	25/32 x 7/16 x 7/32	.50
MCK347	470	1500	25/32 x 7/16 x 7/32	.60
MCK368	680	1500	1 x 5/8 x 11/32	.65
MCK382	820	1500	1 x 5/8 x 11/32	.75
MCK210	1000	1500	1 x 5/8 x 11/32	.80
MCK215	1500	1500	1 x 5/8 x 11/32	1.10
MCK220	2000	1500	1 x 5/8 x 11/32	1.35
MCK224	2400	1500	1 x 5/8 x 11/32	1.55

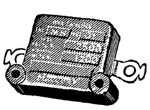
THE MALLORY TV-101 UHF CONVERTER

Offers Outstanding Features for Increased TV Reception

- √ **Reception of all UHF channels**
- √ **No loss of VHF channels**
- √ **Built-in UHF antenna**
- √ **Fast, easy installation**
- √ **Constructed with Mallory UHF Inductuner®**
- √ **Adaptable to all TV sets**

For complete description and listing see page 1, Mallory Television Accessories section, this catalog.

Mica Transmitting Capacitors (Type MH)



For use in transmitting and power amplifier circuits. Made with accurately gauged, high-quality, India mica in molded phenolic case.

Test volts are 200% of WVDC. Case size 1⅝″ x 1⅛″ (minus terminals).

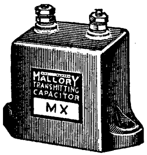
Catalog Number	Cap. Mfd.	Working Volts DC	Test Volts DC	Thickness	List Price
MH535	.0001	600	1200	23/64	$0.70
MH635	.0001	1200	2500	23/64	1.00
MH735	.0001	2500	5000	23/64	1.25
MH545	.0005	600	1200	23/64	.70
MH645	.0005	1200	2500	23/64	1.00
MH745	.0005	2500	5000	23/64	1.70
MH555	.001	600	1200	23/64	.70
MH655	.001	1200	2500	23/64	1.25
MH755	.001	2500	5000	23/64	2.05
MH557	.002	600	1200	23/64	.80
MH657	.002	1200	2500	23/64	1.90
MH757	.002	2500	5000	23/64	3.10
MH565	.005	600	1200	23/64	1.00
MH665	.005	1200	2500	29/64	2.40
MH765	.005	2500	5000	29/64	4.70
MH575	.01	600	1200	23/64	3.10
MH675	.01	1200	2500	29/64	3.90
MH577	.02	600	1200	29/64	2.20

You can depend on
MALLORY CAPACITORS
Ask for them by name!

MICA, OIL FILLED AND IMPREGNATED CAPACITORS

P. R. MALLORY & CO., INC. • INDIANAPOLIS

P.R. MALLORY & CO. Inc. MALLORY



Mica Transmitting Capacitors (Type MX)

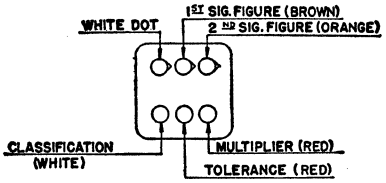
Ideal for amateur transmitting equipment. May also be used in coupling, tank and by-pass circuits at currents within specified rating.

Catalog Number	Cap. Mfd.	Test Volts DC	Max. Amps.	Freq. KC.	List Price
MX855	.001	12,500	9.0	15000	
			10.0	7500	
			11.0	3750	$8.00
			12.0	1875	
MX857	.002	12,500	9.0	15000	
			12.0	7500	
			13.0	3750	
			15.0	1875	11.00
MX865	.005	10,000	10.0	15000	
			13.0	7500	
			14.0	3750	
			15.0	1875	14.50
MX875	.01	7,000	10.0	15000	
			13.0	7500	
			15.0	3750	
			15.0	1875	15.25
MX877	.02	3,500	10.0	15000	
			13.0	7500	
			17.0	3750	
			17.0	1875	16.00
MX885	.05	3,500	11.0	15000	
			14.0	7500	
			16.0	3750	
			18.0	1875	18.50
MX895	.1	2,000	11.0	15000	
			14.0	7500	
			16.0	3750	
			18.0	1875	18.50

Case Size: 4 1/16" x 2¾" x 2⅛" (Minus Terminals).

Instructions for use of RTMA Color Code

Hold capacitor with arrow pointing to right. From left to right, the first dot shall always be white to indicate standard RTMA molded mica capacitor. The second and third dots become the first two significant figures in the capacitance. The second row is read from right to left. The lower right dot should be the multiplier. The lower second dot indicates the tolerance and the lower left dot indicates the class.



Example shown above = 1300 mmfd. ±2%, 500 V.W.

The key to color significance is as follows:

Color	Sig. Fig.	Mult.	Tol.	Class.*
Black	0	1	±20%	A
Brown	1	10		B
Red	2	100	± 2%	C
Orange	3	1000	± 3%	D
Yellow	4	10000		
Green	5		± 5%	
Blue	6			
Violet	7			
Gray	8			I
White	9			J
Gold		0.1		
Silver		0.01	±10%	

* Denotes various electrical characteristics.
Voltage ratings vary with capacitance as shown in RMA Specification—April, 1946.

MALLORY
TX 807

Transmitting Capacitors (Type TX)

For radio, television, transmitting and all circuits requiring high voltage capacitors. Compact rectangular oil filled capacitors of sturdy construction.

Catalog Number	Cap. Mfd.	Working Volts DC	Size* W	L	H	List Price
TX801	1	600	1	x 1¾	x 2⅛	$5.20
TX802	2	600	1	x 1¾	x 2⅝	6.50
TX803	4	600	1	x 1¾	x 4¼	8.50
TX816	6	600	1 3/16	x 2½	x 4⅝	10.50
TX817	10	600	1¼	x 3¾	x 4⅝	14.00
TX822	.5	1000	1	x 1¾	x 2⅛	4.55
TX804	1	1000	1	x 1¾	x 2⅝	5.70
TX805	2	1000	1	x 1¾	x 3⅞	7.60
TX806	4	1000	1 3/16	x 2½	x 4⅝	9.60
TX824	6	1000	1¼	x 3¾	x 4⅝	12.75
TX825	10	1000	1¾	x 3¾	x 4⅝	15.50
TX807	1	1500	1	x 1¾	x 4¼	6.85
TX808	2	1500	1 3/16	x 2½	x 4⅝	9.50
TX809	4	1500	1½	x 3¾	x 4⅝	12.75
TX829	6	1500	1¾	x 3¾	x 4⅝	15.75
TX830	10	1500	3 3/16	x 3¾	x 4⅝	23.00
TX831	.25	2000	1	x 1¾	x 2⅛	6.50
TX832	.5	2000	1	x 1¾	x 2⅞	6.90
TX810	1	2000	1 3/16	x 2½	x 3⅜	8.40
TX811	2	2000	1¼	x 3¾	x 4¼	9.95
TX823	4	2000	2¼	x 3¾	x 4¾	13.75
TX833	6	2000	3 3/16	x 3¾	x 4⅝	18.00
TX834	10	2000	4 9/16	x 3¾	x 4⅝	28.50
TX812	1	2500	1 3/16	x 2½	x 4¼	12.25
TX813	2	2500	1¼	x 3 23/32	x 4 7/32	20.00
TX835	.1	3000	1 3/16	x 2½	x 2⅜	12.75
TX836	.25	3000	1 3/16	x 2½	x 3⅜	14.00
TX837	.5	3000	1 3/16	x 2½	x 4⅝	15.50
TX814	1	3000	1¾	x 3¾	x 4⅝	18.75
TX815	2	3000	3 3/16	x 3¾	x 4⅝	23.25
TX838	4	3000	4 9/16	x 3¾	x 5½	34.00
TX839	1	4000	2¼	x 3¾	x 4¾	34.00
TX827	2	4000	4 9/16	x 3¾	x 4¾	43.00
TX818	1	5000	5⅛	x 3½	x 5⅝	39.00
TX819	2	5000	5⅛	x 3½	x 9	50.00
TX820	.5	6000	4⅜	x 5⅛	x 3½	62.00
TX821	1	6000	3 15/16	x 4 13/16	x 6 13/16	77.00

* W—Width; L—Length; H—Height.

MALLORY
TRANSMITTING
CAPACITOR
384

Transmitting Capacitors (Type TZ)

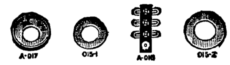
For filter and by-pass circuits in power amplifiers, television and transmitting equipment where compact round can units are desired.

Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. Height	List Price
TZ382	2.0	600	1 x 2⅝	$4.65
TZ383	4.0	600	1⅜ x 4⅛	6.20
TZ384	1.0	1000	1⅜ x 2⅝	4.30
TZ385	2.0	1000	1⅜ x 4⅛	5.45
TZ389	4.0	1000	2 x 4	7.25
TZ386	.5	1500	1⅜ x 3⅛	5.05
TZ387	1.0	1500	1⅜ x 4 11/16	5.45
TZ388	2.0	1500	2 x 4	7.25
TZ390	1.0	2000	2 x 3¼	6.85
TZ391	2.0	2000	2 x 4½	7.60

TERMINAL HEIGHTS

TX Capacitors	TZ Capacitors
600 through 2500V—1¼ 3000 through 4000V—1⅝ 5000 through 6000V—2½	600V—⅝ 1 and 2 mfd at 1000V—⅝ .5 and 1 mfd at 1500V—⅝ 4 mfd at 1000V—1⅜ 2 mfd at 1500V—1⅜ 1 mfd at 2000V—1⅜ 2 mfd at 2000V—1⅜

Capacitor Hardware



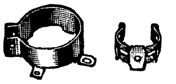
Type A-016—Terminal connector or anchor strap for general use where required.

Type 015-1—Washer for RS type ⅝″ neck when used in over-size chassis hole.

Type 015-2—Washer for use with RS, RM, or HS units where chassis hole is too large for regular mounting. Use two washers, one above and one below chassis.

Type A-017—Special washer with turned-over edge for ring clamp mounting 1″ RS type in 1⅜″ ring clamp.

Cat. No.	Description	Size	List Price
015-1	Washer for ⅝″ neck in ⅞″ hole......	Var.	**$0.05**
015-2	Washer for ¾″ neck in 1″ hole......	Var.	**.05**
MS-1	Adjustable mounting strap..	Var.	**.05**
A-016	Terminal connector...............	Var.	**.10**
A-017	Washer for clamp mounting neck cans	Var.	**.10**

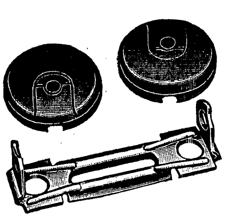


Type TH—Special clips for horizontal mounting of any tubular or FP unit within the diameter range shown. Designed primarily to mount without tools under special chassis lances in original equipment; they may also be attached to chassis with 5-32 screw and nut in any ⅛″ hole.

Type VR—Brackets for vertical mounting round units.

Cat. No.	Description	Size	List Price
TH-13	Spring clip for TC........	⅜	**$0.05**
TH-15	Spring clip for TC........	½ to 9/16	**.05**
TH-17	Spring clip for TC........	⅝ to 11/16	**.05**
TH-19	Spring clip for TC and FP..	¾ to 13/16	**.05**
TH-21	Spring clip for TC........	⅞ to 15/16	**.05**
TH-23	Spring clip for TC and FP..	1 to 1 1/16	**.05**
TH-25	Spring clip for TC and FP..	1⅜ to 1 7/16	**.10**
VR-1	Clamp for vertical mounting	1 to 1 1/16	**.15**
VR-3	Clamp for vertical mounting	1⅜ to 1 7/16	**.15**
VR-4	Clamp for vertical mounting	1½ to 1 9/16	**.20**
VR-6	Clamp for vertical mounting	1¾ to 1 13/16	**.25**
VR-8	Clamp for vertical mounting	2 to 2 1/16	**.30**
VR-10	Clamp for vertical mounting	2½	**.35**

* Will be discontinued when present stocks are exhausted.



Type "P" Hardware

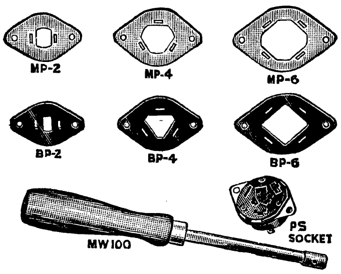
Types PL and PL-A—Plastic end cap to protect terminals on HC, NP or P units when desired.

Type HB—Horizontal bracket for mounting HC, NP or P units, using end cap type PL or PLA.

Cat. No.	Description	Size	List Price
PL-3	Plastic end cap For “On Motor”	1 7/16	**$0.20**
PL-6	Plastic end cap mounting	1 13/16	**.25**
PL-8	Plastic end cap	2 1/16	**.30**
PL-3A	Plastic end cap For “Off Motor”	1 7/16	**.20**
PL-6A	Plastic end cap mounting	1 13/16	**.25**
PL-8A	Plastic end cap	2 1/16	**.30**
HB-4	Horizontal bracket (plastic cases).	3⅜	**.30**
HB-8	Horizontal bracket (plastic cases).	4⅜	**.35**

Type "MSU," P, HC and NP Hardware

Catalog Number	Description	Size	List Price
115-1	Top Cap.................	1⅜	**$0.20**
116-1	Top Cap.................	2	**.20**
118-1	Bottom Cap..............	1⅜	**.20**
119-1	Bottom Cap..............	2	**.20**
121-1	Bracket.................	1⅜ x 3¼	**.35**
122-1	Bracket.................	1⅜ x 4¼	**.35**
123-1	Bracket.................	2 x 3⅛	**.35**
124-1	Bracket.................	2 x 4⅛	**.35**



Type MP—Metal plates for grounded mounting of FP and WP capacitors.

Type BP—Phenolic plates for insulated mounting of FP and WP capacitors.

Type PS—Molded plastic sockets for plug-in mounting FP or WP capacitors. (Blank ear on capacitor should be removed to permit polarization with respect to socket.)

Type MW-100—Special wrench for twisting mounting ears on FP or WP capacitors.

Cat. No.	Description	Size	List Price
MP-2	Metal mounting wafer for FP...	¾	**$0.05**
MP-4	Metal mounting wafer for FP...	1	**.05**
MP-6	Metal mounting wafer for FP...	1⅜	**.05**
BP-2	Phenolic mounting wafer for FP.	¾	**.05**
BP-4	Phenolic mounting wafer for FP.	1	**.05**
BP-4A	Phenolic mounting wafer for FP. (To mount 1″ FP in chassis punched for 1⅜″ wafer)	1	**.05**
BP-6	Phenolic mounting wafer for FP.	1⅜	**.05**
PS-4	Plug-in socket for FP..........	1	**.70**
PS-6	Plug-in socket for FP..........	1⅜	**.90**
PSC-4	Retainer clamp for PS-4 socket..		**.10**
MW-100	Mounting wrench for FP.......		**1.75**

Recommended Replacements for Modified and Discontinued FP and WP Types

(as listed on pages 1 and 2, Mallory Capacitor Section, this catalog)

Old Catalog Number	Recommended Replacement	Old Catalog Number	Recommended Replacement
FP313*	**FP330**	FP373*	**FP385**
FP316*	**FP343.1**	FP376*	**FP396.2**
FP318*	**FP319.5**	FP379*	**FP385**
FP332	**FP345.2†**	FP380	**FP343.4†**
FP334*	**FP333.8**	FP389	**FP375.8†**
FP339	**FP345.8†**	FP390	**FP376.1†**
FP342*	**FP342.5**	FP393	**FP376.8†**
FP345	**FP370†**	FP395	**FP369.1†**
FP352	**FP341.5†**	FP418*	**FP418.3**
FP353*	**FP343.6**	FP420*	**FP447**
FP354	**FP311.2†**	FP422*	**FP423.4**
FP355	**FP311.4†**	FP423*	**FP430.6**
FP356	**FP311.7†**	FP425*	**FP432.4**
FP357	**FP311.5†**	FP427	**FP422.1†**
FP358	**FP311.9†**	FP457*	**FP476**
FP360*	**FP343.1**	FP465*	**FP467**
FP363	**FP320†**	FP550*	**FP245**
FP367	**FP330.5†**	WP032*	**WP042**
FP369	**FP330.3†**	WP302*	**WP302.1**

* Will be deleted from line when present stocks are exhausted.
† Change in catalog number only. No change in rating.

CAPACITORS **AEROVOX** **RESISTORS**

TYPE AFH (85°C) TWIST-PRONG ELECTROLYTIC CAPACITORS

AEROVOX
CAPACITOR
AFH 4444 J
AFH 4-14

- SINGLES
- DUALS
- TRIPLES
- QUADS

AFH SINGLES

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 1-01	3000	10	1⅜x3	$2.90
AFH 1-02	1000	15	1x3	2.55
AFH 1-03	2000	15	1⅜x3	3.45
AFH 1-04	3000	15	1⅜x3	3.50
AFH 1-05	25	25	¾x2	1.25
AFH 1-06	40	25	¾x2	1.35
AFH 1-07	100	25	¾x2	1.60
AFH 1-08	500	25	1x2½	2.55
AFH 1-10	1000	25	1⅜x2	3.55
AFH 1-11	100	50	¾x2	1.65
AFH 1-12	150	50	¾x2	1.80
AFH 1-13	500	50	1⅜x2½	2.65
AFH 1-14	1000	50	1⅜x3½	3.75
AFH 1-15	25	150	1x2	1.50
AFH 1-16	30	150	1x2	1.55
AFH 1-17	40	150	1x2	1.60
AFH 1-18	50	150	1x2	1.65
AFH 1-19	60	150	1x2	1.75
AFH 1-20	80	150	1x2	1.85
AFH 1-21	100	150	1x2	2.00
AFH 1-22	120	150	1x3	2.10
AFH 1-23	140	150	1x3	2.15
AFH 1-24	150	150	1x3	2.15
AFH 1-25	40	200	1x2	1.70
AFH 1-26	15	250	1x2	1.55
AFH 1-27	20	250	¾x2	1.60
AFH 1-28	30	250	¾x2	1.70
AFH 1-29	40	250	1x2	1.80
AFH 1-30	60	250	1x2½	2.05
AFH 1-31	80	250	1x3	2.15
AFH 1-32	15	300	1x2	1.60
AFH 1-33	30	300	1x2	1.75
AFH 1-34	50	300	1x2½	2.10
AFH 1-35	80	300	1x3	2.55
AFH 1-36	100	300	1x3½	2.90
AFH 1-37	125	300	1⅜x3	3.50
AFH 1-38	15	350	1x2	1.65
AFH 1-39	30	350	1x2	1.90
AFH 1-40	40	350	1x2½	2.00
AFH 1-41	50	350	1x3	2.10
AFH 1-42	80	350	1⅜x2½	2.85
AFH 1-43	125	350	1⅜x3	3.95
AFH 1-44	10	400	¾x2	1.50
AFH 1-45	20	400	1x2	1.75
AFH 1-46	40	400	1⅜x2	2.00
AFH 1-47	80	400	1⅜x2½	2.95
AFH 1-48	10	450	1x2	1.55
AFH 1-49	15	450	1x2	1.70
AFH 1-50	20	450	1x2	1.80
AFH 1-51	30	450	1x2½	1.95
AFH 1-52	40	450	1x3	2.05
AFH 1-53	50	450	1x3	2.35
AFH 1-54	60	450	1⅜x2½	2.60
AFH 1-55	80	450	1⅜x3	3.05
AFH 1-56	30	475	1x3	2.00
AFH 1-57	90	475	1⅜x3½	3.50
AFH 1-58	10	500	1x2	1.60
AFH 1-59	20	500	1x2½	1.85
AFH 1-60	30	500	1x3	2.00
AFH 1-61	40	500	1x3½	2.50
AFH 1-62	80	500	1⅜x3	3.20
AFH 1-63	90	500	1⅜x3½	3.50
AFH 1-64	10	525	1x2	1.70
AFH 1-65	10 ohm-30 cps	3VNP	¾x2	2.00
AFH 1-66	0.5 ohm-15750 cps	3VNP	1x2	2.20
AFH 1-67	1 ohm-60 cps	3VNP	1⅜x3	4.00

AFH DUALS

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 2-02	1000-1000	15	1x3½	$4.40
AFH 2-03	20-20	25	1x2	1.45
AFH 2-04	40-40	25	1x2	1.60
AFH 2-05	150-50	25	1x2	1.90
AFH 2-06	50-50	50	1x2	1.70
AFH 2-07	10-20	150	1x2	1.60
AFH 2-08	20-20	150	1x2	1.70
AFH 2-09	30-15	150	1x2	1.75
AFH 2-10	30-20	150	1x2	1.75
AFH 2-11	30-30	150	1x2	1.85
AFH 2-12	40-20	150	1x2	1.80
AFH 2-13	40-30	150	1x2	1.85
AFH 2-14	40-40	150	1x2	1.90
AFH 2-15	50-30	150	1x2	2.00
AFH 2-16	50-50	150	1x2½	2.15
AFH 2-17	60-60	150	1x3	2.35
AFH 2-18	75-75	150	1x3	2.60
AFH 2-19	80-40	150	1x3	2.30
AFH 2-20	80-80	150	1⅜x2	2.65
AFH 2-22	200-125	150	1⅜x3	3.75
AFH 2-23	200-200	150	1⅜x3	4.00
AFH 2-24	60-60	200	1⅜x2	2.55
AFH 2-25	10-10	250	1x2	1.70
AFH 2-26	20-20	250	1x2	1.90
AFH 2-27	30-30	250	1x2½	2.30
AFH 2-28	40-20	250	1x2½	2.20
AFH 2-29	40-40	250	1x3	2.50
AFH 2-30	150-150	250	1⅜x4	5.15
AFH 2-31	10-10	300	1x2	1.75
AFH 2-32	15-15	300	1x2	1.85
AFH 2-33	50-50	300	1⅜x2½	3.35
AFH 2-34	80-80	300	1⅜x3	4.05
AFH 2-35	120-20	300	1⅜x3	4.00
AFH 2-36	15-15	350	1x2	2.25
AFH 2-37	20-20	350	1x2½	2.30
AFH 2-38	30-20	350	1x3	2.60
AFH 2-39	30-30	350	1x3	2.90
AFH 2-40	50-30	350	1⅜x2½	3.15
AFH 2-41	80-80	350	1⅜x3½	4.70
AFH 2-42	10-30	400	1x3	2.30
AFH 2-43	15-15	400	1x2½	2.25
AFH 2-44	60-60	400	1⅜x3½	4.40
AFH 2-45	80-10	400	1⅜x3	3.40
AFH 2-46	5-5	450	1x2	1.60
AFH 2-47	10-10	450	1x2	1.90
AFH 2-48	15-10	450	1x2½	2.05
AFH 2-49	15-15	450	1x2½	2.25
AFH 2-50	20-10	450	1x2½	2.25
AFH 2-51	20-20	450	1x3	2.55
AFH 2-52	30-10	450	1x3	2.50
AFH 2-53	30-15	450	1⅜x2	2.65
AFH 2-54	30-30	450	1⅜x2	3.05
AFH 2-56	40-20	450	1⅜x2	3.00
AFH 2-57	40-40	450	1⅜x2½	3.45
AFH 2-60	60-20	450	1⅜x3	3.55
AFH 2-61	60-40	450	1⅜x3½	3.95
AFH 2-62	80-10	450	1⅜x3	3.60
AFH 2-63	80-20	450	1⅜x3½	3.90
AFH 2-64	80-40	450	1⅜x3½	4.35
AFH 2-65	30-10	475	1⅜x2	2.60
AFH 2-66	40-10	475	1⅜x2½	3.10
AFH 2-67	10-10	500	1x2½	1.95
AFH 2-69	20-20	500	1⅜x2½	2.85
AFH 2-70	25-40	500	1⅜x3	3.65
AFH 2-71	30-10	500	1⅜x2½	2.60
AFH 2-72	40-40	500	1⅜x3	4.40
AFH 2-73	60-40	500	1⅜x3½	4.60
AFH 2-74	250-1000	10/6	1⅜x2	2.85
AFH 2-75	250-2000	10/6	1⅜x2	3.30
AFH 2-77	40-20	150/50	1x2	1.70
AFH 2-78	40-150	150/25	1x2	2.05
AFH 2-79	40-20	250/25	1x2	2.00
AFH 2-80	50-100	250/50	1⅜x2	2.60
AFH 2-81	100-150	250/50	1⅜x3	3.65
AFH 2-82	20-20	300/25	1x2	1.85
AFH 2-83	30-30	300/350	1x3	2.65
AFH 2-84	20-20	350/25	1x2	1.90
AFH 2-85	40-20	350/25	1x2½	2.35
AFH 2-86	40-10	350/200	1⅜x2	2.40
AFH 2-87	10-20	450/25	1x2	1.70
AFH 2-88	20-20	450/25	1x2	2.00
AFH 2-89	40-20	450/25	1x3	2.45
AFH 2-90	80-20	450/25	1⅜x3	3.40
AFH 2-91	80-50	450/50	1⅜x3	3.75
AFH 2-92	10-50	450/100	1⅜x2	2.05
AFH 2-93	20-100	450/100	1⅜x2	2.90
AFH 2-94	30-40	450/150	1⅜x2	2.50
AFH 2-95	20-80	450/350	1⅜x3	3.60
AFH 2-96	40-10	450/350	1⅜x2	2.60
AFH 2-97	40-40	450/350	1⅜x3	3.30
AFH 2-99	75-50	475/50	1⅜x3	3.65
AFH 2-100	20-100	475/300	1⅜x3	3.35
AFH 2-101	40-40	475/400	1⅜x3	3.75
AFH 2-102	80-50	500/50	1⅜x3½	3.80
AFH 2-103	60-80	500/150	1⅜x3	3.75
AFH 2-104	40-50	500/200	1⅜x3	3.30
AFH 2-105	15-20	500/300	1x2½	2.30
AFH 2-106	20-100	500/300	1⅜x3	3.90
AFH 2-107	40-40	500/400	1⅜x3	3.75
AFH 2-108	0.5 ohm-15750 cps 2.5 ohm-60 cps	12 6	1⅜x2	3.60

TYPE AFH (85°C) TWIST-PRONG ELECTROLYTIC CAPACITORS

AFH TRIPLES

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 3-01	20-20-20	25	1x2	$1.95
AFH 3-02	40-40-40	25	1x2	2.15
AFH 3-03	30-30-30	50	1x2	2.15
AFH 3-04	10-30-30	150	1x2	2.35
AFH 3-05	20-20-20	150	1x2	2.30
AFH 3-06	30-30-10	150	1x2	2.35
AFH 3-07	40-20-10	150	1x2	2.35
AFH 3-08	40-20-20	150	1x2	2.40
AFH 3-09	40-30-20	150	1x2	2.50
AFH 3-10	40-40-40	150	1x2½	2.60
AFH 3-11	40-70-40	150	1x3	2.95
AFH 3-12	60-40-20	150	1x3	2.75
AFH 3-13	80-40-20	150	1x3	2.90
AFH 3-14	10-15-15	250	1x2	2.45
AFH 3-16	15-15-30	250	1x2	2.75
AFH 3-17	20-20-10	250	1x2	2.50
AFH 3-18	30-20-10	250	1x2½	2.70
AFH 3-19	40-20-10	250	1x3	2.85
AFH 3-20	40-20-20	250	1x3	2.90
AFH 3-21	80-80-60	250	1⅜x3	4.90
AFH 3-22	10-10-10	300	1x2	2.40
AFH 3-24	20-80-10	300	1⅜x2½	3.80
AFH 3-25	60-20-10	300	1⅜x2	3.45
AFH 3-26	120-50-40	300	1⅜x4	5.65
AFH 3-27	10-10-10	350	1x2½	2.40
AFH 3-28	20-20-10	350	1x3	2.95
AFH 3-29	60-40-20	350	1⅜x3½	4.25
AFH 3-30	10-10-10	400	1x2½	2.40
AFH 3-31	10-10-10	450	1x3	2.60
AFH 3-32	10-30-30	450	1⅜x3	3.75
AFH 3-33	15-15-10	450	1x3	2.95
AFH 3-34	15-15-15	450	1x3	3.10
AFH 3-35	20-10-10	450	1x3	2.95
AFH 3-36	20-20-20	450	1⅜x2½	3.60
AFH 3-37	30-20-20	450	1⅜x3	3.85
AFH 3-38	30-30-20	450	1⅜x3	4.10
AFH 3-39	30-30-30	450	1⅜x3	4.35
AFH 3-40	30-60-10	450	1⅜x3½	4.50
AFH 3-41	40-10-10	450	1⅜x3	3.35
AFH 3-42	40-30-20	450	1⅜x3	4.30
AFH 3-43	40-40-10	450	1⅜x3	4.20
AFH 3-44	40-40-40	450	1⅜x3½	4.90
AFH 3-45	60-20-20	450	1⅜x3½	4.60
AFH 3-46	80-40-20	450	1⅜x4	5.40
AFH 3-47	10-10-10	475	1x3	2.70
AFH 3-48	30-20-20	475	1⅜x3	3.95
AFH 3-49	30-30-10	475	1⅜x3	4.00
AFH 3-50	40-10-10	475	1⅜x3	3.85
AFH 3-51	10-10-10	500	1x3	2.70
AFH 3-52	30-20-20	500	1⅜x3	4.20
AFH 3-53	40-10-10	500	1⅜x3	3.90
AFH 3-54	40-40-10	500	1⅜x3½	5.05
AFH 3-55	100/50-25	100/25	1x3	2.65
AFH 3-58	30-20/100	150/6	1x2	2.40
AFH 3-59	20-20/100	150/10	1x2	2.35
AFH 3-60	20-20/250	150/10	1x2	2.60
AFH 3-61	30-30/200	150/10	1x2½	2.50
AFH 3-62	40-20/150	150/10	1x2	2.40
AFH 3-63	40-20/200	150/10	1x2½	2.70
AFH 3-64	40-20/250	150/10	1x2½	2.70
AFH 3-65	20/250-100	150/15	1⅜x2	2.90
AFH 3-67	20-20/20	150/25	1x2	2.20
AFH 3-68	20-20/200	150/25	1x3	2.60
AFH 3-69	30-20/20	150/25	1x2	2.25
AFH 3-70	30-30/20	150/25	1x2	2.30
AFH 3-72	40-20/20	150/25	1x2	2.30
AFH 3-73	40-20/100	150/25	1x3	2.50
AFH 3-74	40-20/200	150/25	1x3	2.70
AFH 3-75	40-30/20	150/25	1x2½	2.35
AFH 3-76	40-40/20	150/25	1x2½	2.40
AFH 3-77	50-30/20	150/25	1x2½	2.50
AFH 3-78	50-30/100	150/25	1x3	2.70
AFH 3-79	50-50/20	150/25	1x3	2.65
AFH 3-80	60-20/20	150/25	1x2	2.55
AFH 3-81	60-40/20	150/25	1x2½	2.65
AFH 3-82	80-40/20	150/25	1x2½	2.80
AFH 3-83	120-60/20	150/25	1⅜x2½	3.35
AFH 3-84	30-20/20	200/25	1x2	2.55
AFH 3-86	100-10/40	200/50	1⅜x2	3.15
AFH 3-87	15-15/20	250/25	1x2	2.35
AFH 3-88	20-15/20	250/25	1x2	2.35
AFH 3-89	30-30/20	250/25	1x2½	2.80
AFH 3-90	70-70/20	250/50	1⅜x3	3.90
AFH 3-93	40-20/10	250/150	1⅜x2	2.70
AFH 3-95	10-20/30	250/350	1x3	3.00
AFH 3-96	80-80/10	250/450	1⅜x3½	4.20
AFH 3-97	20-20/20	300/25	1x2	2.75
AFH 3-98	40-15/20	300/25	1x2½	2.95
AFH 3-99	30-30/25	300/50	1x3	2.90
AFH 3-100	40-40/20	300/150	1⅜x2	3.60
AFH 3-101	10-10/15	300/250	1x2	2.45
AFH 3-102	120/15-10	300/450	1⅜x3½	4.50
AFH 3-103	10-10/20	350/25	1x2	2.25
AFH 3-104	15-10/20	350/25	1x2	2.50
AFH 3-105	15-15/20	350/25	1x2½	2.70
AFH 3-106	20-10/20	350/25	1x2½	2.55
AFH 3-107	20-20/20	350/25	1x2½	2.80
AFH 3-108	30-10/20	350/25	1x2½	3.05
AFH 3-109	30-20/20	350/25	1x3	3.10
AFH 3-110	30-30/20	350/25	1⅜x2	3.40

AFH TRIPLES—(Continued)

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 3-111	40-40/50	350/25	1⅜x2½	$3.75
AFH 3-112	10-5/150	350/50	1x3	2.70
AFH 3-113	40-20/10	350/100	1⅜x2	2.85
AFH 3-114	20-40/10	350/150	1x3	3.20
AFH 3-115	20-10/5	350/250	1x2½	2.55
AFH 3-116	30/20-10	350/250	1x3	3.00
AFH 3-117	30-10/20	350/250	1x3	3.05
AFH 3-119	15-15/40	400/25	1x2½	2.80
AFH 3-120	20-20/20	400/25	1x3	2.85
AFH 3-121	30-10/150	400/50	1⅜x2½	3.40
AFH 3-122	80-40/150	400/50	1⅜x4	5.15
AFH 3-123	80/20-10	400/300	1⅜x3½	4.25
AFH 3-124	10-10/10	450/25	1x2	2.35
AFH 3-125	10-10/20	450/25	1x2	2.40
AFH 3-126	10-20/20	450/25	1x3	2.70
AFH 3-127	15-15/20	450/25	1x3	2.70
AFH 3-128	20-15/20	450/25	1x3	2.90
AFH 3-129	20-20/20	450/25	1x3	3.05
AFH 3-130	30/100-25	450/25	1⅜x2	2.95
AFH 3-131	30-30/20	450/25	1⅜x2½	3.55
AFH 3-132	40-20/20	450/25	1⅜x2½	3.50
AFH 3-133	40-40/20	450/25	1⅜x3	3.95
AFH 3-134	40-40/40	450/25	1⅜x3	3.95
AFH 3-135	80-40/100	450/25	1⅜x4	5.10
AFH 3-136	10-10/40	450/50	1x2½	2.50
AFH 3-137	20-10/40	450/50	1x3	2.80
AFH 3-138	20-10/50	450/50	1x3	2.85
AFH 3-139	30-30/40	450/50	1⅜x3	3.65
AFH 3-140	40-10/100	450/50	1⅜x3	4.30
AFH 3-141	40-40/80	450/50	1⅜x3½	4.10
AFH 3-142	40-40/100	450/50	1⅜x3½	4.30
AFH 3-143	10-10/50	450/100	1⅜x2	2.65
AFH 3-144	30-20/30	450/150	1⅜x2½	3.50
AFH 3-145	40/90-50	450/150	1⅜x3	3.95
AFH 3-146	40-10/80	450/150	1⅜x3	3.75
AFH 3-147	40-40/40	450/150	1⅜x3½	4.10
AFH 3-148	40-10/80	450/200	1⅜x3	3.90
AFH 3-149	20/40-10	450/250	1⅜x2	3.15
AFH 3-150	15-15/10	450/300	1x3	2.85
AFH 3-151	20/15-10	450/300	1x3	2.85
AFH 3-152	15-5/15	450/350	1x3	2.85
AFH 3-153	20-20/60	450/350	1⅜x3	4.05
AFH 3-154	40-10/10	450/350	1⅜x2	3.30
AFH 3-155	40-40/10	450/500	1⅜x3½	4.15
AFH 3-156	10-10/100	500/50	1x3½	2.85
AFH 3-157	20-10/100	500/50	1x4	3.30
AFH 3-158	30-10/20	500/50	1⅜x2½	3.10
AFH 3-159	40-40/100	500/200	1⅜x4	5.85
AFH 3-160	10-10/5	500/350	1x2½	2.50
AFH 3-161	20-20/60	500/400	1⅜x3½	4.80
AFH 3-162	40/25/130	150/25/15	1x3	3.30
AFH 3-164	80/40/50	250/150/50	1⅜x2½	2.35
AFH 3-165	100/60/20	300/150/25	1⅜x3	4.20
AFH 3-166	20/50/100	350/100/75	1x3	3.10
AFH 3-167	10/50/100	350/150/50	1x3	2.85
AFH 3-168	50/10/500	350/250/5	1⅜x2½	3.60
AFH 3-169	30/30/20	350/300/25	1x3	3.15
AFH 3-171	60/40/20	400/300/25	1⅜x3½	4.20
AFH 3-172	10/40/10	400/300/150	1⅜x2	2.90
AFH 3-173	55/50/80	400/300/250	1⅜x3½	5.35
AFH 3-174	10/50/30	400/350/25	1x3	3.10
AFH 3-175	10/50/100	450/150/25	1x3	2.75
AFH 3-176	40/40/130	450/150/50	1⅜x3	3.75
AFH 3-177	40/100/50	450/150/50	1⅜x3	3.95
AFH 3-178	20/60/100	450/250/25	1⅜x2½	3.65
AFH 3-179	10/40/10	450/300/150	1⅜x2	3.10
AFH 3-180	10/10/20	450/350/25	1x2	2.30
AFH 3-182	20/80/100	450/350/50	1⅜x3½	4.50
AFH 3-183	15/20/20	450/350/250	1⅜x2	2.95
AFH 3-184	20/15/10	450/350/300	1x3	3.05
AFH 3-186	30/50/40	450/400/25	1⅜x3	3.90
AFH 3-187	10/30/30	450/400/300	1⅜x2½	3.35
AFH 3-188	10/100/40	475/200/50	1⅜x2½	3.30
AFH 3-189	20/20/40	475/300/25	1⅜x2	3.05
AFH 3-190	40/40/25	475/400/50	1⅜x3	4.30
AFH 3-191	10/100/40	500/200/50	1⅜x2½	3.35
AFH 3-192	40/40/100	500/250/50	1⅜x3	4.30
AFH 3-193	20/20/40	500/300/25	1⅜x2	3.10
AFH 3-194	40/40/25	500/400/50	1⅜x3	4.30
AFH 3-195	30/20/20	500/500/25	1⅜x2½	3.55

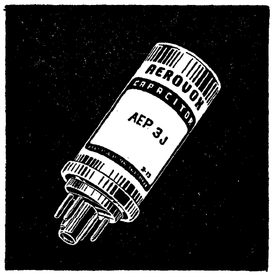
AFH QUADS

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 4-01	40-40-40-30	150	1⅜x2	$3.35
AFH 4-02	40-40-20-10	300	1⅜x2½	4.55
AFH 4-03	10-10-10-10	350	1⅜x2	3.10
AFH 4-05	80-10-10-10	350	1⅜x3	4.55
AFH 4-06	30-30-20-20	400	1⅜x3	4.85
AFH 4-07	80-20-10-10	400	1⅜x3½	5.05
AFH 4-09	5-5-5-5	450	1⅜x2	3.00
AFH 4-10	10-10-10-10	450	1⅜x2	3.35
AFH 4-11	15-30-30-10	450	1⅜x3	4.70
AFH 4-12	15-30-30-30	450	1⅜x4	5.30
AFH 4-13	20-10-10-10	450	1⅜x2½	3.70
AFH 4-14	20-20-20-20	450	1⅜x2½	4.70
AFH 4-15	30-15-15-15	450	1⅜x3	4.45
AFH 4-16	35-35-10-5	450	1⅜x3½	4.65
AFH 4-17	40-10-10-10	450	1⅜x3	4.15

TYPE AFH TWIST-PRONG ELECTROLYTIC CAP.

AFH QUADS—(Continued)

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 4-18	40-20-10-10	450	1⅜x3	$4.45
AFH 4-19	10-10-10-10	475	1⅜x2	3.50
AFH 4-20	10-10-10-10	500	1⅜x2	3.50
AFH 4-21	30-20-20/200	150/10	1⅜x2	3.15
AFH 4-22	40-40-20/200	150/10	1⅜x2	3.25
AFH 4-23	60-40-20/200	150/10	1⅜x2	3.50
AFH 4-24	10-20-60/20	150/25	1⅜x2	3.10
AFH 4-25	20-20-20/20	150/25	1⅜x2	2.90
AFH 4-26	30-30-30/40	150/25	1⅜x2	3.10
AFH 4-27	40-20-20/20	150/25	1⅜x2	2.95
AFH 4-28	40-40-30/20	150/25	1⅜x2	3.10
AFH 4-29	40-40-40/20	150/25	1⅜x2	3.15
AFH 4-30	40-40/40-40	150/25	1⅜x2	3.05
AFH 4-31	40-40-40/100	150/25	1⅜x2	3.35
AFH 4-32	40-40-40/160	150/25	1⅜x2	3.55
AFH 4-33	40-40/100-100	150/25	1⅜x2	3.35
AFH 4-34	50-30-30/100	150/25	1⅜x2	3.45
AFH 4-35	50-50-50/20	150/25	1⅜x2	3.55
AFH 4-36	75-75-75/30	150/25	1⅜x3	4.30
AFH 4-37	80-40-40/20	150/25	1⅜x2	3.55
AFH 4-38	80-40-40/100	150/25	1⅜x2½	3.75
AFH 4-39	40-20-10/20	200/25	1⅜x2	3.20
AFH 4-40	40-20-10/20	250/25	1⅜x2	3.40
AFH 4-41	100-40-10/100	250/50	1⅜x3½	5.15
AFH 4-42	80-60-40/20	250/150	1⅜x3½	5.10
AFH 4-43	10-10-10/20	300/25	1⅜x2	2.95
AFH 4-44	40-20-20/25	300/25	1⅜x2	4.00
AFH 4-45	40-40-20/20	300/25	1⅜x3	4.40
AFH 4-46	60-40-20/50	300/25	1⅜x3	4.65
AFH 4-47	40-40-40/20	300/150	1⅜x3	4.90
AFH 4-48	10-10-10/20	350/25	1⅜x2	2.95
AFH 4-49	20-10-5/20	350/25	1⅜x2	3.10
AFH 4-50	30-20-20/20	350/25	1⅜x2½	4.10
AFH 4-51	40-20-20/25	350/25	1⅜x2½	4.25
AFH 4-52	40-40-20/20	350/25	1⅜x3	4.70
AFH 4-53	40-40-40/40	350/25	1⅜x3	5.20
AFH 4-54	15-15-15/50	350/50	1⅜x2	3.80
AFH 4-55	40-30-10/50	350/50	1⅜x3	4.40
AFH 4-56	40-40-40/150	350/50	1⅜x3½	5.70
AFH 4-57	20-20-20/20	400/25	1⅜x2½	3.85
AFH 4-58	40-10/80-10	400/250	1⅜x3½	4.70
AFH 4-59	10-10-10/20	450/25	1⅜x2	3.15
AFH 4-60	10-10-10/25	450/25	1⅜x2	3.15
AFH 4-61	10-10-10/100	450/25	1⅜x2	3.35
AFH 4-62	10-10-10/150	450/50	1⅜x2½	3.70
AFH 4-63	10-10/20/20	450/25	1⅜x2	2.95
AFH 4-65	20-10-10/100	450/25	1⅜x2	3.70
AFH 4-66	20-15/20-20	450/25	1⅜x2	3.55
AFH 4-67	20-20-20/20	450/25	1⅜x2½	4.15
AFH 4-68	30-15-15/40	450/25	1⅜x2½	4.15
AFH 4-69	30-20-20/20	450/25	1⅜x3	4.40
AFH 4-70	30-30-10/20	450/25	1⅜x3	4.35
AFH 4-71	30-30-20/20	450/25	1⅜x3	4.65
AFH 4-72	40-10-10/250	450/25	1⅜x3	4.65
AFH 4-73	40-10-10/300	450/25	1⅜x3	4.85
AFH 4-74	40-15-10/25	450/25	1⅜x3	4.05
AFH 4-75	40-20-10/20	450/25	1⅜x3	4.25
AFH 4-76	40-20-20/20	450/25	1⅜x3	4.60
AFH 4-77	40-20-20/40	450/25	1⅜x3	4.65
AFH 4-78	40-30-10/20	450/25	1⅜x3	4.50
AFH 4-79	40-40-20/20	450/25	1⅜x3½	5.00
AFH 4-80	20-20-20/100	450/50	1⅜x3	4.55
AFH 4-81	30-30-15/30	450/50	1⅜x3	4.55
AFH 4-82	30-30-15/100	450/50	1⅜x3½	4.90
AFH 4-83	40-20-10/100	450/50	1⅜x3½	4.60
AFH 4-84	40-40-10/20	450/50	1⅜x3	4.70
AFH 4-85	40-40/10-30	450/50	1⅜x3	4.50
AFH 4-86	60-10-10/20	450/50	1⅜x3	4.55
AFH 4-87	40-40-10/100	450/100	1⅜x3½	5.35
AFH 4-88	60-10-10/20	450/150	1⅜x3	4.60
AFH 4-89	20-20/30-30	450/300	1⅜x3	4.50
AFH 4-91	20-20/30-30	450/350	1⅜x3	5.05
AFH 4-92	40-10/35-10	450/350	1⅜x3	4.60
AFH 4-93	40-40/30-30	450/350	1⅜x4	5.90
AFH 4-94	40-10-20/10	475/25	1⅜x3	4.85
AFH 4-95	20-20-10/10	500/300	1⅜x2½	4.30
AFH 4-96	50-30-10/20	500/300	1⅜x4	5.60
AFH 4-97	100/40/80-20	300/50/25	1⅜x2½	4.55
AFH 4-99	15/80-40/200	350/200/25	1⅜x3	4.50
AFH 4-100	40/40-20/20	350/300/25	1⅜x3	4.50
AFH 4-101	5-5/50/80	400/300/250	1⅜x3	4.65
AFH 4-102	10/50-30/30	400/350/25	1⅜x3	4.40
AFH 4-103	40-60/40/10	400/350/50	1⅜x3½	5.75
AFH 4-104	40/10/80-10	400/350/250	1⅜x3	4.65
AFH 4-105	30/125-125/30	450/25/450	1⅜x3	8.55
AFH 4-106	40/40/10-30	450/150/50	1⅜x3	3.75
AFH 4-107	10-10/60/100	450/200/50	1⅜x3	3.85
AFH 4-108	20/80-20/50	450/200/50	1⅜x3	4.15
AFH 4-109	10/60-40/25	450/350/25	1⅜x3½	4.60
AFH 4-110	10/100-10/20	450/350/25	1⅜x3½	5.25
AFH 4-111	20/15-15/20	450/350/25	1⅜x2	3.80
AFH 4-112	30/40-40/10	450/350/200	1⅜x3½	5.15
AFH 4-113	15-15/80/40	475/300/50	1⅜x3	4.80
AFH 4-114	10-5/80/40	475/450/50	1⅜x3½	4.95
AFH 4-115	120/20/20/100	300/250/25/50	1⅜x4	5.05
AFH 4-117	20/40/10/250	350/300/150/50	1⅜x3	4.60
AFH 4-118	80/10/30/40	450/400/300/150	1⅜x4	5.25
AFH 4-119	20/40/100/80	475/300/50/25	1⅜x3	4.50
AFH 4-120	10/40/80/100	475/350/200/100	1⅜x3½	4.80
AFH 4-121	10/10/80/50	475/450/200/50	1⅜x2½	3.85
AFH 4-122	25/20/40/100	475/450/300/50	1⅜x3½	4.95
AFH 4-123	10/60/30/125	475/450/400/50	1⅜x4	5.45



TYPE AEP PLUG-IN ELECTROLYTIC CAPACITORS

Quick change, hermetically sealed dry electrolytic. Plugs into standard octal socket for fast replacement or testing when continuous service is important. High capacity and ultra-compact, using etched foil in small can sizes. Non-corrosive aluminum internal construction throughout. Vented for safety.

Single Element Units

Type	Cap. Mfds.	VDCW	Dia. x Hgt.	List
AEP5A	25	25	1 5/32 x 2½	$3.75
AEP4D	20	150	1 5/32 x 2½	3.95
AEP8D	40	150	1 5/32 x 2½	4.10
AEP2J	10	450	1 5/32 x 2½	4.05
AEP3J	15	450	1 5/32 x 2½	4.20
AEP4J	20	450	1 5/32 x 2½	4.30
AEP6J	30	450	1 5/32 x 2½	4.45
AEP8J	40	450	1 5/32 x 2½	4.55
AEP16J	80	450	1⅜ x 3½	5.55
AEP2L	10	600	1⅜ x 4¼	4.20

Dual Element Units

Type	Cap. Mfds.	VDCW	Dia. x Hgt.	List
AEP44D	20-20	150	1 5/32 x 2½	$4.20
AEP88D	40-40	150	1 5/32 x 2½	4.35
AEP22J	10-10	450	1 5/32 x 2½	4.40
AEP44J	20-20	450	1⅜ x 2½	5.05
AEP88J	40-40	450	1⅜ x 3	5.95

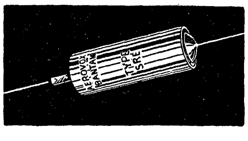
Triple Element Units

Type	Cap. Mfds.	VDCW	Dia. x Hgt.	List
AEP444D	20-20-20	150	1 5/32 x 2½	$4.80
AEP88D4A	40-40 x 150/20	25	1 5/32 x 2½	4.85
AEP222J	10-10-10	450	1 5/32 x 2½	5.10
AEP22J4A	10-10 x 450/20	25	1 5/32 x 2½	4.85
AEP44J4A	20-20 x 450/20	25	1⅜ x 2½	5.55
AEP444J	20-20-20	450	1⅜ x 3	6.10

Quadruple Element Units

Type	Cap. Mfds. x V.D.C.W.	Size—D. x H.	List
AEPG444D4A	20-20-20 x 150/20 x 25*	1⅜ x 2½	$5.35
AEP2222J	10-10-10-10 x 450	1⅜ x 2½	5.85
AEPG444J4A	20-20-20 x 450/20 x 25*	1⅜ x 3	6.65

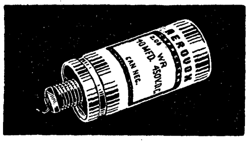
*Ground lug provided for cathode connection.



TYPE SRE BANTAM CAPACITORS

Tiniest Aerovox electrolytic. Handles full sized jobs, especially suitable for hearing aids, personal radios, screen filter circuits and similar functions. Hermetically sealed, aluminum tube with waxed cardboard insulating jacket. New stud terminals with #18 gauge tinned copper wire leads.

Volts	Cap Mfd.	Size Dia. x Length	List
3	100	⅜ x 1	$1.10
3	200	⅜ x 1⅝	1.15
3	300	½ x 1⅛	1.30
3	500	½ x 1⅝	1.40
6	50	⅜ x 1	.95
6	100	⅜ x 1⅝	1.20
12	50	⅜ x 1⅛	1.00
12	100	½ x 1	1.20
12	200	½ x 1⅝	1.35
25	25	⅜ x 1	1.00
25	50	⅜ x 1⅝	1.10
25	100	½ x 1⅝	1.35
50	10	⅜ x 1	1.00
50	15	⅜ x 1⅛	1.00
50	25	⅜ x 1⅝	1.05
150	5	⅜ x 1	1.00
150	10	⅜ x 1⅝	1.05
150	15	½ x 1⅛	1.15
150	25	½ x 1⅝	1.25



REPLACEMENT FOR WET ELECTROLYTIC - TYPE WR

Dry electrolytic for replacement of wet electrolytic units. Furnished in round aluminum cans, the range of capacities covers most applications in standard radio receivers and other equipment originally using wet type electrolytic capacitors. 450 V.D.C.

Cap. Mfd.	Replacement For	Size—Dia. x Hght.	List
10	4 to 12 mfd.	1⅜ x 3	$2.30
20	16 to 20 mfd.	1⅜ x 3	2.70
30	20 to 30 mfd.	1⅜ x 3	2.95
40	30 to 40 mfd.	1⅜ x 3	3.15

TYPE PRS • DANDEES • TUBULAR ALUMINUM CAN ELECTROLYTICS

AEROVOX
150
MADE IN U.S.A.

- Singles
- Triples
- Duals
- Quads

Tubular units encased in aluminum containers especially suited for compact assemblies. Single element units have solid wire leads. Dual, triple, and quad units are supplied with stranded wire leads and safety sleeves.

The higher voltage listings meet the new radio and electronic circuit potentials, particularly in cathode-ray applications like television receivers and oscillographs.

PRS units are normally supplied with etched foil, but plain foil is available. High-purity aluminum construction. Vented for excessive gas pressures.

SINGLE ELEMENT UNITS

Cap Mfd.	V.D.C.W.	Size Diameter x Length	List
100	6	11/16 x 1¼	$1.20
250	6	11/16 x 1¾	1.35
500	6	13/16 x 1¾	1.55
1000	6	15/16 x 2¼	1.90
1500	6	1 1/16 x 2¼	2.10
2000	6	1 1/16 x 2¾	2.30
100	12	11/16 x 1½	1.20
250	12	13/16 x 1¾	1.45
500	12	15/16 x 2¼	1.70
1000	12	1 1/16 x 3¼	2.25
100	15	11/16 x 1½	1.25
250	15	13/16 x 2¼	1.55
500	15	15/16 x 2¼	1.75
10	25	9/16 x 1¼	1.00
16	25	9/16 x 1¼	1.00
25	25	9/16 x 1¼	1.00
50	25	11/16 x 1½	1.10
100	25	13/16 x 1½	1.35
250	25	15/16 x 2¼	1.70
500	25	1 1/16 x 2½	2.30
10	50	9/16 x 1¼	1.00
20	50	11/16 x 1¼	1.00
25	50	11/16 x 1¼	1.05
50	50	11/16 x 1¾	1.20
100	50	13/16 x 1¾	1.40
4	150	9/16 x 1¼	1.00
8	150	11/16 x 1¼	1.05
12	150	11/16 x 1¼	1.10
16	150	11/16 x 1½	1.15
20	150	11/16 x 1¾	1.20
24	150	11/16 x 1¾	1.25
30	150	13/16 x 1½	1.30
40	150	13/16 x 1¾	1.35
50	150	15/16 x 1¾	1.40
100	150	15/16 x 2¼	1.75
150	150	1 1/16 x 3	1.90
4	250	11/16 x 1¼	1.00
8	250	11/16 x 1½	1.15
12	250	11/16 x 1¾	1.25
16	250	13/16 x 1½	1.30
20	250	13/16 x 1½	1.35
40	250	13/16 x 2¼	1.55
4	350	11/16 x 1½	1.05
8	350	13/16 x 1½	1.20
10	350	13/16 x 1¾	1.25
12	350	13/16 x 1¾	1.30
16	350	13/16 x 1¾	1.40
24	350	15/16 x 1¾	1.55
4	450	11/16 x 1½	1.15
8	450	13/16 x 1½	1.25
10	450	13/16 x 1¾	1.30
12	450	15/16 x 1½	1.35
16	450	15/16 x 1¾	1.40
20	450	1 1/16 x 1¾	1.55
30	450	1 1/16 x 2¼	1.70
40	450	1 1/16 x 2½	1.80
50	450	1 x 3	2.10
80	450	1 1/16 x 3¾	2.80
8	500	13/16 x 3 1/16	2.30
10	500	15/16 x 3 1/16	2.45
12	500	15/16 x 3 1/16	2.50
16	500	1 1/16 x 3 1/16	2.55
8	600	15/16 x 3 1/16	2.75
10	600	15/16 x 3 1/16	2.95
12	600	1 1/16 x 3 1/16	3.10
16	600	1 1/16 x 3 9/16	3.25
8	700	15/16 x 3 1/16	3.00
10	700	1 1/16 x 3 1/16	3.50
12	700	1 1/16 x 3 9/16	3.75
16	700	1 1/16 x 3 9/16	4.50

DUAL DANDEES

Common (Dual-Element Units) Negative

Cap. Mfd.	V.D.C.W.	Size—Diameter x Length	List
10-10	25	11/16 x 1¼	$1.40
10-10	50	11/16 x 1½	1.40
8-8	150	11/16 x 1¾	1.50
8-16	150	11/16 x 2¼	1.55
20-20	150	13/16 x 1¾	1.65
20-30	150	13/16 x 2¼	1.70
20-40	150	15/16 x 1¾	1.75
30-30	150	15/16 x 1¾	1.80
30-40	150	15/16 x 2¼	1.80
30-50	150	15/16 x 2¼	1.95
40-40	150	15/16 x 2¼	1.80
40-80	150	15/16 x 2¾	2.20
50-30	150	15/16 x 2¼	1.95
50-50	150	15/16 x 2¼	2.10
80-40	150	15/16 x 2¾	2.25
100-100	150	1 1/16 x 3¼	3.20
8-8	200	11/16 x 1¾	1.50
8-16	200	11/16 x 2¼	1.60
16-16	200	13/16 x 1¾	1.70
30-30	200	15/16 x 2¼	2.15
8-16	250	13/16 x 1¾	1.65
10-10	250	13/16 x 1¾	1.65
16-16	250	13/16 x 2¼	1.70
20-20	250	15/16 x 2¼	1.85
30-30	250	15/16 x 2¼	2.25
8-8	450	13/16 x 2¼	1.70
8-16	450	15/16 x 2¼	2.00
10-10	450	15/16 x 2¼	1.85
16-16	450	1 1/16 x 2¼	2.25
20-20	450	1 1/16 x 3¼	2.50
*30-30	450	1⅜ x 2¾	3.00
*40-20	450	1⅜ x 2¾	2.95
*40-40	450	1⅜ x 3¼	3.35

*Supplied in paper cases only.

TRIPLE DANDEES

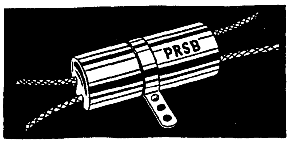
(Triple-Element Units)

Cap. Mfd.	V.D.C.W.	Size—Diameter x Length	List
20-20-20	150	15/16 x 1¾	$2.20
30-20-10	150	15/16 x 1¾	2.15
30-30-30	150	15/16 x 2¼	2.35
40-20-20	150	15/16 x 2¼	2.25
40-30-20	150	15/16 x 2¼	2.35
40-40-40	150	1 1/16 x 2¼	2.45
50-30-10	150	15/16 x 2¼	2.35
50-30-20	150	1 1/16 x 2¼	2.45
80-40-20	150	1 1/16 x 2½	2.75

TYPE PRS MULTIPLES

(Common Negative)

Type	Cap. Mfd. x V.D.C.W.	Size—Dia. x Lgth.	List
PRS 64D20A	30-20 × 150 + 100 × 25	15/16 x 2¼	$2.20
PRS 86D4A	40-30 × 150 + 20 × 25	15/16 x 2¼	2.20
PRS 106D20A	50-30 × 150 + 100 × 25	1 1/16 x 2¼	2.55
PRS 106D50A	50-30 × 150 + 250 × 25	1 1/16 x 2¾	3.10
PRS 1010D4A	50-50 × 150 + 20 × 25	1 1/16 x 2¼	2.50



TYPE PRS-B 150
150V.D.C.W. 200v Surge Peak

Cap. Mfd.	Can Size Dia. x Lgth.	List
20-20	1 x 2½	$2.05
20-40	1 x 3	2.20

TYPE PRSB
DUAL ELEMENT — 4 LEADS

TYPE PRS-B 450
450V.D.C.W. 500v Surge Peak

Cap. Mfd.	Can Size Dia. x Lgth.	List
8-8	1 x 3	$2.15
8-16	1⅛ x 3½	2.45
16-16	1⅜ x 3½	2.80

TYPE PRS-B 250
250V.D.C.W. 300v Surge Peak

Cap. Mfd.	Can Size Dia. x Lgth.	List
8-16	1 x 2½	2.10
16-16	1 x 3	2.20

TYPE HCLV

AEROVOX
HCLV

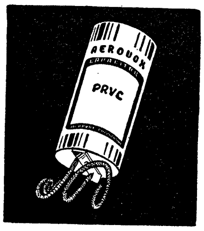
HIGH CAPACITY LOW VOLTAGE

High capacity—low voltage units used in electric fence control and other applications requiring these capacity-voltage values. Unit supplied with outer insulating tube and mounting ring. External tube sizes indicated below.

Cap. Mfds.	Size Dia. x Hght.	List
Type HCLV12—12 V.D.C.W.		
500	1 7/16 x 3	$2.70
1000	1 7/16 x 3½	3.25
2000	1 7/16 x 4½	3.65
3000	2 1/16 x 4½	4.55
4000	2 1/16 x 4½	4.75
Type HCLV18—18 V.D.C.W.		
500	1 7/16 x 3	3.00
1000	1 7/16 x 4½	3.80
2000	1 7/16 x 4½	4.75
4000	2 9/16 x 4½	8.45
Type HCLV25—25 V.D.C.W.		
500	1 7/16 x 3	3.30
1000	1 7/16 x 4½	4.30
2000	2 1/16 x 3½	5.25
3000	2 9/16 x 4½	8.00
4000	2 9/16 x 4½	9.50
Type HCLV50—50 V.D.C.W.		
1000	2 1/16 x 3½	6.50
2000	2 9/16 x 4½	8.60

CAPACITORS AEROVOX RESISTORS

TYPE PRVC



Cleat-Mounting Metal-Can Capacitors

Originally designed by Aerovox. Replaces other electrolytics requiring mounting hole in chassis. Installed in a jiffy by center screw and metal cleat. Separate sections, two leads each section. Coded leads.

TYPE PRVC 600
600V.D.C.W. Single Section

Cap. Mfds.	Size Dia. x Hght.	List
4	1⅜ x 4	$2.95
8	1½ x 4	3.15
16	1½ x 4	3.75

TYPE PRVC 475
475V.D.C.W. Single & Double

Cap. Mfds.	Dia. x Hght.	List
8	1⅜ x 3	2.75
12	1⅜ x 3	2.95
16	1⅜ x 3	3.15
8-8	1⅜ x 4	4.10

TYPE PRVC 450
450V.D.C.W. Single Section

Cap. Mfds.	Dia. x Hght.	List
4	1⅜ x 3	2.00
8	1⅜ x 3	2.20
10	1⅜ x 3	2.30
12	1⅜ x 3	2.40
16	1⅜ x 3	2.45
20	1⅜ x 3	2.70
30	1⅜ x 3	3.00
40	1⅜ x 3	3.15
80	1⅜ x 4	4.90

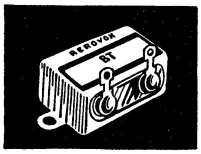
TYPE PRVC 450
Double Section

Cap. Mfds.	Dia. x Hght.	List
8-8	1⅜ x 4	3.00
8-16	1⅜ x 4	3.30
10-10	1⅜ x 4	3.10
12-12	1⅜ x 4	3.20
16-16	1⅜ x 4	3.55
20-20	1⅜ x 4	3.80

TYPE PRVC 450
Triple Section

Cap. Mfds.	Dia. x Hght.	List
8-8-8	1⅜ x 4	5.00
10-10-10	1⅜ x 4	5.30

TYPE BT



DRAWN-CASE "BATHTUB"

Designed for rigid mounting in minimum space. Extra sturdy construction, immersion proof.

TYPE BT500
500 V.D.C.W.

Cap. Mfd.	L. x W. x H.	List
4	2 x 2 x 1⅛	$4.70
8	2 x 2 x 1⅛	4.85

TYPE BT450
450 V.D.C.W.

Cap. Mfd.	L. x W. x H.	List
8	1¾ x 1 x 1	4.25
12	1¾ x 1¼ x 1	4.75
16	2 x 1¾ x 1	5.00

TYPE BT350
350 V.D.C.W.

Cap. Mfd.	L. x W. x H.	List
8	1¾ x 1 x ⅞	3.70
12	1¾ x 1 x ⅞	4.20
16	1¾ x 1 x 1	4.40
20	1¾ x 1¼ x 1⅛	4.60

TYPE BT150
150 V.D.C.W.

Cap. Mfd.	L. x W. x H.	List
8	1¾ x 1 x ⅞	2.75
12	1¾ x 1 x ⅞	2.80
16	1¾ x 1 x ⅞	2.85
24	1¾ x 1 x ⅞	3.00
30	1¾ x 1 x 1	3.10
40	1¾ x 1 x 1	3.20

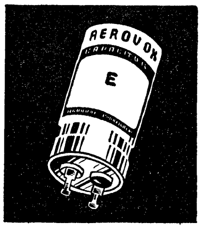
TYPE BT50
50 V.D.C.W.

Cap. Mfd.	L. x W. x H.	List
10	1¾ x 1 x ⅞	2.65
25	1¾ x 1 x ⅞	2.75
50	1¾ x 1 x ⅞	3.00

TYPE BT25
25 V.D.C.W.

Cap. Mfd.	L. x W. x H.	List
10	1¾ x 1 x ⅞	2.60
25	1¾ x 1 x ⅞	2.70
50	1¾ x 1 x ⅞	2.80

TYPE E



Upright or Inverted Mounting Capacitors

Can be mounted in any position with ring-type clamp provided with unit. Single or multiple elements. Two terminals on singles, three on dual, and 4 terminals on triple element units.

SINGLE ELEMENT
TYPE E475
475 V.D.C.W. 525 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1⅜ x 2¼	$2.20

TYPE E450
450 V.D.C.W. 500 V. Surge Peak

Cap. Mfds.	Dia. x Hght.	List
4	1⅜ x 2¼	2.15
8	1⅜ x 2¼	2.25
10	1⅜ x 2¼	2.30
12	1⅜ x 2¼	2.35
16	1⅜ x 2¼	2.40
20	1⅜ x 2¼	2.55
30	1⅜ x 2¼	2.70
40	1⅜ x 2¾	2.75
80	1⅜ x 4¼	3.80

TYPE E50
50 V.D.C.W. 75 V. Single Peak

Cap. Mfds.	Dia. x Hght.	List
10	1 x 1¾	2.00
25	1 x 1¾	2.05

TYPE E25
25 V.D.C.W. 40 V. Surge Peak

Cap. Mfds.	Dia. x Hght.	List
10	1 x 1¾	2.00
25	1 x 1¾	2.00

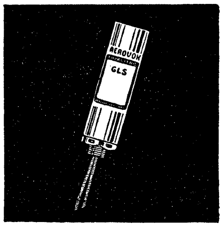
DUAL ELEMENT
TYPE E450
450 V.D.C.W. 500 V. Surge Peak

Cap. Mfds.	Dia. x Hght.	List
8-8	1⅜ x 2¼	3.25
8-16	1⅜ x 2¼	3.50
10-10	1⅜ x 2¼	3.35
12-12	1⅜ x 2¼	3.45
16-16	1⅜ x 2¾	3.80
20-20	1⅜ x 2¾	4.05

TRIPLE ELEMENT
TYPE E450

Cap. Mfds.	Dia. x Hght.	List
8-8-8	1⅜ x 2¼	3.90
10-10-10	1⅜ x 2¼	4.10

TYPE GLS



Midget Screw-Mounting Wire-Lead Capacitors

Similar to Type GL. Smaller diameter cans and minimum length. Best for compact assemblies.

TYPE GLS450
SINGLE-ELEMENT
450 V.D.C.W. 500 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1 x 2 3/16	$2.00
8	1 x 2 11/16	2.20
12	1 x 3¼	2.40
16	1 x 3¼	2.45

TYPE GLS450
DOUBLE-ELEMENT

Cap. Mfds.	Dia. x Hght.	List
8-8	1⅜ x 3	3.00

TYPE GLS250
SINGLE-ELEMENT
250 V.D.C.W. 300 V. Surge Peak

Cap. Mfds.	Dia. x Hght.	List
4	1 x 2 3/16	1.40
8	1 x 2 11/16	1.65
12	1 x 2 11/16	1.75
16	1 x 3¼	1.80

TYPE G

Insulated Screw-Mounting Capacitors

Hermetically - sealed aluminum can unit, threaded cover with hex nut and washer for convenient mounting on chassis. Washer can be used to insulate can from chassis. Terminals molded in cover. Cathode connection through terminal in cover.

TYPE G475
SINGLE ELEMENT
475 V.D.C.W. 525 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1⅜ x 2¼	$2.20
8	1⅜ x 2¼	2.30

TYPE G450
450 V.D.C.W. 500 V. Surge Peak

Cap. Mfds.	Dia. x Hght.	List
4	1⅜ x 2¼	2.15
8	1⅜ x 2¼	2.25
10	1⅜ x 2¼	2.30
12	1⅜ x 2¼	2.35
16	1⅜ x 2¼	2.40
20	1⅜ x 2¼	2.55
30	1⅜ x 2¼	2.70
40	1⅜ x 2¾	2.75
80	1⅜ x 4¼	2.80

TYPE G450
DUAL-ELEMENT

Cap. Mfds.	Dia. x Hght.	List
8-8	1⅜ x 2¼	3.25
8-16	1⅜ x 2¼	3.50
10-10	1⅜ x 2¼	3.35
12-12	1⅜ x 2¼	3.45
16-16	1⅜ x 2¾	3.80
20-20	1⅜ x 2¾	4.05

TYPE GL

SCREW-MOUNTING WIRE-LEAD CAPACITORS

Inverted mounting, aluminum can unit in single, double and triple elements. Two separate color-coded leads, 5″ long brought out from each section. Convenient mounting with palnut and threaded neck.

TYPE GL600
SINGLE-ELEMENT
600 V.D.C.W. 750 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1⅜ x 4	$2.95
8	1⅜ x 4½	3.15
16	1⅜ x 4½	3.75

TYPE GL475
SINGLE-ELEMENT
475 V.D. C. W. 525 V. Surge Peak

Cap. Mfds.	Dia. x Hght.	List
8	1⅜ x 3	2.75
12	1⅜ x 3	2.95
16	1⅜ x 3	3.15

TYPE GL475
DUAL-ELEMENT

Cap. Mfds.	Dia. x Hght.	List
8-8	1⅜ x 4	4.10

TYPE GL450
SINGLE-ELEMENT
450 V.D.C.W. 500 V. Surge Peak

Cap. Mfds.	Dia. x Hght.	List
4	1⅜ x 3	2.00
8	1⅜ x 3	2.20
10	1⅜ x 3	2.30
12	1⅜ x 3	2.40
16	1⅜ x 3	2.45
20	1⅜ x 3	2.75
30	1⅜ x 3	3.00
40	1⅜ x 3	3.15
80	1⅜ x 4	4.90

TYPE GL450
DUAL-ELEMENT

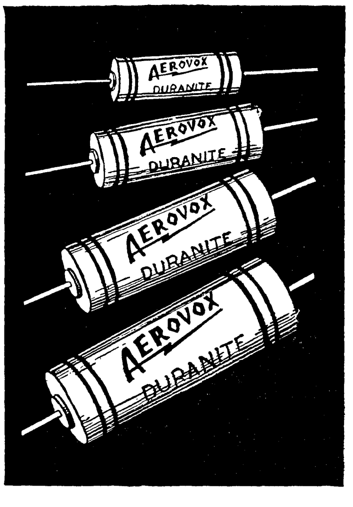
Cap. Mfds.	Dia. x Hght.	List
8-8	1⅜ x 4	3.00
8-16	1⅜ x 4	3.30
10-10	1⅜ x 4	3.10
12-12	1⅜ x 4	3.20
16-16	1⅜ x 4	3.55
20-20	1⅜ x 4	3.80

TYPE GL450
TRIPLE-ELEMENT

Cap. Mfds.	Dia. x Hght.	List
8-8-8	1⅜ x 4	5.00
10-10-10	1⅜ x 4	5.30

DURANITE MOLDED TUBULAR CAPACITORS • TYPE P-88

Toughest capacitors ever offered for radio-electronic equipment. DURANITE capacitors are entirely new—in design, impregnant, processing, and casing. New technique glove-fitting contact and seal throughout. DURANITE provides a permanent, non-varying, rock-hard casing, does not dry out, does not develop cracks or fissures. Pig-tail leads firmly imbedded, won't pull out, won't work loose. Moisture-proof; operate from sub-zero to over 212°F. Exposure to temperatures of 250°F. will not impair life or performance, no deterioration on the shelf.



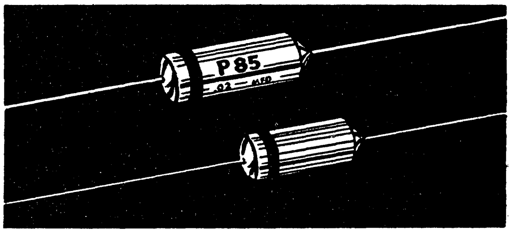
	200 Volts		400 Volts		600 Volts		1000 Volts		1600 Volts	
Mfds.	Size	List	Size	List	Size	List	Size	List	Size	List
.001					A	.25	A	.50	B	.60
.0015					A	.25	A	.50	B	.60
.002					A	.25	A	.50	B	.60
.0022					A	.25	A	.50	B	.60
.003					A	.25	B	.50	B	.60
.0033					A	.25	B	.50	B	.60
.004					A	.25	B	.50	B	.60
.0047					A	.25	B	.50	D	.60
.005					A	.25	B	.50	D	.60
.006			A	.25	C	.25	B	.50	D	.60
.0068			A	.25	B	.25	B	.50	D	.65
.007									E	.65
.0075			A	.25	D	.30	B	.50	E	.65
.008									E	.65
.01			A	.25	D	.30	B	.50	E	.65
.015	A	.25	B	.25	D	.30	D	.50	E	.65
.02			B	.25	D	.30	E	.50	F	.65
.022			B	.30	D	.30	E	.50	F	.65
.025			B	.30	D	.35	E	.50	F	.65
.03			B	.30	E	.35	E	.50	F	.65
.033			B	.30	E	.35	E	.60	F	.70
.04	B	.30			E	.35	F	.60		
.047	B	.30	D	.30	E	.35	F	.60		
.05	B	.30	D	.30	E	.40	F	.60		
.06					F	.40				
.068	C	.35	E	.35	F	.40	F	.70		
.075	C	.35	E	.35	F	.45				
.1	C	.35	E	.35	F	.45				
.15	E	.40	F	.40						
.22			F	.45						
.25			F	.45						
.33	F	.50								
.47	F	.60								
.5	F	.60								

Size	Length x Dia.	Size	Length x Dia.
A	1 1/8 x 11/32	D	1 3/8 x 15/32
B	1 3/8 x 13/32	E	1 5/8 x 17/32
C	1 1/8 x 15/32	F	2 x 21/32

AEROCON MINIATURE CAPACITORS • TYPE P-85

SIZE: Diameter x Length

CAP. MFD.	200 VDCW	LIST	400 VDCW	LIST	600 VDCW	LIST
.00025	3/16 x 9/16	$.35	3/16 x 5/8	$.35	3/16 x 5/8	$.35
.0005	3/16 x 9/16	.35	3/16 x 11/16	.35	3/16 x 11/16	.35
.001	3/16 x 9/16	.35	3/16 x 11/16	.35	7/32 x 11/16	.35
.0015	3/16 x 9/16	.35	3/16 x 11/16	.35	7/32 x 11/16	.35
.002	3/16 x 9/16	.35	3/16 x 11/16	.35	1/4 x 11/16	.35
.0022	3/16 x 9/16	.35	3/16 x 11/16	.35	1/4 x 11/16	.35
.003	3/16 x 9/16	.35	7/32 x 11/16	.35	9/32 x 11/16	.35
.0033	3/16 x 9/16	.35	7/32 x 11/16	.35	9/32 x 11/16	.35
.004	3/16 x 9/16	.35	7/32 x 11/16	.35	9/32 x 3/4	.40
.0047	7/32 x 9/16	.35	7/32 x 3/4	.35	9/32 x 3/4	.40
.005	7/32 x 9/16	.35	7/32 x 3/4	.35	9/32 x 3/4	.40
.006	7/32 x 9/16	.35	1/4 x 3/4	.35	5/16 x 3/4	.45
.0068	1/4 x 9/16	.40	1/4 x 3/4	.40	5/16 x 13/16	.45
.01	1/4 x 5/8	.40	1/4 x 13/16	.45	5/16 x 7/8	.45
.015	9/32 x 5/8	.45	9/32 x 7/8	.45	11/32 x 1	.50
.02	9/32 x 11/16	.45	5/16 x 7/8	.45	3/8 x 1 1/16	.50
.022	9/32 x 3/4	.45	5/16 x 7/8	.45	3/8 x 1 1/8	.50
.03	9/32 x 13/16	.45	11/32 x 15/16	.45	7/16 x 1 1/8	.55
.033	5/16 x 13/16	.50	11/32 x 1	.50	7/16 x 1 3/16	.55
.04	5/16 x 15/16	.50	13/32 x 1	.50	15/32 x 1 3/16	.55
.047	5/16 x 15/16	.50	13/32 x 1	.50	15/32 x 1 1/4	.55
.05	5/16 x 15/16	.50	13/32 x 1	.50	1/2 x 1 1/4	.60
.068	3/8 x 1	.55	7/16 x 1 3/16	.55	9/16 x 1 1/4	.60
.1	13/32 x 1	.60	15/32 x 1 3/16	.65	21/32 x 1 1/4	.70

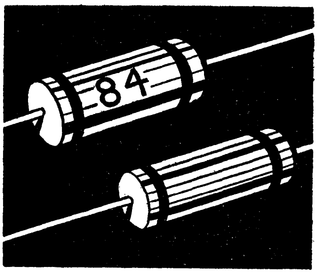


The new, tiny, Aerolene-impregnated tubular unit. Duranite endfill excludes humidity. Designed especially for personal radios, hearing aids and electronic assemblies requiring good performance and minimum size.

TYPE P-85
SIZE: Diameter..x..Length

Cap. Mfd.	100 VDCW	List
.25	15/32 x 1 1/8	$.70
.5	5/8 x 1 1/8	.80

TYPE 84 LO-VOLTAGE TUBULAR PAPER CAPACITORS



LO-VOLTAGE TYPE 84

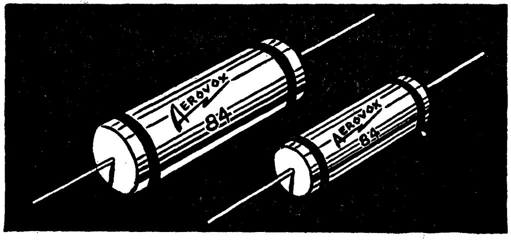
Lo-voltage, type 84 units are wax-impregnated, wax-sealed capacitors in paper cases. These capacitors are available with HYVOL H impregnation for operation at temperatures from 70°C. up to 85°C. For over 600 VDC, and 85°C. operation units are available with HYVOL M impregnation. Units are obtainable with a radial mounting band on request at extra cost.

WAX-IMPREGNATED WAX-SEALED CARDBOARD TUBULAR CAPACITORS

CAP. MFD.	400 VDCW	LIST	600 VDCW	LIST	1000 VDCW	LIST	1600 VDCW	LIST
.001	3/8 x 1 1/8	$.23	3/8 x 1 1/8	$.23	3/8 x 1 1/8	$.45	7/16 x 1 1/4	$.50
.002	3/8 x 1 1/8	.23	3/8 x 1 1/8	.23	3/8 x 1 1/4	.45	7/16 x 1 1/4	.50
.003	3/8 x 1 1/8	.23	3/8 x 1 1/8	.23	3/8 x 1 1/4	.45	7/16 x 1 1/2	.50
.004	3/8 x 1 1/8	.23	3/8 x 1 1/8	.23	3/8 x 1 1/4	.45	7/16 x 1 1/2	.50
.005	3/8 x 1 1/4	.23	3/8 x 1 1/4	.23	7/16 x 1 1/4	.45	1/2 x 1 1/2	.50
.006	3/8 x 1 1/4	.23	3/8 x 1 1/4	.23	7/16 x 1 1/4	.45	1/2 x 1 1/2	.50
.0075	3/8 x 1 1/4	.23	3/8 x 1 1/4	.27	7/16 x 1 3/8	.45	1/2 x 1 1/2	.54
.01	3/8 x 1 1/4	.23	3/8 x 1 1/4	.27	7/16 x 1 1/2	.45	9/16 x 1 1/2	.54
.015	3/8 x 1 1/4	.23	7/16 x 1 1/4	.27	1/2 x 1 1/2	.45	5/8 x 1 1/2	.54
.02	3/8 x 1 1/4	.23	7/16 x 1 1/4	.27	1/2 x 1 1/2	.45	9/16 x 2	.54
.025	3/8 x 1 1/2	.27	7/16 x 1 1/2	.32	9/16 x 1 1/2	.45	9/16 x 2	.54
.03	3/8 x 1 1/2	.27	7/16 x 1 1/2	.32	5/8 x 1 1/2	.45	5/8 x 2	.63
.04		....	7/16 x 1 1/2	.36				
.05	7/16 x 1 1/2	.27	1/2 x 1 5/8	.36	9/16 x 2	.54	13/16 x 2	.68
.06	1/2 x 1 1/2	.32	9/16 x 1 1/2	.36	5/8 x 2	.54	7/8 x 2 1/8	.72
.075	1/2 x 1 1/2	.32	9/16 x 1 1/2	.41	11/16 x 2	.63	1 x 2 5/16	.81
.1	9/16 x 1 1/2	.32	9/16 x 1 3/4	.41	3/4 x 2	.68	1 1/8 x 2 5/16	.90
.15	9/16 x 1 3/4	.36	5/8 x 2	.45	7/8 x 2 1/8	.81		
.2	5/8 x 2	.36	11/16 x 2	.50	1 x 2 1/8	.90		
.25	11/16 x 2	.41	3/4 x 2	.50	1 3/16 x 2 5/16	1.04		
.5	7/8 x 2	.54	1 x 2 1/8	.72				
1.0	1 1/16 x 2 1/2	.81	1 1/4 x 2 1/2	1.13				

CAPACITORS AEROVOX RESISTORS

HI-VOLTAGE • TYPE 84 • TUBULAR PAPER CAPACITORS



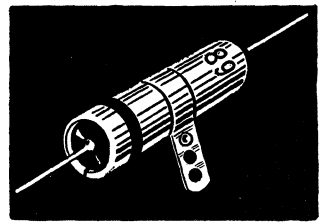
Hi-voltage type 84 oil impregnated, tubular capacitors are compact high-grade units. Overall wax dipped for high resistance to humidity.
Units rated from 2500 VDCW and up are designed to meet the elevated peaks and transients encountered in television and other cathode-ray tube applications and to reduce the effects of corona.
These high-voltage units are encased in cardboard tubes with tinned wire leads, and have an improved end-seal for longer life under operating conditions to which they are subjected. Supplied with radial mounting band at no extra cost.

CAP.	2500 VDC	LIST	5000 VDC	LIST	6000 VDC	LIST
.0001	7/16 x 1½	$.95	7/16 x 1⅝	$1.05	7/16 x 1⅝	$1.10
.00025	7/16 x 1½	.95	7/16 x 1⅝	1.05	7/16 x 1⅝	1.10
.0005	7/16 x 1½	.95	7/16 x 1⅝	1.05	7/16 x 1⅝	1.10
.001	7/16 x 1½	.95	½ x 1⅝	1.05	½ x 1⅝	1.10
.003	7/16 x 1⅝	.95	½ x 2	1.05	9/16 x 2	1.15
.005	½ x 1⅝	1.00	⅝ x 2	1.10	⅝ x 2	1.15
.01	9/16 x 1⅞	1.05	13/16 x 2	1.15	13/16 x 2	1.40
.03	¾ x 2⅛	1.10	1 x 2½	1.30	1 3/16 x 2½	1.50
.05	¾ x 2⅝	1.20	1⅛ x 3	1.40	1 3/16 x 3	1.60
.1	1 x 2⅝	1.50				
.15	1 x 3⅛	1.65				

CAP.	7500 VDC	LIST	10000 VDC	LIST	15000 VDC	LIST
.0001	7/16 x 1⅞	$1.10	7/16 x 2⅛	$1.15	9/16 x 2⅜	$1.75
.00025	7/16 x 1⅞	1.10	9/16 x 2⅛	1.15	11/16 x 2⅜	1.75
.0005	½ x 1⅞	1.10	⅝ x 2⅛	1.15	13/16 x 2⅜	1.75
.001	11/16 x 1⅞	1.10	13/16 x 2⅛	1.15	1 x 2⅜	1.75
.003	¾ x 2⅜	1.15	15/16 x 2⅝	1.20	1¼ x 2⅞	1.85
.005	⅞ x 2⅜	1.15	1 x 2⅞	1.35	1⅜ x 3⅛	2.00
.01	1 x 2⅞	1.50	1⅜ x 2⅞	1.60		
.03	1⅜ x 3⅜	1.75				

OIL FILLED PAPER TUBULAR CAPACITORS • TYPE 89

CAP. MFD.	400 VDCW	LIST	600 VDCW	LIST	1000 VDCW	LIST	2000 VDCW	LIST
.001	11/32 x 1⅛	$1.00	13/32 x 1⅛	$1.05	15/32 x 1⅛	$1.20	13/16 x 1 11/16	$1.40
.002	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.003	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.004	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.005	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.006	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.0075	13/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.01	13/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.015	15/32 x 1⅛	1.10	15/32 x 1⅛	1.10	15/32 x 1¼	1.30	13/16 x 1 11/16	1.45
.02	15/32 x 1¼	1.10	15/32 x 1¼	1.15	15/32 x 1⅜	1.30	13/16 x 1 13/16	1.50
.03	15/32 x 1¼	1.15	15/32 x 1⅜	1.20	9/16 x 1 7/16	1.30	⅞ x 1 13/16	1.55
.04	9/16 x 1 7/16	1.15	9/16 x 1 7/16	1.20	⅝ x 1 7/16	1.30	⅞ x 1 15/16	1.55
.05	9/16 x 1 7/16	1.15	⅝ x 1 7/16	1.20	⅝ x 1 9/16	1.45	⅞ x 2 1/16	1.60
.075	⅝ x 1 11/16	1.20	⅝ x 1 11/16	1.30	11/16 x 1 11/16	1.55	15/16 x 2 3/16	1.95
.1	⅝ x 1 13/16	1.30	11/16 x 1 13/16	1.40	11/16 x 1 13/16	1.65	1 1/16 x 2 3/16	2.20
.25	¾ x 2 1/16	1.60	⅞ x 2 1/16	1.85	15/16 x 2 3/16	2.20		
.5	1 x 2 1/16	1.90	1 1/16 x 2 3/16	2.40				



Immersion-proof, oil-impregnated, oil-filled units in handy, space-saving tubes. Ideal for vibrator applications, coupling and by-pass functions in transmitters, high-voltage and in test equipment. Fully sealed against oil leakage or moisture penetration. Case is insulated, not connected to the capacitor section. Supplied with mounting strap and outer insulating tube.

CAP. MFD.	2500 VDCW	LIST	3000 VDCW	LIST	3500 VDCW	LIST	4000 VDCW	LIST	5000 VDCW	LIST	6000 VDCW	LIST
.0005	13/16 x 1 9/16	$1.50	15/16 x 1 11/16	$1.65	1 1/16 x 1 13/16	$1.95	1 1/16 x 1 13/16	$2.20	1 1/16 x 1 13/16	$2.50	1 1/16 x 2 1/16	$2.75
.001	13/16 x 1 9/16	1.50	15/16 x 1 11/16	1.65	1 1/16 x 1 13/16	1.95	1 1/16 x 1 13/16	2.20	1 1/16 x 1 13/16	2.50	1 1/16 x 2 3/16	2.75
.005	13/16 x 1 11/16	1.50	15/16 x 1 13/16	1.65	1 1/16 x 1 15/16	1.95	1 1/16 x 2 1/16	2.20	1 1/16 x 2 3/16	2.50	1 1/16 x 2 11/16	2.75
.01	13/16 x 1 15/16	1.50	15/16 x 1 15/16	1.65	1 1/16 x 2 3/16	1.95	1 1/16 x 2 7/16	2.20	1 1/16 x 2 11/16	2.50	1 1/16 x 3 7/16	2.75
.02	13/16 x 2 3/16	1.65	15/16 x 2 3/16	1.80	1 1/16 x 2 7/16	2.10	1 1/16 x 3 3/16	2.35	1 7/16 x 2 11/16	2.65	1 7/16 x 3 3/16	2.90
.03	13/16 x 2 7/16	1.75	1 1/16 x 2 7/16	1.95	1 1/16 x 2 11/16	2.20	1 7/16 x 2 11/16	2.50	1 7/16 x 3 3/16	2.75	1 7/16 x 3 15/16	3.05
.05	15/16 x 2 11/16	1.95	1 1/16 x 2 11/16	2.10	1 1/16 x 3 7/16	2.35	1 7/16 x 3 7/16	2.65	1 7/16 x 4 3/16	2.90	1 7/16 x 5 3/16	3.20
.1	1 1/16 x 3 3/16	2.65	1 7/16 x 2 15/16	2.90	1 7/16 x 3 7/16	3.20	1 7/16 x 4 15/16	3.45				

TELEVISION CAPACITORS

TYPE 38
OIL FILLED METAL-CASED

Cap. Mfd.	6000 V.D.C.	List
.0005	1 1/16 x 1 15/16	$2.75
.001	1 1/16 x 1 15/16	2.75
.005	1 1/16 x 2 1/16	2.75
.01	1 1/16 x 2 7/16	2.75
.05	1 5/16 x 3 7/16	3.20

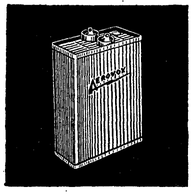
TYPE P88
MOLDED TUBULAR CAPACITORS

Cap. Mfd.	6000 V.D.C.	List
.0005	21/32 x 2	$1.35
.001	21/32 x 2	1.35
.005	21/32 x 2	1.35
Cap. Mfd.	**10000 V.D.C.**	**List**
.0005	21/32 x 2	$1.50

ENERGY-STORAGE CAPACITORS • TYPE PX

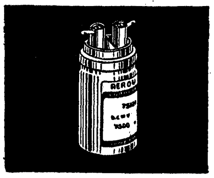
VDC PEAK	NOMINAL CAP. MFD.	TYPE NO.	LIST
	22.5 Watt Seconds		
1500	20	PX10D1	$15.00
	50.0 Watt Seconds		
2000	28	PX14D3	22.00
	75.0 Watt Seconds		
2500	24	PX14D2	22.00
3000	16	PX18D1	25.00
	100.0 Watt Seconds		
2500	30	PX15D1B	37.00
4000	12.5	PX20D1	24.00

SIZE:	Length x Width x Height
PX10D1	2½" x 3¾" x 4⅝"
PX15D1B	4 9/16" x 3¾" x 6½"
ALL OTHERS	4 9/16" x 3¾" x 4⅝"



For high-speed flash photography, flash signaling equipment, pulsing and other energy storage uses.

TYPE 12



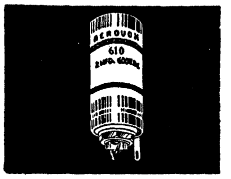
Vertical-Mounting Oil-Impregnated Oil-Filled

Inverted Mounting Oil-Impregnated Oil-Filled

High-voltage, inverted or vertical, immersion-proof unit suitable for such high-voltage circuit applications as in television, cathode-ray tube power supplies, high-voltage rectifiers, or as a high-voltage by-pass capacitor.

Mfd.	Hght. x Dia.	List
	2000 VDCW	
1.0	3¾ x 2¼	$ 8.10
2.0	5¼ x 2¼	10.00
	3000 VDCW	
.05	2¼ x 2¼	10.25
.1	2¼ x 2¼	11.00
.25	3¼ x 2¼	12.10
.5	3¾ x 2¼	13.20
1.0	5¼ x 2¼	16.80
	4000 VDCW	
.05	2¾ x 2¼	9.90
.1	3¾ x 2¼	10.25
.25	5¼ x 2¼	11.55
	6000 VDCW	
.03	2¾ x 2¼	13.20
.05	3¾ x 2¼	14.85
.1	4¾ x 2¼	18.15

TYPE 10

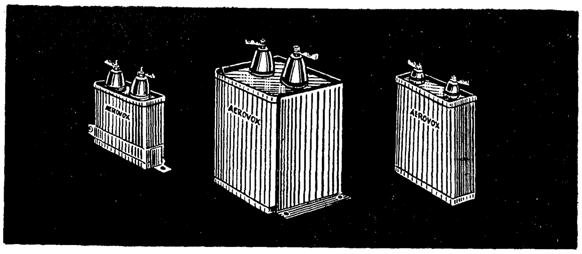


New immersion-proof unit, physically interchangeable with the old single terminal type unit. One piece molded bakelite terminal assembly. Both terminal lugs insulated from container.

SIZE: Height x Diameter

CAP. MFD.		LIST
	TYPE 1510—1500 VDCW	
.5	2⅞ x 1½	$5.00
1.0	4½ x 1½	$5.45
	TYPE 1010—1000 VDCW	
1.0	2⅞ x 1½	$4.20
2.0	4½ x 1½	$5.45
	TYPE 610—600 VDCW	
2.0	2⅞ x 1½	$4.55
4.0	4½ x 1½	$6.25

	7500 VDCW	
.01	3¼ x 2¼	13.20
.02	3¼ x 2¼	14.30
.03	3¾ x 2¼	15.40
.05	4¼ x 2¼	17.05
.1	4¾ x 2¼	19.90
.5	4¾ x 2¼	26.00



AEROVOX HYVOLS* • TYPE 09

Immersion-proof in sturdy rectangular metal can. High-voltage screw type pillar terminals fitted with soldering lugs. Use of "HYVOL" allows exceptionally compact size for capacity, working voltage, and safety factor. Intended for heavy-duty continuous service in transmitters, amplifiers, etc. Type MB bracket is supplied unless otherwise specified, except on units with base sizes 3¾" x 3-3/16" and 3¾" x 4-9/16" where Type MS bracket is supplied. MSB is available for all types upon request.

	600 VDCW		1000 VDCW		1500 VDCW		2000 VDCW		2500 VDCW	
Cap. Mfds	Size H. x W. x D.	List	Size H. x W. x D.	List	Size H. x W. x D.	List	Size H. x W. x D.	List	Size H. x W. x D.	List
.1			2 x 1 13/16 x 1 1/16	$4.15			2 x 1 13/16 x 1 1/16	$6.60		
.25			2⅛ x 1 13/16 x 1 1/16	4.70			2⅛ x 1 13/16 x 1 1/16	7.15		
.5	2⅛ x 1 13/16 x 1 1/16	$4.70	2⅛ x 1 13/16 x 1 1/16	4.95	2⅞ x 1 13/16 x 1 1/16	$6.35	2⅞ x 1 13/16 x 1 1/16	7.45	3½ x 2½ x 1 3/16	$11.55
1.0	2⅛ x 1 13/16 x 1 1/16	5.80	2⅛ x 1 13/16 x 1 1/16	6.35	4 x 1 13/16 x 1 1/16	7.45	3⅜ x 2½ x 1 3/16	9.10	3¼ x 3¾ x 1¾	13.20
2.0	2⅞ x 1 13/16 x 1 1/16	7.15	3⅞ x 1 13/16 x 1 1/16	8.25	4⅛ x 2½ x 1 3/16	10.45	4 x 3¾ x 1¼	10.75	4⅝ x 3¾ x 1¾	21.45
3.0	3⅞ x 1 13/16 x 1 1/16	8.25	3½ x 2½ x 1 3/16	9.65	4¾ x 2½ x 1 3/16	12.40	4¾ x 3¾ x 1¼	13.20		
4.0	3¼ x 2½ x 1 3/16	9.10	4⅝ x 2½ x 1 3/16	10.45	4⅝ x 3¾ x 1¼	14.05	3⅞ x 3¾ x 2¼	15.15	4⅝ x 3¾ x 3 3/16	30.00
5.0	4⅜ x 2½ x 1 3/16	10.45	3⅞ x 3¾ x 1¼	12.65	4¾ x 3¾ x 1¾	15.15	4¾ x 3¾ x 2¼	16.80		
6.0	4⅝ x 2½ x 1 3/16	11.30	4¾ x 3¾ x 1¼	14.05	4¾ x 3¾ x 1¾	17.05	4⅝ x 3¾ x 3 3/16	20.10		
8.0	3⅞ x 3¾ x 1¼	13.50	4¾ x 3¾ x 1¼	15.15	4¾ x 3¾ x 2½	20.90	4⅝ x 3¾ x 3 3/16	25.05		
10.0	4⅝ x 3¾ x 1¼	15.15	4⅝ x 3¾ x 1¾	16.80	4¾ x 3¾ x 3 3/16	25.05	4¾ x 3¾ x 4 9/16	30.55	6⅜ x 3¾ x 4 9/16	75.10
12.0	4¾ x 3¾ x 1½	16.70	3⅞ x 3¾ x 2¼	18.15	4¾ x 3¾ x 3 3/16	27.25	5⅜ x 3¾ x 4 9/16	33.30		
15.0	4¾ x 3¾ x 1¾	18.50	4¾ x 3¾ x 2½	20.10	4¾ x 3¾ x 4 9/16	30.00	6½ x 3¾ x 4 9/16	40.15		

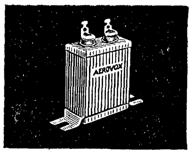
	3000 VDCW		4000 VDCW		5000 VDCW		6000 VDCW		7500 VDCW	
Cap. Mfds	Size H. x W. x D.	List	Size H. x W. x D.	List	Size H. x W. x D.	List	Size H. x W. x D.	List	Size H. x W. x D.	List
.1	2 x 2½ x 1 3/16	$14.05	2¾ x 3¾ x 2¼	$25.05	2¾ x 3¾ x 2¼	$26.70	3⅜ x 3¾ x 2¼	$33.55	3⅞ x 3¾ x 2¼	$47.30
.25	2½ x 2½ x 1 3/16	14.85	2¾ x 3¾ x 2¼	26.40	3⅜ x 3¾ x 2¼	30.25	4⅝ x 3¾ x 2¼	41.80	5⅛ x 3¾ x 2½	50.05
.5	3⅞ x 2½ x 1 3/16	16.80	3⅞ x 3¾ x 2¼	30.00	4¼ x 3¾ x 2¼	33.30	4⅜ x 3¾ x 4 9/16	47.30	5⅛ x 3¾ x 4 9/16	54.20
1.0	3⅞ x 3¾ x 1¾	20.10	5⅛ x 3¾ x 2¼	36.85	4⅜ x 3¾ x 4 9/16	41.80	8 x 3¾ x 4 9/16	83.60		
2.0	4⅛ x 3¾ x 3 3/16	25.05	5⅛ x 3¾ x 4 9/16	46.75	6 x 3¾ x 4 9/16	53.65				
4.0	4¾ x 3¾ x 4 9/16	36.85	8 x 3¾ x 4 9/16	66.85						

COMPACT HYVOL* CAPACITORS • TYPE 16CT

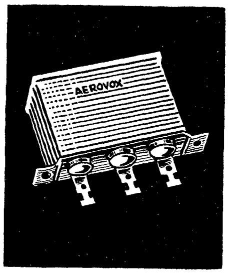
Cap. Mfd.	400 VDCW	List	600 VDCW	List	1000 VDCW	List
.01	1 1/16	$2.85	1 1/16	$2.90	1 1/16	$3.10
.05	1 1/16	2.90	1 1/16	3.10	1⅜	3.15
.1	1 1/16	3.15	1⅜	3.20	1⅜	3.25
.25	1⅜	3.20	1⅝	3.25	1⅝	3.35
.5	1⅝	3.25	2	3.35	2	3.65
1.0	2	3.65	2½	3.75		

Standard Width 5/16" — Depth 11/16"

Compact, immersion-proof unit, of minimum size and weight. Corrosion-proof metal container. Special immersion-proof terminals for severe atmospheric and climatic conditions. Type 16CT is standard, but Type 16CB (terminals on bottom) units also available.



COMPACT HYVOL* CAPACITORS • TYPE 18CB



Compact, immersion-proof unit. Different base sizes make units adaptable for duals and triples. Even on single sections, different base sizes make units fit in particular applications where Type 16's do not fit. Type 18CB is standard, but Type 18CT (terminals on top) also available.

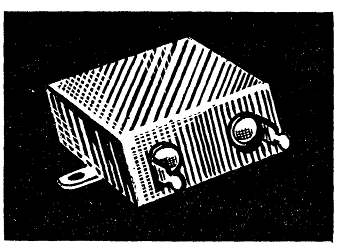
Cap. Mfd.	400 VDCW	List	600 VDCW	List	1000 VDCW	List
SINGLE-ELEMENT						
.05	1	$3.15	1	$3.20	1	$3.35
.1	1	3.25	1	3.35	1	3.45
.25	1¼	3.35	1⅜	3.45	1½	3.65
.5	1½	3.45	1 11/16	3.70	1 13/16	3.85
1.0	2	3.85	2½	4.00		
DUAL-ELEMENT						
.05-.05	1	$4.00	1	$4.20	1 1/16	$4.55
.1 -.1	1¼	4.15	1⅜	4.30	1½	4.90
.25-.25	1½	4.30	1 11/16	4.55	1 13/16	5.00
.5 -.5	2	4.70	2½	4.95		
TRIPLE-ELEMENT						
.05-.05-.05	1	$4.95	1 1/16	$5.00	1⅜	$5.90
.1 -.1 -.1	1½	5.30	1½	5.95	1⅝	6.85
.25-.25-.25	2	5.70	2½	6.85		

Standard Width 1¾" — Depth 9/16"

BATHTUB CASE HYVOL CAPACITORS • TYPE 30

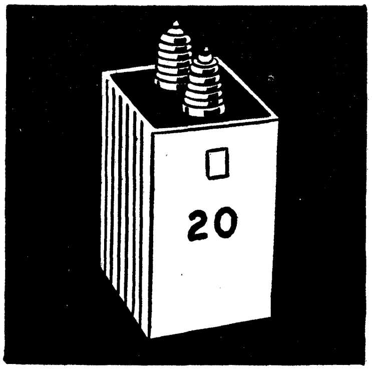
SIZE: Length x Width x Height

Cap. Mfds.	400 VDCW	List	600 VDCW	List	1000 VDCW	List
SINGLE-ELEMENT						
.05	1¾ x 1 x ¾	$1.95	1¾ x 1 x ¾	$2.85	1¾ x 1 x ¾	$3.05
.1	1¾ x 1 x ¾	2.20	1¾ x 1 x ¾	2.90	1¾ x 1 x ¾	3.15
.25	1¾ x 1 x ¾	2.50	1¾ x 1 x ¾	3.10	1¾ x 1 x ¾	3.25
.5	1¾ x 1 x ⅞	2.65	1¾ x 1 x ⅞	3.30	2 1/16 x 1¼ x ⅞	3.50
.75	2 1/16 x 1¼ x ¾	2.95	2 1/16 x 1¼ x ⅞	3.50	2 x 1¾ x ⅞	4.20
1.0	2 x 1¾ x 13/16	3.15	2 x 1¾ x ⅞	3.75	2 x 1¾ x 1	4.40
2.0	2 x 2 x 1⅛	3.95	2 x 2 x 1 3/16	5.00		
DUAL-ELEMENT						
.05- .05	1¾ x 1 x ¾	$3.05	1¾ x 1 x ¾	$3.65	1¾ x 1 x ¾	$3.85
.1 - .1	1¾ x 1 x ¾	3.30	1¾ x 1 x ¾	3.70	1¾ x 1 x ¾	3.95
.25- .25	1¾ x 1 x ⅞	3.60	1¾ x 1 x ⅞	3.75	2 1/16 x 1¼ x ⅞	4.20
.5 - .5	2 x 1¾ x 13/16	4.15	2 x 1¾ x ⅞	4.30	2 x 1¾ x 1	5.45
1.0 -1.0	2 x 2 x 1⅛	4.95	2 x 2 x 1 3/16	5.30		
TRIPLE-ELEMENT						
.05-.05-.05	1¾ x 1 x ¾	$3.85	1¾ x 1 x ¾	$4.05	1¾ x 1 x 13/16	$4.25
.1 -.1 -.1	1¾ x 1 x 13/16	4.00	1¾ x 1 x 13/16	4.20	1¾ x 1¼ x ⅞	4.55
.25-.25-.25	2 x 1¾ x ⅞	4.40	2 x 1¾ x ⅞	4.75	2 x 2 x 1	5.50



A compact superior-grade oil-impregnated, oil-filled, drawn-metal case capacitor. Hermetically sealed, immersion-proof. Built for severe operating conditions as in aircraft, police, broadcast, public address and other types of communications equipment. The Aerovox-designed terminals are constructed with "doublerubber bakelite" insulators permanently riveted to the case, and make a sturdy, absolutely immersion-proof assembly.

TYPE 20 • HIGH VOLTAGE TRANSMITTER CAPACITORS



High quality oil-capacitors designed to meet the exacting service requirements of communications and electronic equipment, and general DC applications in industrial equipment. Single capacitors or parallel grouped capacitors available in ratings from 6000 to 50,000 VDCW. These units consist of precision wound, adequately insulated sections connected in parallel and assembled in heavy, welded copper bearing steel tanks, designed to expand or contract with changes in temperature. Finished in long lasting dark grey lacquer. Heavy duty, wet process porcelain insulator assemblies are gasketed, pressure sealed, and oil-filled to prevent internal creepage and corona. The assembled units are heat vacuum dried, vacuum impregnated with Aerovox Hyvol and hermetically sealed for long life under exacting, operating conditions. Single units rated at 30 KV or less are normally supplied with the capacitor element insulated from ground. Type 20 units not carried in stock but are built to order. Submit full application information when ordering.

SIZE: Height x Width x Depth

CAP. MFDS.	6000 VDCW	LIST	7500 VDCW	LIST	10,000 VDCW	LIST	12,500 VDCW	LIST
.1								
.2								
.25								
.5			11 x 8 x 4	$ 83.00			11 x 8 x 4	$184.00
1.0			11 x 8 x 4	108.00	11 x 8 x 4	$217.00	11 x 12 x 4	233.00
1.5								
2.0	11 x 8 x 4	$150.00	11 x 8 x 4	166.00	11 x 12 x 4	275.00	13 x 12 x 6	292.00
3.0								
4.0	11 x 12 x 4	184.00	13 x 12 x 4	250.00	13 x 12 x 6	336.00		
5.0	11 x 12 x 4	208.00			13 x 12 x 6	368.00	15 x 12 x 9½	551.00
6.0	13 x 12 x 4	233.00	13 x 12 x 6	300.00				
10.0	13 x 12 x 6	290.00						
0.25-0.25								
0.5-0.5								

CAP. MFDS.	15,000 VDCW	LIST	20,000 VDCW	LIST	25,000 VDCW	LIST	37,500 VDCW	50,000 VDCW
.1							13x13½x4	13x13½x4
.2					11 x 12 x 4	$217.00	13x13½x6	15x13½x8½
.25	11 x 8 x 4	$175.00	11 x 8 x 4	$208.00	11 x 12 x 4	292.00	15x13½x8½	15x15½x15
.5	11 x 12 x 4	208.00	11 x 12 x 4	267.00	11 x 12 x 6	317.00	15x13½x15	
1.0	13 x 12 x 4	292.00	13 x 12 x 6	359.00	15 x 12 x 9½	475.00		
1.5			15 x 12 x 9½	484.00				
2.0	15 x 12 x 9½	384.00	15 x 12 x 9½	576.00				
3.0	15 x 12 x 9½	526.00						
4.0			15 x 14 x 16	1011.00				
5.0								
6.0								
10.0								
0.25-0.25								
0.5-0.5								

TYPE 12520 VD
25,000 Volts Output
(12,500—12,500 Volts)
Dual Units
(For Voltage-Doubler Circuits)
11 x 8 x 4   11 x 12 x 4
PRICES ON REQUEST

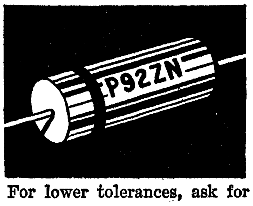
HIGH TEMPERATURE METALLIZED — PAPER CAPACITORS

Sizes given are D x L

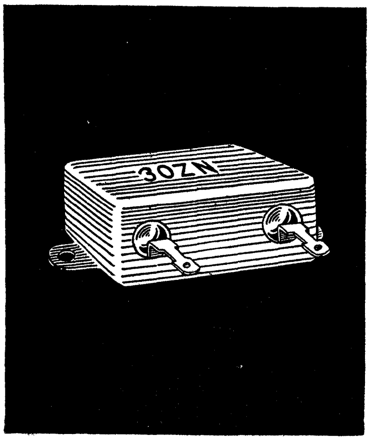
Capacity	200 Volt Size	List	400 Volt Size	List	600 Volt Size	List
.01	3/16 x 9/16	$1.30	¼ x 11/16	$1.35	9/32 x 11/16	$1.45
.02	¼ x 11/16	1.40	5/16 x 11/16	1.45	⅜ x 11/16	1.55
.03	¼ x 11/16	1.50	⅜ x 11/16	1.55	13/32 x 11/16	1.65
.05	¼ x 27/32	1.60	⅜ x 27/32	1.65	13/32 x 27/32	1.75
.1	9/32 x 27/32	1.75	⅜ x 1 5/32	1.80	13/32 x 1 5/32	1.90
.25	⅜ x 27/32	2.00	9/16 x 1 5/32	2.10	⅝ x 1 5/32	2.25
.5	13/32 x 1 5/32	2.50	⅝ x 1⅜	2.85	11/16 x 1½	3.00
1.0	9/16 x 1 5/32	3.00	11/16 x 1⅞	3.50	13/16 x 1⅞	4.00
2.0	⅝ x 1½	4.00	13/16 x 2⅜	5.50	15/16 x 2⅜	6.00

TYPE P92ZN

Aerovox type P92ZN Aerolene impregnated metallized - paper capacitors are modified plastic tubular type, Duranite end-sealed capacitors in paper cases. Operating temperature range is -30°C to +100°C. Standard Tolerances ±20%. For lower tolerances, ask for quotations.



TYPE P30ZN



HIGH TEMPERATURE METALLIZED — PAPER CAPACITORS

Sizes given are L x W x H

Capacity	200 Volt	List	400 Volt	List	600 Volt	List
.1	1¾ x 1 x ¾	$5.75	1¾ x 1 x ¾	$7.00	1¾ x 1 x ¾	$8.00
.25	1¾ x 1 x ¾	6.00	1¾ x 1 x ¾	7.30	1¾ x 1 x ¾	8.30
.5	1¾ x 1 x ¾	6.25	1¾ x 1 x ¾	7.60	1¾ x 1 x ¾	8.75
1.0	1¾ x 1 x ¾	6.75	1¾ x 1 x ⅞	8.20	1¾ x 1¼ x ⅞	9.50
2.0	1¾ x 1 x ¾	7.80	2 x 1¾ x 13/16	9.50	2 x 2 x ⅞	11.00
3.0			2 x 1¾ x 15/16	11.00	2 x 2 x 1⅛	13.25
4.0			2 x 2 x 1	12.20		
5.0			2 x 2 x 1¼	14.30		

Cap. Mfd.	150 Volt	List
3.0	1¾ x 1 x ⅞	$9.00
4.0	1¾ x 1 x ⅞	9.80
5.0	1¾ x 1 x ⅞	11.20
6.0	1¾ x 1¼ x ⅞	12.40
8.0	2 x 2 x 13/16	14.70
10.0	2 x 2 x 13/16	17.20
12.0	2 x 2 x ⅞	19.60
15.0	2 x 2 x 1	23.50

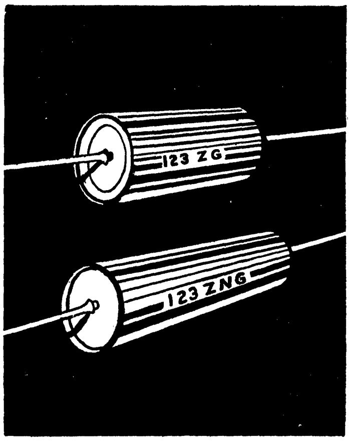
Aerovox type P30ZN Aerolene empregnated metallized-paper capacitors housed in "bathtub" metal-cases with vitrified ceramic or glass terminal seals. Operating termperature range —55°C to +100°C at full rating with operation to +125°C at 75 per cent of voltage rating.

Standard Tolerances ±20%. For lower tolerances, ask for quotations.

METAL-CASED METALLIZED-PAPER CAPACITORS • TYPE P123ZG

Cap. Mfd.	200 V	List	400 V	List	600 V	List
.0005	.175 x 7/16	$2.50	.235 x 7/16	$2.60	.235 x 7/16	$2.70
.001	.175 x 7/16	2.55	.235 x 7/16	2.65	.235 x 7/16	2.70
.002	.175 x 7/16	2.55	.235 x 7/16	2.65	.235 x 9/16	2.70
.003	.175 x 7/16	2.60	.235 x 9/16	2.70	.235 x 9/16	2.80
.005	.175 x 7/16	2.65	.235 x 9/16	2.75	.235 x 9/16	2.85
.01	.175 x 7/16	2.65	.235 x 9/16	2.80	.312 x 23/32	2.90
.015	.195 x ½	2.65	.235 x 23/32	2.85	.312 x 23/32	2.95
.02	.195 x ½	2.70	.235 x 23/32	2.90	.312 x 23/32	2.95
.022	.195 x ½	2.70	.235 x 23/32	2.90	.312 x 23/32	3.00
.033	.235 x 9/16	2.75	.312 x 23/32	2.95	.400 x 23/32	3.15
.040	.235 x 9/16	2.85	.312 x 23/32	3.00	.400 x 23/32	3.15
.047	.235 x 23/32	2.85	.400 x 23/32	3.05	.400 x 23/32	3.20
.050	.235 x 23/32	2.85	.400 x 23/32	3.10	.400 x 23/32	3.25
.068	.312 x 23/32	2.90	.400 x 1 1/32	3.15	.400 x 1 1/32	3.35
.10	.312 x 23/32	2.95	.400 x 1 1/32	3.30	.500 x 1 1/32	3.65
.15	.312 x 1 1/32	3.00	.500 x 1 1/32	3.55	.500 x 1 1/32	3.85
.2	.312 x 1 1/32	3.15	.500 x 1 1/32	3.70	.562 x 1 7/32	4.00
.22	.312 x 1 1/32	3.25	.562 x 1 1/32	3.85	.562 x 1 7/32	4.20
.25	3.12 x 1 1/32	3.40	.562 x 1 1/32	3.95	.562 x 1 11/32	4.50
.33	.400 x 1 1/32	3.55	.562 x 1 7/32	4.10	.562 x 1 23/32	4.80
.47	.400 x 1 1/32	3.85	.562 x 1 23/32	4.65	.670 x 1 23/32	5.15
.50	.400 x 1 1/32	4.00	.562 x 1 23/32	4.85	.670 x 1 23/32	5.85
.68	.562 x 1 1/32	4.15	.670 x 1 23/32	5.05	.670 x 2 7/32	6.05
1.00	.562 x 1 7/32	4.70	.670 x 2 7/32	5.65	.750 x 2 7/32	6.70
1.5	.562 x 1 23/32	5.40				
2.0	.562 x 1 23/32	6.80				

Ultra-compact, tiny capacitors in hermetically-sealed, metal cases. Bonded glass to metal terminal construction to minimize size. Can be supplied with Plastic insulating tubes. Std. Tolerance ±20%.



Aerovox type P123ZNG Aerolene impregnated metallized-paper capacitors housed in tubular metal cases with vitrified ceramic terminal seal. Operating temperature range -55°C to +100°C at full rating with operation to +125°C at 75 per cent of voltage rating.

NOTE: For insulated section (insulating terminal at both ends) — specify type P123ZN — add 1/16 inch to lengths listed above.

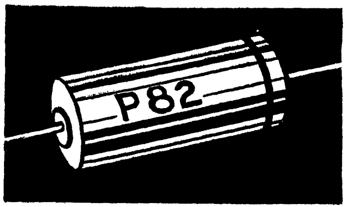
For mounting bracket add Suffix "B" to type designation.

For threaded terminal mounting add Suffix "T" to type designation.

HIGH TEMPERATURE METAL-CASED METALLIZED PAPER CAPACITORS • TYPE 123ZNG

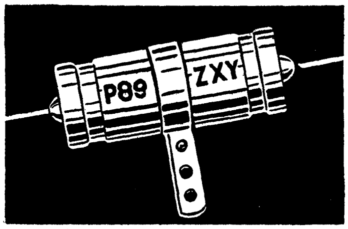
Capacity	200 V	List	400 V	List	600 V	List
.0005	.175 x 7/16	$2.95	.235 x 7/16	$3.10	.235 x 7/16	$3.15
.001	.175 x 7/16	2.95	.235 x 7/16	3.10	.235 x 7/16	3.15
.002	.175 x 7/16	2.95	.235 x 7/16	3.10	.235 x 9/16	3.15
.003	.175 x 7/16	3.00	.235 x 9/16	3.15	.235 x 9/16	3.25
.005	.175 x 7/16	3.00	.235 x 9/16	3.15	.235 x 9/16	3.25
.01	.175 x 7/16	3.10	.235 x 9/16	3.20	.312 x ¾	3.35
.015	.195 x 9/16	3.10	.235 x 9/16	3.35	.312 x ¾	3.40
.02	.195 x 9/16	3.10	.235 x ¾	3.40	.312 x ¾	3.50
.022	.195 x 9/16	3.10	.235 x ¾	3.40	.312 x ¾	3.50
.033	.235 x 9/16	3.25	.312 x ¾	3.45	.400 x ¾	3.65
.040	.235 x 9/16	3.35	.312 x ¾	3.55	.400 x ¾	3.70
.047	.235 x 9/16	3.35	.312 x ¾	3.55	.400 x ¾	3.70
.050	.235 x 9/16	3.40	.312 x ¾	3.60	.400 x ¾	3.85
.068	.312 x ¾	3.40	.400 x 1 1/16	3.70	.400 x 1 1/16	3.95
.10	.312 x ¾	3.45	.400 x 1 1/16	3.85	.400 x 1 1/16	4.30
.15	.312 x 1 1/16	3.50	.500 x 1 1/16	4.15	.500 x 1 1/16	4.50
.2	.312 x 1 1/16	3.80	.500 x 1 1/16	4.35	.562 x 1¼	4.70
.22	.312 x 1 1/16	3.80	.500 x 1 1/16	4.50	.562 x 1¼	4.90
.25	.312 x 1 1/16	4.00	.500 x 1 1/16	4.65	.562 x 1¼	5.25
.33	.400 x 1 1/16	4.15	.562 x 1¼	4.80	.562 x 1¾	5.60
.47	.400 x 1 1/16	4.50	.562 x 1¾	5.45	.670 x 1¾	6.00
.50	.400 x 1 1/16	4.70	.562 x 1¾	5.70	.670 x 1¾	6.75
.68	.562 x 1 1/16	4.85	.670 x 1¾	5.90	.670 x 2¼	7.55
1.00	.562 x 1 1/16	5.50	.670 x 2¼	7.00	.750 x 2¼	8.60
1.5	.562 x 1¾	6.25				
2.0	.562 x 1¾	7.00				

TYPE P82 METALLIZED-PAPER CAPACITORS • CARDBOARD TUBES



Cap. Mfds.	200 V	List	400 V	List	600 V	List
.01	⅜ x ⅝	$ .60	⅜ x ⅝	$ .65	⅜ x ⅝	$ .70
.02	⅜ x ⅝	.60	⅜ x ⅝	.65	⅜ x ⅝	.70
.03	⅜ x ⅝	.60	⅜ x ⅝	.65	15/32 x ⅝	.80
.05	⅜ x ⅝	.65	15/32 x ⅝	.70	15/32 x ⅝	.80
.1	⅜ x ⅝	.70	15/32 x 1⅛	.80	15/32 x 1⅛	.90
.25	15/32 x ⅝	.90	9/16 x 1⅛	1.00	⅝ x 1⅛	1.10
.5	15/32 x 1⅛	1.05	⅝ x 1⅝	1.15	23/32 x 1⅝	1.45
1.0	9/16 x 1⅛	1.30	23/32 x 2⅛	1.60	23/32 x 2⅝	1.80
2.0	⅝ x 1⅝	1.80				

TYPE 89ZXY • METALLIZED-PAPER CAPACITORS



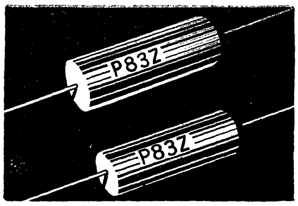
Cap. Mfds.	Size 200 V.D.C.	List	Size 400 V.D.C.	List	Size 600 V.D.C.	List
.01					⅜ x 1	$1.40
.02					⅜ x 1	1.45
.03			⅜ x 1	$1.40	7/16 x 1	1.50
.05	⅜ x 1	$1.40	7/16 x 1	1.45	½ x 1	1.55
.1	7/16 x 1	1.45	7/16 x 1 5/16	1.60	½ x 1½	1.70
.25	½ x 1	1.60	⅝ x 1 5/16	1.80	⅝ x 1⅝	2.00
.5	½ x 1 5/16	1.70	⅝ x 2	2.00	¾ x 2	2.40
1.0	⅝ x 1½	2.10	¾ x 2½	2.50	13/16 x 2½	3.00
2.0	⅝ x 2	2.60	1 x 2½	3.60	1¼ x 2½	4.00

Tubular Aerolites in hermetically-sealed, metal cases. Hyvol K or M impregnated. Unique self-healing feature and Aerovox service-proven, double-rubber bakelite terminal seals. Ideal for extreme conditions and hard use. Tolerance ±20%.

Cap. Mfds.	Size 150 V.D.C.	List
3.0	¾ x 2	$3.40
4.0	13/16 x 2	4.35
6.0	1 x 2	5.30

Sizes shown are for floating case without insulating tube.

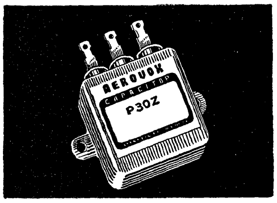
TYPE P83Z MICROMINIATURES METALLIZED-PAPER CAPACITORS



Ultra-small, new metallized-dielectric capacitor particularly applicable in the electronic field to replace the low capacity paper units now being used. Hyvol K impregnated in humidity resistant molded thermo-plastic cases.

Cap. Mfd.	Voltage	Case Size (Inches) Dia. x Lgth.	List
.004	200 VDC	3/16 x 7/16	$.30
005	200 VDC	3/16 x 7/16	.30
.01	200 VDC	3/16 x 7/16	.30
.02	200 VDC	¼ x 9/16	.35
.04	200 VDC	¼ x 9/16	.35
.00025	400 VDC		.30
.002	400 VDC	3/16 x 7/16	.30
.003	400 VDC	3/16 x 7/16	.30
.008	400 VDC	¼ x 9/16	.35
.01	400 VDC	¼ x 9/16	.35
.0005	600 VDC	3/16 x 7/16	.30
.0008	600 VDC	3/16 x 7/16	.30
.001	600 VDC	3/16 x 7/16	.30
.002	600 VDC	¼ x 9/16	.35
.0022	600 VDC	¼ x 9/16	.35
.0047	600 VDC	¼ x 9/16	.35
.005	600 VDC	¼ x 9/16	.35
.0068	600 VDC	¼ x 9/16	.35

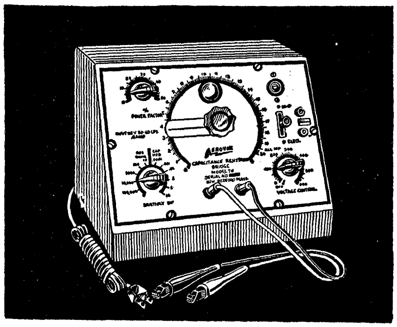
TYPE P30Z BATHTUBS METALLIZED-PAPER CAPACITORS



Aerolite Metallized-Paper capacitors. Hyvol K or M impregnated in bathtub, hermetically-sealed metal cases. Meets rigid JAN requirements for moisture immersion and vibration testing. Std. Tolerance ±20%.

Cap. Mfds.	Volts	Size	List
.5	200	1¾ x 1 x ¾	$3.30
1.0	200	1¾ x 1 x ¾	3.55
2.0	150	1¾ x 1 x ¾	4.45
4.0	150	1¾ x 1 x ⅞	5.75
6.0	150	2 x 1¾ x ⅞	6.10
8.0	150	2 x 2 x 13/16	8.40
10.0	150	2 x 2 x ⅞	9.70
12.0	150	2 x 2 x 1	11.00
.25	400	1¾ x 1 x ¾	3.35
.5	400	1¾ x 1 x ¾	3.55
1.0	400	1¾ x 1 x ⅞	3.95
2.0	400	2 x 1¾ x ⅞	4.90
4.0	400	2 x 2 x 1⅛	7.85
.1	600	1¾ x 1 x ¾	3.50
.25	600	1¾ x 1 x ¾	3.55
.5	600	1¾ x 1 x ¾	4.25
1.0	600	1¾ x 1¼ x ⅞	4.90
2.0	600	2 x 2 x 1	6.25

TEST INSTRUMENTS



Aerovox Capacitance and Resistance Bridge

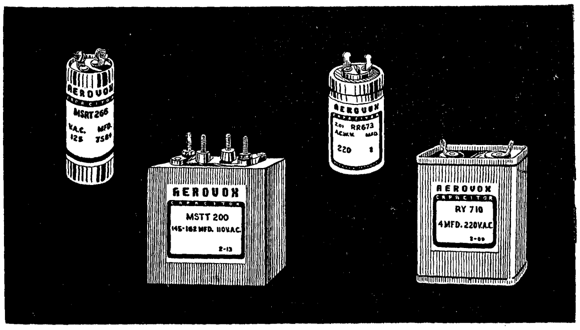
AEROVOX MODEL 76 Resistance Capacitance Bridge is the new postwar general-utility instrument combining simplicity of operation, remarkable degree of accuracy, and modest price. Extreme ruggedness makes it equally suitable out on the job, in the shop, or in the laboratory.

Sloping panel 10" x 6". Aluminum, etched and anodized. Steel cabinet, black crackle finish. All readings taken from main 4" dial. Same calibrated scale eliminates trouble and chances for errors in reading. Linear scale, also an exclusive feature, means no crowding at high end to make readings difficult and inaccurate. Both the resistance and the capacitance readings are covered by six overlapping ranges, as against two or three in usual service instruments, for maximum sensitivity and accuracy. Positive "magic eye" indicator.

Here is what Model 76 bridge does: (1) Measures capacitance from 100 mmf. to 200 mfd. in six ranges. (2) Measures resistance from 10 ohms to 20 megohms in six ranges. (3) Measures power factor from 0 to 50%. (4) Provides D.C. polarizing potential for leakage measurements, from 0 to 600 V.D.C., continuously variable and calibrated in volts. (5) Checks leakage or insulation resistance.

Instrument is provided with shockproof, color-coded test leads fitted with banana plugs for panel jacks, and with clips. Instructions. Measures 10" x 7¾" x 8¼". Weight 8 lbs. 3 oz.

Aerovox *Motor-Starting* Capacitors

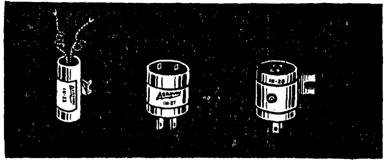


A TYPE FOR *EVERY* APPLICATION

Aerovox motor capacitors are available in two general categories: (1) Exact-Duplicate Replacements, precisely matching the mechanical and electrical features of the original equipment; and (2) Universal Replacements, for a minimum stock of numbers taking care of the maximum range of motor applications. Exact-Duplicate Replacements do the "same-as-new" service job insisted upon by critical customers. Universal Replacements mean maximum convenience with minimum investment. And of course Aerovox also supplies the hardware, housings, caps, mountings.

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

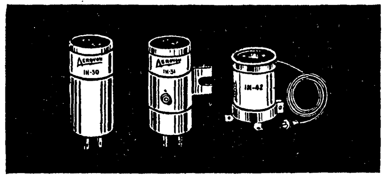
INTERFERENCE FILTERS



TYPE IN-23. Especially used for neon sign fixtures. Convenient mounting bracket. One filter for each fixture. Flexible leads. Also used on small motors. Size 1 x 2⅛ inches. **List $1.05**

TYPE IN-27. Simple, inexpensive, plug-in unit where interference is slight. Size 1⅜ x 1½ inches. **List $1.50**

TYPE IN-28. For use where ground is at considerable distance. Most efficent when mounted on appliance. Bracket supplied. Size: 1⅜ x 2 inches. **List $2.00**



TYPE IN-29. Effective plug-in unit for local noise sources of variable character but strong intensity. Especially suited for shavers and other vibrating devices. Size: 1⅜ x 3 inches. **List $1.75**

TYPE IN-30. Similar to IN-29 but with greater inductance to handle more severe noise interference. Size: 1⅜ x 3 inches. **List $2.50**

TYPE IN-31. Bracket mounted unit with high inductance. Size: 1⅜ x 3 inches. **List $3.00**

TYPE IN-42. Heavy duty unit for serious interference from power transmission lines, etc. Plugs into outlet. Appliance or radio plugs into receptacle in filter. Mounting ring provided. Rating: 110/220 v. AC; 6 amps. Size: 2½" dia. x 3¾". **List $7.50**

UHF — INTERFERENCE FILTERS

These latest filter units provide maximum attenuation from 150 KC well up into the UHF range. And they are extra-rugged, extra-compact, extra-efficient, by any comparison with previous filters.

Primary applications are in r.f. noise suppression work in military or commercial aircraft and for vehicular low-voltage d.c. applications. Also, for special applications such as battery or low-voltage d.c. filters, for shield room applications, and for critical equipment.

Available in seven standard types meeting a wide variety of applications. For extraordinary requirements, special filters can be developed and built to your order.

Aerovox Type	Amps.	VDC	Size (l. x w. x h.)	List
IN 148	2.0	150	1¾"x1"x⅞"	$11.00
IN 150	3.0	150	1 13/16"x1"x1"	12.50
IN 151	5.0	150	1 13/16"x1¼"x1"	14.00
IN 152	10.0	150	2 1/16"x1¼"x1"	16.25
IN 153	25.0	150	2"x2"x1 3/16"	23.00
IN 156	40.0	150	5 1/16"x1 13/32"x1 1/16"	29.50
IN 154	100.0	150	3 1/16"x2⅛"x2⅞"	39.00

AEROVOX RESEARCH WORKER

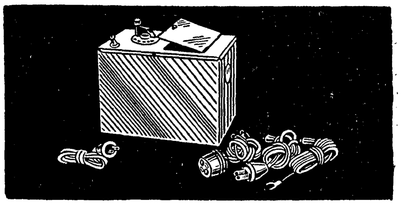
A snappy, informative, practical engineering paper, issued monthly, the AEROVOX RESEARCH WORKER is free to servicemen, engineers, hams, and other interested radio workers. Ask your AEROVOX jobber how you may subscribe, or write direct.

INTERFERENCE ANALYZER

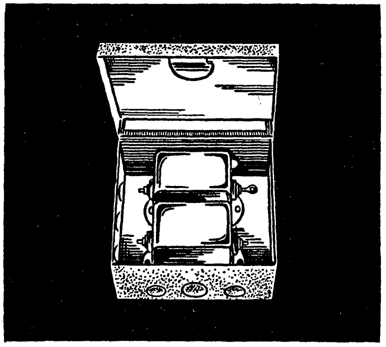
TYPE ANL-37

The Aerovox Filter Selector eliminates the guess work in determining the proper filter to use. Plugs between interfering device and outlet. Adjust selector switch until noise is eliminated or minimized. Dial then indicates type filter (IN27 thru IN42) to be used.

Unit in handsome, sturdy metal cabinet. Compartment contains necessary attachment plugs and clips. Size: 5½ x 5½ x 8 inches.



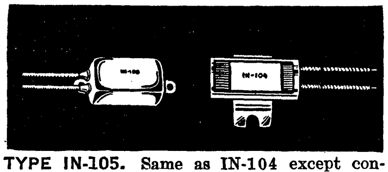
HEAVY DUTY INDUSTRIAL FILTERS



Heavy duty, industrial-type interference filters consisting of one or more highly efficent radio noise filter elements. Enclosed in black painted steel surface cabinet for permanent installations of power equipment. One element per line. Cabinets meet Underwriters' requirements, and have standard knockouts. Rating: 250 v. AC —25 to 60 cps. or 600 v. DC.

Type	Max. Amps.	Elements	List
SINGLE-PHASE BALANCED NETWORK			
INB-104	5	1	$12.50
INB-100	10	1	7.50
INB-101	30	1	27.50
INB-105	5	2	20.00
INB-102	10	2	30.00
INB-103	30	2	49.00
THREE-PHASE NETWORK			
INB-106	5	3	27.50
INB-107	10	3	42.50
INB-108	30	3	71.00

Other INB filters available for up to 200 amperes. Write for information.



TYPE IN-105. Same as IN-104 except container is bathtub type metal can. Size: 1¾" x 1" x ¾" high. **List $1.25**

TYPE IN-106. Best filter for fluorescents. Balanced network. Especially suited for radio and television salesrooms. One unit per fixture in series where power leads enter. Metal container with four stranded wire leads. Rating: 125 v. AC or DC; 2.6 amps. Size: 1⅞" x 3" x 1⅜" high. **List $3.80**

TYPE IN-104. Small, inexpensive filter unit of low impedance, delta-connected capacitors. Connect one unit for each fluorescent light fixture or across line leads every eight feet in core lighting. Tubular with single hole mounting bracket. 6" stranded wire insulated leads. Can common for grounding. Rating: 125 v. AC or DC. Size: 1" dia. x 2 3/16". **List $1.20**

TYPE IN-109. Balanced network filter for severe r-f noises from small appliances. Metal container and four insulated, stranded wire leads. Case common for grounding. Rating: 125 v. AC or DC; 2.5 amps. Size: 1⅞" x 3" x 1⅜" high. **List $3.80**

TYPE IN-133. Hermetically sealed, metal cased unit — bracket mounted. Delta-connected capacitor combination for connecting across line. Excellent for use in areas near radio stations. 6" insulated stranded wire leads. Can common for grounding. Rating: 125 v. AC or DC. Size: 1⅞" x 1 5/16" x 9/16" high. **List $1.75**

BUILT-IN FILTERS

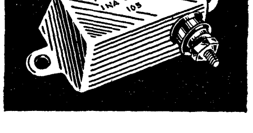
High attenuation type, hermetically sealed units for use where severe interference is encountered and dependability is required. For permanently mounted applications.

Aerovox special "Pi type" construction insures efficient radio noise reduction over low frequency broadcast, shortwave, and television bands. Suitable for Army-Navy or aircraft equipment where immersion and severe humidity tests must be met.

For single wire unbalanced applications. For two wire filtering use one filter in each line. Filter case must be securely bonded to the filter appliance and ground for maximum efficiency. These filters when used on high-voltage AC should be used only on permanently grounded equipment.

Aerovox Type	Maximum Voltage	Maximum Amperes	Size L x W x H	List
IN-101	125 VAC	1.5	2 1/16 x 1¼ x ¾	$ 3.75
IN-103	50 VDC	50	3 1/16 x 2⅛ x 2⅞	22.00
IN-110	250 VAC	5	2 x 2 x 1	7.50
IN-111	250 VAC	10	2 x 2 x 1¼	12.50
IN-112	250 VAC	30	3 1/16 x 2⅛ x 2⅞	22.00

AEROVOX
R-F NOISE CAPACITANCE SUPPRESSORS
Type INA-116 Type INA-117 Type INA-118



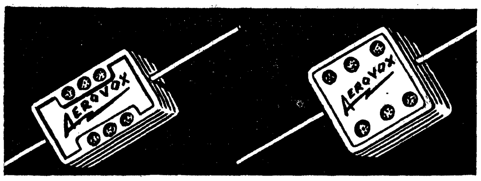
These radio-noise suppression capacitors have been especially designed for use in military or commercial, aircraft and vehicular applications. Primary application is as an r-f bypass capacitor from line to ground in low voltage dc supply lines. Units are especially treated to assure extremely long, noise-free life.

Operating temperature range is minus 55 degrees C to plus 95 degrees C. For full 150 volt rating the operating temperature range is minus 55 degrees C to plus 50 degrees C. Units may be used at operating voltages up to 120 vdc over a temperature range of minus 55 degrees C to plus 71 degrees C; and 60 vdc over a range of minus 55 degrees C to plus 95 degrees C.

Aerovox Type	Voltage	Max. Imped. at 150 Kc (Ohms)	Nom. Cap. Rating (Mfd	Case Size	Mounting Centers	List
INA-117	150 VDC	.6	2.	1¾ x 1 x ¾	2⅛	$ 6.00
INA-116	150 VDC	.3	4.	1¾ x 1 x ⅞	2⅛	7.50
INA-118	150 VDC	.12	10.	2 x 2 x ⅞	2⅜	10.00

"POSTAGE-STAMP" MOLDED-IN-BAKELITE MICA CAPACITORS

Wide choice of designs, sizes, mountings, terminals offer the correct Aerovox unit for every application, as listed. Units built of selected mica and foil; molded bakelite casing impervious to moisture, heat, mechanical damage. Micrometer test for mica thickness maintains capacity values for long life. Capacity values indicated on units.



TYPE 1441W

Compact, with wire leads.

500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.0005	$.25	.003	$.50
.00075	.25	.004*	.55
.001	.30	.005*	.60
.0015	.30	.006*	.75
.002	.40	.007*	.90
.0025	.45	.008*	1.00

TYPE 1441WX

Compact, with wire leads.

300 V.D.C.W. • 600 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.004	$.50	.008*	$.90
.005	.55	.009*	1.00
.006	.70	.01*	1.10
.007*	.80		

Size: 1″ x $\frac{5}{8}$″ x $\frac{3}{16}$″ Std. Tolerance ±20%
*Thickness $\frac{5}{16}$″

TYPE 1467

Compact, with wire leads.

500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.0005	$.25	.004	$.55
.00075	.25	.005	.60
.001	.30	.006	.75
.0015	.30	.007*	.90
.002	.40	.008*	1.00
.0025	.45	.009*	1.10
.003	.50	.01*	1.20

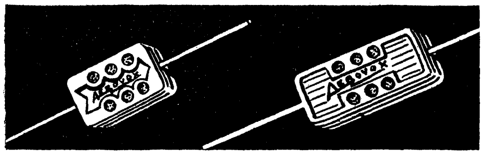
TYPE 1467X

Compact, with wire leads.

300 V.D.C.W. • 600 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.007	$.80	.013*	$1.35
.008	.90	.014*	1.45
.01	1.10	.015*	1.55
.012*	1.25		

Std. Size: $\frac{53}{64}$″ x $\frac{53}{64}$″ x $\frac{9}{32}$″ Std. Tolerance ±20%
*Thickness $\frac{21}{64}$″



TYPE 1468

Midget size with wire leads.

500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.000001	$.25	.00025	$.25
.000005	.25	.0003	.25
.00001	.25	.00035	.25
.000025	.25	.0004	.25
.00004	.20	.0005	.25
.00005	.20	.00075	.25
.000075	.20	.001	.30
.0001	.20		
.00015	.20		
.0002	.20		

Size: $\frac{45}{64}$″ x $\frac{29}{64}$″ x $\frac{3}{16}$″ Std. Tolerance ±20%

TYPE 1478

Midget size with wire leads.

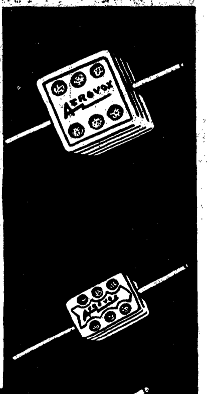
500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.0005	$.30	.0015	$.45
.00075	.30	.002	.50
.001	.40		

Size: $1\frac{1}{16}$″ x $\frac{7}{16}$″ x $\frac{3}{16}$″ Std. Tolerance ±20%

HI-VOLTAGE MICA CAPACITORS

TYPE 1441WL-HV, 1467L-HV, 1468L-HV



TYPE 1468L-HV
Size: $\frac{45}{64}$ x $\frac{29}{64}$ x $\frac{3}{16}$
1500 VDCW

Cap. Mfd.	List
.000005	$.30
.00001	.30
.000025	.30
.00005	.30
.000075	.30
.0001	.35
.00015	.35
.0002	.40
.00025	.45
.0003	.50
.00035	.50
.0004	.55

TYPE 1467L-HV
Size: $\frac{53}{64}$ x $\frac{53}{64}$ x $\frac{21}{64}$
1500 VDCW

Cap. Mfd.	List
.0005	$.70
.00075	.80
.001	.90

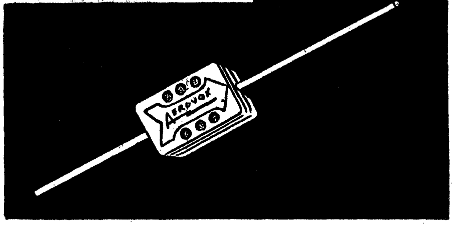
1000 VDCW

Cap. Mfd.	List
.0015	.70
.002	.80
.0025	1.00
.003	1.10
.004	1.30
.005	1.60

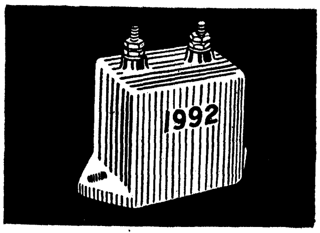
TYPE 1441WL-HV
Size: 1 x $\frac{5}{8}$ x $\frac{5}{16}$
2000 VDCW

Cap. Mfd.	List
.0005	$.65
.00075	.75
.001	.95

Std. Tolerance ±20%



PORCELAIN-CASED MICA CAPACITORS



Ideal for high-frequency application. Glazed porcelain case, high temperature wax sealed. Heavy duty power terminals. Minimum power loss due to dielectric absorption. No heating at full load.

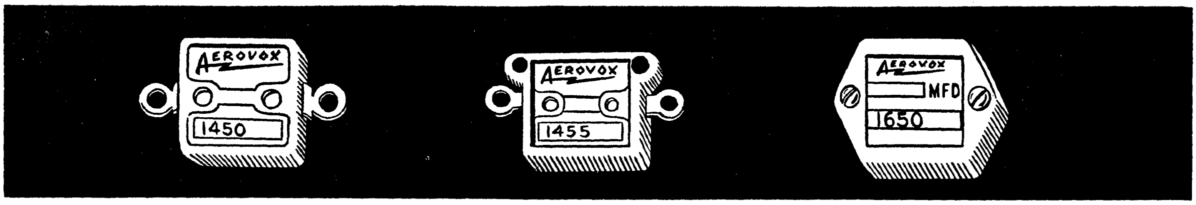
SIZE: 4″ overall by 3″ high; 3½″ between mounting holes.

TYPES 1991-1996

Cap.	DC Voltage Rating	Type	Max. Current Capacity—Amps.				List
			15 mc	7.5 mc	3750 kc	1875 kc	
.00005	12,500	1996	3	2.5	1.5	1	$10.40
.0001	12,500	1996	5	4	3	2	10.40
.00025	12,500	1996	7	8	6	4	10.40
.0005	12,500	1996	8	9	8	7	10.40
	7,000	1994	7	8	6	4	8.45
.001	12,500	1996	9	10	11	12	10.40
	7,000	1994	8	9	10	8	9.45
	3,500	1992	8	9	8	5	8.45
.0015	12,500	1996	9	10	11	12	12.35
	7,000	1994	9	9	10	8	10.40
	5,000	1993	8	9	9	7	13.65
	3,500	1992	8	9	8	5	8.45
	2,000	1991	7	8	8	5	6.50
.002	12,500	1996	9	12	13	15	14.30
	7,000	1994	9	9	10	10	12.35
	5,000	1993	8	9	9	8	11.40
	3,500	1992	8	8	9	7	10.40
	2,000	1991	7	8	8	6	8.45
.003	12,500	1996	9	12	13	15	19.85
	7,000	1994	9	10	10	10	13.35
	5,000	1993	8	9	9	9	12.35
	3,500	1992	8	9	9	8	11.40
	2,000	1991	7	8	8	7	9.10
.005	10,000	1995	10	13	14	15	18.85
	7,000	1994	9	11	12	11	14.30
	5,000	1993	9	11	12	10	13.65
	3,500	1992	9	10	11	9	13.65
	2,000	1991	8	9	10	8	11.05
.01	7,000	1994	10	13	15	15	19.85
	5,000	1993	10	13	15	15	19.85
	3,500	1992	10	13	14	14	20.80
	2,000	1991	10	13	14	14	18.20
.02	3,500	1992	10	14	16	17	20.80
	2,000	1991	10	13	15	15	19.20
.05	3,500	1992	10	14	17	18	24.05
	2,000	1991	10	14	16	17	22.10
.1	2,000	1991	10	14	17	18	24.05

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

HI-VOLTAGE MOLDED-IN-BAKELITE MICA CAPACITORS



TYPE 1450

For critical service in low-powered transmitting circuits, buffer stages, power amplifiers, laboratory equipment, etc. Non-magnetic parts are used to reduce r.f. losses to minimum. Heavy terminals for minimum r.f. and contact resistance. Intended for point-to-point wiring, supported entirely by soldered connections.

600 V.D.C.D.		1000 V.D.C.T.	
Cap. Mfd.	**List**	**Cap. Mfd.**	**List**
.00025	$.45	.006	$.80
.0003	.45	.008	.90
.00035	.45	.01	1.00
.0004	.45	.015*	1.35
.0005	.45	.02*	1.45
.001	.50	.025*	1.75
.0015	.55	.03*†	2.05
.002	.55	.04*†	2.65
.0025	.60	.05*†	3.30
.003	.70		
.004	.70		
.005	.70		

*300 V.D.C.W. 600 V.D.C.T.

Size: 1¼″ x 1¼″ x 5/16″. Std. Tolerance ±10%

†Thickness ¾″

TYPES 1455-57

Same as Types 1445-47 except for sizes and capacitance ranges. Distance between mounting holes is 1½″.

TYPE 1455

600V.D.C.W. 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.00005	$1.20	.0025	$1.30
.0001	1.20	.003	1.45
.00015	1.20	.004	1.50
.0002	1.20	.005	1.55
.00025	1.20	.006	1.80
.0003	1.20	.008	1.90
.00035	1.20	.01	2.15
.0004	1.20	.015	2.65
.0005	1.20	.02	3.05
.001	1.20	.025	3.60
.0015	1.20	.03	4.45
.002	1.30		

TYPE 1456

1200 V.D.C.W. 2500 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.00005	$1.60	.0015	$2.30
.0001	1.60	.002	2.40
.00015	1.60	.0025	2.80
.0002	1.60	.003	3.05
.00025	1.60	.004	3.05
.0003	1.60	.005	3.30
.00035	1.60	.006	3.30
.0004	1.60	.008	3.85
.0005	1.60	.01	5.10
.001	1.80		

TYPE 1457

2500 V.D.C.W. 5000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.00005	$1.90	.0005	$2.40
.000075	1.90	.001	2.80
.0001	1.90	.0015	3.55
.00015	1.90	.002	4.15
.0002	1.90	.0025	4.60
.00025	2.20	.003	4.90
.0003	2.25		
.00035	2.25		
.0004	2.30		

Size: 1¼″ x 1 25/32″ x 11/32″. Std. Tolerance ±10%.

TYPES 1650-1654

Heaviest-duty molded in bakelite mica capacitors of the AEROVOX line. Threaded mounting holes for roundhead screw terminals or plain holes available. Add suffix A for plain holes. Types 1650, 1651, and 1652 are supplied in brown or low-loss bakelite. Types 1653L and 1654L in low-loss bakelite only.

TYPE 1650

600 VDCW - 1000 VDCT
350 VACW - 700 VACT

Cap. Mfd.	List
.00005	$1.45
.0001	1.45
.00025	1.45
.0003	1.45
.00035	1.45
.0004	1.45
.0005	1.45
.001	1.45
.0015	1.45
.002	1.65
.0025	1.70
.003	1.85
.004	2.00
.005	2.10
.006	2.20
.008	2.45
.01	2.80
.015	3.05
.02	3.55
.025	4.35
.03	4.55
.04*	5.85
.05*	7.10
.06*	8.05

TYPE 1651

1200 VDCW - 2500 VDCT
875 VACW - 1750 VACT

Cap. Mfd.	List
.00005	$1.60
.0001	1.60
.00025	1.60
.0003	1.60
.00035	1.60
.0004	1.60
.0005	1.60
.001	$1.90
.0015	2.25
.002	2.50
.0025	2.80
.003	2.95
.004	3.10
.005	3.30
.006	3.45
.008	4.10
.01	4.70
.015	5.80
.02*	7.05
.025*	7.90
.03*	8.10

TYPE 1652

2500 VDCW - 5000 VDCT
1750 VACW - 3500 VACT

Cap. Mfd.	List
.00005	$1.90
.000075	1.90
.0001	1.90
.00015	2.00
.0002	2.10
.00025	2.15
.0003	2.20
.00035	2.25
.0004	2.50
.0005	2.55
.001	2.90
.0015	3.90
.002	4.25
.0025	4.60
.003	5.10
.004	5.65
.005	6.20
.006	6.35
.008*	6.85
.01*	7.30

TYPE 1653L

3750 VDCW - 7500 VDCT
2625 VACW - 5250 VACT

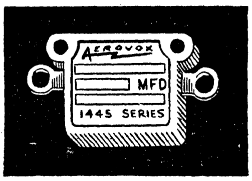
Cap. Mfd.	List
.00005	$3.30
.000075	3.65
.0001	3.80
.00015	4.15
.0002	4.30
.00025	4.75
.0003	4.90
.00035	5.75
.0004	5.90
.0005	6.50
.001	7.70
.0015	10.10
.002	11.50
.0025	12.90
.003*	14.25

TYPE 1654L

5000 VDCW 10000 VDCT
3500 VACW - 7000 VACT

Cap. Mfd.	List
.00005	$3.75
.000075	4.15
.0001	4.65
.00015	5.05
.0002	6.25
.00025	6.80
.0003	7.15
.00035	7.50
.0004	7.70
.0005	9.90
.001*	12.50

Size: 1¾″x1 5/16″x 7/16″
*Thickness ¾″
Std. Tolerance ±10%



HIGH VOLTAGE MICAS

TYPES 1445-47

Designed with insulated mounting holes 1 5/16″ apart independent of soldering lugs. Used to shunt meter windings, large or small meter-mounting brackets available. Specify by suffix (A) for large or (E) for small brackets.

TYPE 1445

600 VDCW - 1000 VDCT

Cap. Mfd.	List
.00005	$1.20
.0001	1.20
.00015	1.20
.0002	1.20
.00025	1.20
.0003	1.20
.00035	1.20
.0004	1.20
.0005	1.20
.001	1.20
.0015	1.20
.002	1.30
.0025	1.30
.003	1.45
.004	1.50
.005	1.55
.006	1.80
.008	1.90
.01	2.15
.015*	2.65
.02*	3.05
.025*	3.60
.03*	4.45
.04*	5.65

TYPE 1446

1200 VDCW - 2500 VDCT

Cap. Mfd.	List
.00005	$1.60
.0001	1.60
.00015	1.60
.0002	1.60
.00025	1.60
.0003	1.60
.00035	1.60
.0004	1.60
.0005	1.60
.001	1.80
.0015	2.30
.002	2.40
.0025	2.80
.003	3.05
.004*	3.05
.005*	3.30
.006*	3.30
.008*	3.85
.01*	5.10
.015*	6.00

TYPE 1447

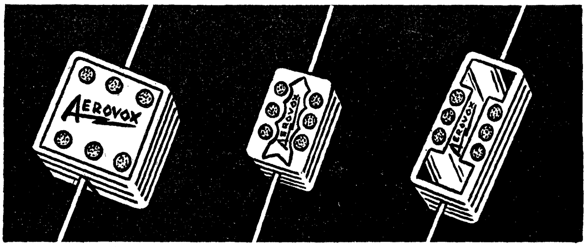
2500 VDCW - 5000 VDCT

Cap. Mfd.	List
.00005	$1.90
.000075	1.90
.0001	1.90
.00015	1.90
.0002	1.90
.00025	2.20
.0003	2.25
.00035	2.25
.0004	2.30
.0005	2.40
.001	2.80
.0015	3.55
.002*	4.15
.0025*	4.60
.003*	4.90
.004*	5.65
.005*	6.40

Size: 1⅛″ x 1⅝″ x 11/32″
*Thickness 7/16″ Tolerance ±10%

CAPACITORS AEROVOX RESISTORS

SILVERED MICA CAPACITORS



AEROVOX silvered mica units for most critical applications where precise capacity values are required. Encased in red low-loss bakelite. Similar in external appearance to standard bakelite molded mica units.

Available with temperature coefficient and retrace characteristics as defined by characteristics A to F inclusive of REC-115 and JAN-C-5 specifications for molded capacitors. Exceptionally high "Q." Mechanically protected against physical damage and changes in electrical characteristics due to varying atmospheric conditions. Wax impregnated externally. Ideal for circuits where inductance and capacity product must remain constant under all operating conditions.

TYPE 1464 • 500 VDCW - 1000 VDCT

Cap. Mfd.	List	Cap. Mfd.	List
.00075	$.90	.0025	$1.80
.0008	.95	.003	2.05
.0009	1.00	.004*	2.15
.001	1.10	.005*	2.25
.0015	1.35	.006*	3.00
.002	1.35		

TYPE 1464X • 300 VDCW - 600 VDCT

Cap. Mfd.	List	Cap. Mfd.	List
.004	$2.15	.007*	3.40
.005	2.25	.008*	4.00
.006	3.00	.01*	4.80

Size: $\frac{53}{64}$" x $\frac{53}{64}$" x $\frac{9}{32}$" provided with wire leads
Standard Tolerance ±5%.
*Thickness $\frac{21}{64}$".

TYPE 1469 • 500 VDCW - 1000 VDCT

Cap. Mfd.	List	Cap. Mfd.	List
.000005	$.45	.00015	$.45
.00001	.40	.0002	.45
.000025	.40	.00025	.45
.00004	.40	.0003	.55
.00005	.40	.00035	.60
.00007	.40	.0004	.65
.000075	.40	.0005	.70
.0001	.40		

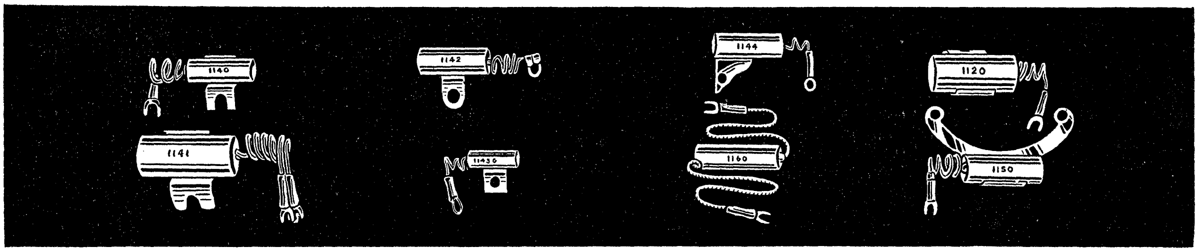
Size: $\frac{45}{64}$" x $\frac{29}{64}$" x $\frac{3}{16}$" provided with wire leads.

TYPE 1479 • 500 VDCW - 1000 VDCT

Cap. Mfa.	List	Cap. Mfd.	List
.0001	$.40	.0005	$.70
.00015	.45	.0007	.85
.0002	.45	.00075	.90
.00025	.45	.0008	.95
.0003	.55	.0009	1.00
.00035	.60	.001	1.10
.0004	.65		

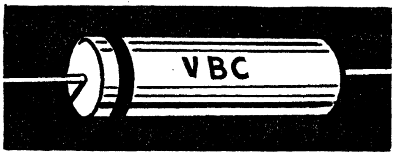
Size: 1$\frac{1}{16}$" x $\frac{7}{16}$" x $\frac{3}{16}$" provided with wire leads.
Maximum characteristic available F.

AUTO-RADIO CAPACITORS



Car Generators		
Type 1120	1.0 Cap. Mfd.	$1.75
Type 1140	0.5 Cap. Mfd.	.90
	Dual Element	
Type 1141	0.5-0.5 Cap. Mfd.	3.25
Ford Auto Radios		
Type 1144	0.5 Cap. Mfd.	.90
For 1936 Models		
Type 1150	0.5 Cap. Mfd.	.90

Motorola Auto Radios		
Type 1466	.0008 Cap. Mfd.	$ .90
Ammeter Condenser		
Type 1160	0.5 Cap. Mfd.	.90
Gas Gage Filter Condenser		
Type 1143-G	0.05 Cap. Mfd.	.90
Oil Gage Filter Condenser		
Type 1142-O	0.25 Cap. Mfd.	.90



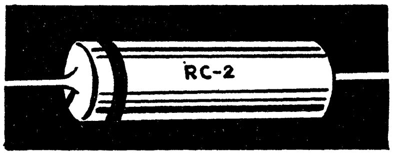
TYPE VBC

VIBRATOR BUFFER CAPACITORS

Type	Cap. Mfd.	Size	List
VBC-2	.001	$\frac{7}{16}$ x 1½	$.50
VBC-3	.002	$\frac{7}{16}$ x 1½	.50
VBC-4	.0022	$\frac{7}{16}$ x 1½	.50
VBC-5	.003	$\frac{7}{16}$ x 1½	.50
VBC-6	.0033	$\frac{7}{16}$ x 1½	.50
VBC-7	.004	$\frac{7}{16}$ x 1½	.50
VBC-8	.0047	½ x 1½	.50
VBC-9	.005	½ x 1½	.50
VBC-22	.006	½ x 1½	.50
VBC-23	.0068	½ x 1½	.50
VBC-24	.007	½ x 1½	.55
VBC-25	.0075	$\frac{9}{16}$ x 1½	.55
VBC-26	.008	$\frac{9}{16}$ x 1½	.55
VBC-27	.01	$\frac{9}{16}$ x 1½	.55
VBC-28	.015	$\frac{9}{16}$ x 1¾	.55
VBC-29	.02	$\frac{9}{16}$ x 2	.55
VBC-32	.025	⅝ x 2	.55
VBC-33	.03	$\frac{11}{16}$ x 2	.65
VBC-34	.05	$\frac{13}{16}$ x 2	.70
VBC-35	.015-.015	¾ x 2	.80

VIBRATOR "HASH" CAPACITOR VHC36
.5 Mfd. 100 Volts WVDC .50

RC SERIES



AEROVOX RESONANT CAPACITORS

Again the radio-electronic art imposes still more critical capacitor requirements. This time it's adequate bypassing of IF circuits in order to keep IF frequencies from entering such circuits and causing troublesome squeals and howls. And Aerovox comes up with the new AEROVOX RESONANT CAPACITORS.

AEROVOX RESONANT CAPACITORS, Series RC, are now available in conventional paper tubular design, wax impregnated and wax sealed as follows:

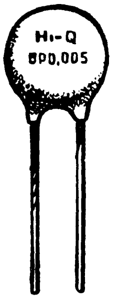
CAT. #	MFD.	WVDC	O. D.	LIST
RC2	.05	400	½ d. x 1⅛	$.50
RC3	.1	400	½ d. x 1⅝	.65
RC4	.2	400	$\frac{9}{16}$ d. x 1⅞	.70

AEROVOX RESEARCH WORKER

A snappy, informative, practical engineering paper, issued monthly, the AEROVOX RESEARCH WORKER is free to servicemen, engineers, hams, and other interested radio workers. Ask your AEROVOX jobber how you may subscribe, or write direct.

HI-Q DISK CERAMIC CAPACITORS

Hi-Q ceramic disk capacitors are available in a range of capacities from 10 mmf to 30,000 used for by-passing, blocking and coupling applications. They are sturdily constructed, precision tested, and moisture-proofed against high humidities. In many instances these Hi-Q disk capacitors offer advantages over the regular capacitors through their space saving features. Multiple capacities can be fabricated on single disks affording additional savings of space and installation costs. The silver electrodes are fired directly to the ceramic dielectric to assure low noise operation. They are coated with a non-hydroscopic phenolic and are impregnated with a micro-crystalline wax which protects the units from humidity and affords a sturdy construction.



DISK CAPACITORS

Bypass and Coupling

Stock Items
BPD-GMV CAPACITOR - 600 VDCW

Singles

Type	Cap.	Diam.	List Price
BPD	.00001	5/16	$.25
BPD	.000015	5/16	.25
BPD	.000022	5/16	.25
BPD	.000025	5/16	.25
BPD	.000033	5/16	.25
BPD	.000047	5/16	.25
BPD	.00005	5/16	.25
BPD	.000068	5/16	.25
BPD	.0001	5/16	.25
BPD	.00012	5/16	.25
BPD	.00015	5/15	.25
BPD	.0002	5/16	.25
BPD	.00027	5/16	.25
BPD	.00033	5/16	.25
BPD	.00047	5/16	.25
BPD	.0005	5/16	.25
BPD	.00068	5/16	.25
BPD	.0008	5/16	.25
BPD	.001	5/16	.25
BPD	.0015	5/16	.25
BPD	.002	3/8	.25
BPD	.0022	3/8	.25

Singles

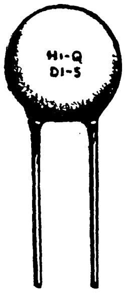
Type	Cap.	Diam.	List Price
BPD	.0025*	7/16	.25
BPD	.0033	7/16	.25
BPD	.004	19/32	.25
BPD	.0047	19/32	.25
BPD	.005	19/32	.25
BPD	.0068*	11/16	.25
BPD	.01	3/4	.30
BPD	.015*	29/32	.40
BPD	.02*	29/32	.60
BPD	.03*	29/32	.65#

Duals and Triples

Type	Cap.	Diam.	List Price
BPD2	2 x .001	19/32	.40
BPD2	2 x .0015	19/32	.40
BPD2	2 x .002	19/32	.40
BPD2	2 x .0022	19/32	.40
BPD2	2 x .003	3/4	.45
BPD2	2 x .004	3/4	.45
BPD2	2 x .0047	3/4	.45
BPD2	2 x .01*	3/4	.50
BPD2	2 x .02*	29/32	.70
BPD3	3 x .0015	3/4	.50
BPD3	3 x .002	3/4	.50

DISK CAPACITORS

General Purpose



Hi-Q by-pass disks are fixed ceramic dielectric capacitors specifically suited for by-pass or coupling applications or for frequency discriminating circuits where Q and capacity stability are not of major importance. These disks are available in the capacities listed below. 10 mmf to 30,000 in tolerances as specified. The smallest possible standard disk has been used for each value of capacity.

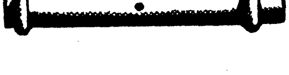
Stock Items
600 VDCW

Type	Cap.	Diam.	List Price
DI-1	5*	5/16	$.25
DI-1	10*	5/16	.25
DI-1	12*	5/16	.25
DI-1	15*	5/16	.25
DI-1	18*	5/16	.25
DI-1	20*	5/16	.25
DI-1	22*	5/16	.25
DI-1	25*	5/16	.25
DI-1	27*	5/16	.25
DI-1	30*	5/16	.25
DI-1	33*	5/16	.25
DI-1	39*	5/16	.25
DI-1	47*	5/16	.25
DI-1	50*	5/16	.25
DI-1	56*	5/16	.25
DI-2	68*	3/8	.25
DI-2	82*	3/8	.25
DI-2	100*	3/8	.25
DI-2	120*	3/8	.25
DI-2	150*	3/8	.25
DI-2	180*	3/8	.25
DI-2	200*	3/8	.25
DI-2	220*	3/8	.25
DI-2	250*	3/8	.25
DI-2	270*	3/8	.25

Type	Cap.	Diam.	List Price
DI-2	300*	3/8	.25
DI-2	330*	3/8	.25
DI-2	390*	3/8	.25
DI-2	470*	3/8	.25
DI-2	500*	3/8	.25
DI-2	560*	3/8	.25
DI-2	680*	3/8	.25
DI-2	750*	3/8	.25
DI-4	1000*	19/32	.25
DI-4	1200*	19/32	.25
DI-4	1500*	19/32	.25
DI-4	1800*	19/32	.25
DI-4	2000*	19/32	.25
DI-4	2200*	19/32	.25
DI-5	2500*	11/16	.25
DI-5	2700*	11/16	.25
DI-5	3000*	11/16	.25
DI-5	3300*	11/16	.25
DI-7	4700*	29/32	.25
DI-7	5000*	29/32	.25
DI-7	5600*	29/32	.30
DI-5	#6800*	11/16	.30
DI-5	#7500*	11/16	.30
DI-6	#10000*	3/4	.30

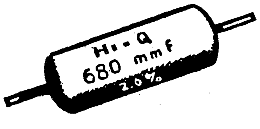
*—New #—Tolerance +80% −20% Standard Tolerance ±20%

TUBULAR and DISK CAPACITORS-PHYSICAL SIZES



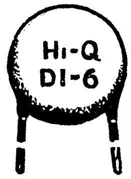
SI TUBULAR

Desig.	Size
SI-1	.234 x .437
SI-2	.234 x .687
SI-3	.312 x 1.250
SI-4	.375 x 1.093
SI-5	.375 x 1.600
SI-6	.375 x 1.968
SI-7	.275 x .875
SI-13	.234 x .468
SI-19	.312 x .937
SI-22	.280 x .750
SI-27	.275 x .500



CI TUBULAR

Desig.	Size
CI-1	.250 x .562
CI-2	.250 x .812
CI-3	.340 x 1.320

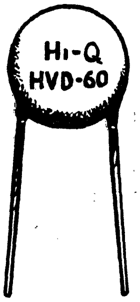


DI DISK

Desig.	Diam
DI-1	5/16
DI-2	3/8
DI-3	7/16
DI-4	19/32
DI-5	11/16
DI-6	3/4
DI-7	29/32

CAPACITORS AEROVOX RESISTORS

HI-VOLTAGE DISK CAPACITORS - General Purpose



Hi-Q high voltage disk capacitors are available in many capacities and voltage ratings. These types offer many possible uses in TV circuits where voltages above 500 are necessary. They are the ideal units for dependable day-after-day service. Hi-Q has available numerous combinations of capacity, working voltages and physical sizes. These low cost units are manufactured to specific tolerances as listed.

Stock Items — 1500 VDCW

Type	Cap.	Diam.	List Price	Type	Cap.	Diam.	List Price
HVD-15	4.7*	7/16	$0.30	HVD-15	220*	7/16	$0.40
HVD-15	6.8*	7/16	.30	HVD-15	270*	7/16	.40
HVD-15	10*	7/16	.30	HVD-15	330*	7/16	.40
HVD-15	15*	7/16	.30	HVD-15	390*	9/16	.45
HVD-15	22*	7/16	.30	HVD-15	470*	9/16	.45
HVD-15	33*	7/16	.30	HVD-15	680*	9/16	.55
HVD-15	47*	7/16	.30	HVD-15	1000*	9/16	.55
HVD-15	68*	7/16	.30	HVD-15	1500*	11/16	.65
HVD-15	100*	7/16	.35	HVD-15	2200*	11/16	.85
HVD-15	150*	7/16	.35	HVD-15	3300*	11/16	1.05
HVD-15	180*	7/16	.35	HVD-15	4700*	15/16	1.40
				HVD-15	5600*	15/16	1.60

3000 VDCW

Type	Cap.	Diam.	List Price	Type	Cap.	Diam.	List Price
HVD-30	4.7*	9/16	$0.50	HVD-30	180*	9/16	$0.55
HVD-30	6.8*	9/16	.50	HVD-30	220*	9/16	.60
HVD-30	10*	9/16	.50	HVD-30	330*	9/16	.60
HVD-30	15*	9/16	.50	HVD-30	470*	9/16	.65
HVD-30	22*	9/16	.50	HVD-30	680*	9/16	.75
HVD-30	33*	9/16	.50	HVD-30	1000*	9/16	.75
HVD-30	47*	9/16	.50	HVD-30	1500*	9/16	.85
HVD-30	68*	9/16	.50	HVD-30	2200*	9/16	1.05
HVD-30	100*	9/16	.55	HVD-30	3300*	11/16	1.25
HVD-30	150*	9/16	.55				

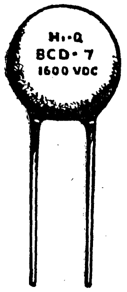
6000 VDCW

Type	Cap.	Diam.	List Price	Type	Cap.	Diam.	List Price
HVD-60	4.7*	11/16	$1.00	HVD-60	33*	11/16	$1.00
HVD-60	6.8*	11/16	1.00	HVD-60	47*	11/16	1.00
HVD-60	10*	11/16	1.00	HVD-60	68*	11/16	1.00
HVD-60	15*	11/16	1.00	HVD-60	100*	11/16	1.00
HVD-60	18*	11/16	1.00	HVD-60	150*	11/16	1.00
HVD-60	22*	11/16	1.00	HVD-60	220*	11/16	1.00
HVD-60	30*	11/16	1.00	HVD-60	330*	11/16	1.00
				HVD-60	470*	11/16	1.00

* — New   Tolerance — ±20% up to .001; +80% −20% over .001

VIBRATOR BUFFER CAPACITORS - GMV

Vibrator Buffer Capacitors — ceramic disks for use as buffers in car radios and similar equipment, compact, easily assembled, ¼ the size of previous paper tubular types rated for 1600 VDCW GMV.

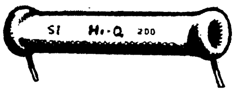


Stock Items — 1600 VDCW

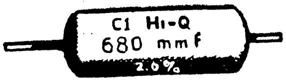
Type	Cap.	Diam.	List Price	Type	Cap.	Diam.	List Price
BCD-2	.001*	11/16	$0.50	BCD-9	.005*	15/16	$0.50
BCD-3	.002*	11/16	.50	BCD-22	.006*	15/16	.50
BCD-4	.0022*	11/16	.50	BCD-23	.0068*	1	.50
BCD-5	.003*	11/16	.50	BCD-24	.007*	1	.50
BCD-6	.0033*	11/16	.50	BCD-25	.0075*	1	.50
BCD-7	.004*	15/16	.50	BCD-26	.008*	1	.50
BCD-8	.0047*	15/16	.50	BCD-27	.01*	1	.50

* — New

HI-Q TUBULAR CERAMIC CAPACITORS



Type SI



Hi-Q general purpose tubular ceramic capacitors may be used for coupling, by-passing and filtering where frequency control is not critical (not to be confused with the Hi-Q line of close tolerance temperature compensating units). Available in two types (SI and CI) small in size, rugged construction and available in a wide range of capacity values.

Stock Items—500 VDCW

Cap.	Size	List Price	Cap.	Size	List Price	Cap.	Size	List Price	Cap.	Size	List Price
5	SI-1	$.25	5	CI-1	$.25	330	SI-1	$.25	20,000	SI-5 GMV	$.30
10	SI-1	.25	10	CI-1	.25	360	SI-1	.25	25,000	SI-5 GMV	.50
12	SI-1	.25	12	CI-1	.25	390	SI-1	.25	30,000	SI-6 GMV	.50
15	SI-1	.25	15	CI-1	.25	470	SI-1	.25	33,000	SI-6 GMV	.50
18	SI-1	.25	18	CI-1	.25	500	SI-1	.25	330	CI-1	.25
20	SI-1	.25	20	CI-1	.25	510	SI-1	.25	360	CI-1	.25
22	SI-1	.25	22	CI-1	.25	560	SI-1	.25	390	CI-1	.25
24	SI-1	.25	24	CI-1	.25	680	SI-1	.25	470	CI-1	.25
25	SI-1	.25	25	CI-1	.25	750	SI-1	.25	500	CI-1	.25
27	SI-1	.25	27	CI-1	.25	*820	SI-1	.25	510	CI-1	.25
30	SI-1	.25	30	CI-1	.25	*910	SI-1	.25	560	CI-1	.25
33	SI-1	.25	33	CI-1	.25	1000	SI-1	.25	680	CI-1	.25
39	SI-1	.25	39	CI-1	.25	1200	SI-2	.25	750	CI-1	.25
47	SI-1	.25	47	CI-1	.25	1500	SI-2	.25	*820	CI-2	.25
50	SI-1	.25	50	CI-1	.25	1800	SI-2	.25	*910	CI-2	.25
51	SI-1	.25	51	CI-1	.25	2000	SI-2	.25	1000	CI-2	.25
56	SI-1	.25	56	CI-1	.25	2200	SI-7	.25	1200	CI-2	.25
68	SI-1	.25	68	CI-1	.25	2400	SI-7	.25	1500	CI-2	.25
75	SI-1	.25	75	CI-1	.25	2500	SI-7	.25	1800	CI-2	.25
82	SI-1	.25	82	CI-1	.25	2700	SI-7	.25	2000	CI-2	.25
*91	SI-1	.25	*91	CI-1	.25	3000	SI-19	.25	2200	CI-3	.25
100	SI-1	.25	100	CI-1	.25	3300	SI-19	.25	2400	CI-3	.25
110	SI-1	.25	110	CI-1	.25	4000	SI-19	.25	2500	CI-3	.25
120	SI-1	.25	120	CI-1	.25	4700	SI-3	.25	2700	CI-3	.25
150	SI-1	.25	150	CI-1	.25	5000	SI-3	.25	3000	CI-3	.25
180	SI-1	.25	180	CI-1	.25	5100	SI-3	.25	3300	CI-3	.25
200	SI-1	.25	200	CI-1	.25	*5600	SI-3	.25	4000	CI-3	.25
220	SI-1	.25	220	CI-1	.25	6000	SI-3	.25	4700	CI-3	.25
240	SI-1	.25	240	CI-1	.25	6800	SI-4	.25	5000	CI-3	.25
250	SI-1	.25	250	CI-1	.25	7500	SI-4	.25	5100	CI-3	.25
270	SI-1	.25	270	CI-1	.25	10,000	SI-5	.25	*5600	CI-3	.25
300	SI-1	.25	300	CI-1	.25	15,000	SI-6	.30	6000	CI-3	.25
						17,500	SI-6	.30			

*New Tolerance: ±20%

SI-TV HI-VOLTAGE CERAMIC CAPACITORS

A recent addition to the already complete line of Aerovox Hi-Q Ceramic capacitors. Especially adapted to television applications this capacitor is available in two sizes. For capacities from 4.7 - mmf. to 22. mmf. the size is .280 x .750. For 24. mmf. to 60. mmf. the case size is .312 x 1.250. All units referred to here are 6000 Volts DCW.

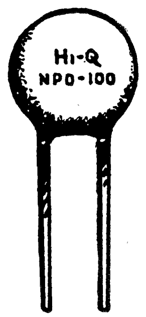
SI-TV 22MMF 6000VDC

Stock Items—6000 VDCW

Cap.	Size	List Price	Cap.	Size	List Price
4.7	SI-22	$1.00	24	SI-3	$1.00
8.2	SI-22	1.00	27	SI-3	1.00
12	SI-22	1.00	30	SI-3	1.00
15	SI-22	1.00	40*	SI-3	1.00
18	SI-22	1.00	47	SI-3	1.00
20	SI-22	1.00	50*	SI-3	1.00
22	SI-22	1.00	60*	SI-3	1.00

*New Tolerance: ±20%

HI-Q TEMPERATURE COMPENSATING DISK CAPACITORS



The temperature coefficient of ceramic capacitors is an inherent characteristic of the ceramic body. By controlling this coefficient, the use of ceramics has been extended to countless applications in the electronic and communications fields. Temperature coefficient is determined by the ceramic mix and therefore certain tolerances are standardized. Following is a list of standard recommended tolerances used in this listing:

Temp. Coef.	Tolerance—PPM	Temp. Coef.	Tolerance—PPM
NPO	+30	N330	±500
N080	±30	N750	±100

The tolerances shown are maximum deviation. The actual average temperature coefficient usually runs close to nominal. Aerovox Hi-Q is the first to offer temperature compensating capacitors in both disk and tubular styles as stock items.

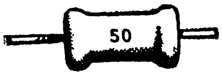
Hi-Q temperature compensating disks are specifically suited for resonant circuit applications or any other applications where high Q and stability of capacity are essential. They meet all specifications of RTMA Class 1 fixed ceramic dielectric capacitors. These disks are unusually suitable for limited space applications. These capacitors are available from stock in the capacity ranges and tolerances listed below.

Stock Items—500 VDCW

Type	Cap.	Diam.	List Price	Type	Cap.	Diam.	List Price	Type	Cap.	Diam.	List Price	Type	Cap.	Diam.	List Price
NPO-DI	3.0*	5/16	$.50	NPO-DI	25*	7/16	$.50	N750-DI	10*	5/16	$.50	N750-DI	75*	7/16	$.50
NPO-DI	3.3*	5/16	.50	NPO-DI	33*	19/32	.50	N750-DI	15*	5/16	.50	N750-DI	100*	19/32	.50
NPO-DI	4.7*	5/16	.50	NPO-DI	39*	19/32	.55	N750-DI	20*	5/16	.50	N750-DI	150*	19/32	.50
NPO-DI	5.0*	5/16	.50	NPO-DI	47*	19/32	.55	N750-DI	22*	5/16	.50	N750-DI	200*	11/16	.50
NPO-DI	6.8*	5/16	.50	NPO-DI	50*	19/32	.55	N750-DI	25*	5/16	.50	N750-DI	220*	11/16	.50
NPO-DI	8.2*	5/16	.50	NPO-DI	68*	11/16	.55	N750-DI	33*	5/16	.50	N750-DI	330*	29/32	.50
NPO-DI	10*	5/16	.50	NPO-DI	75*	11/16	.55	N750-DI	47*	3/8	.50	N750-DI	360*	29/32	.50
NPO-DI	15*	3/8	.50	NPO-DI	100*	3/4	.55	N750-DI	68*	7/16	.50	N750-DI	390*	29/32	.50
NPO-DI	20*	3/8	.50	NPO-DI	120*	29/32	.60					N750-DI	430*	29/32	.50
NPO-DI	22*	7/16	.50	NPO-DI	150*	29/32	.60								

*New Standard Tolerance: up to 10 mmf. ±.5 mmf. above 10 mmf. ±10%

HI-Q TEMPERATURE COMPENSATING TUBULAR CAPACITORS



These tubular capacitors are precision designed for frequency determining applications where little or no capacity change with temperature is desired. Available in nominal capacities and tolerances which cover a complete range of applications.

Stock Items—500 VDCW

Type	Cap.	Size	List Price	Type	Cap.	Size	List Price
NPO-SI	1.0*	SI-1	$.50	NPO-SI	39*	SI-2	$.50
NPO-SI	1.5*	SI-1	.50	NPO-SI	47*	SI-2	.50
NPO-SI	2.2*	SI-1	.50	NPO-SI	50	SI-2	.50
NPO-SI	3.0	SI-1	.50	NPO-SI	56*	SI-7	.50
NPO-SI	3.3	SI-1	.50	NPO-SI	68*	SI-7	.50
NPO-SI	4.7	SI-1	.50	NPO-SI	75	SI-7	.50
NPO-SI	5.0	SI-1	.50	NPO-SI	100	SI-7	.50
NPO-SI	6.8	SI-1	.50	NPO-SI	120*	SI-19	.50
NPO-SI	8.2	SI-1	.50	NPO-SI	150	SI-3	.50
NPO-SI	10	SI-1	.50	NPO-SI	175	SI-4	.50
NPO-SI	15*	SI-1	.50	NPO-SI	180*	SI-4	.50
NPO-SI	20	SI-1	.50	NPO-SI	220*	SI-5	.50
NPO-SI	22*	SI-1	.50	NPO-SI	270*	SI-5	.50
NPO-SI	25	SI-13	.50				
NPO-SI	33	SI-13	.50				

*New
Standard Tolerance: up to 10 mmf. ±.5 mmf.
above 10 mmf. ±10%

NPO TYPE SI

The zero temperature coefficient capacitor is the most stable ceramic commercial capacitor available.

When ordering the above units, designate type and MMFD fully. For example: NPO - SI-1-1.5 MMFD.

Stock Items—N750-500 VDCW

Type	Cap.	Size	List Price	Type	Cap.	Size	List Price
N750-SI	5	SI-1	$.50	N750-SI	220*	SI-7	$.50
N750-SI	10	SI-1	.50	N750-SI	270*	SI-7	.50
N750-SI	15*	SI-1	.50	N750-SI	330*	SI-3	.50
N750-SI	20*	SI-1	.50	N750-SI	360*	SI-3	.50
N750-SI	22*	SI-1	.50	N750-SI	390*	SI-3	.50
N750-SI	25*	SI-1	.50	N750-SI	430*	SI-4	.50
N750-SI	33*	SI-1	.50	N750-SI	470*	SI-4	.50
N750-SI	39*	SI-1	.50	N750-SI	510*	SI-4	.50
N750-SI	47	SI-1	.50	N750-SI	560*	SI-5	.50
N750-SI	56*	SI-1	.50	N750-SI	620*	SI-5	.50
N750-SI	68*	SI-1	.50	N750-SI	680*	SI-5	.50
N750-SI	75*	SI-13	.50	N750-SI	750*	SI-5	.50
N750-SI	100*	SI-2	.50				
N750-SI	120*	SI-7	.50				
N750-SI	150*	SI-7	.50				
N750-SI	200*	SI-7	.50				

*New
Standard Tolerance: up to 10 mmf. ±.5 mmf.
above 10 mmf. ±10%

Stock Items — 500 VDCW

N080

Type	Cap.	Size	List Price
N080-SI	10	SI-1	$.60
N080-SI	22	SI-1	.60
N080-SI	33	SI-13	.60
N080-SI	47	SI-27	.60
N080-SI	62	SI-27	.60

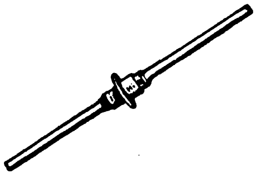
N300 ± 500 ppm

Type	Cap.	Type	Size	List Price
N330-SI	47 ±10%	1500 VDCW	SI-2	$.50
N330-SI	56 ±10%	1500 VDCW	SI-2	.50

N330 — Deflection Yoke Capacitor for silvered mica capacitor replacement.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

HI-Q TUBULAR FEED-THRU CAPACITORS



Eyelet Feed-Thru
Type EF

Hi-Q Feed-Thru Capacitors provide means to transmit thru shields or ground potentials and simultaneously by-pass unwanted frequencies. A good mechanical connection is provided by the silver-plated bushing. These are excellent dependable units even under severe mechanical vibrations as in aircraft, missiles and automotive requirements. All units are flash tested at 1250 volts D.C.

Hi-Q Eyelet Feed-Thru Ceramic Capacitors provide the ultimate in miniaturization. They can be soldered directly to the chassis and provide excellent by-pass performance where space is critical. Especially recommended for use in UHF.

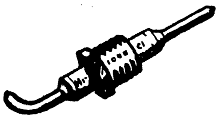
Stock Items — Feed-Thru 500 VDCW

Type	Cap.	Thread	List Price
CFC-1	500 mmf.*	12-28	$1.00
	1000 mmf.*	12-28	1.00
	1500 mmf.*	12-28	1.00
CF-1	1500 mmf.	1/4 - 28	1.00
CF-2	1800 mmf.*	5/16 - 24	1.00
	2300 mmf.*	5/16 - 24	1.00
	3000 mmf.	5/16 - 24	1.00
CF-3	4000 mmf.	5/16 - 24	1.00
CF-4	7000 mmf.	5/16 - 24	1.00

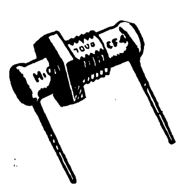
Stock Items — Feed-Thru Eyelet Type - Miniature 500 VDCW

Cap.	Size	Type	Tol.	List Price
50*	CN-1**	EF	±10%	$.50
100*	CN-1**	EF	±10%	.50
500*	CN-1**	EF	±20%	.50
1000*	CN-1**	EF	GMV	.50

*New
**Center conductor
Tolerance ±20%



Feed-Thru Type CFC



Feed-Thru Type CF

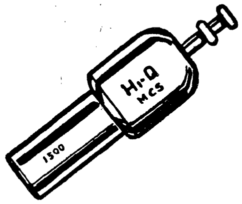
HI-Q TUBULAR STAND-OFF CAPACITORS

Hi-Q stand-off capacitors are basically tubular, having as an integral part of their construction, a screw fixture for mounting to the chassis or common ground. Close coupling and their unique construction make them an excellent choice for by-passing high frequencies.

All units are coated with a high temperature enamel, stamped for capacity and supplied with mounting nut, if desired.

The MCS is a quick mounting type which permits high speed mechanical installation. The ceramic tube is enclosed in a cadmium-plated metal case with a specially developed end seal for protection against humidity and temperature changes.

All units are flash tested at 1250 volts D.C. The power factor is under 3% and the installation resistance is above 7500 megohms.



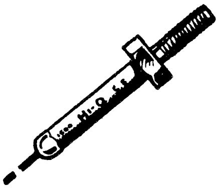
Type MCS

Stock Items — 500 VDCW

Type	Capacity	List Price
CS-1A	50	$.60
CS-1A	100	.60
CS-1A	500	.60
CS-1B	1000	.60
CS-1B	1500	.60

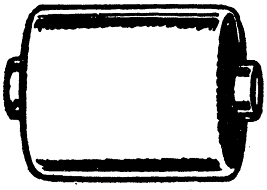
*New
Radial leads only
Tolerance: ±10% up to and including 500 mmf.
±20% above 500 mmf.

Type	Capacity	List Price
CS-2	3000	$.60
CS-3	4000	.60
CS-4	7500	.60
CIS-1	50	.60
CIS-1	100	.60
CIS-1	500	.60
CIS-1	1000	.60
CIS-2	1500	.60
MCS	1500*	.70



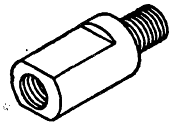
Type CS

HI-Q HIGH VOLTAGE "CARTWHEEL" CAPACITORS

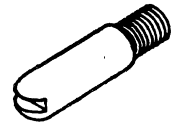


Hi-Q high voltage "cartwheels" are thoroughly tested units capable of assuring dependable service while withstanding high voltages. This new universal type (UV) offers interchangeable terminals in 5 styles for use in filter and by-pass applications in TV high voltage power supplies.

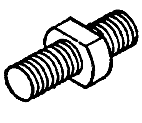
TERMINAL HARDWARE



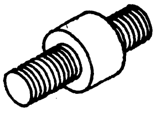
UV-3A



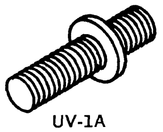
UV-4A



UV-2A



UV-6A



UV-1A

Stock Items — 500 MMF

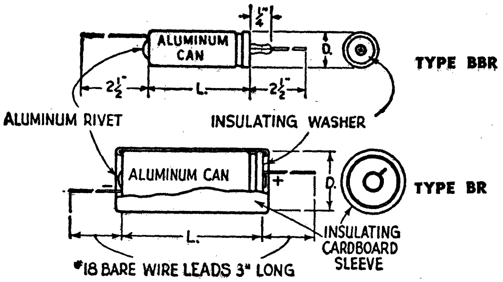
Type	Volt.	Cap.	List Price
UV-501	10,000 VDCW	500 mmf.	$1.55
UV-502	20,000 VDCW	500 mmf.	2.05

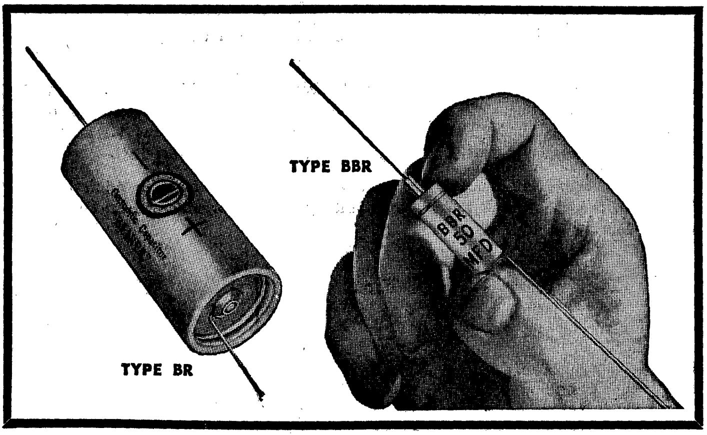
Stock Items — Terminal Hardware

Type	List Price	Type	List Price
UV-1A	$.10	UV-4A	$.10
UV-2A	.10	UV-6A	.10
UV-3A	.10		

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

"BLUE BEAVER" ELECTROLYTIC TUBULARS





CD "Blue Beavers" have become the service industry's most popular tubular electrolytic—being DESIGNED EXPRESSLY AND EXCLUSIVELY FOR SERVICE REPLACEMENT APPLICATIONS. Type BR is the compact unit in *aluminum can with cardboard outer sleeve.* Fits neatly into the cramped quarters of a chassis—self-supported by means of rigid tinned copper leads. The larger sizes may be further supported by means of a metal strap. NEGATIVE TERMINAL IS GROUNDED TO CAN.

TEMPERATURE RANGE—to +85°C except 500 V. D.C., to +65°C.

BR Cat. No.	Cap. Mfd.	*Can Size—Inches Diam. x Length	List Price	Net Price
		25 V. D.C.		
BR 102	10	5/8 x 1 1/16	$1.00	**$ .60**
BR 202	20	5/8 x 1 1/16	1.00	**.60**
BR 252	25	5/8 x 1 1/16	1.00	**.60**
BR 502	50	5/8 x 1 1/16	1.10	**.66**
		50 V. D.C.		
BR 550	5	5/8 x 1 1/16	1.00	**.60**
BR 105	10	5/8 x 1 1/16	1.00	**.60**
BR 205	20	5/8 x 1 1/16	1.00	**.60**
BR 255	25	5/8 x 1 1/16	1.05	**.63**
BR 505	50	5/8 x 1 11/16	1.20	**.72**
		150 V. D.C.		
BR 415	4	5/8 x 1 1/16	1.00	**.60**
BR 815	8	5/8 x 1 1/16	1.05	**.63**
BR 1015	10	5/8 x 1 1/16	1.05	**.63**
BR 1215	12	5/8 x 1 7/16	1.10	**.66**
BR 1615	16	5/8 x 1 7/16	1.15	**.69**
BR 2015	20	5/8 x 1 7/16	1.20	**.72**
BR 2515	25	3/4 x 1 7/16	1.25	**.75**
BR 3015	30	3/4 x 1 7/16	1.30	**.78**
BR 4015	40	3/4 x 1 11/16	1.35	**.81**
BR 5015	50	7/8 x 1 11/16	1.40	**.84**
BR 6015	60	7/8 x 2	1.50	**.90**
BR 8015	80	7/8 x 2	1.60	**.96**
BR 10015	100	1 x 2 1/2	1.75	**1.05**
BR 15015	150	1 x 3	1.90	**1.14**
		250 V. D.C.		
BR 425	4	5/8 x 1 1/16	1.00	**.60**
BR 825	8	5/8 x 1 7/16	1.15	**.69**
BR 1225	12	5/8 x 1 11/16	1.25	**.75**
BR 1625	16	3/4 x 1 11/16	1.30	**.78**
BR 2025	20	3/4 x 1 11/16	1.35	**.81**
BR 3025	30	7/8 x 1 11/16	1.45	**.87**
BR 4025	40	7/8 x 2	1.55	**.93**
BR 5025	50	1 x 2	1.70	**1.02**
BR 6025	60	1 x 2 1/2	1.80	**1.08**
		350 V. D.C.		
BR 435	4	5/8 x 1 7/16	1.05	**.63**
BR 835	8	5/8 x 1 11/16	1.20	**.72**
BR 1235	12	3/4 x 1 11/16	1.30	**.78**
BR 1635	16	7/8 x 1 11/16	1.40	**.84**
BR 2035	20	7/8 x 1 11/16	1.45	**.87**
BR 3035	30	1 x 2	1.65	**.99**
BR 4035	40	1 x 2 1/2	1.75	**1.05**
BR 5035	50	1 x 2 1/2	1.85	**1.11**
		450 V. D.C.		
BR 145	1	5/8 x 1 1/16	1.10	**.66**
BR 245	2	5/8 x 1 1/16	1.10	**.66**
BR 445	4	5/8 x 1 7/16	1.15	**.69**
BR 845	8	3/4 x 1 7/16	1.25	**.75**
BR 1045	10	3/4 x 1 11/16	1.30	**.78**
BR 1245	12	3/4 x 1 11/16	1.35	**.81**
BR 1645	16	7/8 x 2	1.40	**.84**
BR 2045	20	7/8 x 2	1.55	**.93**
BR 3045	30	1 x 2 1/2	1.70	**1.02**
BR 4045	40	1 x 2 1/2	1.80	**1.08**
BR 6045	60	1 3/8 x 2 5/8	2.35	**1.41**
BR 8045	80	1 3/8 x 3 1/8	2.80	**1.68**
		500 V. D.C.		
BR 450	4	5/8 x 1 11/16	1.20	**.72**
BR 850	8	3/4 x 1 11/16	1.30	**.78**
BR 1250	12	7/8 x 2	1.40	**.84**
BR 1650	16	1 x 2	1.50	**.90**
BR 2050	20	1 x 2	1.60	**.96**
BR 3050	30	1 x 2 1/2	1.75	**1.05**

*For Overall Size add 1/16" to Diam, and 3/16" to Length.

Type BBR "BLUE BEAVERS," miniature versions of the BR, are especially popular for those cramped and limited space installations in television receivers, hearing aids, miniature radios and other small assemblies. They are hermetically sealed *in tubular aluminum containers* and ideally suited to meet requirements in low voltage circuits. NEGATIVE TERMINAL IS GROUNDED TO CAN.

TEMPERATURE RANGE—to +85°C.

BBR Cat. No.	Cap. Mfd.	Can Size—Inches Diam. x Length	List Price	Net Price
		3 Volts		
BBR 25-3	25	3/8 x 1 1/16	$ .85	**$ .51**
BBR 50-3	50	3/8 x 1 1/16	.95	**.57**
		6 Volts		
BBR 5-6	5	3/8 x 1 1/16	.80	**.48**
BBR 25-6	25	3/8 x 1 1/16	.85	**.51**
BBR 50-6	50	3/8 x 1 1/16	.95	**.57**
BBR 100-6	100	1/2 x 1 1/16	1.20	**.72**
BBR 250-6	250	1/2 x 1 7/16	1.35	**.81**
		15 Volts		
BBR 100-15	100	1/2 x 1 1/16	1.25	**.75**
		25 Volts		
BBR 10-25	10	3/8 x 1 1/16	1.00	**.60**
BBR 20-25	20	3/8 x 1 1/16	1.00	**.60**
BBR 25-25	25	3/8 x 1 1/16	1.00	**.60**
BBR 50-25	50	1/2 x 1 1/16	1.10	**.66**
BBR 100-25	100	1/2 x 1 7/16	1.35	**.81**
		50 Volts		
BBR 1-50	1	3/8 x 1 1/16	.90	**.54**
BBR 2-50	2	3/8 x 1 1/16	.90	**.54**
BBR 4-50	4	3/8 x 1 1/16	1.00	**.60**
BBR 5-50	5	3/8 x 1 1/16	1.00	**.60**
BBR 10-50	10	3/8 x 1 1/16	1.00	**.60**
BBR 25-50	25	1/2 x 1 1/16	1.05	**.63**
		90 Volts		
BBR 10-90	10	1/2 x 1 1/16	1.10	**.66**
BBR 16-90	16	1/2 x 1 7/16	1.10	**.66**
		150 Volts		
BBR 4-150	4	3/8 x 1 1/16	1.00	**.60**
BBR 8-150	8	1/2 x 1 1/16	1.05	**.63**
BBR 10-150	10	1/2 x 1 1/16	1.05	**.63**
BBR 12-150	12	1/2 x 1 1/16	1.10	**.66**
BBR 16-150	16	1/2 x 1 7/16	1.15	**.69**
BBR 20-150	20	1/2 x 1 7/16	1.20	**.72**
		250 Volts		
BBR 4-250	4	1/2 x 1 1/16	1.00	**.60**
BBR 8-250	8	1/2 x 1 7/16	1.15	**.69**
BBR 12-250	12	1/2 x 1 7/16	1.25	**.75**

Printed in U.S.A.

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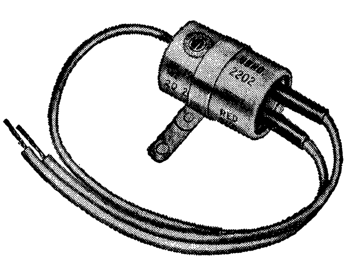
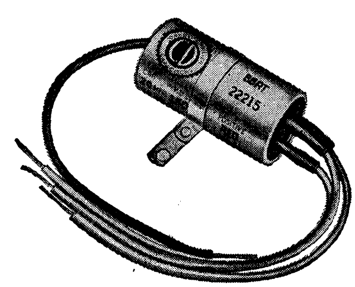
CORNELL DUBILIER

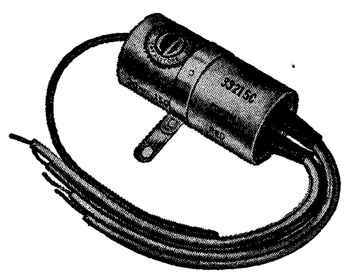
MULTI-SECTION TUBULAR ELECTROLYTICS



BBRD



BBRT



BBRQ

A new series of compact, tubular metal-cased, cardboard sleeved electrolytics—specially sealed against heat and humidity.

Featuring—

- Direct-to-terminal internal lead construction reduces possibility of shorts. (Pure aluminum wires crimped securely together with outer leads within aluminum stud terminals.)
- New high-insulation vinylite covered leads—generous 7 inches long.
- Sections sealed in aluminum tube for protection against moisture getting in, or electrolyte drying out.
- Wax impregnated cardboard outer insulation sleeve.
- Rubber diaphragm-type vent insures ideal vent action under all conditions.
- **IDEAL FOR OPERATION AT TEMPERATURES UP TO 85°C.**

BBRD—Dual Common Negative

BBRD Cat. No.	Cap. Mfd.	D.C. W. Volts	Can Size†—Ins. Dia. x Lgth.	List Price	Net Price
BBRD 2202	20–20	25	¾ x 1¹⁄₁₆	$1.40	**$ .84**
BBRD 115	10–10	50	¾ x 1¹⁄₁₆	1.40	**.84**
BBRD 2115	20–10	150	¾ x 1⁷⁄₁₆	1.55	**.93**
BBRD 2215	20–20	150	¾ x 1¹¹⁄₁₆	1.65	**.99**
BBRD 3215	30–20	150	⅞ x 1¹¹⁄₁₆	1.70	**1.02**
BBRD 3315	30–30	150	⅞ x 1¹¹⁄₁₆	1.80	**1.08**
BBRD 4215	40–20	150	⅞ x 1¹¹⁄₁₆	1.75	**1.05**
BBRD 4315	40–30	150	⅞ x 2	1.80	**1.08**
BBRD 4415	40–40	150	⅞ x 2	1.85	**1.11**
BBRD 5315	50–30	150	⅞ x 2	1.95	**1.17**
BBRD 5515	50–50	150	1 x 2	2.10	**1.26**
BBRD 8415	80–40	150	1 x 2³⁄₁₆	2.25	**1.35**
BBRD 16825	16–8	250	¾ x 2	1.70	**1.02**
BBRD 16D25	16–16	250	⅞ x 2	1.80	**1.08**
BBRD 2225	20–20	250	1 x 1¹¹⁄₁₆	1.85	**1.11**
***BBRD 7V225**	75–20	250	1 x 3	2.60	**1.56**
BBRD 8D45	8–8	450	⅞ x 1¹¹⁄₁₆	1.70	**1.02**
BBRD 16845	16–8	450	1 x 2³⁄₁₆	2.00	**1.20**
BBRD 16D45	16–16	450	1 x 2½	2.25	**1.35**
***BBRD 2245**	20–20	450	1 x 3	2.50	**1.50**
***BBRD 4445**	40–40	450	1 x 4¹⁄₁₆	3.40	**2.04**

BBRT—Triple-Common Negative

BBRT Cat. No.	Cap. Mfd.	D.C. W. Volts	Can† Size—Inches Dia. x Lgth.	List Price	Net Price
BBRT 22215	20–20–20	150	⅞ x 1¹¹⁄₁₆	$2.20	**$1.32**
BBRT 32V215	30–25–20	150	⅞ x 2	2.25	**1.35**
BBRT 33315	30–30–30	150	1 x 2	2.35	**1.41**
BBRT 42215	40–20–20	150	1 x 1¹¹⁄₁₆	2.25	**1.35**
BBRT 43215	40–30–20	150	1 x 2	2.35	**1.41**
BBRT 44215	40–40–20	150	1 x 2	2.35	**1.41**
BBRT 44415	40–40–40	150	1 x 2³⁄₁₆	2.45	**1,47**
BBRT 2215C	20–20, 20	150, 25	⅞ x 1¹¹⁄₁₆	2.05	**1.23**
BBRT 3315C	30–30, 20	150, 25	⅞ x 2	2.20	**1.32**
BBRT 4215C	40–20, 20	150, 25	1 x 1¹¹⁄₁₆	2.15	**1.29**
BBRT 4315C	40–30, 20	150, 25	1 x 1¹¹⁄₁₆	2.20	**1.32**

BBRT—Triple-Common Negative

BBRT Cat. No.	Cap. Mfd.	D.C. W. Volts	Can† Size—Inches Dia. x Lgth.	List Price	Net Price
BBRT 4415C	40–40, 20	150, 25	1 x 1¹¹⁄₁₆	2.25	**1.35**
BBRT 4415X25	40–40, 250	150, 10	1 x 2³⁄₁₆	2.60	**1.56**
BBRT 5315C	50–30, 20	150, 25	1 x 1¹¹⁄₁₆	2.35	**1.41**
BBRT 5515C	50–50, 20	150, 25	1 x 2³⁄₁₆	2.50	**1.50**
BBRT 8415C	80–40, 20	150, 25	1 x 2½	2.65	**1.59**
BBRT 3215C10	30–20, 100	150, 25	1 x 2	2.35	**1.41**
BBRT 5315X20	50–30, 200	150, 10	1 x 2³⁄₁₆	2.55	**1.53**
BBRT 5315C10	50–30, 100	150, 25	1 x 2³⁄₁₆	2.45	**1.47**
BBRT 8215C10	80–20, 100	150, 25	1 x 2½	2.75	**1.65**
BBRT 2225C	20–20, 20	250, 25	1 x 2	2.25	**1.35**
BBRT 4225C	40–20, 20	250, 25	1 x 2³⁄₁₆	2.55	**1.53**
BBRT 4425C	40–40, 20	250, 25	1 x 2¹¹⁄₁₆	2.90	**1.74**
***BBRT 7V4125**	75–40–10	250	1⅛ x 3	3.45	**2.07**
***BBRT 16T45**	16–16–16	450	1⅛ x 3	3.10	**1.86**
***BBRT 2245C**	20–20, 20	450, 25	1 x 3	2.90	**1.74**

BBRQ—Quadruple-Common Negative

BBRQ Cat. No	Cap. Mfd.	D.C. W. Volts	Can† Size—Inches Dia. x Lgth.	List Price	Net Price
BBRQ 33215C	30–30–20, 20	150, 25	1 x 2	$2.90	**$1.74**
BBRQ 42215C	40–20–20, 150	20, 25	1 x 2	2.85	**1.71**
BBRQ 53215C	50–30–20, 150	20, 25	1 x 2½	3.05	**1.83**
BBRQ 44315C	40–40–30, 150	20, 25	1 x 2½	3.00	**1.80**
BBRQ 55515C	50–50–50, 150	20, 25	1 x 3	3.45	**2.07**
***BBRQ 22245C**	20–20–20, 20	450, 25	1⅛ x 3⁹⁄₁₆	4.05	**2.43**

All above Packed—5 Units per Carton, except those marked (*) which are Individual Carton Packed.

EDL—Dual Separate Section

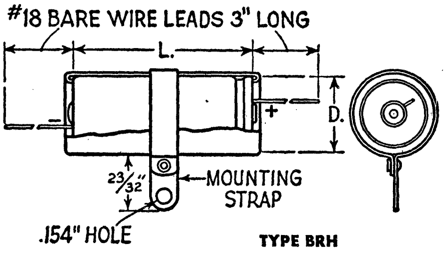
Type EDL Capacitors are dual units in cardboard tube containers with wax-filled ends. Capacities, voltages and polarity of the leads are clearly defined by color coding stamped on the tube casing.

EDL Cat. No.	Cap. Mfd.	D.C. W. Volts	OVERALL Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 2215SS	20–20	150	¹⁵⁄₁₆ x 2⅝	$1.65	**$ .99**
EDL 3315SS	30–30	150	1 x 2⅝	1.80	**1.08**
EDL 4215SS	40–20	150	1 x 2⅝	1.75	**1.05**
EDL 4415SS	40–40	150	1¹⁄₁₆ x 2⅞	1.85	**1.11**
EDL 5315SS	50–30	150	1¹⁄₁₆ x 2⅞	1.95	**1.17**
EDL 5515SS	50–50	150	1⅛ x 3⅛	2.10	**1.26**
EDL 8415SS	80–40	150	1³⁄₁₆ x 3⅜	2.25	**1.35**

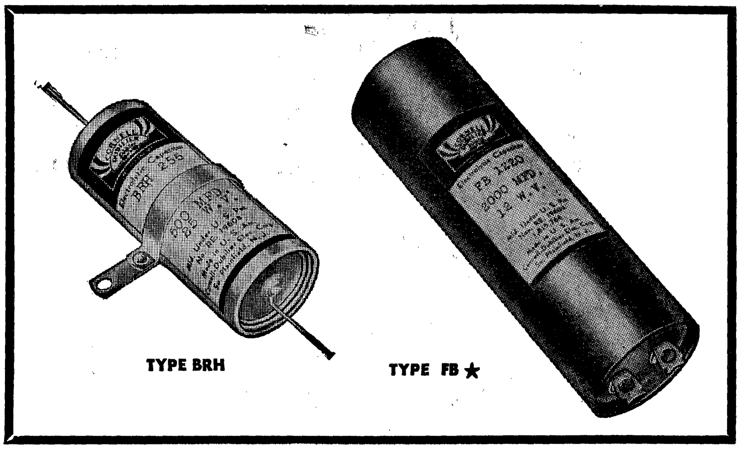
†For OVERALL size on BBRD, BBRT and BBRQ, add ¹⁄₁₆″ to Diam. and ³⁄₁₆″ to Length.

CORNELL DUBILIER

HIGH-CAPACITY LOW-VOLTAGE ELECTROLYTICS



TYPE BRH



BRH compact tubular electrolytic capacitors are widely employed in portable radio power rectifying circuits, electric fence devices, telephone and D.C. timing circuits. Hermetically sealed in pure aluminum cans with an external cardboard insulating sleeve, these units are provided with metal mounting strap and bare wire leads for convenient wiring into any circuit assembly.

TEMPERATURE RANGE to +85°C.

BRH Cat. No.	Cap. Mfd.	Can† Size—Inches Diam. x Length	List Price	Net Price
		6 D.C. W. Volts		
BRH 601	100	⅝ x 1 1/16	$1.20	**$ .72**
BRH 6025	250	⅝ x 1 7/16	1.35	**.81**
BRH 605	500	¾ x 1 11/16	1.55	**.93**
BRH 610	1000	⅞ x 2	1.90	**1.14**
BRH 620	2000	1 x 2½	2.30	**1.38**
		12 D.C. W. Volts		
BRH 121	100	⅝ x 1 1/16	1.20	**.72**
BRH 1225	250	¾ x 1 11/16	1.45	**.87**
BRH 125	500	⅞ x 2	1.70	**1.02**
BRH 1210	1000	1 x 2	2.25	**1.35**
BRH 1220	2000	1 x 3	2.65	**1.59**
		15 D.C. W. Volts		
BRH 151	100	⅝ x 1 1/16	1.25	**.75**
BRH 1525	250	¾ x 1 11/16	1.55	**.93**
BRH 155	500	⅞ x 2	1.75	**1.05**
BRH 1510	1000	1 x 2	2.30	**1.38**
BRH 1520	2000	1 x 3	3.20	**1.92**
		25 D.C. W. Volts		
BRH 251	100	⅝ x 1 7/16	1.35	**.81**
BRH 2525	250	⅞ x 1 11/16	1.70	**1.02**
BRH 255	500	1 x 2	2.30	**1.38**
		50 D.C. W. Volts		
BRH 501	100	¾ x 2	1.40	**.84**
BRH 5015	150	⅞ x 2	1.55	**.93**
BRH 5025	250	1 x 2	1.75	**1.05**
BRH 5050	500	1 x 3	2.40	**1.44**

†For Overall Size add 1/16" to Diam. and 3/16" to Length.

HIGH VOLTAGE TUBULAR ELECTROLYTICS

TEMPERATURE RANGE to +85°C.

BRHV Cat. No.	Cap. Mfd.	OVERALL Size—Inches Diam. x Length	List Price	Net Price
		500 D.C. W. Volts		
BRHV 850	8	13/16 x 3 3/16	$1.30	**$ .78**
BRHV 1050	10	13/16 x 3 3/16	1.35	**.81**
BRHV 1250	12	15/16 x 3 3/16	1.40	**.84**
BRHV 1650	16	1 1/16 x 3 3/16	1.50	**.90**
		600 D.C. W. Volts		
BRHV 608	8	13/16 x 3 3/16	1.40	**.84**
BRHV 610	10	15/16 x 3 3/16	1.45	**.87**
BRHV 612	12	1 1/16 x 3 3/16	1.50	**.90**
BRHV 616	16	1 1/16 x 3 3/16	1.65	**.99**
		700 D.C. W. Volts		
BRHV 708	8	15/16 x 3 3/16	1.50	**.90**
BRHV 710	10	1 1/16 x 3 3/16	1.55	**.93**
BRHV 712	12	1 1/16 x 3 11/16	1.60	**.96**
BRHV 716	16	1 1/16 x 4 5/16	1.75	**1.05**

Type FB capacitors in round cardboard sleeved aluminum cans are designed for high capacity, low voltage applications, and are especially popular as replacements in motion picture sound equipment, and other low voltage circuits.

TEMPERATURE RANGE to +85°C.

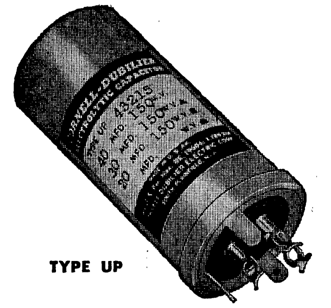
FB Cat. No.	Cap. Mfd.	D.C. W. Volts	Can†† Size—Inches Dia. x Lgth.	List Price	Net Price
FB 1005	500	10	1⅜ x 2⅜	$3.10	**$1.86**
FB 1010	1000	10	1⅜ x 2⅜	3.55	**2.13**
FB 1015	1500	10	1⅜ x 2⅜	3.75	**2.25**
FB 1020	2000	10	1⅜ x 2⅝	3.95	**2.37**
FB 1030	3000	10	1⅜ x 3⅛	4.35	**2.61**
FB 1040	4000	10	1⅜ x 4⅛	4.75	**2.85**
FB 1050	5000	10	1½ x 4⅛	5.15	**3.09**
FB 1060	6000	10	1¾ x 4⅛	7.50	**4.50**
FB 1205	500	12	1⅜ x 2⅜	3.20	**1.92**
FB 1210	1000	12	1⅜ x 2⅜	3.75	**2.25**
FB 1215	1500	12	1⅜ x 2⅝	3.95	**2.37**
FB 1220	2000	12	1⅜ x 3⅛	4.15	**2.49**
FB 1225	2500	12	1⅜ x 3⅛	4.85	**2.91**
FB 1230	3000	12	1⅜ x 4⅛	5.05	**3.03**
FB 1240	4000	12	1½ x 4⅛	5.25	**3.15**
FB 1260	6000	12	2 x 4⅛	9.35	**5.61**
FB 1505	500	15	1⅜ x 2⅜	3.25	**1.95**
FB 1510	1000	15	1⅜ x 2⅜	3.80	**2.28**
FB 1515	1500	15	1⅜ x 2⅝	4.00	**2.40**
FB 1520	2000	15	1⅜ x 3⅛	4.70	**2.82**
FB 1530	3000	15	1⅜ x 4⅛	5.15	**3.09**
FB 1540	4000	15	1½ x 4⅛	8.10	**4.86**
FB 1560	6000	15	2 x 4⅛	10.00	**6.00**
FB 1805	500	18	1⅜ x 2⅜	3.00	**1.80**
FB 1810	1000	18	1⅜ x 2⅜	3.90	**2.34**
FB 1820	2000	18	1⅜ x 3⅛	4.90	**2.94**
FB 1840	4000	18	1½ x 4⅛	8.45	**5.07**
FB 2005	500	20	1⅜ x 2⅜	3.40	**2.04**
FB 2010	1000	20	1⅜ x 3⅛	4.10	**2.46**
FB 2020	2000	20	1⅜ x 4⅛	5.20	**3.12**
FB 2040	4000	20	2 x 4⅛	8.75	**5.25**
FB 2505	500	25	1⅜ x 2⅜	3.55	**2.13**
FB 2510	1000	25	1⅜ x 3⅛	4.80	**2.88**
FB 2520	2000	25	1⅜ x 4⅛	5.75	**3.45**
FB 2530	3000	25	1¾ x 4⅛	8.00	**4.80**
FB 2540	4000	25	2 x 4⅛	9.50	**5.70**
FB 2550	5000	25	2½ x 4⅛	6.85	**4.11**
FB 3005	500	30	1⅜ x 3⅛	3.60	**2.16**
FB 3010	1000	30	1⅜ x 4⅛	4.90	**2.94**
FB 3020	2000	30	1¾ x 4⅛	7.40	**4.44**
FB 3030	3000	30	2 x 4⅛	8.95	**5.37**
FB 3040	4000	30	2½ x 4⅛	10.50	**6.30**
FB 3505	500	35	1⅜ x 3⅛	3.70	**2.22**
FB 3510	1000	35	1⅜ x 4⅛	5.00	**3.00**
FB 3520	2000	35	1¾ x 4⅛	8.00	**4.80**
FB 3530	3000	35	2 x 4⅛	9.50	**5.70**
FB 3540	4000	35	2½ x 4⅛	11.00	**6.60**
FB 4005	500	40	1⅜ x 3⅛	3.80	**2.28**
FB 4010	1000	40	1⅜ x 4⅛	6.50	**3.90**
FB 4020	2000	40	1¾ x 4⅛	9.00	**5.40**
FB 4030	3000	40	2 x 4⅛	10.50	**6.30**
FB 4040	4000	40	2½ x 4⅛	11.50	**6.90**
FB 5005	500	50	1⅜ x 3⅛	3.90	**2.34**
FB 5010	1000	50	1⅜ x 4⅛	7.00	**4.20**
FB 5020	2000	50	1¾ x 4⅛	10.00	**6.00**
FB 5030	3000	50	2 x 4⅛	11.50	**6.90**
FB 5040	4000	50	2½ x 4⅛	12.50	**7.50**

††For Overall Size add 1/16" to Diam. and ⅜" to Length.

★ When JAN-C-62 units must be supplied, order according to specific CE type designations.

CORNELL DUBILIER

UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS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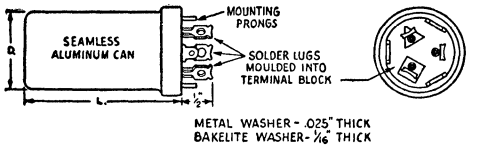
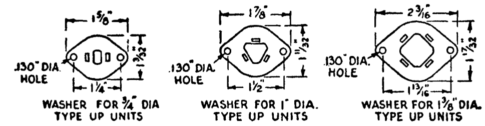

MOUNTING PRONGS
SEAMLESS ALUMINUM CAN
SOLDER LUGS MOULDED INTO TERMINAL BLOCK
D
L
½"
METAL WASHER - .025" THICK
BAKELITE WASHER - 1/16" THICK


1⅝
1¼
.130" DIA. HOLE
1⅞
1½
.130" DIA. HOLE
2 3/16
1 13/16
.130" DIA. HOLE
WASHER FOR ¾" DIA TYPE UP UNITS
WASHER FOR 1" DIA. TYPE UP UNITS
WASHER FOR 1⅜" DIA. TYPE UP UNITS
DIMENSIONS OF METAL AND BAKELITE MOUNTING WASHERS

Types **UP** and **UPT** capacitors are small, conveniently-mounted, round can-type electrolytic units furnished with bakelite and metal mounting washers. Terminals are tinned for soldering. They are dependable in operation over wide temperature variations with minimum capacity change.

Units are especially designed for use in television, radio, amplifier and other equipment where extremely high temperatures, voltage surges and ripple currents are encountered. They are particularly popular as replacement capacitors for all standard television receivers.§

Type **UPE** units are designed for use in selenium rectifier circuits. When using selenium rectifiers in televison, radio or other equipment, care must be taken to employ **ONLY** this type electrolytic capacitor and protective resistor—See page 6.

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
A001	UPT 102	10Ω 30 CPS.	¾ x 2	$2.00	**$1.20**
A002	UPT 100	.5Ω 15,750 CPS.	1 x 2	2.20	**1.36**
A003	UPT 101	1Ω 60 CPS.	1⅜ x 3	2.80	**1.68**
A004	UPT 2M-6	2000/6	1⅜ x 2	2.55	**1.53**
A005	UP 3M-10	3000/10	1⅜ x 2½	2.90	**1.74**
A006	UP 1M-15	1000/15	1 x 2½	2.55	**1.53**
A007	UP 2M-15	2000/15	1⅜ x 2½	3.45	**2.07**
A008	UP 3M-15	3000/15	1⅜ x 3	3.52	**2.11**
A009	UP 40-25	40/25	¾ x 2	1.35	**.81**
A010	UP 100-25	100/25	¾ x 2	1.60	**.96**
A011	UPT 103*	500/25	1 x 2½	2.55	**1.53**
A012	UP 500-25	500/25	1 x 2	2.55	**1.53**
A013	UP 1M-25	1000/25	1⅜ x 2	3.55	**2.13**
A014	UP 100-50	100/50	¾ x 2	1.65	**.99**
A015	UP 150-50	150/50	1 x 2	1.80	**1.08**
A016	UP 500-50	500/50	1⅜ x 2	2.65	**1.59**
A017	UP 1M-50	1000/50	1⅜ x 3⅝	3.75	**2.25**
A018	UP 3015	30/150	¾ x 2	1.55	**.93**
A019	UP 4015	40/150	1 x 2	1.60	**.96**
A020	UP 5015	50/150	1 x 2	1.65	**.99**
A022	UP 6015	60/150	1 x 2	1.75	**1.05**
A023	UPT 8015	80/150	1 x 2	1.85	**1.11**
A024	UP 10015	100/150	1 x 2½	2.00	**1.20**
A025	UPT 12015	120/150	1⅜ x 2	2.10	**1.26**
A026	UP 15015	150/150	1 x 3	2.15	**1.29**
A027	UP 2025	20/250	¾ x 2	1.60	**.96**
A028	UP 3025	30/250	1 x 2	1.70	**1.02**
A029	UP 4025	40/250	1 x 2	1.80	**1.08**
A030	UP 6025	60/250	1 x 2½	2.05	**1.23**
A031	UP 8025	80/250	1 x 3	2.15	**1.29**
A032	UP 5030	50/300	1 x 2½	2.05	**1.23**
A033	UP 8030	80/300	1 x 3	2.55	**1.53**
A034	UPT 10030	100/300	1⅜ x 3	2.90	**1.74**
A035	UPT 104	100/300	1 x 3⅝	2.90	**1.74**
A036	UP 1535	15/350	1 x 2	1.65	**.99**
A037	UP 3035	30/350	1 x 2	1.90	**1.14**
A038	UP 4035	40/350	1 x 2½	2.00	**1.20**
A039	UP 5035	50/350	1 x 3	2.10	**1.26**
A040	UP 8035	80/350	1⅜ x 2½	2.85	**1.71**
A041	UP 12535	125/350	1⅜ x 3	3.65	**2.19**
A042	UP 8040	80/400	1⅜ x 3	2.95	**1.77**
A043	UP 1045	10/450	1 x 2	1.55	**.93**
A044	UP 1AJ57	10/450	¾ x 2	1.55	**.93**
A045	UP 1545	15/450	1 x 2	1.70	**1.02**
A046	UP 2045	20/450	1 x 2	1.80	**1.08**
A047	UP 3045	30/450	1 x 2½	1.95	**1.17**
A048	UPT 4045	40/450	1 x 3	2.05	**1.23**
A049	UP 5045	50/450	1 x 3⅝	2.35	**1.41**
A050	UP 6045	60/450	1⅜ x 2½	2.60	**1.56**
A051	UP 8045	80/450	1⅜ x 3	3.05	**1.83**

*Can Positive—All others Can Negative.

TYPES UP, UPT AND UPE

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
A052	UP 1050	10/500	1 x 2	$1.60	**$ .96**
A053	UP 2050	20/500	1 x 2½	1.85	**1.11**
A054	UP 3050	30/500	1 x 3	2.00	**1.20**
A055	UP 4050	40/500	1 x 3⅝	2.50	**1.50**
A056	UP 8050	80/500	1⅜ x 3⅝	3.20	**1.92**
A057	UP 9050	90/500	1⅜ x 3⅝	3.50	**2.10**

Dual Section

B001	UPT 202	.5Ω 15,750 CPS 2.5Ω 60 CPS.	1⅜ x 2	$3.90	**$2.34**
B002	UPT 203	1000-500/6 VNP	1⅜ x 2	3.85	**2.31**
B003	UPT 201	1000-1000/15	1 x 3⅝	4.40	**2.64**
B004	UP 11M-15	1000-1000/15	1⅜ x 2½	4.40	**2.64**
B005	UP 22-25	20-20/25	1 x 2	1.45	**.87**
B006	UP 44-25	40-40/25	1 x 2	1.60	**.96**
B007	UPT 205	150-50/25	1 x 2	1.90	**1.14**
B008	UP 55-50	50-50/50	1 x 2	1.70	**1.02**
B009	UP 2215	20-20/150	1 x 2	1.70	**1.02**
B010	UP 3215	30-20/150	1 x 2	1.75	**1.05**
B011	UP 3315	30-30/150	1 x 2	1.85	**1.11**
B012	UP 4215	40-20/150	1 x 2	1.80	**1.08**
B013	UP 4315	40-30/150	1 x 2	1.85	**1.11**
B014	UP 4415	40-40/150	1 x 2	1.90	**1.14**
B015	UP 5315	50-30/150	1 x 2	2.00	**1.20**
B016	UP 5515	50-50/150	1 x 2½	2.15	**1.29**
B017	UP 75D15	75-75/150	1 x 3	2.60	**1.56**
B018	UP 8415	80-40/150	1 x 2½	2.30	**1.38**
B019	UPT 6620	60-60/200	1⅜ x 2	2.55	**1.53**
B020	UP 1125	10-10/250	1 x 2	1.70	**1.02**
B021	UP 2225	20-20/250	1 x 2	1.90	**1.14**
B022	UP 3325	30-30/250	1 x 2½	2.30	**1.38**
B023	UP 4225	40-20/250	1 x 2½	2.20	**1.32**
B024	UP 4425	40-40/250	1 x 3	2.55	**1.53**
B025	UPT 150D25	150-150/250	1⅜ x 4⅛	5.15	**3.09**
B026	UP 5530	50-50/300	1⅜ x 2½	3.35	**2.01**
B027	UP 8830	80-80/300	1⅜ x 3	4.05	**2.43**
B028	UPT 12230	120-20/300	1⅜ x 3	3.80	**2.28**
B029	UP 15D35	15-15/350	1 x 2	2.25	**1.35**
B030	UP 2235	20-20/350	1 x 2½	2.30	**1.38**
B031	UP 3335	30-30/350	1 x 3	2.90	**1.74**
B032	UP 5335	50-30/350	1⅜ x 2½	3.15	**1.89**
B033	UPT 8835	80-80/350	1⅜ x 3⅝	4.70	**2.82**
B034	UPT 6640	60-60/400	1⅜ x 3⅝	4.40	**2.64**
B035	UP 8140	80-10/400	1⅜ x 3	3.40	**2.04**
B036	UPT 4D45	4-4/450	1 x 2	1.65	**.99**
B037	UPT 1145	10-10/450	1 x 2	1.90	**1.14**
B038	UP 15D45	15-15/450	1 x 2½	2.25	**1.35**
B039	UP 2145	20-10/450	1 x 2½	2.25	**1.35**
B040	UP 2245	20-20/450	1 x 3	2.55	**1.53**
B041	UPT 3145	30-10/450	1 x 3	2.50	**1.50**
B042	UPT 206	30-10/450	1⅜ x 2	2.40	**1.44**
B043	UP 3345	30-30/450	1⅜ x 2½	3.05	**1.83**
B044	UP 4245	40-20/450	1⅜ x 2½	3.00	**1.80**
B045	UPT 4445	40-40/450	1⅜ x 3	3.45	**2.07**
B046	UPT 6245	60-20/450	1⅜ x 3	3.55	**2.13**
B047	UPT 8145	80-10/450	1⅜ x 3	3.60	**2.16**
B048	UP 8445	80-40/450	1⅜ x 3⅝	4.35	**2.61**
B049	UP 1150	10-10/500	1 x 2½	1.95	**1.17**
B050	UP 2250	20-20/500	1⅜ x 2½	2.85	**1.71**
B051	UPT 25S450	25-40/500	1⅜ x 3	3.65	**2.19**
B052	UPT 3150	30-10/500	1⅜ x 2½	2.60	**1.56**
B053	UP 4450	40-40/500	1⅜ x 3⅝	4.30	**2.58**
B054	UPT 6450	60-40/500	1⅜ x 3⅝	4.60	**2.76**
B055	UPT 200	250/10 1000/6	1⅜ x 2	2.85	**1.71**
B056	UP 4015V2	40/150 20/50	1 x 2	1.70	**1.02**
B057	UP 4015C15	40/150 150/25	1 x 2	2.05	**1.23**
B058	UP 4025C	40/250 20/25	1 x 2	2.00	**1.20**
B059	UPT 5025V10	50/250 100/50	1⅜ x 2	2.60	**1.56**
B060	UPT 10025V15	100/250 150/50	1⅜ x 3	3.65	**2.19**
B061	UP 2035C	20/350 20/25	1 x 2	1.90	**1.14**
B062	UP 4035C	40/350 20/25	1 x 2½	2.35	**1.41**
B063	UP 1045C	10/450 20/25	1 x 2	1.70	**1.02**
B064	UP 2045C	20/450 20/25	1 x 2	2.00	**1.20**
B065	UP 4045C	40/450 20/25	1 x 3	2.45	**1.47**
B066	UP 8045C	80/450 20/25	1⅜ x 3	3.40	**2.04**

§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

CORNELL DUBILIER

UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
B067	UPT 204	10/450 100/50	1⅜ x 2	$2.05	**$1.23**
B068	UPT 245-835	20/450 80/350	1⅜ x 3	3.65	**2.19**
B069	UPT 245-1010	20/450 100/100	1⅜ x 2	2.65	**1.59**
B070	UPT 345-415	30/450 40/150	1⅜ x 2	2.50	**1.50**
B071	UPT 445-135	40/450 10/350	1⅜ x 2	2.60	**1.56**
B072	UPT 8045V5	80/450 50/50	1⅜ x 3	3.50	**2.10**
B073	UPT 15S50-230	15/500 20/300	1 x 2½	2.30	**1.38**
B074	UPT 250-1030	20/500 100/300	1⅜ x 3	3.95	**2.37**
B075	UPT 450-520	40/500 50/200	1⅜ x 2½	3.35	**2.01**
B076	UPT 650-815	60/500 80/150	1⅜ x 3⅝	3.75	**2.25**
B077	UPT 8050V5	80/500 50/50	1⅜ x 3⅝	3.80	**2.28**

Triple Section

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
C001	UPT 222-25	20-20-20/25	1 x 2	$1.95	**$1.17**
C002	UP 444-25	40-40-40/25	1 x 2	2.15	**1.29**
C003	UP 333-50	30-30-30/50	1 x 2	2.15	**1.29**
C004	UP 22215	20-20-20/150	1 x 2	2.35	**1.41**
C005	UP 33115	30-30-10/150	1 x 2	2.35	**1.41**
C006	UP 42115	40-20-10/150	1 x 2	2.35	**1.41**
C007	UP 42215	40-20-20/150	1 x 2	2.40	**1.44**
C008	UP 43215	40-30-20/150	1 x 2	2.50	**1.50**
C009	UP 44415	40-40-40/150	1 x 2½	2.60	**1.56**
C010	UP 47415	40-70-40/150	1 x 3	2.95	**1.77**
C011	UP 64215	60-40-20/150	1 x 2½	2.75	**1.65**
C012	UP 84215	80-40-20/150	1 x 2½	2.90	**1.74**
C013	UP 22125	20-20-10/250	1 x 2	2.50	**1.50**
C014	UP 32125	30-20-10/250	1 x 2½	2.70	**1.62**
C015	UPT 42125	40-20-10/250	1⅜ x 2	2.85	**1.71**
C016	UP 42225	40-20-20/250	1 x 3	2.90	**1.74**
C017	UPT 88625	80-80-60/250	1⅜ x 3⅝	4.90	**2.94**
C018	UPT 28130	20-80-10/300	1⅜ x 2½	3.80	**2.28**
C019	UPT 62130	60-20-10/300	1⅜ x 2½	3.45	**2.07**
C020	UPT 125430	120-50-40/300	1⅜ x 4⅛	5.65	**3.39**
C021	UP 11135	10-10-10/350	1 x 2	2.40	**1.44**
C022	UP 22135	20-20-10/350	1 x 3	2.95	**1.77**
C023	UPT 64235	60-40-20/350	1⅜ x 3	4.25	**2.55**
C024	UP 11145	10-10-10/450	1 x 2½	2.60	**1.56**
C025	UP 15D145	15-15-10/450	1 x 3	2.95	**1.77**
C026	UP 21145	20-10-10/450	1 x 3	2.95	**1.77**
C027	UP 22245	20-20-20/450	1⅜ x 2½	3.60	**2.16**
C028	UP 32245	30-20-20/450	1⅜ x 3	3.85	**2.31**
C029	UPT 33245	30-30-20/450	1⅜ x 3	4.10	**2.46**
C030	UPT 33345	30-30-30/450	1⅜ x 3	4.35	**2.61**
C031	UPT 36145	30-60-10/450	1⅜ x 3⅝	4.50	**2.70**
C032	UPT 41145	40-10-10/450	1⅜ x 3	3.35	**2.01**
C033	UP 43245	40-30-20/450	1⅜ x 3	4.30	**2.58**
C034	UPT 44145	40-40-10/450	1⅜ x 3	4.15	**2.49**
C035	UPT 44445	40-40-40/450	1⅜ x 3⅝	4.90	**2.94**
C036	UPT 62245	60-20-20/450	1⅜ x 3⅝	4.60	**2.76**
C037	UPT 84245	80-40-20/450	1⅜ x 4⅛	5.40	**3.24**
C038	UP 11150	10-10-10/500	1 x 3	2.70	**1.62**
C039	UPT 32250	30-20-20/500	1⅜ x 3	4.20	**2.52**
C040	UPT 41150	40-10-10/500	1⅜ x 3	3.90	**2.34**
C041	UPT 44150	40-40-10/500	1⅜ x 3⅝	5.05	**3.03**
C042	UP 4CJ69	15-15/150 1200/1.5	1 x 2	3.05	**1.83**
C043	UP 2215C	20-20/150 20/25	1 x 2	2.20	**1.32**
C044	UP 2215X10	20-20/150 100/10	1 x 2	2.35	**1.41**
C045	UP 2215X25	20-20/150 250/10	1 x 2	2.60	**1.56**
C046	UP 3315C	30-30/150 20/25	1 x 2	2.35	**1.41**
C047	UP 3315X20	30-30/150 200/10	1 x 2	2.50	**1.50**
C048	UP 4215C	40-20/150 20/25	1 x 2	2.30	**1.38**
C049	UP 4215C10	40-20/150 100/25	1 x 2	2.50	**1.50**
C050	UP 4215X10	40-20/100 150/10	1 x 2	2.40	**1.44**
C051	UP 4215C20	40-20/150 200/25	1 x 2½	2.70	**1.62**
C052	UP 4215X20	40-20/150 200/10	1 x 2	2.50	**1.50**
C053	UP 4215X25	40-20/150 250/10	1 x 2	2.70	**1.62**
C054	UP 4315C	40-30/150 20/25	1 x 2	2.35	**1.41**
C055	UP 4415C	40-40/150 20/25	1 x 2	2.40	**1.44**
C056	UP 5315C	50-30/150 20/25	1 x 2	2.50	**1.50**
C057	UP 5315C10	50-30/150 100/25	1 x 2½	2.70	**1.62**
C058	UP 5515C	50-50/150 20/25	1 x 2½	2.65	**1.59**
C059	UP 6215C	60-20/150 20/25	1 x 2	2.55	**1.53**
C060	UP 6415C	60-40/150 20/25	1 x 2½	2.65	**1.59**
C061	UP 8415C	80-40/150 20/25	1 x 2½	2.80	**1.68**
C062	UPT 12615C	120-60/150 20/25	1⅜ x 2½	3.35	**2.01**
C063	UP 3220C	30-20/200 20/25	1 x 2	2.55	**1.53**
C064	UPT 10120V4	100-10/200 40/50	1⅜ x 2	3.15	**1.89**
C065	UP 15D25C	15-15/250 20/25	1 x 2	2.35	**1.41**
C066	UP 215S25C	20-15/250 20/25	1 x 2	2.35	**1.41**
C067	UP 3325C	30-30/250 20/25	1 x 2½	2.80	**1.68**
C068	UPT 7725V2	70-70/250 20/50	1⅜ x 3	3.90	**2.34**
C069	UPT 8825-145	80-80/250 10/450	1⅜ x 3⅝	4.20	**2.52**
C070	UPT 309	10-10/300 15/250	1 x 2	2.45	**1.47**
C071	UP 2230C	20-20/300 20/25	1 x 2	2.75	**1.65**
C072	UP 3330V2	30-30/300 25/50	1 x 3	2.90	**1.74**
C073	UP 415S30C	40-15/300 20/25	1 x 3	2.95	**1.77**
C074	UPT 316	10-5/350 150/50	1 x 3	2.70	**1.62**
C075	UP 1135C	10-10/350 20/25	1 x 2	2.25	**1.35**
C076	UP 115S35C	10-15/350 20/25	1 x 2	2.50	**1.50**
C077	UP 15S135C	15-10/350 20/25	1 x 2	2.50	**1.50**
C078	UP 2135C	20-10/350 20/25	1 x 2	2.55	**1.53**
C079	UP 4CJ66	20-10/350 5/250	1 x 2	2.55	**1.53**
C080	UP 2235C	20-20/350 20/25	1 x 2½	2.80	**1.68**
C081	UP 3135C	30-10/350 20/25	1 x 2½	2.85	**1.71**
C082	UP 3135-225	30-10/350 20/250	1 x 3	3.05	**1.83**
C083	UPT 3235C	30-20/350 20/25	1 x 3	3.10	**1.86**
C084	UP 3335C	30-30/350 20/25	1⅜ x 2	3.40	**2.04**
C085	UPT 4235-110	40-20/350 10/100	1⅜ x 2	2.85	**1.71**
C086	UPT 2435-115	20-40/350 10/150	1 x 3	$3.20	**$1.92**
C087	UPT 4435C5	40-40/350 50/25	1⅜ x 2½	3.75	**2.25**
C088	UPT 3140V15	30-10/400 150/50	1⅜ x 2½	3.40	**2.04**
C089	UPT 8440V15	80-40/400 150/50	1⅜ x 3⅝	5.15	**3.09**
C090	UP 6CJ68	15-5/450 15/350	1 x 3	2.85	**1.71**
C091	UP 1145C	10-10/450 20/25	1 x 2	2.40	**1.44**
C092	UPT 1145V4	10-10/450 40/50	1 x 2½	2.50	**1.50**
C093	UPT 1145-510	10-10/450 50/100	1⅜ x 2	2.65	**1.59**
C094	UP 15D45C	15-15/450 20/25	1 x 2½	2.75	**1.65**
C095	UP 15D45-130	15-15/450 10/300	1 x 3	2.90	**1.74**
C096	UP 2145C	20-10/450 20/25	1 x 2½	2.75	**1.65**
C097	UPT 2145V5	20-10/450 50/50	1 x 3	2.85	**1.71**
C098	UP 215S45C	20-15/450 20/25	1 x 3	2.90	**1.74**
C099	UP 2245C	20-20/450 20/25	1 x 3	3.05	**1.83**
C100	UPT 2245-635	20-20/450 60/350	1⅜ x 3	4.05	**2.43**
C101	UPT 3245-315	30-20/450 30/150	1⅜ x 2½	3.50	**2.10**
C102	UPT 3345C	30-30/450 20/25	1⅜ x 2½	3.55	**2.13**
C103	UP 3345V4	30-30/450 40/50	1⅜ x 3	3.65	**2.19**
C104	UPT 4145V10	40-10/450 100/50	1⅜ x 3	3.55	**2.13**
C105	UPT 4145-820	40-10/450 80/200	1⅜ x 3	3.90	**2.34**
C106	UP 4245C	40-20/450 20/25	1⅜ x 2½	3.50	**2.10**
C107	UP 4445C	40-40/450 20/25	1⅜ x 3	3.95	**2.37**
C108	UPT 4445C4	40-40/450 40/25	1⅜ x 3	2.45	**1.47**
C109	UPT 4445V10	40-40/450 100/50	1⅜ x 3⅝	4.30	**2.58**
C110	UPT 4445-415	40-40/450 40/150	1⅜ x 3⅝	4.15	**2.49**
C111	UPT 8445C10	80-40/450 100/25	1⅜ x 4⅛	5.10	**3.06**
C112	UPT 1150V10	10-10/500 100/50	1 x 3	2.85	**1.71**
C113	UPT 318	10-10/500 4/350	1 x 2½	2.50	**1.50**
C115	UPT 2150V10	20-10/500 100/50	1 x 3⅝	3.30	**1.98**
C116	UPT 2250-640	20-20/500 60/400	1⅜ x 3⅝	4.80	**2.88**
C117	UPT 3150V2	30-10/500 20/50	1⅜ x 2½	3.10	**1.86**
C118	UPT 4450-1020	40-40/500 100/200	1⅜ x 4⅛	5.85	**3.51**
C119	UPT 308	100/100 50-25/25	1 x 3	2.65	**1.59**
C120	UPT 310	20/150 250-100/15	1⅜ x 2	2.90	**1.74**
C121	UPT 305	120/300 15-10/450	1⅜ x 3⅝	4.50	**2.70**
C122	UP 335-2125	30/350 20-10/250	1 x 3	3.00	**1.80**
C123	UPT 840-2130	80/400 20-10/300	1⅜ x 3⅝	4.25	**2.55**
C124	UPT 245-4125	20/450 40-10/250	1⅜ x 2	3.15	**1.89**
C125	UPT 304	30/450 100-25/25	1⅜ x 2	3.00	**1.80**
C126	UPT 445-9515	40/450 90-50/150	1⅜ x 3	4.00	**2.40**
C127	UPT 314	40/150 25/25 130/15	1 x 3	2.35	**1.41**
C128	UPT 825-415V5	80/250 40/150 50/50	1⅜ x 2½	3.30	**1.98**
C129	UPT 1030-615C	100/300 60/150 20/25	1⅜ x 3	4.20	**2.52**
C130	UPT 307	20/350 50/100 100/75	1 x 3	3.10	**1.86**
C131	UP 335-330C	30/350 30/300 20/25	1 x 3	3.15	**1.89**
C132	UPT 302	50/350 10/250 500/5	1⅜ x 2½	3.60	**2.16**
C133	UPT 140-535C3	10/400 50/350 30/25	1 x 3	3.10	**1.86**
C134	UPT 640-430C	60/400 40/300 20/25	1⅜ x 3⅝	4.20	**2.52**
C135	UPT 313	10/450 50/150 100/25	1 x 3	2.75	**1.65**
C136	UPT 306	10/450 40/300 10/150	1⅜ x 2	3.10	**1.86**
C137	UPT 301	10/450 30/400 30/300	1⅜ x 2½	3.35	**2.01**
C138	UP 6CJ17	15/450 20/350 20/250	1 x 3	3.00	**1.80**
C139	UPT 312	20/450 60/250 100/25	1⅜ x 2½	3.65	**2.19**
C140	UP 6CJ67	20/450 15/350 10/300	1 x 3	3.05	**1.83**
C141	UPT 317	20/450 80/350 100/50	1⅜ x 3⅝	4.50	**2.70**
C142	UPT 345-540C4	30/450 50/400 40/25	1⅜ x 3	3.95	**2.37**
C143	UPT 300	40/450 40/150 130/50	1⅜ x 3	3.65	**2.19**
C144	UPT 311	40/450 100/150 50/50	1⅜ x 3	3.95	**2.37**
C145	UPT 315	10/500 100/200 40/50	1⅜ x 2½	3.35	**2.01**
C146	UPT 250-230C4	20/500 20/300 40/25	1⅜ x 2	3.10	**1.86**
C147	UPT 303	40/500 40/250 100/50	1⅜ x 3	4.30	**2.58**
C148	UPT 450-440V2	40/500 40/400 25/50	1⅜ x 3	4.30	**2.58**
C149	UPT 345-435C5	30/450 40/350 50/25	1 x 4⅛	3.70	**2.22**
C150	UPT 64435	60-40-40/350	1⅜ x 3⅝	4.70	**2.82**
C151	UPT 150-8115	10/500 80-10/150	1 x 3⅝	2.85	**1.71**
C152	UPT 10140V2	100-10/400 20/50	1⅜ x 3⅝	4.50	**2.70**

Quadruple Section

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
D001	UP 444315	40-40-40-30/150	1⅜ x 2	$3.35	**$2.01**
D002	UPT 442130	40-40-20-10/300	1⅜ x 2½	4.55	**2.73**
D003	UPT 111135	10-10-10-10/350	1⅜ x 2	3.10	**1.86**
D004	UPT 811135	80-10-10-10/350	1⅜ x 3⅝	4.60	**2.76**
D005	UPT 332240	30-30-20-20/400	1⅜ x 3	4.85	**2.91**
D006	UPT 821140	80-20-10-10/400	1⅜ x 3⅝	5.05	**3.03**
D007	UPT 4Q45	4-4-4-4/450	1⅜ x 2	2.90	**1.74**
D008	UP 5Q45	5-5-5-5/450	1⅜ x 2	3.00	**1.80**
D009	UPT 111145	10-10-10-10/450	1⅜ x 2	3.35	**2.01**
D010	UPT 15S33145	15-30-30-10/450	1⅜ x 3	4.70	**2.80**
D011	UPT 15S33345	15-30-30-30/450	1⅜ x 3⅝	5.30	**3.18**
D012	UPT 211145	20-10-10-10/450	1⅜ x 2½	3.70	**2.22**
D013	UPT 222245	20-20-20-20/450	1⅜ x 3	4.70	**2.82**
D014	UPT 315T45	30-15-15-15/450	1⅜ x 3	4.45	**2.67**
D015	UPT 420	35-35-10-5/450	1⅜ x 3⅝	4.65	**2.79**
D016	UP 411145	40-10-10-10/450	1⅜ x 3	4.15	**2.49**
D017	UPT 421145	40-20-10-10/450	1⅜ x 3	4.45	**2.67**
D018	UPT 111150	10-10-10-10/500	1⅜ x 2	3.50	**2.10**
D019	UP 22215C	20-20-20/150 20/25	1⅜ x 2	2.90	**1.74**
D020	UP 32215X20	30-20-20/150 200/10	1⅜ x 2	3.10	**1.86**
D021	UP 33315C4	30-30-30/150 40/25	1⅜ x 2	3.10	**1.86**
D022	UPT 42215C	40-20-20/150 20/25	1⅜ x 2	2.95	**1.77**
D023	UP 44215X20	40-40-20/150 200/10	1⅜ x 2	3.25	**1.95**
D024	UP 44315C	40-40-30/150 20/25	1⅜ x 2	3.10	**1.86**
D025	UP 44415C	40-40-40/150 20/25	1⅜ x 2	3.15	**1.89**
D026	UP 44415C10	40-40-40/150 100/25	1⅜ x 2	3.35	**2.01**
D027	UP 44415C16	40-40-40/150 160/25	1⅜ x 2	3.55	**2.13**
D028	UP 53315C10	50-30-30/150 100/25	1⅜ x 2	3.45	**2.07**
D029	UP 55515C	50-50-50/150 20/25	1⅜ x 2	3.55	**2.13**
D030	UP 64215X20	60-40-20/150 200/10	1⅜ x 2	3.50	**2.10**
D031	UP 75T15C3	75-75-75/150 30/25	1⅜ x 3	4.30	**2.58**

§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

CORNELL DUBILIER

UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
D032	UP 84415C	80-40-40/150 20/25	1⅜ x 2	$3.55	**$2.13**
D033	UP 84415C10	80-40-40/150 100/25	1⅜ x 2½	3.75	**2.25**
D034	UP 42125C	40-20-10/250 20/25	1⅜ x 2	3.40	**2.04**
D035	UPT 86425-215	80-60-40/250 20/150	1⅜ x 3⅝	5.10	**3.06**
D036	UPT 415	100-40-10/250 100/50	1⅜ x 3⅝	5.15	**3.09**
D037	UPT 44430-215	40-40-40/300 20/150	1⅜ x 3	4.90	**2.94**
D038	UPT 64230C5	60-40-20/300 50/25	1⅜ x 3	4.70	**2.82**
D039	UP 11135C	10-10-10/350 20/25	1⅜ x 2	2.95	**1.77**
D040	UPT 15T35V5	15-15-15/350 50/50	1⅜ x 2	3.80	**2.28**
D041	UP 21535C	20-10-5/350 20/25	1⅜ x 2	3.10	**1.86**
D042	UP 32235C	30-20-20/350 20/25	1⅜ x 2½	4.10	**2.46**
D043	UP 44235C	40-40-20/350 20/25	1⅜ x 3	4.70	**2.82**
D044	UPT 42235C	40-20-20/350 25/25	1⅜ x 2½	4.25	**2.55**
D045	UPT 43135V5	40-30-10/350 50/50	1⅜ x 3	4.40	**2.64**
D046	UPT 44435C4	40-40-40/350 40/25	1⅜ x 3	5.20	**3.12**
D047	UPT 44435V15	40-40-40/350 150/50	1⅜ x 3⅝	5.70	**3.42**
D048	UPT 11145C	10-10-10/450 20/25	1⅜ x 2	3.15	**1.89**
D049	UPT 11145C10	10-10-10/450 100/25	1⅜ x 2	3.35	**2.01**
D050	UPT 11145V15	10-10-10/450 150/50	1⅜ x 2½	3.70	**2.22**
D051	UPT 21145C10	20-10-10/450 100/25	1⅜ x 2	3.70	**2.22**
D052	UP 22245C	20-20-20/450 20/25	1⅜ x 2½	4.15	**2.49**
D053	UPT 22245V10	20-20-20/450 100/50	1⅜ x 3	4.55	**2.73**
D054	UP 315D45C4	30-15-15/450 40/25	1⅜ x 2½	4.15	**2.49**
D055	UP 32245C	30-20-20/450 20/25	1⅜ x 3	4.40	**2.64**
D056	UPT 400	30-30-15/450 30/50	1⅜ x 3	4.15	**2.49**
D057	UPT 404	30-30-15/450 100/50	1⅜ x 3⅝	4.90	**2.94**
D058	UP 33145C	30-30-10/450 20/25	1⅜ x 3	4.35	**2.61**
D059	UP 33245C	30-30-20/450 20/25	1⅜ x 3	4.65	**2.79**
D060	UPT 41145C25	40-10-10/450 250/25	1⅜ x 3	4.25	**2.55**
D061	UPT 42145C	40-20-10/450 20/25	1⅜ x 3	4.25	**2.55**
D062	UPT 42145V10	40-20-10/450 100/50	1⅜ x 3⅝	4.65	**2.79**
D063	UPT 42245C4	40-20-20/450 40/25	1⅜ x 3	4.65	**2.79**
D064	UP 43145C	40-30-10/450 20/25	1⅜ x 3	4.50	**2.70**
D065	UPT 44145V2	40-40-10/450 25/50	1⅜ x 3⅝	4.70	**2.82**
D066	UPT 403	40-40-10/450 100/100	1⅜ x 3⅝	5.35	**3.21**
D067	UPT 61145-215	60-10-10/450 20/150	1⅜ x 3	4.60	**2.76**
D068	UPT 407	40-10-20/475 10/25	1⅜ x 3	4.85	**2.91**
D069	UPT 22150-130	20-20-10/500 10/300	1⅜ x 2½	4.30	**2.58**
D070	UPT 414	100/300 40/50 80-20/25	1⅜ x 2½	4.55	**2.73**
D071	UPT 427	20/300 150-150/150 100/30	1⅜ x 4⅛	5.30	**3.18**
D072	UPT 402	15/350 80-40/200 200/25	1⅜ x 3	4.50	**2.70**
D073	UPT 428	10/400 50-30/350 30/25	1⅜ x 3	4.40	**2.64**
D074	UPT 424	10/450 60-40/350 25/25	1⅜ x 3⅝	4.60	**2.76**
D075	UPT 419	10/450 100-10/350 20/25	1⅜ x 3⅝	5.25	**3.15**
D076	UPT 421	20/450 80-20/200 50/50	1⅜ x 3	4.15	**2.49**
D077	UPT 425	30/450 40-40/350 10/200	1⅜ x 3⅝	5.15	**3.09**
D078	UPT 409	30/450 125-125/25 30/450	1⅜ x 3	4.90	**2.94**
D079	UPT 401	5-5/400 50/300 80/250	1⅜ x 3	4.65	**2.79**
D080	UPT 429	40-60/400 40/350 10/50	1⅜ x 3⅝	5.75	**3.45**
D081	UPT 411	10-10/450 60/200 100/50	1⅜ x 3	3.85	**2.31**
D082	UPT 42245C	40-20-20/450 20/25	1⅜ x 3	4.60	**2.76**
D083	UPT 423	10-5/475 80/450 40/50	1⅜ x 3⅝	4.95	**2.97**
D084	UPT 417	15-15/475 80/300 40/50	1⅜ x 3	4.80	**2.88**
D085	UP 4415C44	40-40/150 40-40/25	1⅜ x 2	3.05	**1.83**
D086	UP 4415CD10	40-40/150 100-100/25	1⅜ x 2	3.35	**2.01**
D087	UPT 4140-8125	40-10/400 80-10/250	1⅜ x 3⅝	4.70	**2.82**
D088	UPT 1145CC	10-10/450 20-20/25	1⅜ x 2	2.95	**1.77**
D089	UP 2245CC	20-20/450 20-20/25	1⅜ x 2	3.60	**2.16**
D090	UP 2245-3335	20-20/450 30-30/350	1⅜ x 3	5.05	**3.03**
D091	UPT 408	40-10/450 35-10/350	1⅜ x 3	4.60	**2.76**
D092	UPT 4445-3335	40-40/450 30-30/350	1⅜ x 4⅛	5.90	**3.54**
D093	UPT 405	120/300 20/250 20/25 100/50	1⅜ x 4⅛	5.05	**3.03**
D094	UPT 406	200/300 20/250 20/25 100/50	1⅜ x 5	5.45	**3.27**
D095	UPT 418	20/350 40/300 10/150 250/50	1⅜ x 3	4.60	**2.76**
D096	UPT 412	80/450 10/400 30/300 40/150	1⅜ x 4⅛	5.25	**3.15**
D097	UPT 410	10/475 10/450 80/200 50/60	1⅜ x 2½	3.85	**2.31**
D098	UPT 413	10/475 60/450 30/400 125/50	1⅜ x 4⅛	5.45	**3.27**
D099	UPT 422	20/475 40/300 100/50 80/25	1⅜ x 3	4.50	**2.70**
D100	UPT 416	25/475 20/450 40/300 100/50	1⅜ x 3	4.95	**2.97**
D101	UPT 426	10/475 40/350 80/200 100/50	1⅜ x 3⅝	4.80	**2.88**
D102	UPT 53150-230	50-30-10/500 20/300	1⅜ x 3⅝	5.60	**3.36**
D103	UPT 434	35-35-10/450 10/200	1⅜ x 3⅝	$4.60	**$2.76**
D104	UPT 433	35-25/450 20/200 100/50	1⅜ x 3⅝	4.65	**2.79**
D105	UPT 432	40-10/475 4/350 40/300	1⅜ x 3	4.95	**2.97**
D106	UPT 430	20/350 150-80/150 20/25	1⅜ x 3	4.55	**2.73**
D107	UPT 431	40/350 50-20/150 80/50	1⅜ x 3	4.05	**2.43**
D108	UPT 435	10/450 100-20/300 20/25	1⅜ x 3⅝	4.90	**2.94**
D109	UPT 436	100-10/300 200-30/150	1⅜ x 5	5.90	**3.54**
D110	UPT 437	10/300 200-140-30/150	1⅜ x 5	5.10	**3.06**
D111	UPT 421130	40-20-10-10/300	1⅜ x 2	3.95	**2.37**
D112	UPT 641130	60-40-10-10/300	1⅜ x 3⅝	4.55	**2.73**

SELENIUM RECTIFIER CAPACITORS

Type **UPE** are etched anode and cathode units *especially* engineered to prevent capacity drop due to high ripple and surge currents normally encountered in selenium rectifier circuits. A *protective series-resistor of approximately 50 ohms for a 100 ma. load, and at least 10 ohms for a 250 ma. load, should always be used to protect both the rectifier and filter capacitors. Use only type UPE in selenium rectifier circuits.*

UPE Single Section Units

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
XA001	UPE 4015	40/150	¾ x 2	$1.60	**$ .96**
XA002	UPE 8015	80/150	1 x 2	1.85	**1.11**
XA003	UPE 10015	100/150	1 x 2½	2.00	**1.20**
XA004	UPE 15015	150/150	1 x 3	2.15	**1.29**
XA005	UPE 30015	300/150	1⅜ x 3	2.80	**1.68**
XA006	UPE 8020	80/200	1⅜ x 2	1.95	**1.17**
XA007	UPE 15020	150/200	1⅜ x 2½	2.80	**1.68**
XA008	UPE 4025	40/250	1 x 2	1.80	**1.08**
XA009	UPE 6030	60/300	1 x 2½	2.10	**1.26**
XA010	UPE 8030	80/300	1 x 3	2.55	**1.53**
XA011	UPE 8035	80/350	1⅜ x 2½	2.85	**1.71**
XA012	UPE 12535	125/350	1⅜ x 3	3.65	**2.19**
XA013	UPE 3050	30/500	1 x 3	2.00	**1.20**

UPE Dual Section Units

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
XB001	UPE 2215	20-20/150	1 x 2	$1.70	**$1.02**
XB002	UPE 4415	40-40/150	1 x 2	1.90	**1.14**
XB003	UPE 5515	50-50/150	1 x 2½	2.15	**1.29**
XB004	UPE 8415	80-40/150	1 x 2½	2.30	**1.38**
XB005	UPE 8815	80-80/150	1⅜ x 2	2.65	**1.59**
XB006	UPE 101015	100-100/150	1⅜ x 2½	3.25	**1.95**
XB007	UPE 150D15	150-150/150	1⅜ x 3	3.50	**2.10**
XB008	UPE 201515	200-150/150	1⅜ x 3⅝	3.75	**2.25**
XB009	UPE 202015	200-200/150	1⅜ x 3⅝	4.00	**2.40**
XB010	UPE 101020	100-100/200	1⅜ x 3	3.50	**2.10**
XB011	UPE 4425	40-40/250	1 x 3	2.55	**1.53**
XB012	UPE 8425	80-40/250	1⅜ x 2½	3.00	**1.80**
XB013	UPE 4430	40-40/300	1 x 3	3.00	**1.80**
XB014	UPE 8430	80-40/300	1⅜ x 2½	3.55	**2.13**

UPE Triple Section Units

Rotational Stock No.	Cat. No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
XC001	UPE 22215	20-20-20/150	1 x 2	$2.35	**$1.41**
XC002	UPE 42215	40-20-20/150	1 x 2	2.40	**1.44**
XC003	UPE 55515	50-50-50/150	1 x 3	3.00	**1.80**
XC004	UPE 88815	80-80-80/150	1⅜ x 3	3.75	**2.25**
XC005	UPE 128415	120-80-40/150	1⅜ x 3	3.70	**2.22**
XC006	UPE 2215C	20-20/150 20/25	1 x 2	2.20	**1.32**
XC007	UPE 4215C	40-20/150 20/25	1 x 2	2.30	**1.38**
XC008	UPE 4415C	40-40/150 20/25	1 x 2	2.40	**1.44**
XC009	UPE 4230C	40-20/300 20/25	1 x 2½	3.10	**1.86**
XC010	UPE 1030-6225	100/300 60-20/250	1⅜ x 4⅛	4.90	**2.94**
XC011	UPE 2030-2625	200/300 20-60/250	1⅜ x 5	5.45	**3.27**

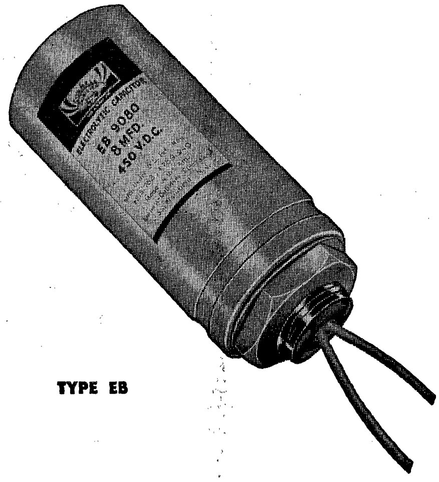
HARDWARE FOR TYPE UP, UPT & UPE CAPACITORS

Part No.	Item	Description	List Price	Net Price
22272	Wrench for	Mtg. Units	$1.24	**$.74**
19891	Bakelite Washer	For ¾″	.07	**.04**
19884	Bakelite Washer	For 1″	.07	**.04**
19888	Bakelite Washer	For 1⅜″	.07	**.04**
19890	Metal Washer	For ¾″	.07	**.04**
19883	Metal Washer	For 1″	.07	**.04**
19887	Metal Washer	For 1⅜″	.07	**.04**
21368-1	Mounting Clip	For ¾″	.15	**.09**
21368-2	Mounting Clip	For 1″	.15	**.09**
21368-3	Mounting Clip	For 1⅜″	.15	**.09**
28521-1	Insulating Tube	For ¾″ x 2″	.07	**.04**
28521-4	Insulating Tube	For 1″ x 2″	$.07	**$.04**
28521-6	Insulating Tube	For 1″ x 3″	.07	**.04**
28521-7	Insulating Tube	For 1⅜″ x 2″	.07	**.04**
28521-9	Insulating Tube	For 1⅜″ x 3″	.07	**.04**
30035	Bakelite Washer	For 1″ in 1⅜″ Hole Mtg.	.07	**.04**
30036	Metal Washer	For 1″ in 1⅜″ Hole Mtg.	.07	**.04**
28521-5	Insulating Tube	For 1″ x 2½″	.07	**.04**
28521-8	Insulating Tube	For 1⅜″ x 2½″	.07	**.04**
28521-12	Insulating Tube	For 1⅜″ x 3⅝″	.07	**.04**
28521-19	Insulating Tube	For 1″ x 3⅝″	.07	**.04**
28521-15	Insulating Tube	For 1⅜″ x 4⅛″	.07	**.04**

§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

CORNELL DUBILIER

ROUND CAN-TYPE ELECTROLYTICS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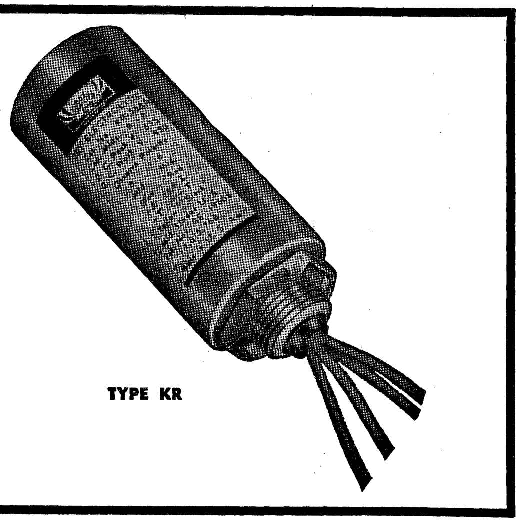
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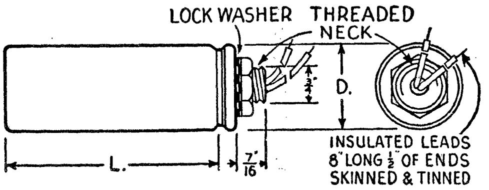

LOCK WASHER
THREADED NECK
3/4
D.
L.
7/16"
INSULATED LEADS 8" LONG 1/2" OF ENDS SKINNED & TINNED

Type EB electrolytic capacitors are especially suited for replacement purposes in radio receivers to replace units of larger physical sizes. They are identical in mounting hole dimensions and general construction to Type WR capacitors except that they are provided with insulated color-coded wire leads 8" long. Bakelite threaded neck.

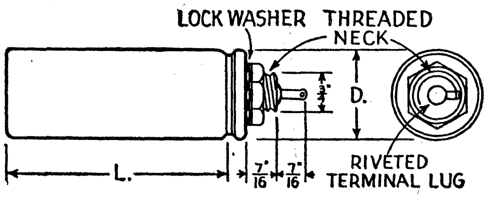
TYPE EB—450-VOLT D.C. WKG.

TEMPERATURE RANGE to +65°C.

EB Cat. No.	Cap. Mfd.	Size—Inches Dia. x Lgth.	List Price	Net Price
EB 9080	8	1⅜ x 4⅜	$2.20	**$1.32**
EB 9100	10	1⅜ x 4⅜	2.30	**1.38**
EB 9120	12	1½ x 4½	2.40	**1.44**
EB 9160	16	1½ x 4½	2.45	**1.47**
EB 9180	18	1½ x 4½	2.55	**1.53**
EB 9200	20	1½ x 4½	2.75	**1.65**
EB 8800	8–8	1½ x 4½	3.00	**1.80**

REPLACEMENTS FOR WET ELECTROLYTICS

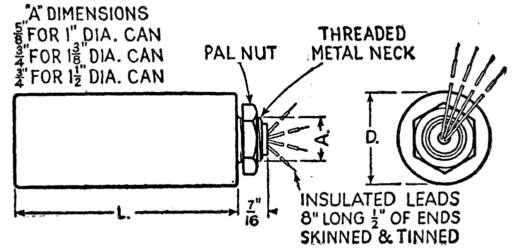
TYPE WR—500-VOLT D.C.


LOCK WASHER
THREADED NECK
3/4
D.
L.
7/16"
7/16"
RIVETED TERMINAL LUG

WET ELECTROLYTIC REPLACEMENT

TEMPERATURE RANGE to +65°C.

WR Cat. No.	Cap. Mfd.	Replacement for	Size—Ins. Dia. x Lgth.	List Price	Net Price
WR 10	10	4 to 12 mfd.	1⅜ x 2½	$2.30	**$1.38**
WR 20	20	16 to 20 mfd.	1⅜ x 2½	2.70	**1.62**
WR 30	30	20 to 30 mfd.	1⅜ x 3¼	2.95	**1.77**
WR 40	40	30 to 40 mfd.	1⅜ x 3¼	3.15	**1.89**


"A" DIMENSIONS
5/8" FOR 1" DIA. CAN
3/4" FOR 1 3/8" DIA. CAN
3/4" FOR 1 1/2" DIA. CAN
PAL NUT
THREADED METAL NECK
A
D.
L.
7/16"
INSULATED LEADS 8" LONG 1/2" OF ENDS SKINNED & TINNED

Types KR and KRC single-hole mounting units are compact etched foil type dry electrolytic capacitors furnished in round (inverted mounting) aluminum cans. Available in single, dual and triple sections with color-coded leads. Metal threaded neck.

TYPE KR

TEMPERATURE RANGE to +65°C.

KR Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
KR 504	4	450	1 x 2½	$2.05	**$1.23**
KR 508	8	450	1 x 2½	2.20	**1.32**
KR 512A	12	450	1 x 2½	2.40	**1.44**
KR 516A	16	450	1 x 3½	2.45	**1.47**
KR 520	20	450	1⅜ x 2½	2.75	**1.65**
KR 530	30	450	1⅜ x 3½	3.00	**1.80**
KR 540	40	450	1⅜ x 4⅜	3.15	**1.89**
KR 604C	4	600	1⅜ x 3½	2.95	**1.77**
KR 608C	8	600	1⅜ x 4⅜	3.15	**1.89**
KR 616C	16	600	1⅜ x 4⅜	3.75	**2.25**

Separate Section Units

KR 548A	4–8	450	1⅜ x 3	$3.70	**$2.22**
KR 588A	8–8	450	1⅜ x 3	3.75	**2.25**
KR 5816A	8–16	450	1⅜ x 4½	4.10	**2.46**
KR 5888A	8–8–8	450	1⅜ x 4½	6.25	**3.75**

Common Negative Units

KRC 548	4–8	450	1 x 3	$2.95	**$1.77**
KRC 588	8–8	450	1⅜ x 2½	3.00	**1.80**
KRC 5116	16–16	450	1⅜ x 3½	3.55	**2.13**
KRC 5220	20–20	450	1⅜ x 4⅜	3.80	**2.28**
KRC 5888	8–8–8	450	1⅜ x 3½	5.00	**3.00**

CORNELL DUBILIER

MOLDED TUBULAR CAPACITORS

"THE CUB"

The Cornell-Dubilier "CUB" is an *outstandingly superior* molded tubular capacitor unequaled by any molded tubular heretofore developed.

The "CUB" possesses characteristics that will meet the wide and demanding applications found in critical industrial, military and experimental electronic equipment.

This is **the** unit recommended for general replacement service.† Sold exclusively through C-D electronic parts Distributors.

The "CUB" is molded in extra hard, non-inflammable bakelite—tough, durable and exceptionally resistant to moisture, high temperature and shock.

The unit is processed by special vacuum—temperature—cycling impregnation—the 200 and 400 volt series are impregnated with HT compound and the 600 volt and up series are impregnated with oil (Dykanol "C").

In countless production test runs, the "CUB" has survived an average of 30 cycles of the punishing JAN and MIL Temperature and Immersion Cycling Test.

The "CUB" is dry assembly processed and sealed immediately after impregnation. This advanced technique results in life long high insulation resistance, low power factor, and exceptional capacitance stability. Each unit is tested at over two times its rated voltage to insure high dielectric strength.

At least a 50% greater resistance to humidity and a 15%-25% greater voltage breakdown over comparable molded tubulars, is built into the C-D "CUB".

Extra strong copper-weld leads eliminate breakage during assembly and throughout service life. The leads are permanently crimped and solder sealed securely to the unit and will not part during soldering operation.

TEMP. RANGE: HT Compound —40°C to +90°C
Dykanol "C" —55°C to +100°C

THE CUB

CUB Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		200 V. D.C.		
CUB 2S2	.02	⅜ x 1	$.25	**$.15**
CUB 2S47	.047	7/16 x 1¼	.25	**.15**
CUB 2S5	05	7/16 x 1¼	.25	**.15**
CUB 2P1	.1	7/16 x 1¼	.35	**.21**
CUB 2P15	.15	9/16 x 1½	.35	**.21**
CUB 2P22	.22	11/16 x 1⅞	.40	**.24**
CUB 2P25	.25	11/16 x 1⅞	.40	**.24**
CUB 2P47	.47	11/16 x 1⅞	.60	**.36**
CUB 2P5	.5	11/16 x 1⅞	.60	**.36**
CUB 2W1	1.0	¾ x 2¼	.90	**.54**
		400 V. D.C.		
CUB 4S1	.01	⅜ x 1	$.25	**$.15**
CUB 4S2	.02	7/16 x 1¼	.25	**.15**
CUB 4S22	.022	7/16 x 1¼	.25	**.15**
CUB 4S47	.047	7/16 x 1¼	.30	**.18**
CUB 4S5	.05	7/16 x 1¼	.30	**.18**
CUB 4S68	.068	9/16 x 1½	.35	**.21**
CUB 4P1	.1	9/16 x 1½	.35	**.21**
CUB 4P15	.15	11/16 x 1⅞	.35	**.21**
CUB 4P22	.22	11/16 x 1⅞	.40	**.24**
CUB 4P25	.25	11/16 x 1⅞	.40	**.24**
CUB 4P5	.5	¾ x 2¼	.60	**.36**
***ST 4W1**	1.0	1 x 2⅞	.90	**.54**

†For units specially recommended in industrial applications see Page 11 "BUDROC" Steatite-Cased Capacitors.

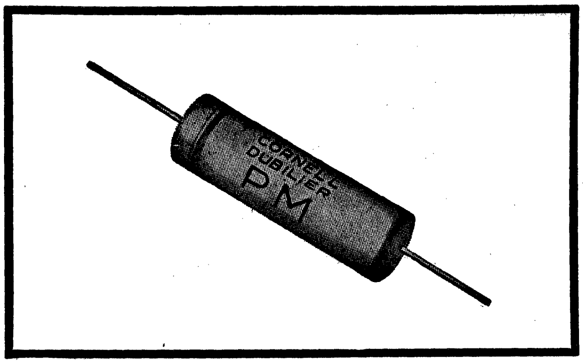
THE CUB

THE CUB

CUB Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		600 V. D.C.		
CUB 6T1	.0001	⅜ x 1	.25	**.15**
CUB 6T25	.00025	⅜ x 1	.25	**.15**
CUB 6T4	.0004	⅜ x 1	.25	**.15**
CUB 6T5	.0005	⅜ x 1	.25	**.15**
CUB 6D1	.001	⅜ x 1	.25	**.15**
CUB 6D15	.0015	⅜ x 1	.25	**.15**
CUB 6D2	.002	⅜ x 1	.25	**.15**
CUB 6D22	.0022	⅜ x 1	.25	**15**
CUB 6D3	.003	⅜ x 1	.25	**.15**
CUB 6D4	.004	⅜ x 1	.25	**.15**
CUB 6D47	.0047	⅜ x 1	.25	**.15**
CUB 6D5	.005	⅜ x 1	.25	**.15**
CUB 6D6	.006	7/16 x 1¼	.25	**.15**
CUB 6D68	.0068	7/16 x 1¼	.30	**.18**
CUB 6S1	.01	7/16 x 1¼	.30	**.18**
CUB 6S15	.015	7/16 x 1¼	.30	**.18**
CUB 6S2	.02	7/16 x 1¼	.30	**.18**
CUB 6S22	.022	7/16 x 1¼	.30	**.18**
CUB 6S3	.03	7/16 x 1¼	.35	**.21**
CUB 6S4	.04	9/16 x 1½	.35	**.21**
CUB 6S47	.047	9/16 x 1½	.40	**.24**
CUB 6S5	.05	9/16 x 1½	.40	**.24**
CUB 6S6	.06	11/16 x 1⅞	.40	**.24**
CUB 6P1	.1	11/16 x 1⅞	.45	**.27**
CUB 6P25	.25	¾ x 2¼	.55	**.33**
***ST 6P5**	.5	1 x 2⅞	.80	**.48**
		1600 V. D.C.		
CUB 16T5	.0005	7/16 x 1¼	.65	**.39**
CUB 16D1	.001	7/16 x 1¼	.65	**.39**
CUB 16D15	.0015	7/16 x 1¼	.65	**.39**
CUB 16D2	.002	7/16 x 1¼	.65	**.39**
CUB 16D22	.0022	7/16 x 1¼	.65	**.39**
CUB 16D3	.003	7/16 x 1¼	.65	**.39**
CUB 16D33	.0033	7/16 x 1¼	.65	**.39**
CUB 16D4	.004	7/16 x 1¼	.65	**.39**
CUB 16D47	.0047	7/16 x 1¼	.65	**.39**
CUB 16D5	.005	7/16 x 1¼	.65	**.39**
CUB 16D6	.006	9/16 x 1½	.65	**.39**
CUB 16D68	.0068	9/16 x 1½	.65	**.39**
CUB 16D7	.007	9/16 x 1½	.65	**.39**
CUB 16D75	.0075	9/16 x 1½	.65	**.39**
CUB 16D8	.008	9/16 x 1½	.65	**.39**
CUB 16S1	.01	9/16 x 1½	.70	**.42**
CUB 16S15	.015	9/16 x 1½	.70	**.42**
CUB 16S2	.02	11/16 x 1⅞	.70	**.42**
CUB 16S22	.022	11/16 x 1⅞	.70	**.42**
CUB 16S3	.03	11/16 x 1⅞	.70	**.42**
CUB 16S4	.04	¾ x 2¼	.70	**.42**
CUB 16S5	.05	¾ x 2¼	.70	**.42**
		6000 V. D.C.		
CUB 60T5	.0005	9/16 x 1½	1.35	**.81**
CUB 60D1	.001	9/16 x 1½	1.35	**.81**
CUB 60D5	.005	11/16 x 1⅞	1.35	**.81**
		10,000 V. D.C.		
CUB 100T5	.0005	11/16 x 1⅞	1.50	**.90**
		12,500 V. D.C.		
CUB 125T25	.00025	11/16 x 1⅞	1.70	**1.02**

*Furnished as a "BUDROC" unit.

MOLDED MYLAR* TUBULARS



MYLAR* Polyester Film
MOLDED TUBULAR CAPACITORS

Cornell-Dubilier's new PM SERIES of molded tubular capacitors are designed to meet the need for a rugged, high-temperature MOLDED unit. These are fabricated with the Du Pont Company's latest new dielectric material, "MYLAR" which maintains excellent electrical characteristics at temperatures up to +130°C. Over the temperature range of from —55°C to +100°C full rated voltage can be applied, and to +130°C voltage is derated only to 75%. Insulation resistance values are exceptionally high at any operating temperature and capacitance variation with thermal change is relatively small. The dielectric absorption and the power factor of the new capacitors is unusually low.

Non-inductive construction is employed with lead wires securely soldered to the extended foils, insuring low resistance connections and low radio frequency impedance. The durable thermosetting plastic case construction holds copperweld lead wires and sections firmly in place to withstand extremes of handling, soldering temperatures, vibration and shock.

Standard sizes in 400, 600, 1000 and 1600 VDC ranges are listed in the accompanying table.

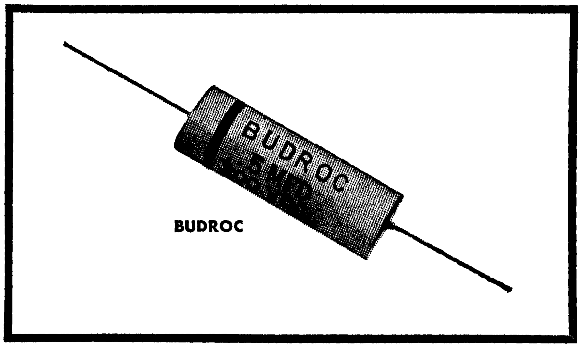
*DU PONT trade mark.

TEMPERATURE RANGE: —55°C to +130°C.

PM Cat. No.	Cap. Mfd.	Dimensions—Inches Diameter x Length	List Price	Net Price
		400 V. D.C.W.		
PM 4S1	.010	5/16 x 1	$1.80	**$1.08**
PM 4S12	.012	3/8 x 1¼	1.80	**1.08**
PM 4S15	.015	3/8 x 1¼	1.80	**1.08**
PM 4S18	.018	3/8 x 1¼	1.80	**1.08**
PM 4S22	.022	7/16 x 1¼	1.90	**1.14**
PM 4S27	.027	7/16 x 1¼	1.90	**1.14**
PM 4S33	.033	7/16 x 1¼	1.90	**1.14**
PM 4S39	.039	7/16 x 1¼	2.00	**1.20**
PM 4S47	.047	7/16 x 1¼	2.00	**1.20**
PM 4S56	.056	½ x 1½	2.10	**1.26**
PM 4S68	.068	½ x 1½	2.10	**1.26**
PM 4S82	.082	½ x 1½	2.20	**1.32**
PM 4P1	.10	½ x 1½	2.30	**1.38**
PM 4P12	.12	9/16 x 1 9/16	2.30	**1.38**
PM 4P15	.15	9/16 x 1 9/16	2.40	**1.44**
PM 4P18	.18	5/8 x 1 7/8	2.40	**1.44**
PM 4P22	.22	5/8 x 1 7/8	2.50	**1.50**
PM 4P27	.27	5/8 x 1 7/8	2.60	**1.56**
PM 4P33	.33	11/16 x 1 15/16	2.70	**1.62**
PM 4P39	.39	¾ x 2¼	2.80	**1.68**
PM 4P47	.47	¾ x 2¼	2.90	**1.74**
PM 4P56	.56	¾ x 2¼	3.10	**1.86**
PM 4P68	.68	1 x 2 1/8	3.30	**1.98**
PM 4P82	.82	1 x 2 1/8	3.50	**2.10**
PM 4W1	1.00	1 x 2 1/8	3.80	**2.28**
		600 V. D.C.W.		
PM 6T5	.0005	5/16 x 1	$1.80	**$1.08**
PM 6D1	.0010	5/16 x 1	1.80	**1.08**
PM 6D12	.0012	5/16 x 1	1.80	**1.08**
PM 6D15	.0015	5/16 x 1	1.80	**1.08**
PM 6D18	.0018	5/16 x 1	1.80	**1.08**
PM 6D22	.0022	5/16 x 1	1.80	**1.08**
PM 6D27	.0027	5/16 x 1	1.80	**1.08**
PM 6D33	.0033	5/16 x 1	1.80	**1.08**
PM 6D39	.0039	5/16 x 1	1.80	**1.08**
PM 6D47	.0047	3/8 x 1¼	1.80	**1.08**
PM 6D56	.0056	3/8 x 1¼	1.80	**1.08**
PM 6D68	.0068	3/8 x 1¼	1.80	**1.08**
PM 6D82	.0082	3/8 x 1¼	1.80	**1.08**
PM 6S1	.010	3/8 x 1¼	1.90	**1.14**
PM 6S12	.012	3/8 x 1¼	1.90	**1.14**
PM 6S15	.015	3/8 x 1¼	1.90	**1.14**
PM 6S18	.018	7/16 x 1¼	1.90	**1.14**
PM 6S22	.022	7/16 x 1¼	2.00	**1.20**
PM 6S27	.027	7/16 x 1¼	2.00	**1.20**
PM 6S33	.033	½ x 1½	2.10	**1.26**
PM 6S39	.039	½ x 1½	2.10	**1.26**
PM 6S47	.047	½ x 1½	2.30	**1.38**
PM 6S56	.056	½ x 1½	2.30	**1.38**
PM 6S68	.068	9/16 x 1 9/16	2.40	**1.44**
PM 6S82	.082	5/8 x 1 7/8	2.40	**1.44**
PM 6P1	.10	5/8 x 1 7/8	2.50	**1.50**
PM 6P12	.12	5/8 x 1 7/8	2.50	**1.50**
PM 6P15	.15	11/16 x 1 15/16	2.70	**1.62**
PM 6P18	.18	11/16x 1 15/16	2.80	**1.68**
PM 6P22	.22	¾ x 2¼	2.90	**1.74**
PM 6P27	.27	¾ x 2¼	3.10	**1.86**
PM 6P33	.33	1 x 2 1/8	3.30	**1.98**
PM 6P39	.39	1 x 2 1/8	3.50	**2.10**
PM 6P47	.47	1 x 2 1/8	3.80	**2.28**
		1000 V. D.C.W.		
PM 10D1	.0010	3/8 x 1¼	1.90	**1.14**
PM 10D12	.0012	3/8 x 1¼	1.90	**1.14**
PM 10D15	0015	3/8 x 1¼	1.90	**1.14**
PM 10D18	.0018	3/8 x 1¼	1.90	**1.14**
PM 10D22	.0022	3/8 x 1¼	1.90	**1.14**
PM 10D27	.0027	3/8 x 1¼	1.90	**1.14**
PM 10D33	.0033	3/8 x 1¼	1.90	**1.14**
PM 10D39	.0039	7/16 x 1¼	1.90	**1.14**
PM 10D47	.0047	7/16 x 1¼	1.90	**1.14**
PM 10D56	.0056	7/16 x 1¼	2.00	**1.20**
PM 10D68	.0068	7/16 x 1¼	2.00	**1.20**
PM 10D82	.0082	7/16 x 1¼	2.00	**1.20**
PM 10S1	.010	½ x 1½	2.10	**1.26**
PM 10S12	.012	½ x 1½	2.10	**1.26**
PM 10S15	.015	½ x 1½	2.20	**1.32**
PM 10S18	.018	½ x 1½	2.20	**1.32**
PM 10S22	.022	9/16 x 1 9/16	2.30	**1.38**
PM 10S27	.027	9/16 x 1 9/16	2.30	**1.38**
PM 10S33	.033	5/8 x 1 7/8	2.40	**1.44**
PM 10S39	.039	5/8 x 1 7/8	2.40	**1.44**
PM 10S47	.047	5/8 x 1 7/8	2.50	**1.50**
PM 10S56	.056	11/16 x 1 15/16	2.50	**1.50**
PM 10S68	.068	11/16 x 1 15/16	2.70	**1.62**
PM 10S82	.082	¾ x 2¼	2.80	**1.68**
PM 10P1	.10	¾ x 2¼	3.00	**1.80**
PM 10P12	.12	1 x 2 1/8	3.20	**1.92**
PM 10P15	.15	1 x 2 1/8	3.60	**2.16**
PM 10P18	.18	1 x 2 1/8	3.90	**2.34**
		1600 V. D.C.W.		
PM 16D1	.0010	3/8 x 1¼	1.90	**1.14**
PM 16D12	.0012	3/8 x 1¼	1.90	**1.14**
PM 16D15	.0015	3/8 x 1¼	1.90	**1.14**
PM 16D18	.0018	3/8 x 1¼	1.90	**1.14**
PM 16D22	.0022	3/8 x 1¼	1.90	**1.14**
PM 16D27	.0027	3/8 x 1¼	2.00	**1.20**
PM 16D33	.0033	3/8 x 1¼	2.00	**1.20**
PM 16D39	.0039	7/16 x 1¼	2.00	**1.20**
PM 16D47	.0047	7/16 x 1¼	2.10	**1.26**
PM 16D56	.0056	7/16 x 1¼	2.10	**1.26**
PM 16D68	.0068	½ x 1½	2.10	**1.26**
PM 16D82	.0082	½ x 1½	2.20	**1.32**
PM 16S1	.010	½ x 1½	2.20	**1.32**
PM 16S12	.012	½ x 1½	2.20	**1.32**
PM 16S15	.015	½ x 1½	2.30	**1.38**
PM 16S18	.018	9/16 x 1 9/16	2.30	**1.38**
PM 16S22	.022	5/8 x 1 7/8	2.40	**1.44**
PM 16S27	.027	5/8 x 1 7/8	2.40	**1.44**
PM 16S33	.033	5/8 x 1 7/8	2.50	**1.50**
PM 16S39	.039	11/16 x 1 15/16	2.60	**1.56**
PM 16S47	.047	11/16 x 1 15/16	2.70	**1.62**
PM 16S56	.056	¾ x 2¼	2.80	**1.68**
PM 16S68	.068	¾ x 2¼	3.00	**1.80**
PM 16S82	.082	1 x 2 1/8	3.20	**1.92**
PM 16P1	.10	1 x 2 1/8	3.50	**2.10**
PM 16P12	.12	1 x 2 1/8	3.90	**2.34**

CORNELL DUBILIER

STEATITE-CASED TUBULAR CAPACITORS
"BUDROC"



BUDROC

BUDROC
STEATITE-CASED TUBULAR PAPER CAPACITORS

C-D "BUDROC" capacitors are made with non-inductive paper and extended foil elements housed in the finest grade ceramic (steatite) tubes with Polykane end-seals. "BUDROCS" are designed and especially recommended for *manufacturing* applications. Except for the C-D molded tubular "CUB", the C-D "BUDROC" surpasses the performance of any molded tubular unit available.

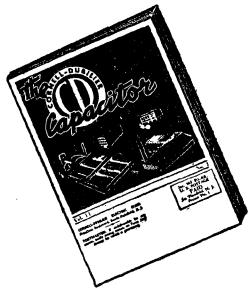
The steatite tube provides exceptional protection against heat and humidity. The Polykane end-fill is tightly bonded to the steatite tube and lead wires, cannot soften, melt or flow at any rated operating temperature. This assures a permanent seal to moisture and humidity besides providing a rigid support for the lead wires.

TEMPERATURE RANGE:

"BUDROC" capacitors rated up to and including 400 VDCW are impregnated with high quality HT compound (—40°C to +90°C). Units rated above 400 volts VDCW are impregnated with C-D Vikane (—55°C to +100°C).

ST Cat. No.	Capacity Mfd.	Size—Inches D x L	List Price	Net Price
		200 VDCW		
ST 2S2	.02	⅜ x 1¼	$.25	**$.15**
ST 2S5	.05	⅜ x 1¼	.25	**.15**
ST 2P1	.10	7/16 x 1¼	.35	**.21**
ST 2P25	.25	11/16 x 1⅞	.40	**.24**
ST 2P5	.50	11/16 x 1⅞	.60	**.36**
ST 2W1	1.00	1 x 2¼	.90	**.54**

ST Cat. No.	Capacity Mfd.	Size—Inches D x L	List Price	Net Price
		400 VDCW		
ST 4S1	.01	5/16 x 1	$.25	**$.15**
ST 4S2	.02	⅜ x 1¼	.25	**.15**
ST 4S22	.022	⅜ x 1¼	.25	**.15**
ST 4S47	.047	7/16 x 1¼	.30	**.18**
ST 4S5	.05	7/16 x 1¼	.30	**.18**
ST 4S68	.068	½ x 1½	.35	**.21**
ST 4P1	.10	½ x 1½	.35	**.21**
ST 4P15	.15	11/16 x 1⅞	.35	**.21**
ST 4P22	.22	11/16 x 1⅞	.40	**.24**
ST 4P25	.25	11/16 x 1⅞	.40	**.24**
ST 4P5	.50	13/16 x 2¼	.60	**.36**
ST 4W1	1.00	1 x 2⅞	.90	**.54**
		600 VDCW		
ST 6T5	.0005	5/16 x 1	.25	**.15**
ST 6D1	.001	5/16 x 1	.25	**.15**
ST 6D15	.0015	5/16 x 1	.25	**.15**
ST 6D2	.002	5/16 x 1	.25	**.15**
ST 6D22	.0022	5/16 x 1	.25	**.15**
ST 6D3	.003	5/16 x 1	.25	**.15**
ST 6D33	.0033	5/16 x 1	.25	**.15**
ST 6D4	.004	5/16 x 1	25	**.15**
ST 6D47	.0047	5/16 x 1	.25	**.15**
ST 6D5	.005	⅜ x 1¼	.25	**.15**
ST 6D68	.0068	⅜ x 1¼	.30	**.18**
ST 6S1	.01	⅜ x 1¼	.30	**.18**
ST 6S15	.015	⅜ x 1¼	.30	**.18**
ST 6S2	.02	7/16 x 1¼	.30	**.18**
ST 6S22	.022	7/16 x 1¼	.30	**.18**
ST 6S25	.025	7/16 x 1¼	.35	**.21**
ST 6S3	.03	7/16 x 1¼	.35	**.21**
ST 6S4	.04	½ x 1½	.35	**.21**
ST 6S47	.047	½ x 1½	.40	**.24**
ST 6S5	.05	½ x 1½	.40	**.24**
ST 6S68	.068	11/16 x 1⅞	.45	**.27**
ST 6P1	.10	11/16 x 1⅞	.45	**.27**
ST 6P25	.25	13/16 x 2¼	.55	**.33**
ST 6P5	.50	1 x 2⅞	.80	**.48**
		1600 VDCW		
ST 16D1	.001	⅜ x 1¼	.65	**.39**
ST 16D15	.0015	⅜ x 1¼	.65	**.39**
ST 16D2	.002	⅜ x 1¼	.65	**.39**
ST 16D22	.0022	⅜ x 1¼	.65	**.39**
ST 16D3	.003	7/16 x 1¼	.65	**.39**
ST 16D33	.0033	7/16 x 1¼	.65	**.39**
ST 16D4	.004	7/16 x 1¼	.65	**.39**
ST 16D47	.0047	7/16 x 1¼	.65	**.39**
ST 16D5	.005	7/16 x 1¼	.65	**.39**
ST 16D56	.0056	7/16 x 1¼	.65	**.39**
ST 16D68	.0068	½ x 1½	.65	**.39**
ST 16D82	.0082	½ x 1½	.65	**.39**
ST 16S1	.01	½ x 1½	.70	**.42**
ST 16S15	.015	½ x 1½	.70	**.42**
ST 16S2	.02	11/16 x 1⅞	.70	**.42**
ST 16S25	.025	11/16 x 1⅞	.70	**.42**
ST 16S3	.03	11/16 x 1⅞	.70	**.42**
ST 16S4	.04	13/16 x 2¼	.70	**.42**



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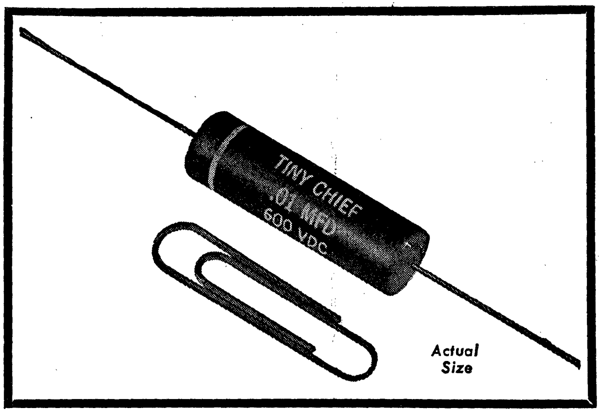
"TINY-CHIEF" MOLDED PLASTIC CAPACITORS



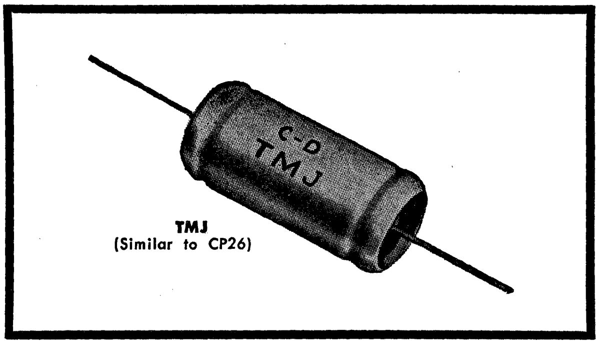
Actual Size

Cornell-Dubilier "TINY-CHIEFS" are small size all purpose capacitors molded in an extra hard thermosetting plastic which has all the qualities and electrical characteristics required for long lasting all-around satisfaction.

TEMPERATURE RANGE: —40°C. to +85°C.

PJ Cat. No.	Cap. Mfd.	Size—Inches Dia. & Length	List Price	Net Price
		200 V. D.C.		
PJ 2S2	.02	5/16 x 1	$.25	**$.15**
PJ 2S5	.05	3/8 x 1 1/4	.25	**.15**
PJ 2P1	.1	7/16 x 1 1/4	.35	**.21**
PJ 2P25	.25	5/8 x 1 7/8	.45	**.27**
PJ 2P5	.5	5/8 x 1 7/8	.60	**.36**
PJ 2W1	1.0	3/4 x 2 1/4	.90	**.54**
		400 V. D.C.		
PJ 4S1	.01	5/16 x 1	.25	**.15**
PJ 4S2	.02	3/8 x 1 1/4	.25	**.15**
PJ 4S22	.022	3/8 x 1 1/4	.25	**.15**
PJ 4S47	.047	7/16 x 1 1/4	.30	**.18**
PJ 4S5	.05	7/16 x 1 1/4	.30	**.18**
PJ 4S68	.068	1/2 x 1 1/2	.35	**.21**
PJ 4P1	.1	1/2 x 1 1/2	.35	**.21**
PJ 4P15	.15	5/8 x 1 7/8	.35	**.21**
PJ 4P22	.22	5/8 x 1 7/8	.40	**.24**
PJ 4P25	.25	5/8 x 1 7/8	.45	**.27**
PJ 4P5	.5	3/4 x 2 1/4	.60	**.36**
PJ 4W1	1.0	1 x 2 1/8	.90	**.54**
		600 V. D.C.		
PJ 6T25	.00025	5/16 x 1	.25	**.15**
PJ 6T5	.0005	5/16 x 1	.25	**.15**
PJ 6D1	.001	5/16 x 1	.25	**.15**
PJ 6D15	.0015	5/16 x 1	.25	**.15**
PJ 6D2	.002	5/16 x 1	.25	**.15**
PJ 6D22	.0022	5/16 x 1	.25	**.15**
PJ 6D3	.003	5/16 x 1	.25	**.15**
PJ 6D33	.0033	5/16 x 1	.25	**.15**
PJ 6D4	.004	5/16 x 1	.25	**.15**
PJ 6D47	.0047	5/16 x 1	.25	**.15**
PJ 6D5	.005	5/16 x 1	.25	**.15**
PJ 6D6	.006	3/8 x 1 1/4	.25	**.15**
PJ 6D68	.0068	3/8 x 1 1/4	.30	**.18**
PJ 6S1	.01	3/8 x 1 1/4	.30	**.18**
PJ 6S15	.015	3/8 x 1 1/4	.30	**.18**
PJ 6S2	.02	7/16 x 1 1/4	.30	**.18**
PJ 6S22	.022	7/16 x 1 1/4	.30	**.18**
PJ 6S25	.025	7/16 x 1 1/4	.30	**.18**
PJ 6S3	.03	7/16 x 1 1/4	.35	**.21**
PJ 6S4	.04	1/2 x 1 1/2	.35	**.21**
PJ 6S47	.047	1/2 x 1 1/2	.40	**.24**
PJ 6S5	.05	1/2 x 1 1/2	.40	**.24**
PJ 6S6	.06	5/8 x 1 7/8	.40	**.24**
PJ 6S68	.068	5/8 x 1 7/8	.40	**.24**
PJ 6P1	.1	5/8 x 1 7/8	.45	**.27**
PJ 6P25	.25	3/4 x 2 1/4	.55	**.33**
PJ 6P5	.5	1 x 2 1/8	.80	**.48**
		1600 V. D.C.		
PJ 16D1	.001	3/8 x 1 1/4	.65	**.39**
PJ 16D15	.0015	3/8 x 1 1/4	.65	**.39**
PJ 16D2	.002	3/8 x 1 1/4	.65	**.39**
PJ 16D22	.0022	3/8 x 1 1/4	.65	**.39**
PJ 16D3	.003	3/8 x 1 1/4	.65	**.39**
PJ 16D33	.0033	3/8 x 1 1/4	.65	**.39**

METAL CASED DYKANOL PAPER CAPACITORS



TMJ
(Similar to CP26)

TYPE TMJ....4P

C-D type TMJ-4P is a non-magnetic metal-cased, ungrounded section, tubular paper capacitor, the body of which is covered with a non-hygroscopic plastic insulating tube. The unit is also available with a mounting strap* on request.

The TMJ is impregnated with Dykanol "C" (oil) and meets MIL-C-25A temperature Characteristic "E".

STANDARD TOLERANCE: ±20%

TEMPERATURE RANGE: —55°C to +85°C

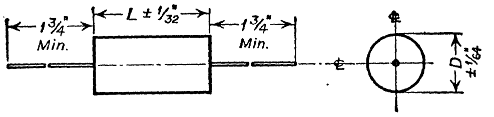
TMJ Cat. No.	Cap. Mfd.	Body Dimensions Overall Dia. x Length	List Price	Net Price
		600 VDCW		
TMJ 6D3-4P	.003	1/2 x 1 5/16	$1.30	**$ .78**
TMJ 6D6-4P	.006	1/2 x 1 5/16	1.30	**.78**
TMJ 6S1-4P	.01	1/2 x 1 5/16	1.30	**.78**
TMJ 6S2-4P	.02	1/2 x 1 13/16	1.45	**.87**
TMJ 6S5-4P	.05	11/16 x 1 11/16	1.55	**.93**
TMJ 6P1-4P	.10	11/16 x 2 1/16	1.75	**1.05**
TMJ 6P25-4P	.25	1 1/16 x 2 5/16	2.40	**1.44**
TMJ 6P5-4P	.50	1 1/16 x 2 13/16	3.05	**1.83**
		1000 VDCW		
TMJ 10D3-4P	.003	11/16 x 1 5/16	1.55	**.93**
TMJ 10D6-4P	.006	11/16 x 1 5/16	1.55	**.93**
TMJ 10DS1-4P	.01	11/16 x 1 5/16	1.55	**.93**
TMJ 10DS2-4P	.02	11/16 x 1 11/16	1.70	**1.02**
TMJ 10DS5-4P	.05	13/16 x 1 13/16	1.80	**1.08**
TMJ 10P1-4P	.10	1 1/16 x 2 1/16	2.05	**1.23**
TMJ 10P25-4P	.25	1 1/16 x 2 13/16	2.70	**1.62**
		1600 VDCW		
TMJ 16D3-4P	.003	1 1/16 x 1 7/16	1.70	**1.02**
TMJ 16D6-4P	.006	1 1/16 x 1 7/16	1.70	**1.02**
TMJ 16S1-4P	.01	1 1/16 x 1 7/16	1.70	**1.02**
TMJ 16S2-4P	.02	1 1/16 x 1 13/16	1.80	**1.08**
TMJ 16S5-4P	.05	1 1/16 x 2 1/16	1.95	**1.17**
TMJ 16P1-4P	.10	1 1/16 x 2 5/16	2.55	**1.53**

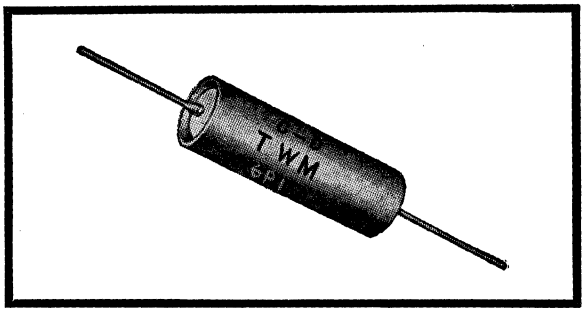
*For unit with mounting strap, specify type as TMJ-6P (Ex. TMJ-6S1-6P).

PJ Cat. No.	Cap. Mfd.	Size—Inches Dia. & Length	List Price	Net Price
PJ 16D4	.004	3/8 x 1 1/4	$.65	**$.39**
PJ 16D47	.0047	3/8 x 1 1/4	.65	**.39**
PJ 16D5	.005	3/8 x 1 1/4	.65	**.39**
PJ 16D55	.0055	7/16 x 1 1/4	.65	**.39**
PJ 16D6	.006	7/16 x 1 1/4	.65	**.39**
PJ 16D68	.0068	7/16 x 1 1/4	.65	**.39**
PJ 16D7	.007	7/16 x 1 1/4	.65	**.39**
PJ 16D75	.0075	7/16 x 1 1/4	.65	**.39**
PJ 16D8	.008	7/16 x 1 1/4	.65	**.39**
PJ 16S1	.01	1/2 x 1 1/2	.70	**.42**
PJ 16S15	.015	1/2 x 1 1/2	.70	**.42**
PJ 16S2	.02	5/8 x 1 7/8	.70	**.42**
PJ 16S25	.025	5/8 x 1 7/8	.70	**.42**
PJ 16S3	.03	5/8 x 1 7/8	.70	**.42**
PJ 16S4	.04	5/8 x 1 7/8	.70	**.42**

CORNELL DUBILIER

MINIATURE METAL-CASED TUBULARS "DEMICONS"





The Cornell-Dubilier series of "DEMICON" capacitors offer miniaturized tubular metal-cased units designed and processed to meet rigid and severe operating requirements particularly where space limitations are an important factor.

Unique and improved manufacturing processes have contributed to a product of unusual stability, dependability, and longevity, as attested to by field-test proven service over a long period of time.

Cornell-Dubilier DEMICONS are hermetically sealed in metal cases, with glass-to-metal seal terminals and are available in a wide variety of mounting styles, impregnants, tolerances, and internal construction. See Bulletins NB-147 and NB-151.

"BASIC" STYLE UNGROUNDED

DEMICONS

TWH Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWH 1D1	.001	100	.175 x ¾	$2.95	**$1.77**
TWH 1S1	.01	100	.175 x ¾	3.00	**1.80**
TWH 1P1	.1	100	.312 x ⅞	3.25	**1.95**
TWH 1W1	1.0	100	.562 x 1⅜	4.15	**2.49**
TWH 2D1	.001	200	.235 x ¾	3.05	**1.83**
TWH 2S1	.01	200	.235 x ¾	3.15	**1.89**
TWH 2P1	.1	200	.312 x ⅞	3.40	**2.04**
TWH 2W1	1.0	200	.562 x 1⅞	4.25	**2.55**
TWH 3D1	.001	300	.235 x ¾	3.10	**1.86**
TWH 3S1	.01	300	.235 x ¾	3.20	**1.92**
TWH 3P1	.1	300	.400 x ⅞	3.45	**2.07**
TWH 3W1	1.0	300	.670 x 1⅞	4.75	**2.85**
TWH 4D1	.001	400	.235 x ¾	3.15	**1.89**
TWH 4S1	.01	400	.235 x ¾	3.25	**1.95**
TWH 4P1	.1	400	.400 x 1⅛	3.50	**2.10**
TWH 4W1	1.0	400	.750 x 2⅛	5.00	**3.00**

TWC Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWC 1D1	.001	100	.175 x ¾	$3.30	**$1.98**
TWC 1S1	.01	100	.175 x ¾	3.40	**2.04**
TWC 1P1	.1	100	.312 x ⅞	3.70	**2.22**
TWC 1W1	1.0	100	.562 x 1⅞	4.85	**2.91**
TWC 2D1	.001	200	.235 x ¾	3.45	**2.07**
TWC 2S1	.01	200	.235 x ¾	3.55	**2.13**
TWC 2P1	.1	200	.400 x ⅞	3.85	**2.31**
TWC 2W1	1.0	200	.670 x 1⅞	5.40	**3.24**
TWC 3D1	.001	300	.235 x ¾	3.50	**2.10**
TWC 3S1	.01	300	.235 x ¾	3.60	**2.16**
TWC 3P1	.1	300	.400 x 1⅛	3.90	**2.34**
TWC 3W1	1.0	300	.750 x 2⅛	5.75	**3.45**
TWC 4D1	.001	400	.235 x ¾	3.55	**2.13**
TWC 4S1	.01	400	.235 x ¾	3.65	**2.19**
TWC 4P1	.1	400	.400 x 1⅜	4.15	**2.49**
TWC 4P68	.68	400	.750 x 2⅛	5.75	**3.45**
TWC 6D1	.001	600	.235 x ¾	3.60	**2.16**
TWC 6S1	.01	600	.312 x ⅞	3.75	**2.25**
TWC 6P1	.1	600	.562 x 1⅛	4.45	**2.67**
TWC 6P47	.47	600	.750 x 2⅛	5.80	**3.48**
TWC 10D1	.001	1000	.400 x ⅞	4.10	**2.46**
TWC 10S1	.01	1000	.400 x ⅞	4.25	**2.55**
TWC 10P1	.1	1000	.562 x 1⅝	5.00	**3.00**
TWC 10P47	.47	1000	1.00 x 2⅛	6.30	**3.78**

All Cornell-Dubilier DEMICONS will comply with applicable parts of Specifications JAN C-25 and MIL-C-25A.

The listings on this page cover the BASIC STYLE (illustrated) for types TWH, TWC, TWU, TWM.

STANDARD TOLERANCE: ±20%.

TEMPERATURE RANGE:

TWH	High Temperature wax	—40°C to +85°C.
TWC	"Dykanol"*	—55°C to +85°C.
TWU	"Dykanol U"*	—55°C to +125°C.
TWM	"Mylar"** polyester film	—55°C to +160°C.

PRICES shown below are for BASIC STYLE—UNGROUNDED.

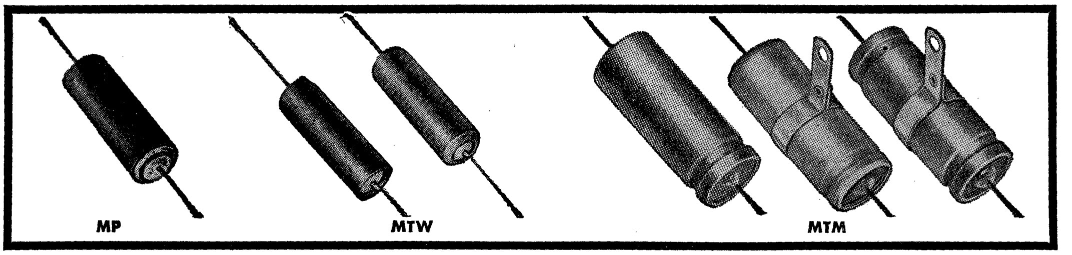
*Registered Cornell-Dubilier trade mark.
**Registered Dupont trade mark.

DEMICONS

TWU Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWU 1D1	.001	100	.175 x ¾	$4.13	**$2.48**
TWU 1S1	.01	100	.175 x ¾	4.25	**2.55**
TWU 1P1	.1	100	.312 x ⅞	4.63	**2.78**
TWU 1W1	1.0	100	.562 x 1⅞	6.06	**3.64**
TWU 2D1	.001	200	.235 x ¾	4.31	**2.59**
TWU 2S1	.01	200	.235 x ¾	4.44	**2.66**
TWU 2P1	.1	200	.400 x ⅞	4.81	**2.89**
TWU 2W1	1.0	200	.670 x 1⅞	6.75	**4.05**
TWU 3D1	.001	300	.235 x ¾	4.38	**2.63**
TWU 3S1	.01	300	.235 x ¾	4.50	**2.70**
TWU 3P1	.1	300	.400 x 1⅛	4.88	**2.93**
TWU 3W1	1.0	300	.750 x 2⅛	7.19	**4.31**
TWU 4D1	.001	400	.235 x ¾	4.44	**2.66**
TWU 4S1	.01	400	.235 x ¾	4.56	**2.74**
TWU 4P1	.1	400	.400 x 1⅜	5.19	**3.11**
TWU 4P68	.68	400	.750 x 2⅛	7.19	**4.31**
TWU 6D1	.001	600	.235 x ¾	4.50	**2.70**
TWU 6S1	.01	600	.312 x ⅞	4.69	**2.81**
TWU 6P1	.1	600	.562 x 1⅛	5.56	**3.34**
TWU 6P47	.47	600	.750 x 2⅛	7.25	**4.35**
TWU 10D1	.001	1000	.400 x ⅞	5.13	**3.08**
TWU 10S1	.01	1000	.400 x ⅞	5.31	**3.19**
TWU 10P1	.1	1000	.562 x 1⅝	6.25	**3.75**
TWU 10P47	.47	1000	1.000 x 2⅛	7.88	**4.73**

TWM Cat. No.	Cap. Mfd.	V.D.C.W.	Size—Inches Dia. x Length	List Price	Net Price
TWM 1S1	.01	100	.235 x ⅞	$5.95	**$3.57**
TWM 1S22	.022	100	.312 x ⅞	6.10	**3.66**
TWM 1S47	.047	100	.312 x ⅞	6.30	**3.78**
TWM 1P1	.1	100	.400 x ⅞	6.50	**3.90**
TWM 4D22	.0022	400	.235 x ⅞	6.20	**3.72**
TWM 4S1	.01	400	.312 x ⅞	6.40	**3.84**
TWM 4P1	.1	400	.562 x 1	7.25	**4.35**
TWM 4W1	1.0	400	.750 x 2½	10.50	**6.30**
TWM 6D22	.0022	600	.235 x ⅞	6.30	**3.78**
TWM 6S1	.01	600	.312 x 1	6.55	**3.93**
TWM 6P1	.1	600	.562 x 1⅜	7.80	**4.68**
TWM 6W1	1.0	600	1.000 x 2 11/16	12.75	**7.65**

COMPACT METALIZED-PAPER CAPACITORS



Cornell-Dubilier self-healing, metalized paper capacitors have better electrical characteristics and extra long service life. Units are light and compact.

"PUP" units have bare wire leads securely anchored in metal end-caps, wax-impregnated and dip-sealed against humidity. All units are extended foil—non-inductive wound for low impedance at high frequencies, have high insulation resistance, low power factor and small capacity change with temperature and life.

"METAPUPS" are one piece metal tubular cased, pressure sealed by spin-over on synthetic rubber gaskets.

"SEALPUPS" are a high quality metalized paper capacitor, designed for smallest size and positive seal against moisture. They are hermetically sealed in metal cases with solder—seal glass terminals. Especially recommended in military and commercial equipment where miniature size and light weight are paramount.

For further data on C-D metalized capacitors, write for Bulletins 142-3-4 and NB-152.

TEMPERATURE RANGE: —40°C to +60°C.

"PUP" METAL END-CAP CARDBOARD TUBULARS

MP Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	List Price	Net Price
MP 2S5	.05	200	3/8 x 5/8	$.65	**$.39**
MP 2P1	.1	200	3/8 x 5/8	.70	**.42**
MP 2P25	.25	200	15/32 x 5/8	.90	**.54**
MP 2P5	.5	200	15/32 x 1 1/8	1.05	**.63**
MP 4S5	.05	400	15/32 x 5/8	.70	**.42**
MP 4P1	.1	400	15/32 x 1 1/8	.80	**.48**
MP 4P25	.25	400	9/16 x 1 1/8	1.00	**.60**
MP 4P5	.5	400	5/8 x 1 5/8	1.15	**.69**
MP 6S1	.01	600	3/8 x 5/8	.70	**.42**
MP 6P1	.1	600	15/32 x 1 1/8	.90	**.54**
MP 6P25	.25	600	5/8 x 1 1/8	1.10	**.66**
MP 6P5	.5	600	23/32 x 1 5/8	1.45	**.87**

TEMPERATURE RANGE: —55°C to +95°C.

"METAPUP" ONE-PIECE METAL TUBULARS

MTM Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	List Price	Net Price
MTM 2S5	.05	200	3/8 x 15/16	$1.40	**$.84**
MTM 2P1	.1	200	7/16 x 15/16	1.45	**.87**
MTM 2P25	.25	200	1/2 x 15/16	1.60	**.96**
MTM 2P5	.5	200	1/2 x 1 1/4	1.70	**1.02**
MTM 4S5	.05	400	7/16 x 15/16	1.45	**.87**
MTM 4P1	.1	400	7/16 x 1 1/4	1.60	**.96**
MTM 4P25	.25	400	5/8 x 1 1/4	1.80	**1.08**
MTM 4P5	.5	400	5/8 x 1 15/16	2.00	**1.20**
MTM 6S1	.01	600	3/8 x 15/16	1.40	**.84**
MTM 6P1	.1	600	1/2 x 1 7/16	1.70	**1.02**
MTM 6P25	.25	600	5/8 x 1 9/16	2.00	**1.20**
MTM 6P5	.5	600	3/4 x 1 15/16	2.40	**1.44**

TEMPERATURE RANGE: —55°C to +95°C.

"SEALPUP" GLASS-METAL END-SEALED TUBULARS

MTW Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	List Price	Net Price
MTW 2S5	.05	200	.235 x 3/4	$2.85	**$1.71**
MTW 2P1	.1	200	.312 x 3/4	2.95	**1.77**
MTW 2P25	.25	200	.312 x 1 1/16	3.40	**2.04**
MTW 2P5	.5	200	.400 x 1 1/16	4.00	**2.40**
MTW 4S5	.05	400	.400 x 3/4	3.10	**1.86**
MTW 4P1	.1	400	.400 x 1 1/16	3.30	**1.98**
MTW 4P25	.25	400	.562 x 1 1/16	3.95	**2.37**
MTW 4P5	.5	400	.562 x 1 3/4	4.85	**2.91**
MTW 6S1	.01	600	.312 x 3/4	2.90	**1.74**
MTW 6P1	.1	600	.500 x 1 1/4	3.65	**2.19**
MTW 6P25	.25	600	.670 x 1 3/8	4.50	**2.70**
MTW 6P5	.5	600	.750 x 1 3/4	5.85	**3.51**

HIGH TEMPERATURE Metalized-Paper CAPACITORS

- **POLYKANE-IMPREGNATED:** This impregnant insures excellent electrical properties over long service life.
- **MOISTURE RESISTANT:** MTX tubulars have the finest glass-to-metal solder seal terminals for maximum protection against moisture. MPX tubulars have POLYKANE-impregnated paper tubes, bonded securely to the POLYKANE fill. An external flash wax dip provides an increased moisture seal for extra long storage and service conditions under extremes of humidity.
- **NON-LEAKING:** "POLYKANE" is a solid thermosetting plastic that will not soften, crack, or leak at the maximum temperature. No oil or wax is used internally with these units.

MPX†—HIGH TEMPERATURE Paper-Cased TUBULARS

STANDARD TOLERANCE: +40 —20% to 1 mfd.
+30 —20% over 1 mfd.

TEMP. RANGE: —55°C to +130°C

MPX Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Dia. x Length	List Price	Net Price
MPX 2S5	.05	200	1/4 x 13/16	$1.60	**$ .96**
MPX 2P1	.10	200	5/16 x 13/16	1.75	**1.05**
MPX 2P25	.25	200	13/32 x 13/16	2.00	**1.20**
MPX 2P5	.50	200	13/32 x 1 1/8	2.50	**1.50**
MPX 4S5	.05	400	3/8 x 13/16	1.65	**.99**
MPX 4P1	.10	400	3/8 x 1 1/8	1.80	**1.08**
MPX 4P25	.25	400	9/16 x 1 3/16	2.10	**1.26**
MPX 4P5	.50	400	5/8 x 1 3/8	2.85	**1.71**
MPX 6S1	.01	600	1/4 x 13/16	1.45	**.87**
MPX 6P1	.10	600	1/4 x 1 1/8	1.90	**1.14**
MPX 6P25	.25	600	5/8 x 1 3/16	2.25	**1.35**
MPX 6P5	.50	600	11/16 x 1 1/2	3.00	**1.80**

†For High Temperature Metalized Paper Capacitors in "BATHTUB" TYPE cases (Type SBX)—See Bulletin NB-152.

MTX†—HIGH TEMPERATURE Metal-Cased‡ TUBULARS

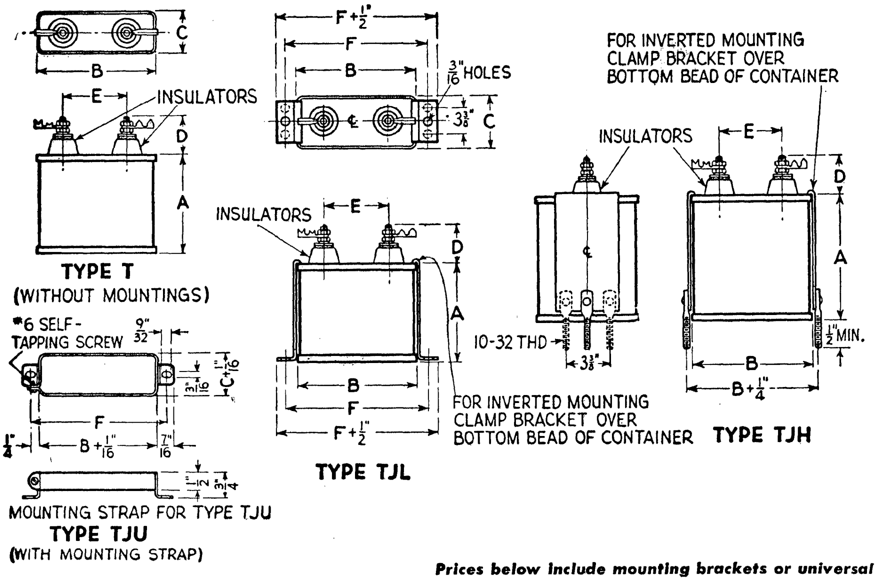
STANDARD TOLERANCE: +40 —20% to 1 mfd.
+30 —20% over 1 mfd.

TEMP. RANGE: —55°C to +130°C

MTX Cat. No.	Cap. Mfd.	Voltage DCW	Size—Inches Diam. x Length	List Price	Net Price
MTX 2S5G	.05	200	.235 x 3/4	$3.40	**$2.04**
MTX 2P1G	.10	200	.312 x 3/4	3.45	**2.07**
MTX 2P25G	.25	200	.312 x 1 1/16	4.00	**2.40**
MTX 2P5G	.50	200	.400 x 1 1/16	4.70	**2.82**
MTX 4S5G	.05	400	.312 x 3/4	3.60	**2.16**
MTX 4P1G	.10	400	.400 x 1 1/16	3.85	**2.31**
MTX 4P25G	.25	400	.500 x 1 1/16	4.65	**2.79**
MTX 4P5G	.50	400	.562 x 1 3/4	5.70	**3.42**
MTX 6S1G	.01	600	.312 x 3/4	3.35	**2.01**
MTX 6P1G	.10	600	.400 x 1 1/16	4.30	**2.58**
MTX 6P25G	.25	600	.562 x 1 1/4	5.25	**3.15**
MTX 6P5G	.50	600	.670 x 1 3/4	6.75	**4.05**

‡Other Styles available—See Bulletin NB-152.

DYKANOL TRANSMITTING CAPACITORS



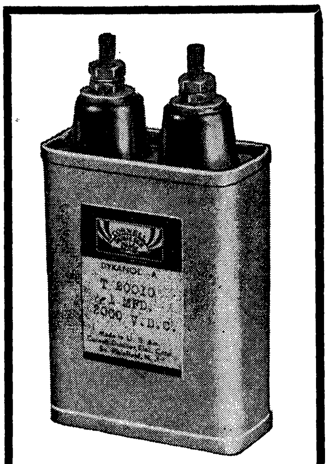
TYPE T (WITHOUT MOUNTINGS)

MOUNTING STRAP FOR TYPE TJU

TYPE TJU (WITH MOUNTING STRAP)

TYPE TJL

TYPE TJH



TYPE T
(Similar to CP70)
Provided with mounting brackets designated upon ordering as explained below.

Prices below include mounting brackets or universal mounting strap when ordered according to these type numbers.

TYPE DESIGNATIONS—Type T (basic units) are without mountings. To order Types TJH, TJL or TJU with mountings as shown above, add letter symbols of type mountings desired to Cat. No. as follows:

TYPE T—(Basic unit) without mountings.

TYPE TJH—With screw spade-lug brackets.

TYPE TJL—With mounting foot brackets.

TYPE TJU—With universal mounting strap.

TEMPERATURE RANGE: −55°C to +85°C. **STANDARD TOLERANCE:** ±10%.

T Cat. No.	Cap. Mfd.	Dimensions—Inches						List Price	Net Price
		A	B	C	D	E	F		
		600 V. D.C. Working							
T 6005	.5	2 1/8	1 13/16	1 1/16	7/8	13/16	2 1/4	$4.70	**$2.82**
T 6010	1	2 1/8	1 13/16	1 1/16	7/8	13/16	2 1/4	5.80	**3.48**
T 6020	2	2 7/8	1 13/16	1 1/16	7/8	13/16	2 1/4	7.15	**4.29**
T 6030	3	3 7/8	1 13/16	1 1/16	7/8	13/16	2 1/4	8.25	**4.95**
T 6040	4	3 3/8	2 1/2	1 3/16	7/8	1 1/8	3	9.10	**5.46**
T 6050	5	4 3/4	1 13/16	1 1/16	7/8	13/16	2 1/4	10.45	**6.27**
T 6060	6	4 5/8	2 1/2	1 3/16	7/8	1 1/8	3	11.30	**6.78**
T 6080	8	3 13/16	3 3/4	1 1/4	7/8	2	4 3/8	13.50	**8.10**
T 6100	10	4 5/8	3 3/4	1 1/4	7/8	2	4 3/8	15.15	**9.09**
		1000 V. D.C. Working							
T 10001	.1	2	1 13/16	1 1/16	7/8	13/16	2 1/4	4.15	**2.49**
T 100025	.25	2 1/8	1 13/16	1 1/16	7/8	13/16	2 1/4	4.70	**2.82**
T 10005	.5	2 1/8	1 13/16	1 1/16	7/8	13/16	2 1/4	4.95	**2.97**
T 10010	1	2 1/8	1 13/16	1 1/16	7/8	13/16	2 1/4	6.35	**3.81**
T 10020	2	4	1 13/16	1 1/16	7/8	13/16	2 1/4	8.25	**4.95**
T 10030	3	3 1/2	2 1/2	1 3/16	7/8	1 1/8	3	9.65	**5.79**
T 10040	4	4 5/8	2 1/2	1 3/16	7/8	1 1/8	3	10.45	**6.27**
T 10050	5	3 13/16	3 3/4	1 1/4	7/8	2	4 3/8	12.65	**7.59**
T 10060	6	4 3/4	3 3/4	1 1/4	7/8	2	4 3/8	14.05	**8.43**
T 10080	8	4 3/4	3 3/4	1 1/4	7/8	2	4 3/8	15.15	**9.09**
T 10100	10	4 5/8	3 3/4	1 3/4	7/8	2	4 3/8	16.80	**10.08**
T 10120	12	3 13/16	3 3/4	2 1/4	7/8	2	4 3/8	18.15	**10.89**
T 10150	15	4 3/4	3 3/4	2 1/2	7/8	2	4 3/8	20.10	**12.06**
		1500 V. D.C. Working							
T 15005	.5	2 7/8	1 13/16	1 1/16	7/8	13/16	2 1/4	6.35	**3.81**
T 15010	1	4	1 13/16	1 1/16	7/8	13/16	2 1/4	7.45	**4.47**
T 15020	2	4 1/8	2 1/2	1 3/16	7/8	1 1/8	3	10.45	**6.27**
T 15030	3	4 3/4	2 1/2	1 3/16	7/8	1 1/8	3	12.40	**7.44**
T 15040	4	4 5/8	3 3/4	1 1/4	7/8	2	4 3/8	14.05	**8.43**
T 15050	5	4 3/4	3 3/4	1 3/4	7/8	2	4 3/8	15.15	**9.09**
T 15060	6	4 3/4	3 3/4	1 3/4	7/8	2	4 3/8	17.05	**10.23**
T 15080	8	4 3/4	3 3/4	2 1/2	7/8	2	4 3/8	20.90	**12.54**
***T 15100**	10	4 3/4	3 3/4	3 3/16	7/8	2	4 3/8	25.05	**15.03**
***T 15120**	12	4 3/4	3 3/4	3 3/16	7/8	2	4 3/8	27.25	**16.35**
†*T 15150	15	4 3/4	3 3/4	4 9/16	7/8	2	4 3/8	30.00	**18.00**

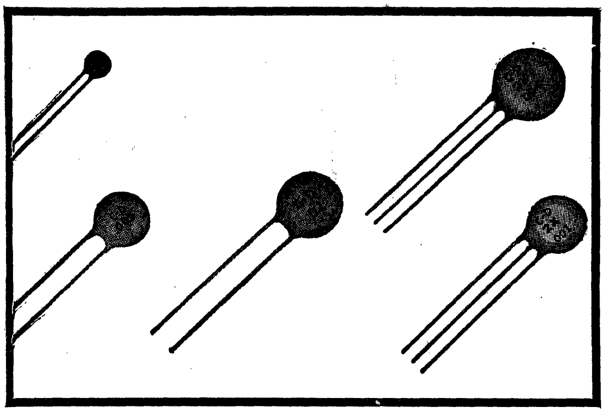
NOTES—* Type TJU units are not furnished in these larger sizes.
† Types TJL and TJH units furnished with two mounting holes or spade lugs 3 3/8" apart. All other units furnished with a single mounting hole or spade lug centered on each bracket.

T Cat. No.	Cap. Mfd.	Dimensions—Inches						List Price	Net Price
		A	B	C	D	E	F		
		2000 V. D.C. Working							
T 20001	.1	2 1/8	1 13/16	1 1/16	7/8	13/16	2 1/4	$6.60	**$3.96**
T 200025	.25	2 1/8	1 13/16	1 1/16	7/8	13/16	2 1/4	7.15	**4.29**
T 20005	.5	2 7/8	1 13/16	1 1/16	7/8	13/16	2 1/4	7.45	**4.47**
T 20010	1	3 3/8	2 1/2	1 3/16	1 1/4	1 1/8	3	9.10	**5.46**
T 20020	2	4	3 3/4	1 1/4	1 1/4	2	4 3/8	10.75	**6.45**
T 20030	3	4 3/4	3 3/4	1 1/4	1 1/4	2	4 3/8	13.20	**7.92**
T 20040	4	3 13/16	3 3/4	2 1/4	1 1/4	2	4 3/8	15.15	**9.09**
T 20050	5	4 3/4	3 3/4	2 1/4	1 1/4	2	4 3/8	16.80	**10.08**
***T 20060**	6	4 3/4	3 3/4	3 3/16	1 1/4	2	4 3/8	20.10	**12.06**
***T 20080**	8	4 3/4	3 3/4	3 3/16	1 1/4	2	4 3/8	25.05	**15.03**
†*T 20100	10	4 3/4	3 3/4	4 9/16	1 1/4	2	4 3/8	30.55	**18.33**
†*T 20120	12	5 3/8	3 3/4	4 9/16	1 1/4	2	4 3/8	33.30	**19.98**
		2500 V. D.C. Working							
T 25005	.5	3 1/2	3 3/4	1 1/4	1 1/4	2	4 3/8	11.55	**6.93**
T 25010	1	3 1/4	3 3/4	1 3/4	1 1/4	2	4 3/8	13.20	**7.92**
T 25020	2	4 3/4	3 3/4	1 3/4	1 1/4	2	4 3/8	21.45	**12.87**
†*T 25040	4	4	3 3/4	4 9/16	1 1/4	2	4 3/8	30.00	**18.00**
†*T 25100A	10	6 3/8	3 3/4	4 9/16	1 1/4	2	4 3/8	75.10	**45.06**
		3000 V. D.C. Working							
T 30001	.1	2	2 1/2	1 3/16	1 1/4	1 1/8	1	14.05	**8.43**
T 300025	.25	2 1/2	2 1/2	1 3/16	1 1/4	1 1/8	3	14.85	**8.91**
T 30005	.5	3 7/8	2 1/2	1 3/16	1 1/4	1 1/8	3	16.80	**10.08**
T 30010	1	3 13/16	3 3/4	2 1/4	1 1/4	2	4 3/8	20.10	**12.06**
***T 30020**	2	4 1/8	3 3/4	3 3/16	1 1/4	2	4 3/8	25.05	**15.03**
†*T 30040	4	4 3/4	3 3/4	4 9/16	1 1/4	2	4 3/8	36.85	**22.11**
		4000 V. D.C. Working							
T 40001	.1	2 3/4	3 3/4	2 1/4	2	2	4 3/8	25.05	**15.03**
T 400025	.25	2 3/4	3 3/4	2 1/4	2	2	4 3/8	26.40	**15.84**
T 40005	.5	4	3 3/4	2 1/4	2	2	4 3/8	30.00	**18.00**
T 40010	1	5	3 3/4	2 1/4	2	2	4 3/8	36.85	**22.11**
†*T 40020	2	5	3 3/4	4 9/16	2	2	4 3/8	46.75	**28.05**
†*T 40040A	4	8	3 3/4	4 9/16	2	1 3/4	4 3/8	66.85	**40.11**
		5000 V. D.C. Working							
T 50005	.5	4 1/4	3 3/4	2 1/4	2	2	4 3/8	33.30	**19.98**
†*T 50010	1	4 1/4	3 3/4	4 9/16	2	2	4 3/8	41.80	**25.08**
†*T 50020	2	6	3 3/4	4 9/16	2	2	4 3/8	53.65	**32.19**
		6000 V. D.C. Working							
†*T 60010A	1	8	3 3/4	4 9/16	2	1 3/4	4 3/8	83.60	**50.16**

For higher voltage units, from 6,000 to 25,000 v.d.c., write for data and prices on Type TK capacitors.

CORNELL DUBILIER

"TINYMIKE" GENERAL PURPOSE
Miniature DISC Ceramic Capacitors



FEATURES OF "TINYMIKE" DISC-TYPE CERAMIC CAPACITORS

- Small, space-saving and lightweight.
- Available in all popular capacities.
- Guaranteed minimum capacity tolerance.
- Adapted for wide variety of applications.
- Minimized eddy current losses due to construction.
- Low inductance, stable, dependable performance.
- Available with temperature compensating characteristics.

TOLERANCE: GMC

(Guaranteed Minimum Capacity)

SINGLES:

500 V. D.C. W.

DIMENSIONS:	D Max.	T Max.
KO60 to **KO69** incl.	1/4"	5/32"
KO71	3/8"	5/32"
KO72 to **KO80** incl.	19/32"	5/32"
KO81 to **KO85** incl.	3/4"	5/32"

Rotational Stock No.	Cap. Mmf.	List Price	Net Price
KO60	470	ALL .25	.15
KO61	500		
KO65	680		
KO67	820		
KO69	1000		
KO71	1500		
KO72	2000		
KO73	2200		
KO74	2500		
KO75	2700		
KO76	3000		
KO77	3300		
KO78	4000		
KO79	4700		
KO80	5000		
KO81	6800		
KO82	10000	$.30	**$.18**
KO85	20000	.60	**.36**

DUALS:

TOLERANCE: GMC **500 V. D.C. W.**

DIMENSIONS:	D Max.	T Max.
DKO69 to **DKO74** incl.	19/32"	5/32"
DKO76 to **DKO82** incl.	3/4"	5/32"

Rotational Stock No.	Cap. Mmf.	List Price	Net Price
DKO69	2X 1000	$.40	**$.24**
DKO71	2X 1500	.40	**.24**
DKO72	2X 2000	.40	**.24**
DKO73	2X 2200	.40	**.24**
DKO74	2X 2500	.45	**.27**
DKO76	2X 3000	.45	**.27**
DKO78	2X 4000	.45	**.27**
DKO79	2X 4700	.45	**.27**
DKO82	2X 10000	.50	**.30**

TOLERANCE: ±20% **500 V. D.C. W.**

DIMENSIONS:	D Max.	T Max.
GO11 to **GO28** incl.	1/4"	5/32"
GO29 to **GO42** incl.	3/8"	5/32"
GO43 to **GO67** incl.	19/32"	5/32"
GO68 to **GO71** incl.	3/4"	5/32"

Rotational Stock No.	Cap. Mmf.	List Price	Net Price
GO11	5.0	ALL .25	.15
GO14	7.0		
GO15	8.0		
GO18	10		
GO19	12		
GO21	15		
GO22	18		
GO23	20		
GO24	22		
GO25	24		
GO26	25		
GO27	27		
GO28	30		
GO29	33		
GO31	39		
GO33	47		
GO34	50		
GO35	51		
GO36	56		
GO38	68		
GO39	75		
GO40	82		
GO42	100		
GO43	110		
GO44	120		
GO46	150		
GO49	180		
GO50	200		
GO51	220		
GO52	240		
GO53	250		
GO54	270		
GO55	300		
GO56	330		
GO57	360		
GO58	390		
GO59	420		
GO60	470		
GO61	500		
GO62	510		
GO63	560		
GO64	620		
GO65	680		
GO66	750		
GO67	820		
GO68	910		
GO69	1000		
GO70	1200		
GO71	1500		

"TINYMIKE" GENERAL PURPOSE

Miniature DISC Ceramic Capacitors

1000 V. D.C. W.

DIMENSIONS:	D Max.	T Max.
VV4.7 to **VQ22** incl.	3/8"	5/32"
VQ33 to **VT68** incl.	19/32"	5/32"
VD1 and **VD15** incl.	3/4"	5/32"

Rotational Stock No.	Cap. Mmf.	List Price	Net Price
VV4.7	4.7	$.30	**$.18**
VV6.8	6.8	.30	**.18**
VQ1	10	.30	**.18**
VQ15	15	.30	**.18**
VQ22	22	.30	**.18**
VQ33	33	.30	**.18**
VQ47	47	.30	**.18**
VQ68	68	.30	**.18**
VT1	100	.35	**.21**
VT15	150	.35	**.21**
VT22	220	.35	**.21**
VT27	270	.40	**.24**
VT33	330	.40	**.24**
VT39	390	.45	**.27**
VT47	470	.45	**.27**
VT68	680	.55	**.33**
VD1	1000	.55	**.33**
VD15	1500	.65	**.39**

1500 V. D.C. W.

DIMENSIONS:	D Max.	T Max.
MCV4.7 to **MCQ15** incl.	3/8"	5/32"
MCQ22 to **MCT47** incl.	19/32"	5/32"
MCT68 and **MCD1** incl.	3/4"	5/32"

Rotational Stock No.	Cap. Mmf.	List Price	Net Price
MCV4.7	4.7	$.30	**$.18**
MCV6.8	6.8	.30	**.18**
MCQ1	10	.30	**.18**
MCQ15	15	.30	**.18**
MCQ22	22	.30	**.18**
MCQ33	33	.30	**.18**
MCQ47	47	.30	**.18**
MCQ68	68	.30	**.18**
MCT1	100	.35	**.21**
MCT15	150	.35	**.21**
MCT22	220	.40	**.24**
MCT33	330	.40	**.24**
MGT47	470	.45	**.27**
MCT68	680	.55	**.33**
MCD1	1000	.55	**.33**

NOTE: CODING—

1500 Volt units are stamped 1.5 KV
1000 Volt units are stamped 1 KV
500 Volt units are unstamped

TEMPERATURE COMPENSATING CERAMIC DISCS

TEMPERATURE COEFFICIENTS: NPO (ZERO) and N750

TOLERANCE: ±10% or .5 MMF
(whichever is greater)

500 V. D.C. W.

DIMENSIONS:	D Max.	T Max.
ZO04 to **ZO16** incl. **NO11** to **NO26** incl.	1/4"	5/32"
ZO17 to **ZO22** incl. **NO27** to **NO38** incl.	3/8"	5/32"
ZO23 to **ZO33** incl. **NO39** to **NO48** incl.	19/32"	5/32"
ZO34 to **ZO40** incl. **NO49** to **NO54** incl.	3/4"	5/32"

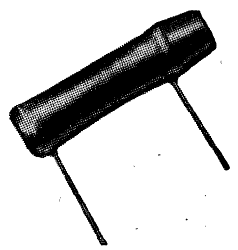
NPO Rotational Stock No.	← Cap. Mmf. →	**N750** Rotational Stock No.	List Price	Net Price
ZO04	1.5	—	**ALL .50**	**.30**
ZO05	2.0	—		
ZO06	2.2	—		
ZO07	3.0	—		
ZO08	3.3	—		
ZO09	4.0	—		
ZO10	4.7	—		
ZO11	5.0	**NO11**		
ZO12	6.0	**NO12**		
ZO13	6.8	**NO13**		
ZO14	7.0	**NO14**		
ZO15	8.0	**NO15**		
ZO16	8.2	**NO16**		
ZO17	9.0	**NO17**		
ZO18	10.0	**NO18**		
ZO19	12.0	**NO19**		
ZO20	13.0	**NO20**		
ZO21	15.0	**NO21**	**ALL .50**	**.30**
ZO22	13.0	**NO22**		
ZO23	20.0	**NO23**		
ZO24	22.0	**NO24**		
ZO25	24.0	**NO25**		
ZO26	25.0	**NO26**		
ZO27	27.0	**NO27**		
ZO28	30.0	**NO28**		
ZO29	33.0	**NO29**		
ZO30	36.0	**NO30**	Z030-Z040 **.55** N030-N040 **.50**	**.33** **.30**
ZO31	39.0	**NO31**		
ZO32	43.0	**NO32**		
ZO33	47.0	**NO33**		
ZO34	50.0	**NO34**		
ZO35	51.0	**NO35**		
ZO36	56.0	**NO36**		
ZO37	62.0	**NO37**		
ZO38	68.0	**NO38**		
ZO39	75.0	**NO39**		
ZO40	82.0	**NO40**		
—	91	**NO41**	**ALL .50**	**.30**
—	100	**NO42**		
—	110	**NO43**		
—	120	**NO44**		
—	130	**NO45**		
—	150	**NO46**		
—	160	**NO47**		
—	175	**NO48**		
—	180	**NO49**		
—	200	**NO50**		
—	220	**NO51**		
—	240	**NO52**		
—	270	**NO53**		
—	300	**NO54**		

CORNELL DUBILIER

"TINYMIKE" Miniature TUBULAR Ceramic Capacitors

GENERAL PURPOSE

Insulated Tube



TOLERANCE: 3.0 MMF to 3000 MMF ± 20%
3300 MMF to 10,000 MMF GMC

500 V. D.C. W.

DIMENSIONS: (over Insulated Tube)	D Max.	L Max.
TP05 to **TP44** incl.	.230″	.475″
TP45 to **TP60** incl.	.230″	.750″
TP61 to **TP64** incl.	.280″	.890″
TP65 to **TP67** incl.	.245″	1.180″

Rotational Stock No.	Cap. Mmf.	List Price	Net Price
TP05	3.0	ALL .25	.15
TP06	5.0		
TP07	6.8		
TP08	8.0		
TP09	10		
TP10	12		
TP11	15		
TP12	18		
TP22	22		
TP25	25		
TP26	27		
TP27	33		
TP28	39		
TP29	47		
TP30	50		
TP31	56		
TP32	68		
TP33	75		
TP34	100		
TP35	120		
TP36	150		
TP37	180		
TP38	200		
TP39	220		
TP40	250		
TP41	270		
TP42	300		
TP43	330		
TP44	390		
TP45	400		
TP46	470		
TP47	500		
TP48	560		
TP49	600		
TP50	680		
TP51	750		
TP52	1000		
TP53	1200		
TP54	1500		
TP55	1800		
TP56	2000		
TP57	2200		
TP58	2500		
TP59	2700		
TP60	3000		
TP61	3300	$.30	**$.18**
TP62	4000	.30	**.18**
TP63	4700	.30	**.18**
TP64	5000	.30	**.18**
TP65	5600	.30	**.18**
TP66	6800	.30	**.18**
TP67	10000	.30	**.18**

NOTE—Types TP05 to TP44 incl.—Color Coded for Capacity.
Types TP45 to TP51 incl.—Coded in Mmf.
Types TP52 to TP67 incl.—Coded in Mfd.

TEMPERATURE COMPENSATING

Uninsulated Tube

TEMPERATURE COEFFICIENTS: NPO (ZERO) and N750

TOLERANCE: ±10% or .5 MMF
(whichever is greater)

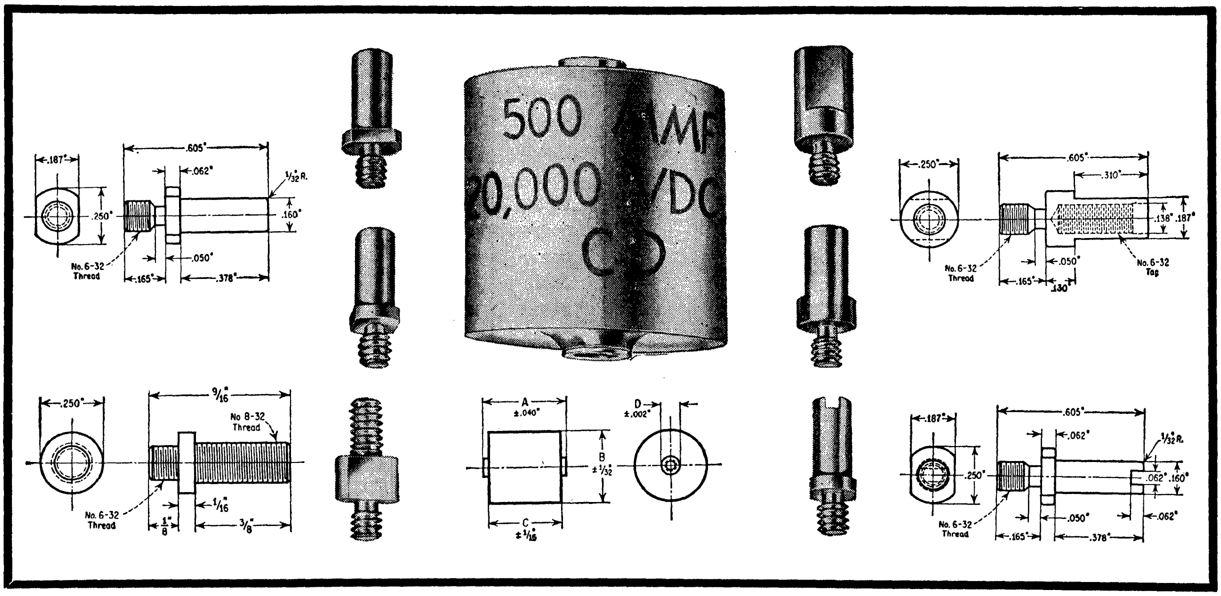
500 V. D.C. W.

DIMENSIONS: (over Lacquer Coating)	D Max.	L Max.
TZ01 to **TZ15** incl. **TN01** to **TN17** incl.	.200″	.400″
TZ16 to **TZ24** incl. **TN18** to **TN27** incl.	.200″	.656″
TZ25 to **TZ32** incl. **TN28** to **TN34** incl.	.250″	.860″
TZ33 to **TZ36** incl. **TN35** to **TN39** incl.	.315″	1.165″
TZ37 to **TZ41** incl. **TN40** to **TN43** incl.	.315″	1.750″

NPO Rotational Stock No.	← Cap. Mmf. →	N750 Rotational Stock No.	List Price	Net Price
TZ01	.5	—	ALL .50	.30
TZ02	.68	—		
TZ03	1.0	—		
TZ04	1.5	—		
TZ05	2.2	—		
TZ06	3.3	—		
TZ07	4.7	—		
TZ08	6.8	—		
TZ09	10	**TN01**		
TZ10	12	**TN02**		
TZ11	15	**TN03**		
TZ12	18	**TN04**		
TZ13	20	**TN05**		
TZ14	22	**TN06**		
TZ15	24	**TN07**		
TZ16	27	**TN08**		
TZ17	30	**TN09**		
TZ18	33	**TN10**		
TZ19	36	**TN11**		
TZ20	39	**TN12**		
TZ21	43	**TN13**		
TZ22	47	**TN14**		
TZ23	51	**TN15**		
TZ24	56	**TN16**		
TZ25	62	**TN17**		
TZ26	68	**TN18**		
TZ27	75	**TN19**		
TZ28	82	**TN20**		
TZ29	91	**TN21**		
TZ30	100	**TN22**		
TZ31	110	**TN23**		
TZ32	120	**TN24**		
TZ33	130	**TN25**		
TZ34	150	**TN26**		
TZ35	160	**TN27**		
TZ36	180	**TN28**		
TZ37	200	**TN29**		
TZ38	220	**TN30**		
TZ39	240	**TN31**		
TZ40	270	**TN32**		
TZ41	300	**TN33**		
—	330	**TN34**		
—	360	**TN35**		
—	390	**TN36**		
—	430	**TN37**		
—	470	**TN38**		
—	510	**TN39**		
—	560	**TN40**		
—	620	**TN41**		
—	680	**TN42**		
—	750	**TN43**		

NOTE—Types TZ01 to TZ15 incl. and TN01 to TN17 incl.—Color Coded for Capacity and Temperature Coefficient.
Types TZ16 to TZ41 incl. and TN18 to TN43 incl.—Coded in Mmf. and Temperature Coefficient.

UNIVERSAL "MITYMIKE" HIGH VOLTAGE CERAMIC CAPACITORS



FEATURES OF "MITYMIKE" HIGH VOLTAGE CERAMIC CAPACITORS

- **New, superior design and construction.**
- **Generous factor of safety permits use at FULL rated voltage.**
- **High insulation resistance, low power factor.**
- **Choice of terminal styles to meet all TV assembly requirements.**

The C-D Universal Type MMU "MITYMIKE" is an entirely new and superior quality unit developed from extensive field experience over a long period. Weaknesses heretofore found in this type capacitor have been eliminated by C-D processing techniques.

Thus, the special quality encasing material forms a complete homogeneous bond between all elements and the ceramic dielectric. The permanent bond between the casing material and the ceramic element prevents formation of corona, hence preventing deterioration of the capacitor.

High purity silver electrodes are heat-bonded to the dielectric — and the silver-plated terminal studs in turn, firmly soldered direct to the electrodes.

A high degree of operating stability in service and extended life can be expected of the C-D MMU.

Six selected terminal styles are furnished with each body, permitting many combinations of terminals to cover a wide range of installation designs.

Because of the superior materials and quality construction of the MMU, a generous factor of safety is built into the "MITY-MIKE", allowing operation at FULL RATED VOLTAGE.

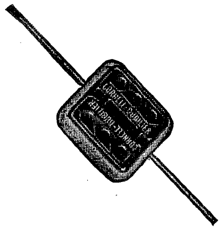
STANDARD TOLERANCE: +50%, —20%

Cat. No.	Cap. Mmfd.	VDCW	Flash Test	Body Size—Inches A x B x C x D	List Price	Net Price
MMU 20T5	500	20,000	30,000	1.068 x .950 x .937 x .250	$1.85	**$1.11**
MMU 30T5	500	30,000	40,000	1.381 x 1.375 x 1.250 x .250	4.50	**2.70**

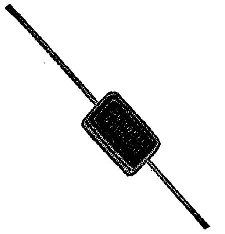
A 10,000 VDCW (MMU 10T5) unit is available on special order.

CORNELL DUBILIER

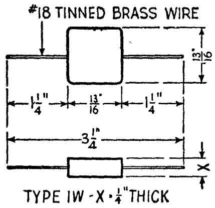
MOLDED MIDGET MICA CAPACITORS



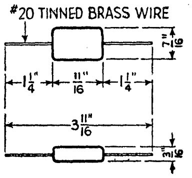
TYPE 1W & 1D★
(Similar to CM30 & CM35)



TYPE 5W
(Similar to CM20)



TYPE 1W - X - 1/4" THICK
TYPE 1D - X - 5/16" THICK
TYPE 1W & 1D



TYPE 5W

Types 1W, 1D, and 5W are suitable for numerous electronic uses and are specially adapted to serve many important functions in low-voltage radio receiving circuits. They are individually tested for accuracy of capacity and voltage breakdown and designed to give dependable service where small size units are required.

STANDARD TOLERANCE: ±20%.

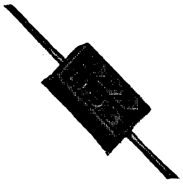
Also available, on order, in plus or minus 10%, 5%, 3% and 2% tolerance ratings (or within 1 mmfd.—whichever is greater). For capacity tolerance of: 10% add 10% to list prices; 5% add 20% to list prices; 3% add 40% to list prices; 2% add 75% to list prices.

Cap. Mfd.	500 V. D.C. W.—1000 V. D.C. T.			List Price	Net Price
	Type 5W Cat. No.	**Type 1W** Cat. No.	**Type 1D** Cat. No.		
.000005	**5W 5V5**			$ .25	**$ .15**
.00001	**5W 5Q1**			.25	**.15**
.000012	**5W 5Q12**			.25	**.15**
.000015	**5W 5Q15**			.25	**.15**
.000018	**5W 5Q18**			.25	**.15**
.00002	**5W 5Q2**			.25	**.15**
.000022	**5W 5Q22**			.25	**.15**
.000024	**5W 5Q24**			.25	**.15**
.000025	**5W 5Q25**			.25	**.15**
.000027	**5W 5Q27**			.25	**.15**
.00003	**5W 5Q3**			.25	**.15**
.000033	**5W 5Q33**			.25	**.15**
.000036	**5W 5Q36**			.25	**.15**
.000039	**5W 5Q39**			.25	**.15**
.00004	**5W 5Q4**			.20	**.12**
.000043	**5W 5Q43**			.20	**.12**
.000047	**5W 5Q47**			.20	**.12**
.00005	**5W 5Q5**			.20	**.12**
.000051	**5W 5Q51**			.20	**.12**
.000056	**5W 5Q56**			.20	**.12**
.000062	**5W 5Q62**			.20	**.12**
.000068	**5W 5Q68**			.20	**.12**
.00007	**5W 5Q7**			.20	**.12**
.000075	**5W 5Q75**			.20	**.12**
.000082	**5W 5Q82**			.20	**.12**
.000091	**5W 5Q91**			.20	**.12**
.0001	**5W 5T1**			.20	**.12**
.00011	**5W 5T11**			.20	**.12**
.00012	**5W 5T12**			.20	**.12**
.00013	**5W 5T13**			.20	**.12**
.00015	**5W 5T15**			.20	**.12**
.00016	**5W 5T16**			$ .20	**$ .12**
.00018	**5W 5T18**			.20	**.12**
.0002	**5W 5T2**			.20	**.12**
.00022	**5W 5T22**			.25	**.15**
.00024	**5W 5T24**			.25	**.15**
.00025	**5W 5T25**			.25	**.15**
.00027	**5W 5T27**			.25	**.15**
.0003	**5W 5T3**			.25	**.15**
.00033	**5W 5T33**			.25	**.15**
.00036	**5W 5T36**			.25	**.15**
.00039	**5W 5T39**			.25	**.15**
.0004	**5W 5T4**			.25	**.15**
.00043	**5W 5T43**			.25	**.15**
.00047	**5W 5T47**			.25	**.15**
.0005	**5W 5T5**			.25	**.15**
.00051	**5W 5T51**			.25	**.15**
.00056		**1W 5T56**		.25	**.15**
.0006		**1W 5T6**		.25	**.15**
.00062		**1W 5T62**		.25	**.15**
.00068		**1W 5T68**		.25	**.15**
.0007		**1W 5T7**		.25	**.15**
.00075		**1W 5T75**		.25	**.15**
.0008		**1W 5T8**		.25	**.15**
.00082		**1W 5T82**		.25	**.15**
.0009		**1W 5T9**		.25	**.15**
.00091		**1W 5T91**		.25	**.15**
.001		**1W 5D1**		.30	**.18**
.0011		**1W 5D11**		.30	**.18**
.0012		**1W 5D12**		.30	**.18**
.0013		**1W 5D13**		.30	**.18**
.0015		**1W 5D15**		.30	**.18**
.0016		**1W 5D16**		.30	**.18**
.0018		**1W 5D18**		.40	**.24**
.002		**1W 5D2**		.40	**.24**
.0022		**1W 5D22**		.45	**.27**
.0024		**1W 5D24**		.45	**.27**
.0025		**1W 5D25**		.45	**.27**
.0027		**1W 5D27**		.50	**.30**
.003		**1W 5D3**		.50	**.30**
.0033		**1W 5D33**		.50	**.30**
.0036		**1W 5D36**		.55	**.33**
.0039		**1W 5D39**		.55	**.33**
.004		**1W 5D4**		.55	**.33**
.0043		**1W 5D43**		.60	**.36**
.0047		**1W 5D47**		.60	**.36**
.005		**1W 5D5**		.60	**.36**
.0051		**1W 5D51**		.60	**.36**
.0056			**1D 5D56**	.75	**.45**
.006			**1D 5D6**	.75	**.45**
.0062			**1D 5D62**	.75	**.45**
			(300 V. D. C. W.—600V. D.C. T.)		
.0068			**1D 3D68**	.90	**.54**
.007			**1D 3D7**	.90	**.54**
.0075			**1D 3D75**	1.00	**.60**
.008			**1D 3D8**	1.00	**.60**
.0082			**1D 3D82**	1.00	**.60**
.009			**1D 3D9**	1.00	**.60**
.0091			**1D 3D91**	1.00	**.60**
.01			**1D 3S1**	1.20	**.72**

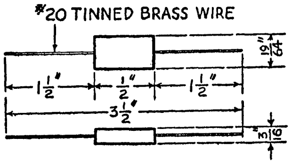
★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Bulletin—Series 422.

CORNELL DUBILIER

MOLDED MIDGET "SILVER-MIKE" CAPACITORS



TYPE 22R★
(Similar to CM15)



HIGH-STABILITY "SILVER-MIKE"* UNITS

Type 22R miniature "Silver-Mike" capacitors are especially adapted for use in circuits where accuracy and stability of capacity is of prime importance. They are rated at 500 volts D.C.W. and tested at 1,000 volts D.C., molded in low-loss red plastic and fully protected against physical damage or changes in characteristics due to varying atmospheric conditions.

STANDARD TOLERANCE ±5%, but in no instance less than ±1mmf. For capacity Tolerance of: 20% deduct 10% from List; 10% deduct 5% from List; 3% add 10% to List; 2% add 15% to List; 1% add 25% to List.

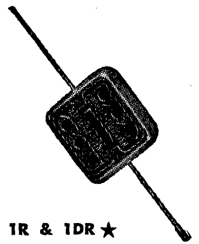
TYPE 22R

22R Cat. No.	Cap. Mfd.	List Price	Net Price
22R 5V2	.000002	$.40	**$.24**
22R 5V5	.000005	.40	**.24**
22R 5Q1	.00001	.40	**.24**
22R 5Q12	.000012	.40	**.24**
22R 5Q15	.000015	.40	**.24**
22R 5Q18	.000018	.40	**.24**
22R 5Q2	.00002	.40	**.24**
22R 5Q22	.000022	.40	**.24**
22R 5Q24	.000024	.40	**.24**
22R 5Q25	.000025	.40	**.24**
22R 5Q27	.000027	.40	**.24**
22R 5Q3	.00003	.40	**.24**
22R 5Q33	.000033	.40	**.24**
22R 5Q36	.000036	.40	**.24**
22R 5Q39	.000039	.40	**.24**
22R 5Q4	.00004	.40	**.24**
22R 5Q43	.000043	.40	**.24**
22R 5Q47	.000047	.40	**.24**
22R 5Q5	.00005	.40	**.24**
22R 5Q51	.000051	.40	**.24**
22R 5Q56	.000056	.40	**.24**
22R 5Q62	.000062	.40	**.24**
22R 5Q68	.000068	.40	**.24**
22R 5Q7	.00007	.40	**.24**
22R 5Q75	.000075	.40	**.24**
22R 5Q82	.000082	.40	**.24**
22R 5Q91	.000091	.40	**.24**
22R 5T1	.0001	.40	**.24**
22R 5T11	.00011	.45	**.27**
22R 5T12	.00012	.45	**.27**
22R 5T13	.00013	.45	**.27**
22R 5T15	.00015	.45	**.27**
22R 5T16	.00016	.45	**.27**
22R 5T18	.00018	.45	**.27**
22R 5T2	.0002	.45	**.27**
22R 5T22	.00022	.45	**.27**
22R 5T24	.00024	.45	**.27**
22R 5T25	.00025	.45	**.27**

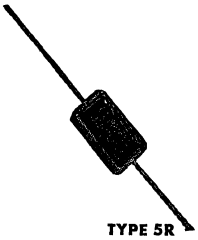
Notes On Ordering 5R, 1R, 1DR Units

Standard capacity tolerance is 5%. Also available, on special order, in tolerance ratings of plus or minus 3%, add 10% to list prices, 2% add 15% to list prices and 1% add 25% to list prices, (or within 1 mmfd.—whichever is greater). All types can also be supplied in plus or minus 10% and 20% tolerances at lower prices.

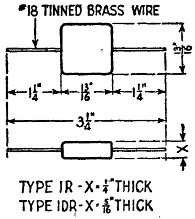
*Reg. U.S. Pat. Off.



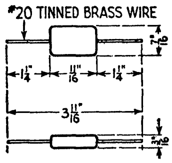
TYPE 1R & 1DR★
(Similar to CM30 & CM35)



TYPE 5R
(Similar to CM20)



TYPE 1R & 1DR



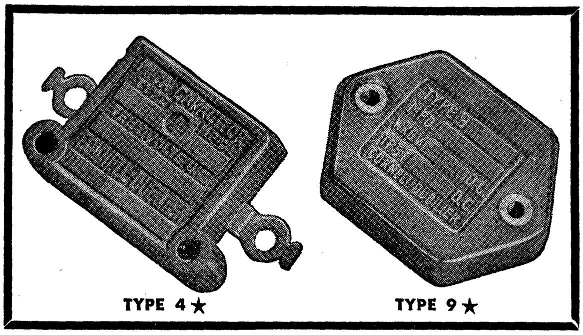
TYPE 5R

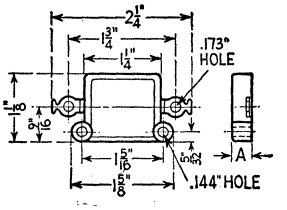
Types 1R, 1DR, and 5R "Silver-Mike" silvered mica capacitors are designed for use in high Q electronic circuits where frequency stability and minimum loss must be maintained. They are ideally suited for use in circuits where the LC product must be maintained constant, and particularly adapted for use in tuning IF transformers, push-button tuning circuits and other similar applications. Standard units are molded in low-loss red plastic.

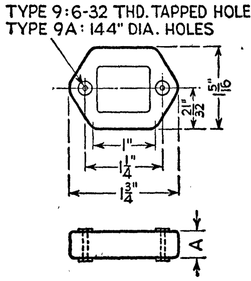
Cap. Mfd.	500 V. D.C. W.—1000 V. D.C. T.			List Price	Net Price
	Type 5R Cat. No.	Type 1R Cat. No.	Type 1DR Cat. No.		
.00027	**5R 5T27**			$ .55	**$ .33**
.0003	**5R 5T3**			.55	**.33**
.00033	**5R 5T33**			.55	**.33**
.00036	**5R 5T36**			.65	**.39**
.00039	**5R 5T39**			.65	**.39**
.0004	**5R 5T4**			.65	**.39**
.00043	**5R 5T43**			.65	**.39**
.00047	**5R 5T47**			.70	**.42**
.0005	**5R 5T5**			.70	**.42**
.00051	**5R 5T51**			.70	**.42**
.00056		**1R 5T56**		.85	**.51**
.0006		**1R 5T6**		.85	**.51**
.00062		**1R 5T62**		.85	**.51**
.00068		**1R 5T68**		.85	**.51**
.0007		**1R 5T7**		.85	**.51**
.00075		**1R 5T75**		.95	**.57**
.0008		**1R 5T8**		.95	**.57**
.00082		**1R 5T82**		.95	**.57**
.0009		**1R 5T9**		1.00	**.60**
.00091		**1R 5T91**		1.00	**.60**
.001		**1R 5D1**		1.10	**.66**
.0011		**1R 5D11**		1.10	**.66**
.0012		**1R 5D12**		1.35	**.81**
.0013		**1R 5D13**		1.35	**.81**
.0015		**1R 5D15**		1.35	**.81**
.0016		**1R 5D16**		1.35	**.81**
.0018		**1R 5D18**		1.35	**.81**
.002		**1R 5D2**		1.35	**.81**
.0022		**1R 5D22**		1.80	**1.08**
.0024		**1R 5D24**		1.80	**1.08**
.0025		**1R 5D25**		1.80	**1.08**
.0027		**1R 5D27**		2.05	**1.23**
.003		**1R 5D3**		2.05	**1.23**
.0033		**1R 5D33**		2.05	**1.23**
.0036		**1R 5D36**		2.15	**1.29**
.0039		**1R 5D39**		2.15	**1.29**
.004		**1R 5D4**		2.15	**1.29**
.0043		**1R 5D43**		2.15	**1.29**
.0047		**1R 5D47**		2.25	**1.35**
.005			**1DR 5D5**	2.25	**1.35**
.0051			**1DR 5D51**	2.25	**1.35**
.0056			**1DR 5D56**	2.25	**1.35**
.0062			**1DR 5D62**	2.25	**1.35**
			(300 V. D.C. W.—600 V. D.C. T.)		
.0068			**1DR 3D68**	2.50	**1.50**
.007			**1DR 3D7**	2.50	**1.50**
.0075			**1DR 3D75**	2.50	**1.50**
			1DR 3D8	2.50	**1.50**
.008			**1DR 3D82**	2.50	**1.50**
.0082			**1DR 3D9**	2.50	**1.50**
.009			**1DR 3D91**	2.50	**1.50**
.0091			**1DR 3S1**	2.50	**1.50**
.01					

★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Bulletin—Series 422.

LOW-POWER MOLDED MICA CAPACITORS


TYPE 4★ TYPE 9★





C-D types 4 and 9 mica capacitors are designed to meet applications in power amplifiers and low-power transmitters. They are principally employed for grid and plate blocking purposes and for r.f. by-pass functions. **The units are molded in a low-loss bakelite and have a special salt water immersion seal against humidity.**

In the case of type 9 the two terminals are tapped to receive mounting screws.

STANDARD TOLERANCE ±10%. Also available on order in plus or minus 5% and 2%. For capacity tolerance of: 5% add 15c to list prices; 2% add 40c to list prices.

TYPE 4

1200 V. D.C. Test— 600 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
4-14050	.00005	$1.20	**$ .72**
4-13010	.0001	1.20	**.72**
4-13020	.0002	1.20	**.72**
4-13025	.00025	1.20	**.72**
4-13030	.0003	1.20	**.72**
4-13040	.0004	1.20	**.72**
4-13050	.0005	1.20	**.72**
4-12010	.001	1.20	**.72**
4-12015	.0015	1.20	**.72**
4-12020 *	.002	1.30	**.78**
4-12025	.0025	1.30	**.78**
4-12030	.003	1.45	**.87**
4-12040	.004	1.50	**.90**
4-12050	.005	1.55	**.93**
4-12060	.006	1.80	**1.08**
4-12070	.007	1.85	**1.11**
4-12080	.008	1.90	**1.14**
4-11010	.01	2.15	**1.29**
4-11015	.015	2.65	**1.59**
4-11020	.02	3.05	**1.83**
4-11025 †	.025	3.60	**2.16**
4-11030	.03	4.45	**2.67**

2500 V. D.C. Test— 1200 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
4-24050	.00005	$1.60	**$ .96**
4-23010	.0001	1.60	**.96**
4-23020	.0002	1.60	**.96**
4-23025	.00025	1.60	**.96**
4-23030	.0003	1.60	**.96**
4-23050 *	.0005	1.60	**.96**
4-22010	.001	1.80	**1.08**
4-22015	.0015	2.30	**1.38**
4-22020	.002	2.40	**1.44**
4-22025	.0025	2.80	**1.68**
4-22030	.003	3.05	**1.83**
4-22040	.004	3.05	**1.83**
4-22050	.005	3.30	**1.98**
4-22060 †	.006	3.30	**1.98**
4-22080	.008	3.85	**2.31**
4-21010	.01	5.10	**3.06**

TYPE 9

1200 V. D.C. Test— 600 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
9-14050	.00005	$1.45	**$ .87**
9-13010	.0001	1.45	**.87**
9-13025	.00025	1.45	**.87**
9-13050	.0005	1.45	**.87**
9-12010	.001	1.45	**.87**
9-12020	.002	1.65	**.99**
9-12025	.0025	1.70	**1.02**
9-12030	.003	1.85	**1.11**
9-12040 *	.004	2.00	**1.20**
9-12050	.005	2.10	**1.26**
9-12060	.006	2.20	**1.32**
9-12080	.008	2.45	**1.47**
9-11010	.01	2.80	**1.68**
9-11015	.015	3.05	**1.83**
9-11020	.02	3.55	**2.13**
9-11025	.025	4.35	**2.61**
9-11030	.03	4.55	**2.73**
9-11040	.04	5.85	**3.51**
9-11050 †	.05	7.10	**4.26**
9-11060	.06	8.05	**4.83**

2500 V. D.C. Test— 1200 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
9-24050	.00005	$1.60	**$ .96**
9-23010	.0001	1.60	**.96**
9-23025	.00025	1.60	**.96**
9-23050	.0005	1.60	**.96**
9-22010	.001	1.90	**1.14**
9-22020	.002	2.50	**1.50**
9-22025 *	.0025	2.80	**1.68**
9-22030	.003	2.95	**1.77**
9-22040	.004	3.10	**1.86**
9-22050	.005	3.30	**1.98**
9-22060	.006	3.45	**2.07**
9-22080	.008	4.10	**2.46**
9-21010	.01	4.70	**2.82**
9-21015	.015	5.80	**3.48**
9-21020	.02	7.05	**4.23**
9-21025 †	.025	7.90	**4.74**
9-21030	.03	8.10	**4.86**

5000 V. D.C. Test— 2500 V. D.C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price	Cat. No.	Cap. Mfd.	List Price	Net Price
4-54050	.00005	$1.90	**$1.14**	**9-54050**	.00005	$1.90	**$1.14**
4-53010	.0001	1.90	**1.14**	**9-53010**	.0001	1.90	**1.14**
4-53020	.0002	1.90	**1.14**	**9-53025**	.00025	2.15	**1.29**
4-53025	.00025	2.20	**1.32**	**9-53050**	.0005	2.55	**1.53**
4-53030 *	.0003	2.25	**1.35**	**9-52010** *	.001	2.90	**1.74**
4-53050	.0005	2.50	**1.50**	**9-52020**	.002	4.25	**2.55**
4-52010	.001	2.80	**1.68**	**9-52025**	.0025	4.60	**2.76**
4-52015	.0015	3.55	**2.13**	**9-52030**	.003	5.10	**3.06**
4-52020	.002	4.15	**2.49**	**9-52040**	.004	5.65	**3.39**
4-52025	.0025	4.50	**2.70**	**9-52050**	.005	6.20	**3.72**
4-52030 †	.003	4.90	**2.94**	**9-52060**	.006	6.35	**3.81**
4-52040	.004	5.65	**3.39**	**9-52080** †	.008	6.85	**4.11**
4-52050	.005	6.40	**3.84**	**9-51010**	.01	7.30	**4.38**
				9-51015	.015	8.05	**4.83**

*Dimension "A" in diagram—for type 4—11/32"; for type 9—7/16".

†Dimension "A" in diagram—for type 4—7/16"; for type 9—47/64". Supplied as Type 4D or 9D.

Notes on Ordering Special Capacitors

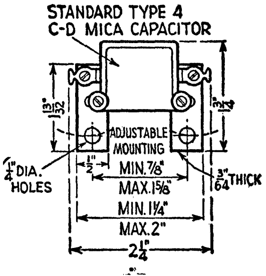
"T" HEAT AGEING TREATMENT for stabilizing capacity over extremely wide temperature changes, minus 40° C. to plus 70° C., furnished on special order. Add "T" to Cat. No. (example: 4T-12010; 9T-21020). Add 15c to list prices.

"4E" SMALL METER BRACKETS adapted for Weston Model 301 meters, add "E" to Cat. No. (example: 4E-22050). Add 20c to list prices.

"9A" UNTAPPED MOUNTING HOLES. Standard units are tapped for 6-32 and furnished with round head screws. For untapped mounting hole, .144" diameter (No. 6 clearance), add "A" to Cat. No. (example: 9A-11030).

"9F" HIGHER VOLTAGE CONSTRUCTION, rated 6,000 v.d.c. test, 3,000 v.d.c.—1500 v.a.c. operating. Capacity range limited. Moulded in low-loss Bakelite. The thickness of these units, or "A" dimension, is 7/16" for capacities up to .002 mfd. and 3/4" for capacities from .0022 to .005 mfd. max. To order, add "F" to Cat. No. (example: 9F-63050, the numeral "6" designating 6,000 volts test). Prices of "9F" units are double the list prices shown.

"9R" HIGH STABILITY UNITS— Special high stability units, comprising low-loss Bakelite, temperature aged and sealed construction for use as low power master oscillator tank capacitors or accessory positions. These units are fixed and permanent in characteristics, having a capacity-temperature coefficient of approximately plus .003% (30 parts per million) per degree C. To order, add "R" to Cat. No. (example: 9R-52020). Prices of 9R units are double the list prices shown.



TYPE 4E

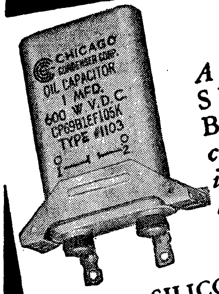
EQUIVALENT JAN TYPE NUMBERS

C-D Type	JAN Type
4	**CM45**
4D	**CM50**
9	**CM55**
9A	**CM56**
9D	**CM60**
9DA	**CM61**

★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

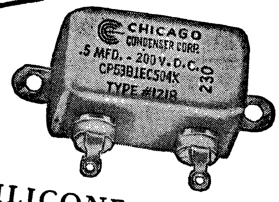
CHICAGO CONDENSER CORPORATION

OIL IMPREGNATED
CHICAGO
APPROVED
VACUUM FILLED
CAPACITORS

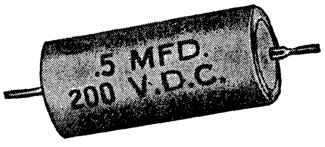

CHICAGO CONDENSER CORP.
OIL CAPACITOR
1 MFD.
600 W.V.D.C.
CP69B1EF105K
TYPE #1103

Approved SILICONE BUSHING *capacitor, oil impregnated, hermetically sealed.*

Featuring SILICONE BUSHINGS *for peak performance at high temperature operation.*


CHICAGO CONDENSER CORP.
.5 MFD. - 200 V.D.C.
CP53B1EC504K
TYPE #1218
230

SILICONE BUSHING BATHTUB TYPE *capacitor, oil impregnated, hermetically sealed, and tested at twice rated voltage to meet all specifications.*


.5 MFD.
200 V.D.C.

GLASS SEALED TUBULAR TYPE *capacitor, oil impregnated, hermetically sealed to meet all specifications.*

MOLDED AND WAX PAPER TUBULAR CAPACITORS

CHICAGO
1 MFD. 400 V.D.C.
TYPE 4100

- ***NON-INDUCTIVELY WOUND***
- ***HIGH VACUUM IMPREGNATION***
- ***PAPER TUBES VACUUM WAXED***
- ***TINNED COPPER WIRE***
- ***END FILLED WITH HI-WAX***
- ***FLASH TESTED AT 3 TIME VOLTAGES***

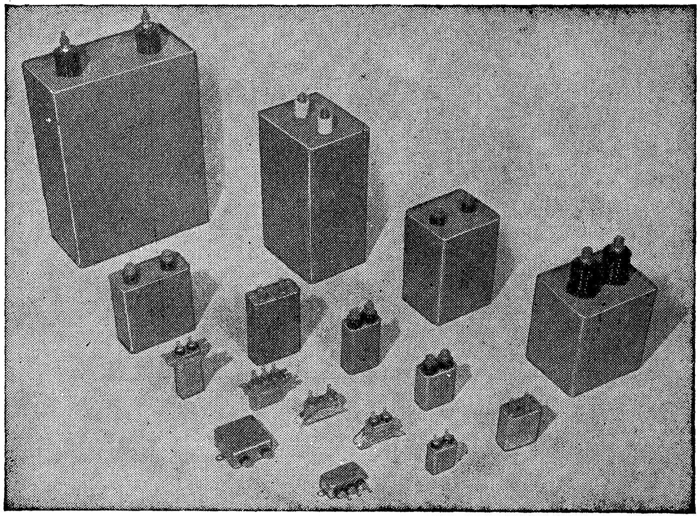
TYPE NO.	CAP. MFD.	LENGTH	DIAMETER
200 VOLTS D.C. OPERATING			
25x2	1.0	2½"	1"
2500	.5	2"	¾"
2250	.25	1¾"	⅝"
2100	.1	1⅝"	½"
2050	.05	1¼"	7/16"
2040	.04	1¼"	7/16"
2030	.03	1¼"	⅜"
2020	.02	1¼"	⅜"
2010	.01	1¼"	⅜"
400 VOLTS D.C. OPERATING			
45x2	1.0	2½"	1"
4500	.5	2"	⅞"
4250	.25	2"	11/16"
4100	.1	1⅝"	9/16"
4050	.05	1⅝"	7/16"
4040	.04	1⅝"	7/16"
4030	.03	1⅝"	7/16"
4020	.02	1¼"	7/16"
4010	.01	1¼"	⅜"
600 VOLTS D.C. OPERATING			
6500	.5	2½"	1⅛"
6250	.25	2"	¾"
6100	.1	1⅞"	⅝"
6050	.05	1⅝"	9/16"
6040	.04	1⅝"	9/16"
6030	.03	1⅝"	½"
6020	.02	1⅝"	7/16"
6010	.01	1¼"	⅜"
6006	.006	1¼"	⅜"
6005	.005	1¼"	⅜"
6004	.004	1¼"	⅜"
6003	.003	1¼"	⅜"
6002	.002	1¼"	⅜"
6001	.001	1¼"	⅜"

PYRANOL* CAPACITORS

*Registered trade-mark of General Electric Co.

CAPACITORS TO MEET JOINT ARMY-NAVY SPECIFICATION JAN-C-25

100 to 12,500 Volts D-c — 0.01 to 15 Microfarads



CP 53, 54—Bathtub style CP 70—Large Rectangular
CP 61, 63, 65, 67, 69—Miniature Rectangular

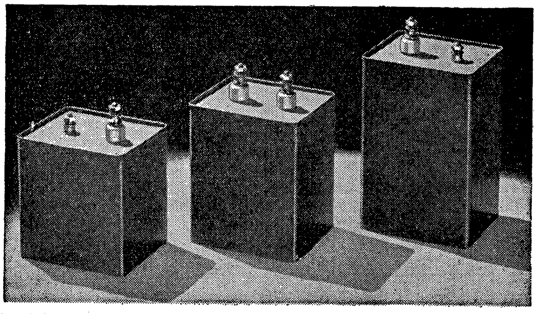
Intended primarily for feeder, by-pass, and blocking purposes, these units are qualified for applications where the alternating-current component of the impressed voltage is small with respect to the direct-current rating.

All case styles are available in Characteristics *D*, *E* and *F*. Single-section units are supplied with a capacitance tolerance of ±10 per cent (K), and two- and three-section units with a capacitance tolerance of +20 per cent, —10 per cent (V). Spade-lug and footed mounting brackets are available for use with capacitors on which the mounting bracket is not an integral part.

In addition to their regular applications, these units may also be used at higher temperatures, with higher voltages for short-life applications, and with a-c voltages.

Write to the nearest G-E Apparatus Sales Office for Bulletin GEC-810.

ENERGY-STORAGE DISCHARGE CAPACITORS



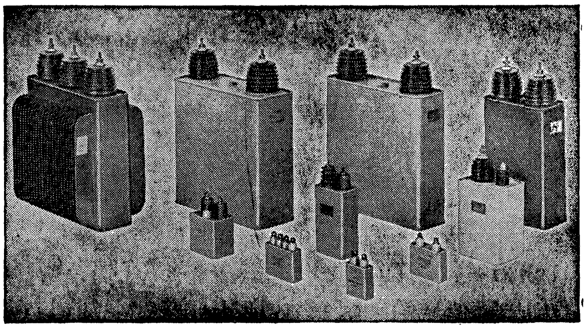
G-E light-duty energy-storage capacitors are made in a wide range of ratings to fit practically every requirement of high-speed flash photography, as well as home and industrial welders for light metals. Careful construction, high-quality materials, and skillful design contribute to long life and efficient operation.

Write for Bulletin GEA-4646.

STANDARD RATINGS

Max. D-c volts	Capacitance, Microfarads	Max. D-c volts	Capacitance, Microfarads
2000	28	4000	50
		4000	100
2500		5000	25/50
		6000	55
3000	60	6000	25
3500	12.5		
4000	25/50		

CAPACITOR NETWORKS



These capacitor networks are designed for radar and industrial equipment where the normal (exponential) capacitor discharge shape is not suitable and where an impulse having a definite energy content and duration is required.

General Electric pioneered in the development of mineral-oil-treated paper dielectric capacitor networks for air, sea, and land radar, and was a prime supplier for the government services. The products supplied varied from the miniature types used with aircraft and guided missiles to the large designs for land-based radar.

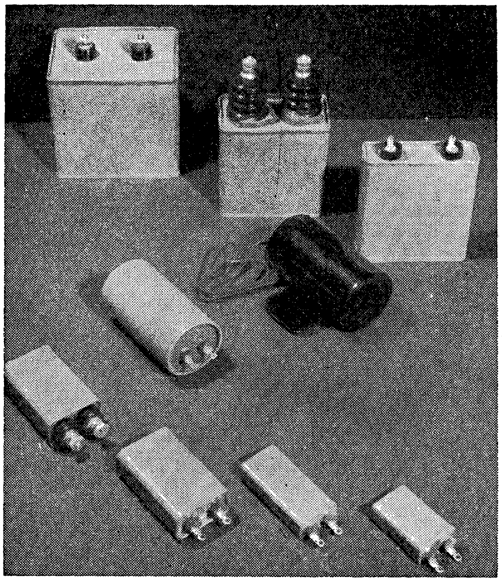
Write for Bulletin GEA-4996.

PYRANOL* CAPACITORS

*Registered trade-mark of General Electric Co.

STANDARD COMMERCIAL TYPES

For A-c and D-c Applications — Fixed Paper-dielectric Capacitors



A-c/d-c dual-rated Pyranol capacitors for motors, controls luminous-tube transformers, electronic equipments, and other applications will reduce inventories, simplify design problems, and increase standardization. Capacitors in the voltage ranges 236 through 660 volts, a-c, and 400 through 1500 volts, d-c, are now dual-rated and can be used for either a-c or d-c applications. Other a-c and d-c ratings available: 0.01 to 75 microfarads, 236 to 660 volts, a-c, and 400 to 100,000 volts, d-c.

Because of the high dielectric strength, high permittivity, and exceptional stability of Pyranol, its use as a treating material has made possible a capacitor far superior to those formerly available and much smaller in size.

Design Advantages

(1) Units are small and compact, because of the use of Pyranol.

(2) A wide range of ratings is available in rectangular, cylindrical, and oval cases.

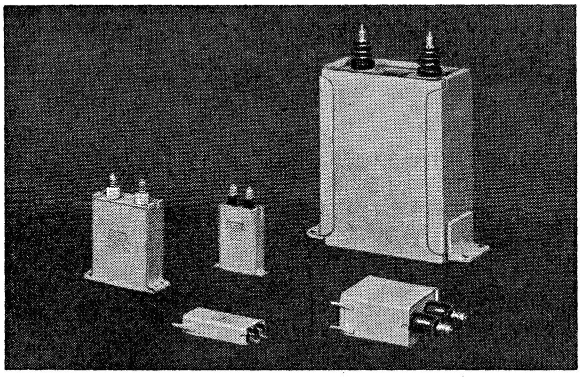
(3) Three styles of mounting brackets are available and are supplied separate from the units. Units may be operated in any position.

Write for Bulletin GEC-809.

STANDARD RATING RANGE

Rated Voltage 60 Cycles		Capacitance Ratings — Microfarads			
A-c	D-c	Case Style 60	Case Style 70	Fabricated Rectangular	Drawn Oval
236	400	2	4-16	—	—
330	—	—	—	1-50	1.25-12
330	600	0.25-1	1-50	—	—
440	—	—	—	28	—
440	1000	0.1-0.5	1-15	—	—
660	—	—	—	2-6	—
660	1500	0.01-0.05	1-15	—	—
—	2000-100,000	—	0.05-75	—	—

Case Style 70



Case Style 70 units with various types of terminals and removable mounting brackets

These Pyranol fixed paper-dielectric capacitors in Case Style 70 are hermetically sealed in rectangular cases. This line includes standard ratings, ranging from very small units weighing only three ounces to large high-voltage units weighing up to 175 pounds.

All are of single-action construction, with a capacitance tolerance of ±10 per cent. Cases are isolated and the two bushings are brought out through the cover. Units in 600-, 1000-, and 1500-volt ratings are available with either solder-lug terminals or with pillar-insulator terminals. All higher-voltage ratings have pillar-insulator terminals. These units may be operated in altitudes up to 7500 feet.

Up to 600 volts d-c, bushings with solder-lug terminals are made of G-E silicone; above this rating, they are of phenolic-cup construction. Bushings with pillar-

PYRANOL* CAPACITORS

*Registered trade-mark of General Electric Co.

Case Style 70 (Cont.)

insulator terminals are made of molded phenolic or porcelain of the highest quality. All bushings are thoroughly bonded to the container to provide a permanent liquid-tight seal.

All units can be supplied with removable mounting brackets. Both spade-lug and L-type are available. Brackets can be attached to either the top or the bottom of the units to permit upright or inverted mounting.

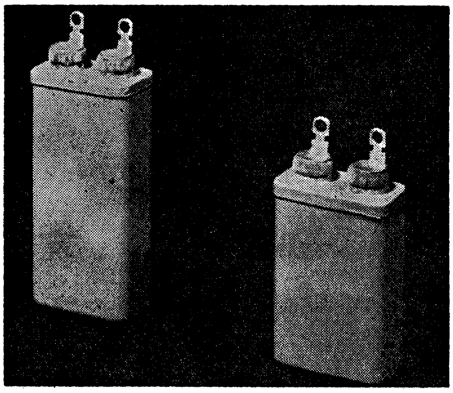
Write for Bulletin GEC-809.

STANDARD RATINGS

Nominal Direct Voltage Rating	Capacitance Ratings, Microfarads
2000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0
2500	0.50, 1.0, 2.0 4.0, 10.0, 20.0, 25.0, 55.0, 75.0
3000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 8.0, 12.0, 20.0, 45.0, 60.0
4000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 7.0, 13.0, 20.0, 30.0
5000	0.05, 0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 14.0, 18.0
6000	0.10, 1.0, 2.0, 4.0, 5.0, 10.0, 14.0
7500	0.10, 0.25, 0.50, 1.0, 2.0, 3.0, 7.0, 9.0
10,000	0.10, 0.25, 0.50, 1.0, 1.5, 2.0, 3.5, 5.0
12,500	0.05, 0.10, 0.25, 0.50, 0.75, 1.0, 1.2, 2.5, 3.3
15,000	0.25, 0.50, 0.75, 0.90, 1.75, 2.25
20,000	0.15, 0.25, 0.50, 1.0, 1.25, 3.0
25,000	0.10, 0.25, 0.60, 1.0
30,000	0.25, 0.5, 0.75
40,000	0.10, 0.20, 0.25, 0.35
50,000	0.17, 0.25
75,000*	0.25
100,000*	0.125

*Mid-point connected to case.

Case Style 60



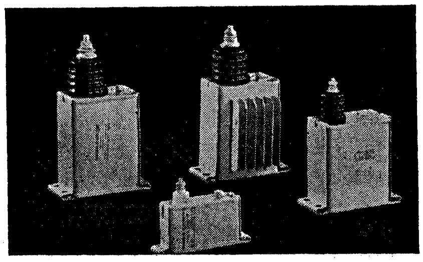
These small rectangular-case fixed-paper-dielectric units are of narrower width than the "bathtub" units, and will fit into a very restricted panel surface, where case height is not the limiting dimension. Mounting lugs, of either the removable or attached type, are of very sturdy construction.

These units have solder-lug terminals, and are available in either single- or dual-section construction for all circuit diagrams.

The metallic containers are hermetically sealed, and of deep drawn construction.

Case Style 60 units have no brackets, but removable brackets of either the footed or spade-lug type can be supplied.

CAPACITORS FOR OSCILLATOR TANK CIRCUITS



This line of fixed paper-dielectric capacitors has been developed primarily for grid and plate blocking service in the electronic oscillator circuits of high-frequency induction-heating equipments. They can also be used to advantage in other high-frequency oscillator circuits of a similar nature.

G-E high-voltage paper-dielectric capacitors are of relatively high capacitance (0.01 mu f) for high-frequency units, yet they are more economical than conventional high-frequency units of considerably smaller capacitance values. They can, therefore, be applied with savings in cost as well as reduced losses and lower voltage drop across the capacitor.

features

- Hermetically sealed in metallic cases.
- Single-bushing construction for minimum size.
- Removable mounting brackets.
- Internal lead connections arranged for minimum inductance.

Write for Bulletin GEA-4388.

STANDARD RATINGS

D-c Voltage Rating	Microfarad Rating
5000	0.01
15,000	0.01
20,000	0.01
20,000*	0.01

* With cooling fins for higher current-carrying capacity.
Capacitance tolerance ±10%.

METAL-CLAD AND TANTALYTIC CAPACITORS

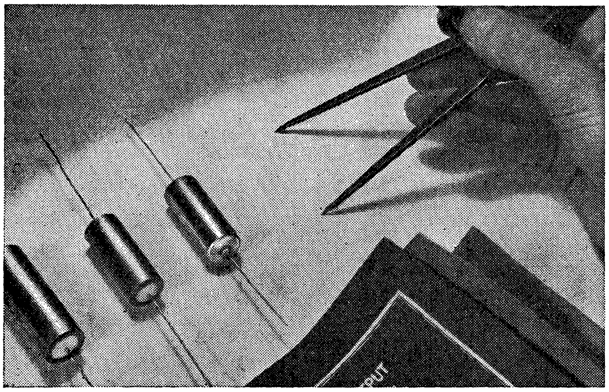
SUBMINIATURE METAL-CLAD TUBULAR CAPACITORS

Pyranol* Filled

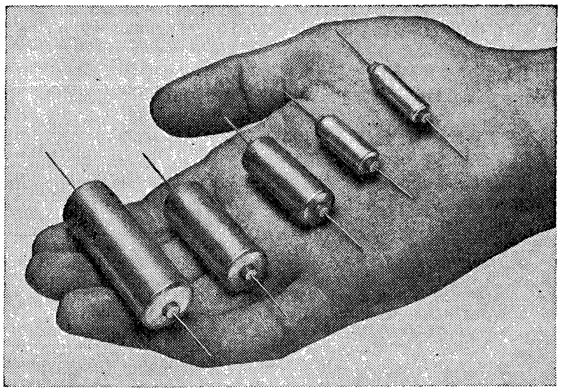
These capacitors with a Pyranol liquid dielectric and silicone end seals will operate from —55 C to +85 C without derating.

Twenty per cent smaller than comparable oil-filled units, they are the same size as the old-style wax units but have superior life characteristics. The silicone end seals, of all-welded construction, provide maximum resistance to thermal and physical shock and permit soldering up to the bushing without danger of seal damage. In addition, in severe humidity conditions, the new silicone end seal permits a polarized voltage to be applied to the capacitor.

They can be supplied in standard case sizes, in either tab or exposed foil designs, with ratings from 0.001 to 1.0 μf, and in voltage ratings of 100, 200, 400, and 600 volts, d-c.



Permafil Solid Dielectric



Subminiature metal-clad tubular capacitors are made with silicone end seals and a solid dielectric Permafil, for operation from —55 C to +125 C without derating. With small size, no liquid leakage, and high insulation resistance, they will withstand extreme temperature cycling. The new silicone end seals with all-welded construction permit leads to be soldered next to case without damage to seal, and also allow a polarized voltage to be applied under severe humidity conditions.

Meeting all military requirements, capacitors can be supplied in both tab and exposed foil designs.

Ratings range from 0.001 to 1.0 μf in voltage ratings of 100, 200, 400, and 600 volts, d-c. Cases are available in standard sizes from 0.235″ diameter and $\frac{11}{16}$″ length to 1″ diameter and 2⅝″ length.

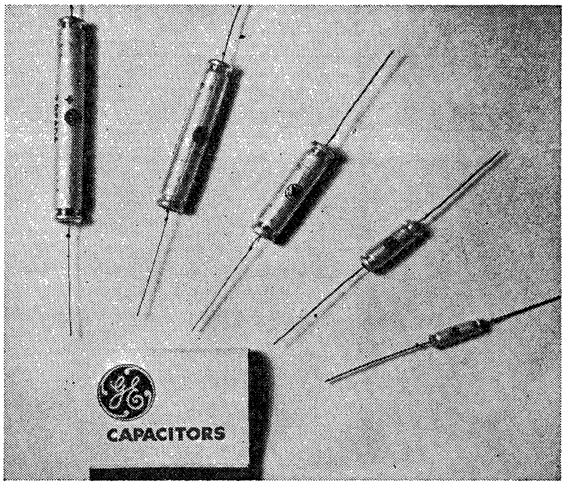
Write for Bulletin GEA-5934.

TANTALYTIC CAPACITORS FOR LOW-VOLTAGE USE

The Tantalytic capacitor is designed for certain direct-current, low-voltage applications where aluminum electrolytics and paper capacitors are not entirely satisfactory, and is suggested for use where superior performance and small size are the major factors.

This capacitor is a foil-type, tantalum-electrode, electrolytic unit, similar in construction to an aluminum electrolytic capacitor, but smaller in size because of the characteristics of the tantalum foil and the electrolyte employed (compare with match book in illustration). The Tantalytic capacitor has lower leakage currents, longer shelf life, and a wider range of temperature operation (—55 C to +85 C), without derating, than the conventional aluminum electrolytic capacitor. Tantalytic capacitors, in a wide range of ratings, are currently being used in telephone equipment and military communication and ordnance equipment.

Write for Bulletin GEC-808.



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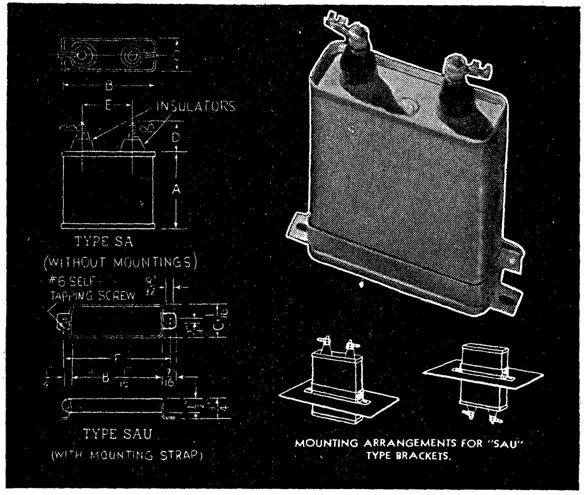
*Registered trade-mark of General Electric Co.

INDUSTRIAL — INDUSTRIAL CONDENSER CORPORATION — CONDENSER

TYPE "SA" OIL FILLED

1. INCCO OIL "A" IMPREGNATED AND FILLED—permitting efficient operation over widest range of temperatures.
2. HERMETICALLY SEALED CASE—is unaffected by time, humidity, or operating temperatures.
3. Use of HIGHEST GRADE CONDENSER TISSUES insures a long uninterrupted life.
4. HIGH-GLAZE PORCELAIN INSULATORS—insure low moisture absorption and high terminal to case flash over.
5. CONSERVATIVELY RATED—SAFE FOR CONTINUOUS OPERATION AT 10 PER CENT OVERLOAD.
6. Use of "SPACE SAVER" UNIVERSAL MOUNTING BRACKET provides adjustable capacitor heights.
7. LEAD COATED STEEL CASE—IS NON-CORROSIVE and lacquer finished.
8. TESTED FOUR TIMES BEFORE SHIPMENT—guarantees a 100 per cent perfect product electrically and mechanically.

If riveted terminal construction is wanted in place of porcelain stand-off insulators add "R" to catalog number. For example, 6SA50 changes to 6SAR50. Submersion proof terminal construction to meet Army and Navy Specifications is optional; specify on order. Standard capacity tolerance plus or minus 10 per cent. Mounting brackets supplied in accordance with following catalog designations: **TYPE SA**—No mounting brackets. **TYPE SAU**—"Space Saver" universal bracket. **TYPE SAJ**—Soldered vertical mounting bracket. **Type SAL**—Reversible mounting foot bracket. **TYPE SAH**—Reversible spade bolt bracket.



For example: The 8mfd. 600V. type with "Space Saver" bracket has catalog number 6SAU800.

NOTE: To facilitate delivery we have standardized on container heights. In many cases units can be supplied in shorter containers if required.

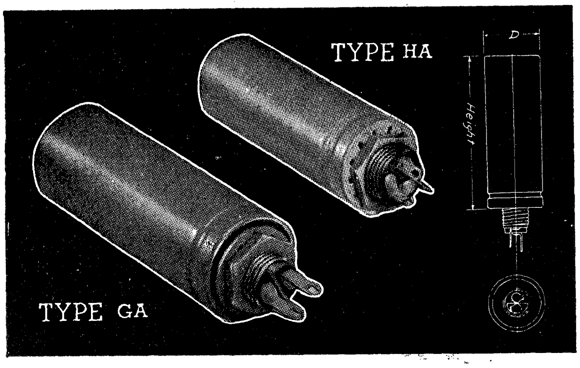
Cat. No.	Cap. Mfd.	A	B	C	D	E	F	*G	H	List Price
600 V.D.C. WORKING										
6SA50	.5	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	$4.55
6SA100	1.0	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	5.85
6SA200	2.0	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	7.10
6SA400	4.0	4⅛	2½	1 3/16	⅞	1⅛	3		3	9.20
6SA600	6.0	4¾	2½	1 3/16	⅞	1⅛	3		3	11.30
6SA800	8.0	4	3¾	1¼	⅞	2	4⅜		4⅜	13.35
6SA1000	10.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	15.00
1000 V.D.C. WORKING										
10SA10	.1	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	4.20
10SA25	.25	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	4.55
10SA50	.5	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	5.00
10SA100	1.0	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	6.25
10SA200	2.0	4	1 13/16	1 1/16	⅞	¾	2¼		2¼	8.35
10SA400	4.0	4¾	2½	1 3/16	⅞	1⅛	3		3	10.45
10SA600	6.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	14.05
10SA800	8.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	15.00
10SA1000	10.0	4¾	3¾	1¾	⅞	2	4⅜		4⅜	16.70
1500 V.D.C. WORKING										
15SA50	.5	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	6.25
15SA100	1.0	4	1 13/16	1 1/16	⅞	¾	2¼		2¼	7.55
15SA200	2.0	4⅛	2½	1 3/16	⅞	1⅛	3		3	10.45
15SA400	4.0	4¾	3¾	1¼	⅞	2	4⅜		4⅜	13.90
15SA600	6.0	4¾	3¾	1¾	⅞	2	4⅜		4⅜	17.05
2000 V.D.C. WORKING										
20SA10	.1	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	6.65
20SA25	.25	2⅞	1 13/16	1 1/16	⅞	¾	2¼		2¼	7.10
20SA50	.5	2⅞	1 13/16	1 1/16	⅞	1⅛	3		3	$7.55
20SA100	1.0	4⅛	2½	1 3/16	⅞	2	4⅜		4⅜	9.20
20SA200	2.0	4	3¾	1¼	⅞	2	4⅜		4⅜	10.85
20SA400	4.0	4¼	3¾	2¼	⅞	2	4⅜	2	4⅜	15.00
20SA600	6.0	4¾	3¾	3 3/16	⅞	¾	2¼		2¼	19.65
2500 V.D.C. WORKING										
25SA50	.5	4	3¾	1¼	1¼	2	4⅜		4⅜	11.70
25SA100	1.0	3¼	3¾	1¾	1¼	2	4⅜		4⅜	13.35
25SA200	2.0	4¾	3¾	1¾	1¼	2	4⅜		4⅜	21.55
25SA400	4.0	4¼	3¾	4 9/16	1¼	2	4⅜	3⅜	4	29.90
3000 V.D.C. WORKING										
30SA10	.1	2⅝	2½	1 3/16	1¼	1⅛	3		3	13.90
30SA25	.25	3⅜	2½	1 3/16	1¼	1⅛	3		3	15.00
30SA50	.5	4⅛	2½	1 3/16	1¼	1⅛	3		3	16.70
30SA100	1.0	4¼	3¾	2¼	1¼	2	4⅜		4⅜	20.10
30SA200	2.0	4¾	3¾	3 3/16	1¼	2	4⅜	2	4⅜	25.10
4000 V.D.C. WORKING										
40SA10	.1	2¾	3¾	2¼	1¼	2	4⅜		4⅜	25.10
40SA25	.25	2¾	3¾	2¼	1¼	2	4⅜		4⅜	26.45
40SA50	.5	4¼	3¾	2¼	1¼	2	4⅜		4⅜	29.90
40SA100	1.0	5	3¾	2¼	1¼	2	4⅜		4⅜	36.75
5000 V.D.C. WORKING										
50SA50	.5	4¼	3¾	2¼	1¼	2	4⅜		4⅜	33.45
50SA100	1.0	4¼	3¾	4 9/16	1¼	2	4⅜	3⅜	4⅜	41.80
6000 V.D.C. WORKING										
60SA50	.5	7	3¾	3 3/16	2 5/16	1⅞	4⅜	2	4⅜	51.64
60SA100	1.0	6½	3¾	4 9/16	2 5/16	2	4⅜	3⅜	4⅜	83.55

Dimensions in Inches: A to H.

* Where G dimension is given, two spade lugs or mountings holes are supplied on each bracket.

TYPES "GA" and "HA" OIL FILLED

These inverted mounting capacitors fill a definite need where chassis space is the prime factor.



Types "GA" and "HA" are INCCO Oil "A" impregnated and filled. The case is a one-piece metal extrusion with a "locked-in" molded neck. This construction meets and surpasses the Army and Navy requirements for a submersion-proof capacitor.

Type "GA" is available in the twelve standard ratings listed below, but can also be supplied in other capacities and/or voltages to manufacturers' specifications.

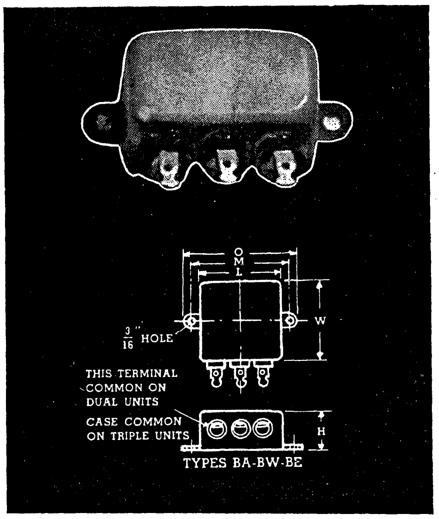
In the standard "GA" and "HA" types the container is insulated. A grounding lug can be supplied for connecting one terminal to the case. Fiber washer for insulating container from chassis, when case is grounded, and insulating cover for insulating the container from adjacent equipment, can also be supplied on special order.

Catalog Number	Cap. Mfd.	Working V.D.C.	Case Size Dia.	Case Size Height	Size of Mounting Neck	List Price
6GA200	2	600	1½	2⅞	¾" x 16 thread	$4.55
6GA300	3	600	1½	3¾	¾" x 16 thread	5.45
6GA400	4	600	1½	4½	¾" x 16 thread	6.25
6GA800	8	600	2	4¾	1" x 14 thread	9.60
6GA2X400	4-4	600	2	4¾	1" x 14 thread	10.10
10GA100	1	1000	1½	2⅞	¾" x 16 thread	..4.20
10GA200	2	1000	1½	4½	¾" x 16 therad	5.45
10GA400	4	1000	2	4½	1" x 14 thread	8.00
10GA2X200	2-2	1000	2	4½	1" x 14 thread	8.60
15GA50	0.5	1500	1½	2⅞	¾" x 16 thread	5.00
15GA100	1	1500	1½	4½	¾" x 16 thread	5.45
15GA200	2	1500	2	4½	1" x 14 thread	7.75

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION


O
M
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3/16" HOLE
THIS TERMINAL COMMON ON DUAL UNITS
CASE COMMON ON TRIPLE UNITS
H
TYPES BA-BW-BE

DRY ELECTROLYTICS

Type "B" electrolytic capacitor is the first commercially available unit of this type with the reliability of the total submersion type, oil filled capacitors.

Wound with the highest purity aluminum foil and cellulose separators available; impregnated in electrolyte having excellent temperature characteristics, these units will outlive their associated equipment.

Cat. No.	Cap. in Mfds.	Volts	Dimen. in Inches L	W	H	M	List Price
52BE10	10	25	1 13/16	1	13/16	2⅛	$2.70
52BE25	25	25	1 13/16	1	13/16	2⅛	2.70
52BE50	50	25	1 13/16	1	13/16	2⅛	2.80
05BE10	10	50	1 13/16	1	13/16	2⅛	2.75
05BE25	25	50	1 13/16	1	13/16	2⅛	2.75
05BE50	50	50	1 13/16	1	13/16	2⅛	3.00

Built to U. S. Signal Corps and Navy Specifications

TYPE "BA" OIL FILLED

1. INCCO OIL "A" permits efficient operation of these compact units over the widest range of temperature.
2. The use of the HIGHEST GRADE CONDENSER TISSUE insures greater safety factor and longer life.
3. Specially PROCESSED RIVETED TERMINALS are designed to withstand total submersion in salt water and changes in temperature from 50° below zero Centigrade to 90° above zero Centigrade without loosening or losing their integrity.
4. CONDENSER MOUNTINGS form an integral part of these drawn shell containers insuring permanent and rigid fastenings.
5. All units are NON-INDUCTIVELY WOUND providing efficient operation over the widest range of frequencies.
6. HERMETICALLY SEALED, they are unaffected by time, temperature or humidity.
7. CONSERVATIVELY RATED for safe and continuous uninterrupted operation at 10% above rated voltage for the lifetime of associated equipment.
8. Tested at twice the rated voltage between terminals and twice the rated voltage plus 1000 from each terminal to case.

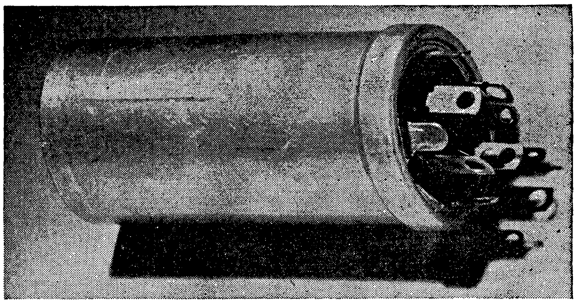
Cat. No.	Cap. in MFDS.	Dimensions in Inches L	W	H	M	O	List Price
		600 V. D. C. WORKING					
6BA05	.05	1 13/16	1	13/16	2⅛	2½	$2.85
6BA10	.1	1 13/16	1	13/16	2⅛	2½	2.90
6BA25	.25	1 13/16	1	13/16	2⅛	2½	3.10
6BA50	.5	1 13/16	1	⅞	2⅛	2½	3.30
6BA100	1.0	2	1¾	⅞	2⅜	2¾	3.75
6BA0505	.05-.05	1 13/16	1	13/16	2⅛	2½	3.65
6BA11	.1-.1	1 13/16	1	13/16	2⅛	2½	3.70
6BA22	.25-.25	2	1¾	⅞	2⅜	2¾	3.75
6BA55	.5-.5	2	1¾	⅞	2⅜	2¾	4.30
6BA111	.1-.1-.1	1 13/16	1	13/16	2⅛	2½	4.20
6BA200	2	2	2	1⅛	2⅜	2 13/16	5.00
		1000 V. D. C. WORKING					
10BA05	.05	1 13/16	1	13/16	2⅛	2½	3.05
10BA10	.1	1 13/16	1	13/16	2⅛	2½	3.15
10BA25	.25	1 13/16	1	13/16	2⅛	2½	3.25
10BA50	.5	2	1¾	⅞	2⅜	2¾	3.50
10BA100	1.0	2	2	1⅛	2⅜	2 13/16	4.40
10BA0505	.05-.05	1 13/16	1	13/16	2⅛	2½	3.85
10BA11	.1-.1	1 13/16	1	13/16	2⅛	2½	3.95
10BA22	.25-.25	2	1¾	⅞	2⅜	2¾	4.20

Above units also available in 200 V. D. C., 400 V. D. C. and 1500 V. D. C. on request.

NOTICE—Most units are available with TERMINALS ON TOP, BOTTOM, OR ENDS. When ordering, add "T" for top terminals, "B" for terminals on bottom, or "E" for end terminals, i.e., 6BAT100 for terminals on top. Type "B" also available in WAX FILLED. When ordering, change catalog number A to W, i.e., 6BW100. If terminal position is not designated, side terminals are furnished. STANDARD CAPACITY tolerance of plus 20 per cent minus 10 per cent furnished on oil filled and wax filled units unless otherwise specified when ordering. Can be furnished in plus or minus 1 per cent capacity tolerance on special request.

Catalog Number	Cap. Mfd.	D.C. Voltage Working	Surge	Dim. in Ins. Diam.	Lg.	List Price
52ET100	100	25	35	1	2	$1.60
15ET30	30	150	225	1	2	1.55
15ET50	50	150	225	1	2	1.65
45ET10	10	450	550	1	2	1.55
45ET15	15	450	550	1	2	1.70
45ET20	20	450	550	1	2½	1.80
45ET30	30	450	550	1	3	1.95
15ET2x20	20-20	150	225	1	2	1.70
15ET2x30	30-30	150	225	1	2	1.85
15ET2x50	50-50	150	225	1	3	2.15
30ET2x15	15-15	300	400	1	2	1.90
35ET3020	30-20	350	450	1	3	2.60
45ET2x10	10-10	450	550	1	2½	1.90
45ET2x20	20-20	450	550	1⅜	2½	2.55
ET100	30-20/20	150/25	225/35	1	2	2.25
ET101	40-30/20	150/25	225/35	1	2½	2.35
15ET3x20	20-20-20	150	225	1	2	2.30
ET102	40-20-20	150	225	1	2½	2.40
15ET3x40	40-40-40	150	225	1	3	2.60
ET103	10-10/25	450/25	550/35	1	3	2.40
45ET3x10	10-10-10	450	550	1	3	2.60

ET SERIES ELECTROLYTIC CAPACITORS

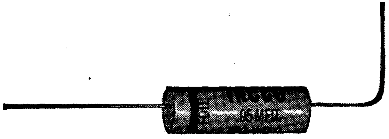


"ET" series capacitors have been designed for ease in installation and reliability. They are constructed to withstand the most severe operating conditions encountered in industrial and electronic equipment. Especially controlled manufacturing processes insure that the equipment in which these capacitors are used will function without interruption. Capacitors can be supplied for operation at temperatures ranging from minus 40 to plus 85 degrees Centigrade. Mounting is effected by inserting the capacitor through the slots in either the chassis or mounting plate, and twisting the mounting prongs 90 degrees.

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION

TUBULAR PAPER CONDENSERS



TYPE PT

INDUSTRIAL By-Pass Capacitors are non-inductively wound and designed for maximum efficiency up to the highest frequencies. The units themselves are completely impregnated and sealed with a special non-hygroscopic sealing compound, thus preventing moisture penetration under the most humid conditions.

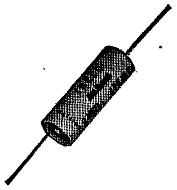
Catalog Number	Capacity Mfd.	Working Volts D.C.	List Price
PT100	.0001	1000	$0.45
PT101	.00025	1000	.45
PT102	.0005	1000	.45
PT103	.001	1000	.45
PT104	.002	1000	.45
PT105	.005	1000	.45
PT106	.006	1000	.45
PT107	.01	1000	.45
PT131	.001	600	.23
PT132	.002	600	.23
PT133	.005	600	.23
PT134	.006	600	.23
PT135	.01	600	.27
PT136	.02	600	.27
PT137	.03	600	.32
PT130	.04	600	.32
PT138	.05	600	.36
PT139	.1	600	.41
PT140	.25	600	.50
PT141	.5	600	.72
PT142	1.0	600	1.13
PT170	.01	400	.23
PT171	.02	400	.23
PT172	.05	400	.27
PT173	.1	400	.32
PT174	.25	400	.41
PT175	.5	400	.54
PT176	1.0	400	1.00
PT200	.02	200	.30
PT201	.05	200	.30
PT202	.1	200	.35
PT203	.25	200	.40
PT204	.5	200	.60
PT205	1.0	200	.90
PT260*	.005	2000	.65
PT261*	.0075	2000	.75
PT262*	.01	2000	.75
PT263*	.02	2000	.85
PT264	.015-.015	1600	.80

*Vibrator Capacitor

MIGHTY MIDGET METAL TUBULAR TYPE "MM"

Catalog Number	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
MM406	100	10	15	11/16 x 1 11/16	$1.20
MM407	250	10	15	13/16 x 2 3/16	1.45
MM408	500	10	15	1 1/16 x 2 3/16	2.30
MM409	750	10	15	1 1/16 x 2 11/16	3.00
MM400	5	25	35	11/16 x 1 11/16	1.00
MM401	10	25	35	11/16 x 1 11/16	1.00
MM402	25	25	35	11/16 x 1 11/16	1.00
MT403*†	10-10	25	35	11/16 x 2 ⅜	1.40
MM410	250	25	35	15/16 x 2 3/16	1.70
MM411	500	25	35	1 1/16 x 2 11/16	2.30
MM404	10	50	75	11/16 x 1 11/16	1.00
MM405	25	50	75	11/16 x 1 11/16	1.05
MM412	100	50	75	13/16 x 2 3/16	1.40
MM413	200	50	75	1 1/16 x 2 3/16	2.00
MM414	300	50	75	1 1/16 x 2 11/16	2.75
MM360	8	150	225	11/16 x 1 11/16	1.05
MM368	12	150	225	11/16 x 1 11/16	1.10
MM361	16	150	225	11/16 x 1 11/16	1.15
MM362	20	150	225	11/16 x 2 3/16	1.20
MM369	30	150	225	13/16 x 2 3/16	1.30
MM363	40	150	225	13/16 x 2 3/16	1.35
MM373	60	150	225	1 1/16 x 2 3/16	1.50
MM374	80	150	225	1 1/16 x 2 3/16	1.60
MM370†	20-20	150	225	15/16 x 2 3/16	1.65
MM375†	30-30	150	225	1 1/16 x 2 3/16	1.80
MM376†	40-40	150	225	1 1/16 x 2 3/16	1.85
MM364	4	475	600	11/16 x 1 11/16	1.15
MM365	8	475	600	13/16 x 2 3/16	1.25
MM371	12	475	600	15/16 x 2 5/16	1.35
MM366	16	475	600	15/16 x 2 3/16	1.40
MM372	20	475	600	1 1/16 x 2 3/16	1.60
MM367†	8-8	475	600	1 1/16 x 2 3/16	1.70

*In cardboard tube with wax filled ends.
†3 leads.



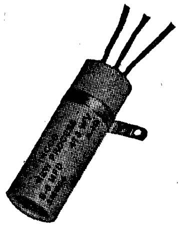
Type MM

An extremely popular type of condenser due to its exceptional high quality and midget size. Hermetically sealed in a small metal case and scientifically vented, to protect against adverse operating conditions of voltage, temperature and humidity. Container is insulated by a high grade tube which is spun over the ends of the can to eliminate shorts when wires are bent close to container. Easily mounted by their rigid wire leads.

"SM" TYPE

Catalog Number	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
SM605*	20-20	150	225	15/16 x 2 ½	$1.40
SM606†	20-20	150	225	1 x 2 ½	2.15
SM601*	30-30	150	225	15/16 x 3	1.55
SM608*	40-40	150	225	1 x 3	1.75
SM607*	50-30	150	225	1 x 3	1.75
SM609†	30-20-20	150	225	1 x 3	2.05
SM604*	8-8	475	600	1 x 3	2.00
SM610*	40-20	150	225	15/16 x 3	1.55

*SM605, SM601, SM608, SM607, SM610: 3 leads.
†SM606, SM609: 4 leads.



Type SM

Type "SM" units are embedded in a high temperature wax and then sealed in a thoroughly impregnated cardboard tube, affording complete immunity to moisture penetration. New high voltage formation gives complete protection against surges and high peak voltages. The addition of the strap mounting bracket has proved favorable in its use due to its wide application in AC-DC and portable sets in the replacement field. The strap can be moved to the best mounting position and then bolted or soldered. Supplied with color-coded, Underwriters' Approved, rubber covered leads.

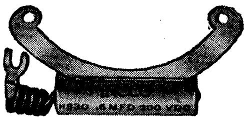
RADIO INTERFERENCE ELIMINATORS

INDUSTRIAL CONDENSER CORP. has made a special study of the suppression of noises caused by fluorescent lighting. No. 7249 capacitor is designed with three leads, two leads to be connected across the 110 volt line and the single lead to be grounded. No. 4219 is housed in a metal container and is self grounding. It is supplied with strap mounting for easy installation. No. 4252 is a flat type unit designed to mount on the ballast support of circline ballasts. The convenient mounting flap grounds the unit when the stem of the lamp is placed through the mounting hole.

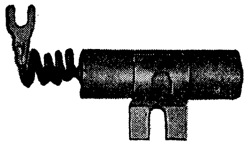
Catalog Number	Dimensions in Inches	List Price
7249	21/32 x 1⅜	$1.30
4219	¾ x 2	1.75
4252	2⅛ x ⅝ x 11/32	1.95

AUTO GENERATOR CONDENSER

ALSO AVAILABLE IN HERMETICALLY SEALED SUBMERSION-PROOF CONSTRUCTION



TYPE F



TYPE G

Completely enclosed in a metal container to overcome severe operating conditions of temperature and humidity. Sturdily built to withstand constant vibration.

Cat. No.	Cap. Mfd.	List Price	Cat. No.	Cap. Mfd.	List Price
G325	.25	$0.77	G328	1.0	$1.15
G326	.5	.85	F330	.5	1.06

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION

Catalog Number	Cap. Mfd.	Dimensions in Inches H	L	W	List Price
		600 VOLTS D.C. WORKING			
6SY50	0.5	4-1/8	1-13/16	1-1/16	$15.50
6SY100	1.0	4-1/8	2-1/2	1-3/16	22.90
6SY200	2.0	4-1/8	3-3/4	1-1/4	33.40
6SY300	3.0	4-1/8	3-3/4	1-3/4	43.80
6SY400	4.0	5-1/8	3-3/4	1-3/4	51.20
6SY600	6.0	4-1/8	3-3/4	3-3/16	77.80
6SY800	8.0	5-1/8	3-3/4	3-3/16	92.80
6SY1000	10.0	5-1/8	4-9/16	3-3/4	113.70
6SY1200	12.0	5-1/8	4-9/16	3-3/4	129.30
		400 VOLTS D.C. WORKING			
4SY50	0.5	2-1/2	1-13/16	1-1/16	13.60
4SY100	1.0	4-1/8	1-13/16	1-1/16	15.20
4SY200	2.0	4-1/8	2-1/2	1-3/16	22.30
4SY300	3.0	5-1/8	2-1/2	1-3/16	25.90
4SY400	4.0	4-1/8	3-3/4	1-1/4	32.20
4SY600	6.0	4-1/8	3-3/4	1-3/4	41.60
4SY800	8.0	5-1/8	3-3/4	1-3/4	48.60
4SY1000	10.0	5-1/8	3-3/4	2-1/4	61.40
4SY1200	12.0	5-1/8	3-3/4	2-1/4	68.50
4SY1500	15.0	5-1/8	3-3/4	3-3/16	83.90
4SY2000	20.0	5-1/8	4-9/16	3-3/4	106.90
4SY2500	25.0	5-1/8	4-9/16	3-3/4	124.80

Catalog Number	Cap. Mfd.	Dimensions in Inches L	W	H	List Price
		600 VOLTS D.C. WORKING			
6BY05	.05	1-13/16	1	13/16	$ 5.80
6BY10	.1	1-13/16	1	13/16	6.10
6BY25	.25	2	1-3/4	7/8	7.70
6BY50	.5	2	2	1-1/8	10.10
		400 VOLTS D.C. WORKING			
4BY25	.25	2	1-3/4	7/8	6.50
4BY50	.5	2	1-3/4	7/8	7.50
4BY100	1.0	2	2	1-1/8	9.80

Catalog Number	Cap. Mfd.	Dimensions in Inches L	W	H	List Price
		600 VOLTS D.C. WORKING			
6DY05	.05	1-5/16	25/32	1-5/16	$ 6.70
6DY10	.1	1-5/16	25/32	1-15/16	7.00
		400 VOLTS D.C. WORKING			
4DY25	.25	1-5/16	25/32	1-15/16	8.30

GENERAL INFORMATION

Technical Information Available in Catalog 1117A

Stabelex Capacitors represent a new series of capacitors being made available to industry for the first time.

Advancements in science and industry have created the need for capacitors having characteristics far superior to either laboratory type or commercial capacitors now available.

Advanced designs in equipment which have not been possible because of the unavailability of suitable capacitors have now become practical.

The Stabelex family of capacitors has been developed after a long period of research and has been made for special applications for quite some time. However, it is only now that these capacitors became available to industry.

Other Stabelex capacitors will be announced from time to time, each having its own special characteristics for use in applications for which they are most suited.

Suggested Applications

Input Capacitors	Computers
Coupling Capacitors	Filter Networks
RC Circuits	Radio Frequency Circuits
Meter Damping	Etc.

Many variations and special characteristics are possible with Stabelex capacitors that are not possible with any other type and it is, therefore, to the interest of the user to indicate, where possible, the application to which these capacitors will be put.

Catalog Number	Cap. Mfd.	Dimensions in Inches Dia.	Length	List Price
		600 VOLTS D.C. WORKING		
6TY00005	.00005	1/2	1-1/16	$ 2.40
6TY0001	.0001	1/2	1-1/16	2.40
6TY0005	.0005	1/2	1-1/16	2.40
6TY001	.001	1/2	1-1/16	2.40
6TY002	.002	1/2	1-1/16	2.40
6TY005	.005	1/2	1-1/16	2.40
6TY01	.01	5/8	1-1/2	2.30
6TY02	.02	5/8	1-1/2	2.40
6TY05	.05	3/4	2	2.80
6TY10	.1	1	2	3.50
		400 VOLTS D.C. WORKING		
4TY05	.05	5/8	1-1/2	2.60
4TY10	.1	3/4	2	2.80
4TY25	.25	1	2	3.60

Catalog Number	Cap. Mfd.	Working V.D.C.	Dimensions in Inches Dia.	Height	Size of Mounting Neck	List Price
6GY50	0.5	600	1-3/8	3-3/4	7/8" - 16 thread	$ 8.60
6GY100	1.0	600	1-1/2	4-3/4	3/4" - 16 thread	12.60
4GY50	0.5	400	1-3/8	2-1/8	7/8" - 16 thread	6.50
4GY100	1.0	400	1-3/8	3-3/4	7/8" - 16 thread	8.30
4GY200	2.0	400	1-1/2	4-3/4	3/4" - 16 thread	12.10

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

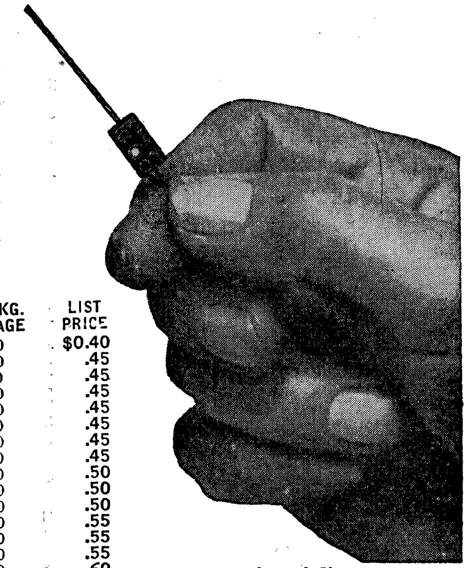
MINIATURE MICA CAPACITORS

SMALLER THAN YOUR FINGERNAIL BUT SKY HIGH IN PERFORMANCE

Known the world over for their reliability under all operating conditions, El-Menco Capacitors are chosen by manufacturers who want successful performance and long life from their products.

El-Menco fixed mica dielectric capacitors are compact, precision made. Manufactured in accordance with American military standards to meet Army and Navy JAN-C-5 Specifications. All impregnated and JAN, RMA and RCM color coded. Standard specification limits are shown below.

Moulded in low loss bakelite, tested at double the working voltage. Tests for dielectric strength, insulation resistance, temperature co-efficient and capacitance drift, humidity and life tests according to JAN and RCM STANDARDS. All units are wax dipped for salt water immersion seal.



Actual Size
1-300 mmf.
9/32" x ½" x 3/16"
301-510 mmf.
9/32" x ½" x 7/32"

For Television, Radio and other Electronic Applications.
1 - 420 mmf. cap. at 500v DCW.
1 - 510 mmf. cap. at 300v DCW.
Temperature Co-efficient ±50 parts per million per degree C for most capacity values.
6-dot color coded.

TYPE CM-15

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE	TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE
CM-15-C-010-M	1	500	$0.50	CM-15-E-750-J	75	500	$0.40
CM-15-C-020-M	2	500	.50	CM-15-E-820-J	82	500	.45
CM-15-C-030-M	3	500	.50	CM-15-E-910-J	91	500	.45
CM-15-C-050-K	5	500	.40	CM-15-E-101-J	100	500	.45
CM-15-C-100-J	10	500	.40	CM-15-E-111-J	110	500	.45
CM-15-C-120-J	12	500	.40	CM-15-E-121-J	120	500	.45
CM-15-C-150-J	15	500	.40	CM-15-E-131-J	130	500	.45
CM-15-C-180-J	18	500	.40	CM-15-E-151-J	150	500	.45
CM-15-C-200-J	20	500	.40	CM-15-E-161-J	160	500	.50
CM-15-C-220-J	22	500	.40	CM-15-E-181-J	180	500	.50
CM-15-E-240-J	24	500	.40	CM-15-E-201-J	200	500	.50
CM-15-E-270-J	27	500	.40	CM-15-E-221-J	220	500	.55
CM-15-E-300-J	30	500	.40	CM-15-E-241-J	240	500	.55
CM-15-E-330-J	33	500	.40	CM-15-E-251-J	250	500	.55
CM-15-E-360-J	36	500	.40	CM-15-E-271-J	270	500	.60
CM-15-E-390-J	39	500	.40	CM-15-E-301-J	300	500	.60
CM-15-E-430-J	43	500	.40	CM-15-E-331-J	330	500	.65
CM-15-E-470-J	47	500	.40	CM-15-E-361-J	360	500	.70
CM-15-E-500-J	50	500	.40	CM-15-E-391-J	390	500	.70
CM-15-E-510-J	51	500	.40	CM-15-E-431-J	430	300	.75
CM-15-E-560-J	56	500	.40	CM-15-E-471-J	470	300	.80
CM-15-E-620-J	62	500	.40	CM-15-E-501-J	500	300	.80
CM-15-E-680-J	68	500	.40	CM-15-E-511-J	510	300	.80

All the above are silver mica only. Temperature Co-efficient: 50 Parts per Million per degree C. (Characteristic "E"). Standard Tolerance: ±5%. Closest Tolerance: ±.5 mmfd.

Special! —HANDY KIT

FOR EXPERIMENTAL WORK

Don't Get Caught Short...

El-Menco
HANDY KIT
Miniature
CAPACITORS
El-Menco
CM-15 CAPACITOR KIT

THESE MINIATURES FIT INTO THE SMALLEST AREA CAPACITOR SIZE (9/32" x ½" x 3/16")

ALWAYS HAVE THE CORRECT CAPACITY ON HAND

This Handy Kit consists of 46 most commonly used Capacitors . . . five of each capacity packed in individual tuck boxes, properly identified for permanent use.

LIST PRICE ONLY $90⁰⁰

The complete set of capacitors amounts to $106.00 at list prices. You get the entire set during this introductory offer, *for only* $90.00.

COMPARE COST!

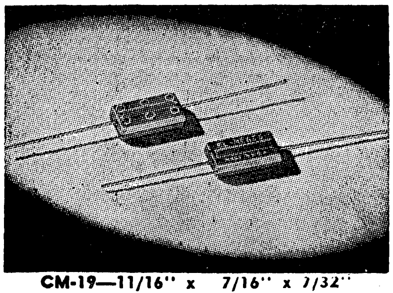
ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

MICA CAPACITORS

CM-19 & CM-20

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	 SILVERED MICA
CM-20-050	5	500	$0.30	$0.40
CM-20-100	10	500	.30	.40
CM-20-120	12	500	.30	.40
CM-20-150	15	500	.30	.40
CM-20-180	18	500	.30	.40
CM-20-200	20	500	.30	.40
CM-20-220	22	500	.30	.40
CM-20-240	24	500	.30	.40
CM-20-270	27	500	.30	.40
CM-20-300	30	500	.30	.40
CM-20-330	33	500	.20	.40
CM-20-360	36	500	.20	.40
CM-20-390	39	500	.20	.40
CM-20-430	43	500	.20	.40
CM-20-470	47	500	.20	.40
CM-20-500	50	500	.20	.40
CM-20-510	51	500	.20	.40
CM-20-560	56	500	.20	.40
CM-20-620	62	500	.20	.40
CM-20-680	68	500	.20	.40
CM-20-750	75	500	.20	.40
CM-20-820	82	500	.20	.40
CM-20-910	91	500	.20	.40
CM-20-101	100	500	.20	.40
CM-20-111	110	500	.20	.45
CM-20-121	120	500	.20	.45
CM-20-131	130	500	.25	.45
CM-20-151	150	500	.25	.45
CM-20-161	160	500	.25	.45
CM-20-181	180	500	.25	.45
CM-20-201	200	500	.25	.45
CM-20-221	220	500	.25	.45
CM-20-241	240	500	.30	.55
CM-20-251	250	500	.30	.55
CM-20-271	270	500	.30	.55
CM-20-301	300	500	.30	.55
CM-20-331	330	500	.30	.55
CM-20-361	360	500	.30	.55
CM-20-391	390	500	.30	.65
CM-20-431	430	500	.30	.65
CM-20-471	470	500	.30	.70
CM-20-501	500	500	.30	.70
CM-20-511	510	500	.30	.70
CM-20-561	560	500	.35	.75
CM-20-621	620	500	.35	.80
CM-20-681	680	500	.35	.85
CM-20-751	750	500	.35	.90
CM-20-821	820	500	.40	.95
CM-20-911	910	500	.45	1.00
CM-20-102	1000	500	.45	1.10
CM-20-112	1100	500	.50	1.20
CM-20-122	1200	500	.50	1.30
CM-20-132	1300	500	.50	1.40
CM-20-152	1500	500	.60	1.50
CM-20-162	1600	500	.60	1.60
CM-20-182	1800	500	.70	1.70
CM-20-202	2000	500	.75	1.75



CM-19—11/16" x 7/16" x 7/32"
CM-20—25/32" x 7/16" x 7/32"
CM-25— 7/16" x 1-7/64" x 7/32"

CM-25

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	 SILVERED MICA
CM-25-510	51	500	$0.25	$0.40
CM-25-560	56	500	.25	.40
CM-25-620	62	500	.25	.40
CM-25-680	68	500	.25	.40
CM-25-750	75	500	.25	.40
CM-25-820	82	500	.25	.40
CM-25-910	91	500	.25	.40
CM-25-101	100	500	.25	.40
CM-25-111	110	500	.25	.45
CM-25-121	120	500	.25	.45
CM-25-131	130	500	.25	.45
CM-25-151	150	500	.25	.45
CM-25-161	160	500	.25	.45
CM-25-181	180	500	.25	.45
CM-25-201	200	500	.25	.45
CM-25-221	220	500	.25	.45
CM-25-241	240	500	.30	.55
CM-25-251	250	500	.30	.55
CM-25-271	270	500	.30	.55
CM-25-301	300	500	.30	.55
CM-25-331	330	500	.30	.55
CM-25-361	360	500	.30	.55
CM-25-391	390	500	.30	.65
CM-25-431	430	500	.30	.65
CM-25-471	470	500	.30	.70
CM-25-501	500	500	.30	.70
CM-25-511	510	500	.30	.70
CM-25-561	560	500	.35	.75
CM-25-621	620	500	.35	.80
CM-25-681	680	500	.35	.85
CM-25-751	750	500	.35	.90
CM-25-821	820	500	.40	.95
CM-25-911	910	500	.45	1.00
CM-25-102	1000	500	.45	1.10
CM-25-112	1100	500	.50	1.20
CM-25-122	1200	500	.50	1.30
CM-25-132	1300	500	.50	1.40
CM-25-152	1500	500	.60	1.50
CM-25-162	1600	500	.60	1.60
CM-25-182	1800	500	.70	1.70
CM-25-202	2000	500	.75	1.80

STANDARD TOLERANCES:

Regular mica ±20% (A and B Characteristics)
For ±10% tolerance add 10% to list price.
For ±5% tolerance add 25% to list price.
Silvered Mica ±5% (C, D and E Characteristics)
For ±2% tolerance add 15% to list price.
For ±1% tolerance add 25% to list price.

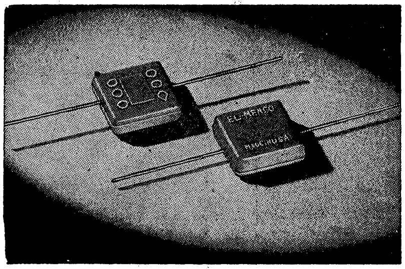
NOTE:

CM19 capacitors available only up to 1000 mmf.

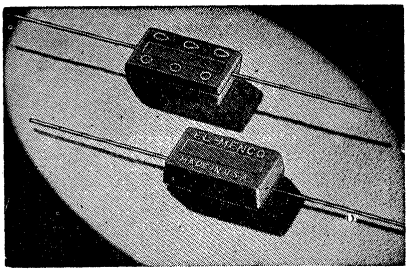
CM20 and CM25 available to 2000 mmf.

ARCO ELECTRONICS, INC.
EL-MENCO CAPACITORS

MICA CAPACITORS



CM-30—13/16" x 13/16" x 9/32"
CM-35—13/16" x 13/16" x 11/32"



CM-40—1" x ⅝" x 11/32"

CM-30

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE	
			REGULAR MICA	SILVERED MICA
CM-30-511	510	500	$0.30	$0.70
CM-30-561	560	500	.30	.75
CM-30-621	620	500	.30	.80
CM-30-681	680	500	.30	.85
CM-30-751	750	500	.30	.90
CM-30-821	820	500	.30	.95
CM-30-911	910	500	.30	1.00
CM-30-102	1000	500	.35	1.10
CM-30-112	1100	500	.35	1.10
CM-30-122	1200	500	.35	1.25
CM-30-132	1300	500	.35	1.25
CM-30-152	1500	500	.40	1.35
CM-30-162	1600	500	.40	1.35
CM-30-182	1800	500	.45	1.35
CM-30-202	2000	500	.45	1.50
CM-30-222	2200	500	.45	1.50
CM-30-242	2400	500	.50	1.80
CM-30-252	2500	500	.50	1.80
CM-30-272	2700	500	.50	1.90
CM-30-302	3000	500	.60	2.05
CM-30-332	3300	500	.60	2.05
CM-30-362	3600	500	.60	2.10
CM-30-392	3900	500	.65	2.15
CM-30-432	4300	500	.65	2.15
CM-30-472	4700	500	.65	2.15
CM-30-502	5000	500	.70	2.25
CM-30-512	5100	500	.70	2.25
CM-30-562	5600	500	.70	2.50
CM-30-622	6200	500	.90	2.90

CM-35

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE	
			REGULAR MICA	SILVERED MICA
CM-35-682	6800	300	$0.95	$3.00
CM-35-752	7500	300	1.00	3.25
CM-35-822	8200	300	1.15	3.50
CM-35-912	9100	300	1.15	4.00
CM-35-103	10000	300	1.40	4.00
CM-35-123	12000	300	1.60	4.50
CM-35-153	15000	300	2.00	5.25
CM-35-682	6800	500	1.05	3.30
CM-35-752	7500	500	1.15	3.65
CM-35-822	8200	500	1.30	3.85
CM-35-912	9100	500	1.30	4.40
CM-35-103	10000	500	1.55	4.40

CM-40

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	REGULAR MICA	SILVERED MICA
CM-40-272	2700	500	.55	1.90
CM-40-302	3000	500	.60	2.05
CM-40-332	3300	500	.60	2.05
CM-40-362	3600	500	.65	2.10
CM-40-392	3900	500	.70	2.15
CM-40-432	4300	500	.70	2.15
CM-40-472	4700	500	.70	2.15
CM-40-502	5000	500	.75	2.25
CM-40-512	5100	500	.75	2.25
CM-40-562	5600	500	.75	2.50
CM-40-622	6200	500	1.05	2.90
CM-40-682	6800	500	1.15	3.30
CM-40-752	7500	500	1.40	3.65
CM-40-822	8200	500	1.40	3.85
CM-40-912	9100	500	1.40	4.40
CM-40-103	10000	500	1.70	4.40
CM-40-912	9100	300	1.30	4.00
CM-40-103	10000	300	1.50	4.00

STANDARD TOLERANCES

Regular mica ±20% (A and B Characteristics)
For ±10% tolerance add 10% to list price.
For ±5% tolerance add 25% to list price.

Silvered mica ±5% (C, D and E Characteristics)
For ±2% tolerance add 15% to list price.
For ±1% tolerance add 25% to list price.

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

TELEVISION • TRANSMITTING • INDUSTRIAL

HIGH VOLTAGE MICA CAPACITORS

DC WORKING VOLTAGES: FROM 1000 TO 2500 VOLTS

Molded in CM-20, CM-35 and CM-40 Cases

Demand for smaller units in higher voltages designed to meet the requirements for TELEVISION, POWER AMPLIFIERS, LOW POWER TRANSMITTERS, and various INDUSTRIAL USES has increased. EL-MENCO designed and produced units listed below are especially adaptable to compact circuits where space is an important factor. Their acceptance has been overwhelming by the various manufacturers of TELEVISION RECEIVERS.

In many cases, these units will do the work of capacitors molded in CM-45, CM-50, and CM-55 cases without breaking down. NO SPECIAL MOUNTINGS ARE NECESSARY; just wire right into the circuit.

The capacitors are molded in low-loss bakelite and tested at double the branded voltage. They are tested for dielectric strength, insulation resistance, temperature coefficient, capacitance drift, susceptibility to humidity, and length of life, according to RCM Standards. All units are wax-dipped for protection against salt water immersion.

VCM-20

TYPE DESIGNATION	CAP. MMF.	5000 VDC TEST 2500 VDC WKG. LIST PRICE	4000 VDC TEST 2000 VDC WKG. LIST PRICE	3000 VDC TEST 1500 VDC WKG. LIST PRICE	2000 VDC TEST 1000 VDC WKG. LIST PRICE
VCM-20-B-050	5	$0.35	$0.35	$0.35	$0.30
VCM-20-B-100	10	.35	.35	.35	.30
VCM-20-B-120	12	.35	.35	.35	.30
VCM-20-B-150	15	.35	.35	.35	.30
VCM-20-B-180	18	.35	.35	.35	.30
VCM-20-B-200	20	.35	.35	.35	.30
VCM-20-B-220	22	.35	.35	.35	.30
VCM-20-B-240	24	.35	.35	.35	.30
VCM-20-B-270	27	.35	.35	.35	.30
VCM-20-B-300	30	.40	.35	.35	.30
VCM-20-B-330	33	.40	.35	.35	.30
VCM-20-B-360	36	.40	.35	.35	.30
VCM-20-B-390	39	.40	.35	.35	.30
VCM-20-B-430	43	.40	.35	.35	.30
VCM-20-B-470	47	.40	.35	.35	.30
VCM-20-B-500	50	.40	.40	.35	.30
VCM-20-B-510	51	.40	.40	.35	.30
VCM-20-B-560	56	.40	.40	.35	.30
VCM-20-B-620	62	.40	.40	.35	.30
VCM-20-B-680	68	.45	.40	.35	.30
VCM-20-B-750	75	.50	.40	.35	.30
VCM-20-B-820	82	.50	.40	.35	.30
VCM-20-B-910	91	.50	.40	.40	.35
VCM-20-B-101	100	.55	.40	.40	.35
VCM-20-B-111	110	.60	.45	.40	.35
VCM-20-B-121	120	.60	.45	.40	.35
VCM-20-B-131	130	.60	.45	.40	.35
VCM-20-B-151	150	.65	.45	.40	.35
VCM-20-B-161	160	.70	.50	.40	.35
VCM-20-B-181	180	.70	.50	.40	.35
VCM-20-B-201	200	.80	.60	.45	.40
VCM-20-B-221	220	.85	.60	.45	.40
VCM-20-B-241	240	.85	.65	.45	.40
VCM-20-B-251	250		.65	.55	.40
VCM-20-B-271	270		.65	.55	.40
VCM-20-B-301	300		.70	.60	.45
VCM-20-B-331	330		.80	.60	.45
VCM-20-B-361	360		.80	.60	.45
VCM-20-B-391	390		.85	.65	.45
VCM-20-B-431	430			.65	.50
VCM-20-B-471	470			.70	.50
VCM-20-B-501	500			.70	.50
VCM-20-B-511	510			.70	.50
VCM-20-B-561	560			.80	.55
VCM-20-B-621	620			.85	.55
VCM-20-B-681	680				.60
VCM-20-B-751	750				.60
VCM-20-B-821	820				.65
VCM-20-B-911	910				.70
VCM-20-B-102	1000				.75

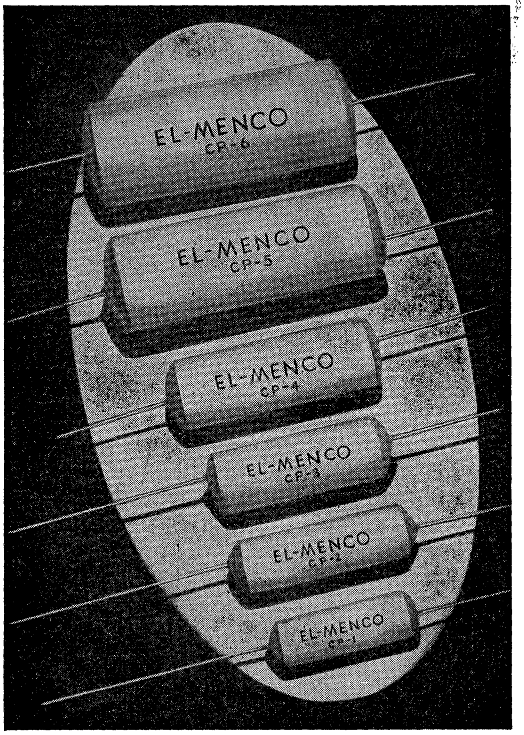
VCM-35 & VCM-40

TYPE DESIGNATION	CAP. MMF.	5000 VDC TEST 2500 VDC WKG. LIST PRICE	4000 VDC TEST 2000 VDC WKG. LIST PRICE	3000 VDC TEST 1500 VDC WKG. LIST PRICE	2000 VDC TEST 1000 VDC WKG. LIST PRICE
VCM-35-B-121	120				
VCM-35-B-151	150				
VCM-35-B-161	160				
VCM-35-B-181	180				
VCM-35-B-221	220				
VCM-35-B-241	240	$0.60			
VCM-35-B-251	250	.60			
VCM-35-B-271	270	.60			
VCM-35-B-301	300	.65			
VCM-35-B-331	330	.65			
VCM-35-B-361	360	.75			
VCM-35-B-391	390	.80			
VCM-35-B-431	430	.80	$0.65		
VCM-35-B-471	470	.80	.75		
VCM-35-B-501	500	.85	.75		
VCM-35-B-511	510	.85	.75		
VCM-35-B-561	560	.90	.75		
VCM-35-B-621	620	.95	.80		
VCM-35-B-681	680	1.05	.80	$0.75	
VCM-35-B-821	820	1.15	.90	.85	
VCM-35-B-911	910	1.35	.95	.90	
VCM-35-B-102	1000	1.40	1.10	.90	
VCM-35-B-112	1100	1.40	1.15	.95	$0.60
VCM-35-B-122	1200	1.50	1.20	1.10	.65
VCM-35-B-132	1300	1.65	1.30	1.15	.65
VCM-35-B-152	1500	1.85	1.45	1.30	.75
VCM-35-B-162	1600	2.00	1.50	1.30	.80
VCM-35-B-182	1800		1.70	1.45	.80
VCM-35-B-202	2000		1.80	1.60	.85
VCM-35-B-222	2200			1.70	.95
VCM-35-B-242	2400			1.80	1.05
VCM-35-B-272	2700				1.05
VCM-35-B-302	3000				1.15
VCM-35-B-332	3300				1.20
VCM-35-B-362	3600				1.35
VCM-35-B-392	3900				1.40
VCM-35-B-432	4300				1.50
VCM-35-B-472	4700				1.65
VCM-35-B-502	5000				1.70
VCM-35-B-512	5100				1.70

All units supplied in "A" or "B" Characteristic at list price.
Case Size Dimensions (See preceeding pages for illustrations):
VCM-20—$\frac{25}{32}$" x $\frac{7}{16}$" x $\frac{7}{32}$"   VCM-35—$\frac{13}{16}$" x $\frac{13}{16}$" x $\frac{11}{32}$"
Standard Tolerance: ±20%.   VCM-40—1" x $\frac{5}{8}$" x $\frac{11}{32}$"
Prices will be quoted for closer tolerances in "Silvered" mica upon request. **TURN TO P-70 FOR INFORMATION ON OUR SPECIAL HI-VOLTAGE KIT.**

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS



MINERAL OIL IMPREGNATION
NON-INDUCTIVE WINDING
SYNTHETIC RESIN END SEALS
STEATITE CASE

PAPER TUBULAR CAPACITORS CP TYPE

El-Menco CP type paper tubular capacitors are sealed into Steatite Tubes which serve to insulate the capacitor electrically as well as against moisture and heat. The capacitor insert is impregnated with Mineral Oil, thereby assuring long life at 85° C operating conditions. This feature insures successful operation at the high ambient temperatures existing in small, compact enclosures.

The Non-Inductively wound paper and foil units are sealed in the Ceramic Tubes by means of baked Synthetic Resin End Fills which cannot melt at any conceivable operating temperature. The end fills will not dissolve in wax, permitting the capacitors to be potted without damage to in the insert. Leads are of tinned copper 2¼″ long.

Many of the large Television, Transmitter and High Voltage Amplifier manufacturers have found these capacitors to be of highest quality. Breakdown tests have exceeded the required standards.

DIMENSIONS FOR CP TYPE CAPACITORS

	DIAMETER	LENGTH
CP-1	⅜″	1⅛″
CP-2	⅜″	1⅜″
CP-3	7/16″	1⅜″
CP-5	9/16″	1⅝″
CP-5	¾″	2⅛″
CP-6	13/16″	2⅛″

STANDARD TOLERANCE ON ABOVE UNITS IS ± 20%.

CAPACITY MFD.	1000 WVDC PART NUMBER	1000 WVDC LIST PRICE	600 WVDC PART NUMBER	600 WVDC LIST PRICE	400 WVDC PART NUMBER	400 WVDC LIST PRICE	200 WVDC PART NUMBER	200 WVDC LIST PRICE
.001	CP-1-102	$0.40	CP-1-102	$0.25				
.0015	CP-1-152	.40	CP-1-152	.25				
.02	CP-1-202	.40	CP-1-202	.25				
.0022	CP-1-222	.40	CP-1-222	.25				
.0025	CP-2-252	.40	CP-1-252	.25				
.003	CP-2-302	.40	CP-1-302	.25				
.0033	CP-2-332	.40	CP-1-332	.25				
.004	CP-2-402	.40	CP-1-402	.25				
.0047	CP-2-472	.45	CP-1-472	.25				
.005	CP-2-502	.45	CP-1-502	.25				
.006	CP-2-602	.45	CP-2-602	.25				
.0068	CP-2-682	.45	CP-2-682	.25				
.0075	CP-2-752	.45	CP-2-752	.30				
.01	CP-2-103	.50	CP-2-103	.30				
.015	CP-3-153	.50	CP-2-153	.30				
.02	CP-3-203	.50	CP-3-203	.30	CP-2-203	$0.25		
.022	CP-3-223	.50	CP-3-223	.30	CP-3-223	.30		
.025	CP-4-253	.50	CP-4-253	.35	CP-3-253	.30		
.03	CP-4-303	.50	CP-4-303	.35	CP-3-303	.30		
.033	CP-4-333	.60	CP-4-333	.35	CP-3-333	.30		
.04	CP-4-403	.60	CP-4-403	.35	CP-3-403	.30		
.047	CP-4-473	.60	CP-4-473	.35	CP-4-473	.30		
.05	CP-4-503	.60	CP-4-503	.40	CP-4-503	.30		
.056	CP-4-563	.65	CP-5-563	.40	CP-4-563	.30		
.068			CP-5-683	.40	CP-4-683	.35		
.075			CP-5-753	.45	CP-5-753	.35		
.1			CP-5-104	.45	CP-5-104	.35	CP-4-104	$0.35
.15					CP-6-154	.45	CP-4-154	.40
.22					CP-6-224	.55	CP-5-224	.45
.25					CP-6-254	.55	CP-5-254	.45
.33							CP-6-334	.55
.47							CP-6-474	.70
.5							CP-6-504	.70

TURN TO P-70 FOR INFORMATION ON OUR SPECIAL PAPER TUBULAR KITS

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

Single and Dual PADDERS

EL-MENCO PADDING CONDENSERS have been acclaimed by engineers as the finest development in adjustable mica condensers.

The construction is such as to completely enclose and protect the delicate edges of the mica films, made of the finest quality clear India ruby mica.

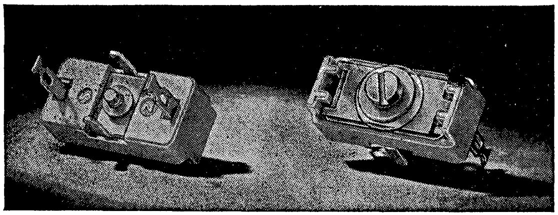
The phosphor bronze adjusting plates assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.

TYPE 30

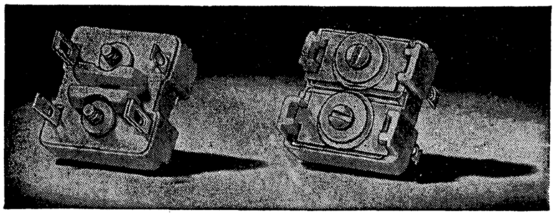
350 Volts DC Flash-Test — 175 WVDC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302	2 Pl.	130	15	$0.60
303	3 Pl.	340	65	.65
304	4 Pl.	550	100	.75
305	5 Pl.	760	190	.85
306	6 Pl.	970	275	.90
307	7 Pl.	1180	350	1.00
308	8 Pl.	1390	450	1.05
309	9 Pl.	1600	550	1.15
310	10 Pl.	1890	650	1.25
311	11 Pl.	2110	780	1.35
312	12 Pl.	2330	880	1.40
313	13 Pl.	2605	1150	1.50
314	14 Pl.	2830	1300	1.60
315	15 Pl.	3055	1400	1.65

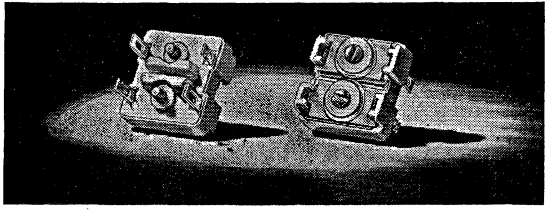
Screw is insulated from top plate my mica washer. Above maximum capacity values are based on using 1½ to 1¾ Mil Mica films.



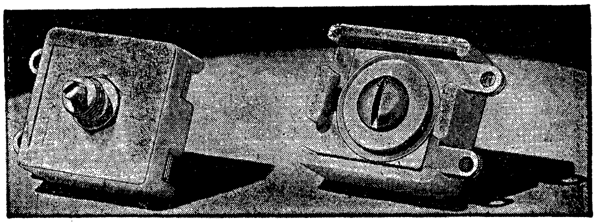
TYPE 58 PADDER 1.000" x .468"



TYPE 50 DUAL PADDER
(will fit any size shield having dimensions exceeding 1-1/16" x 1-1/16")



TYPE 60 DUAL PADDER
(will fit any size shield having dimensions exceeding ¾" x ¾")



TYPE 30 AND TYPE 30-M PADDER 7/8" x 15/16"

TYPE 30-M

1000 Volts DC Flash-Test — 500 Working Volts DC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At 1½ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302-M	2 Pl.	120	15	$0.60
303-M	3 Pl.	320	65	.65
304-M	4 Pl.	500	100	.80
305-M	5 Pl.	690	180	.85
306-M	6 Pl.	880	265	.90
307-M	7 Pl.	1070	340	1.05
308-M	8 Pl.	1260	425	1.10
309-M	9 Pl.	1415	525	1.15
310-M	10 Pl.	1600	615	1.25
311-M	11 Pl.	1785	730	1.35
312-M	12 Pl.	1970	800	1.45
313-M	13 Pl.	2155	1000	1.50
314-M	14 Pl.	2340	1100	1.60
315-M	15 Pl.	2525	1200	1.70

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 2 to 2¼ Mil Mica.

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
582	2 Pl.	80	7.5	$0.40
583	3 Pl.	160	19	.45
584	4 Pl.	240	50	.50

◄TYPE 58 Padder is a single variable trimmer section provided with a two-pronged staple mounting for attachment to bracket or chassis. Base is made of lowest loss steatite and the mica is India Ruby.

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
502	2 Pl.	80	7.5	$0.60
503	3 Pl.	160	19	.70
504	4 Pl.	240	50	.80

◄TYPE 50 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding 1 1/16" x 1 1/16".

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
602	2 Pl.	55	7	$0.50
603	3 Pl.	100	15	.60
604	4 Pl.	160	35	.70

▲ TYPE 60 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding ¾" x ¾".

See page 7 for Mica Trimmer Capacitors

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

TYPE 46 TRIMMER

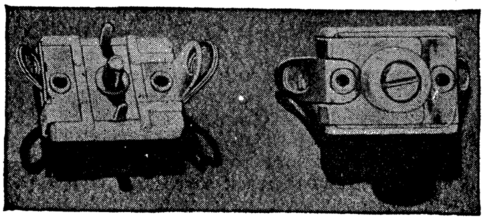
The base is made of the lowest dielectric loss ceramic material available and the mica is clear India Ruby.

The soldering lugs may be bent in any position without affecting capacity setting due to the rigid construction of adjusting plates.

El-Menco Trimming Condensers are treated for resistance to humidity and for permanence of capacity setting.

Trimmers shown here are standard sizes and capacities.

TYPE 46W NUMBER PART	PLATES NUMBER OF	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	 At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
460	1¼ Pl.	15	1.5	$0.35
461	1¾ Pl.	30	2.7	.35
462	2 Pl.	80	5	.40
463	3 Pl.	180	9	.45
464	4 Pl.	280	25	.50
465	5 Pl.	380	50	.55
466	6 Pl.	480	80	.60
467	7 Pl.	580	110	.70
468	8 Pl.	680	140	.75
469	9 Pl.	780	170	.80



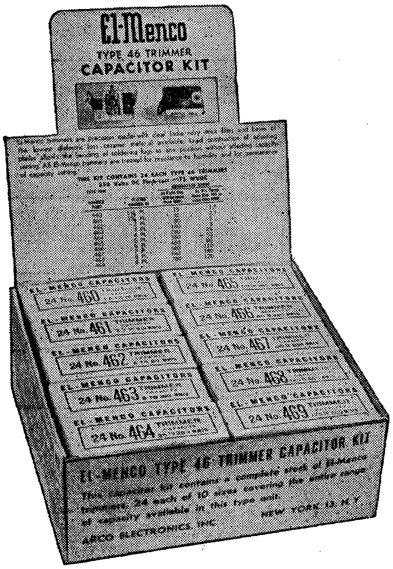
TYPE 46 TRIMMER ¾" x ⅝"

Metal Mounting Brackets for these trimmers can be supplied from stock

	LIST PRICE
Bracket for mounting 2 Trimmers	$0.10
Bracket for mounting 3 Trimmers	.12
Bracket for mounting 4 Trimmers	.14
Bracket for mounting 5 Trimmers	.16
Bracket for mounting 6 Trimmers	.18

Type 46 Trimmer and Type 30 Padder Kits

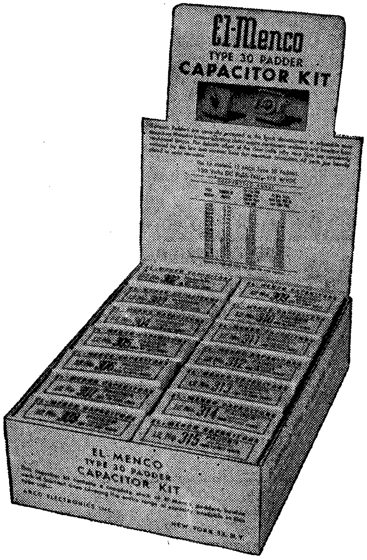
A complete stock of trimmers and padders is provided in these compact, easily handled, and readily accessible kits. Always have a full line of El-Menco trimmers and padders available for immediate use.


El-Menco
TYPE 46 TRIMMER
CAPACITOR KIT
EL-MENCO TYPE 46 TRIMMER CAPACITOR KIT
ARCO ELECTRONICS, INC. NEW YORK 13, N.Y.

TYPE 46 TRIMMER KIT

Provides a capacity range from 1½ to 780 mmfd.
Twenty-four units of each size available in type 46 trimmers (see page 7).
The total list price for all units included in the kit is $115.20.
Yet you may have this complete kit for only

List Price Only $90.00



TYPE 30 PADDER KIT

Provides a capacity range from 15 to 3055 mmfd.
(30M:15 to 2525 mmfd.)
Twelve units of each size available in type 30 or type 30M (see page 6).
The total list price for all units included in the kit is $163.20.
Yet you may have this complete kit for only

List Price Only $125.00

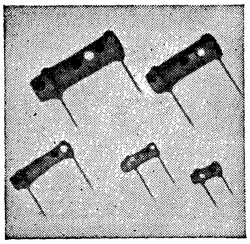
ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

CERAMIC CAPACITORS

Use primarily for coupling and by-pass in RF and higher frequency circuits, ELMENCO ceramic capacitors are wax impregnated with low-loss phenolic coating. Insulation resistance far exceeds the 10,000 megohm minimum requirements. Voltage rating is 1500VDCT, 500VDCW. 90% relative humidity test for 100 hours. Radial leads are 1¼″ minimum No. 22 tinned copper wire.

SILVER HIGH "K" TUBULAR

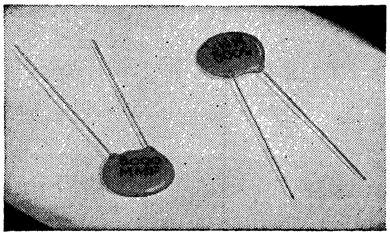


For general and higher frequency applications RMA Color Code. Tolerance ±20%.

See Note below for Lower Capacities.

TYPE DESIGNATION	CAP. MMF.	SIZE LENGTH	SIZE DIAM.	LIST PRICE
CC-1-301	300	9/16″	.250″	$0.25
CC-1-401	400	9/16″	.250″	.25
CC-1-501	500	9/16″	.250″	.25
CC-2-751	750	¾″	.250″	.25
CC-2-102	1000	¾″	.250″	.25
CC-2-122	1200	¾″	.250″	.25
CC-2-152	1500	¾″	.250″	.25
CC-2-202	2000	¾″	.250″	.25
CC-3-252	2500	11/16″	.350″	.30
CC-3-302	3000	11/16″	.350″	.30
CC-3-402	4000	11/16″	.350″	.35
CC-4-502	5000	1″	.350″	.40
CC-4-682	6800	1″	.350″	.40
CC-5-752	7500	1.20″	.350″	.45
CC-5-103	10000	1.20″	.350″	.50
CC-6-123	12000	1.325″	.350″	.50

SILVER HIGH "K" DISC



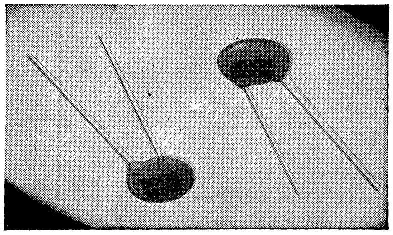
Reduced self-inductance due to flat design makes these units particularly adaptable to VHF applications.

Capacity and tolerance stamped on capacitor.

Maximum dimensions:
.575″ diameter
.150″ thickness

TYPE DESIGNATION	CAP. MMF.	LIST PRICE (MIN. GUAR. CAP.)	LIST PRICE (±20% TOL.)
CCD-102	1000	$0.25	$0.30
CCD-152	1500	.25	.30
CCD-202	2000	.25	.30
CCD-272	2700	.25	.35
CCD-332	3300	.25	.35
CCD-392	3900	.25	.35
CCD-472	4700	.25	.35
CCD-502	5000	.25	.40
CCD-682	6800	.25	.45
CCD-822	8200	.30	.50
CCD-103	10000	.30	.50
CCD-123	12000	.40	

N-750 DISC

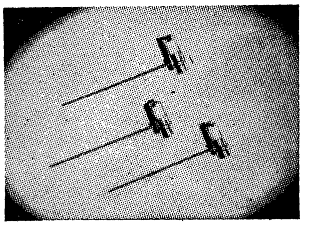


Negative temperature coefficient ceramics for compensation and reduction of temperature drift.

Capacity and tolerance stamped on capacitor.

Maximum dimensions:
.575″ diameter
.150″ thickness

TYPE DESIGNATION	CAP. MMF.	LIST PRICE (±20% TOL.)	LIST PRICE (±10% TOL.)
CCDN-470	47	$0.40	$0.50
CCDN-560	56	.40	.50
CCDN-620	62	.40	.50
CCDN-680	68	.40	.50
CCDN-750	75	.40	.50
CCDN-820	82	.40	.50
CCDN-101	100	.40	.50
CCDN-121	120	.40	.50
CCDN-151	150	.40	.50

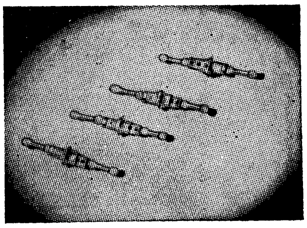


Adjustable ceramic trimmer capacitor for high frequency applications. Silvered Steatite tubes ⅝″ in length provide capacity ranges listed below upon insertion of 6-32 screw.

VARIABLE CERAMIC TRIMMER

PART No.	CAP. RANGE MMF.	LIST PRICE
CV-1	0.5 - 3	$0.35
CV-2	1 - 4	.35
CV-3	2 - 6	.35

Compact rugged ceramic feed through capacitors are designed for high frequency coupling with a minimum of inductive reactance through elimination of wire leads. These units are three dot RMA coded and rated at 500VDCW.



FEED THRU CAPACITORS

PART No.	CAP. (MMF.) (Guar. Min. Val.)	LIST PRICE
CCF-501	500	$0.40
CCF-102	1000	.40
CCF-152	1500	.40
CCF-202	2000	.40

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

NEW ARCO CAPACITOR KITS

1000 VOLT PAPER TUBULAR CAPACITOR KIT

SPECIAL KIT LIST PRICE **$35.00**

El-Menco
1000 VOLT PAPER TUBULAR CAPACITOR KIT
EL-MENCO 1000 VOLT PAPER TUBULAR CAPACITOR KIT

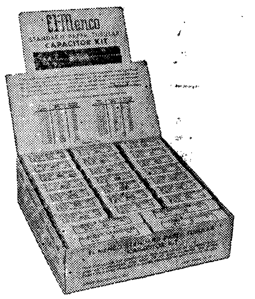
This Kit contains 5 EACH of the following PAPER TUBULAR CAPACITOR SIZES

PART NUMBER	CAPACITY MFD.	WORKING VOLTAGE
CP-1-102	.001	1000
CP-1-152	.0015	1000
CP-1-202	.002	1000
CP-1-252	.0025	1000
CP-2-302	.003	1000
CP-2-332	.0033	1000
CP-2-402	.004	1000
CP-2-472	.0047	1000
CP-2-502	.005	1000
CP-2-602	.006	1000
CP-2-752	.0075	1000
CP-3-103	.01	1000
CP-3-153	.015	1000
CP-4-203	.02	1000
CP-4-253	.025	1000
CP-5-353	.035	1000
CP-5-503	.05	1000

El-Menco CP type paper tubular capacitors are sealed in impervious steatite ceramic tubes through use of synthetic resin end fills which are waterproof and will not melt at any conceivable operating temperature. The non-inductivity wound paper and foil inserts are mineral oil impregnated. This combination of fine quality material and construction insures long life at high ambient temperatures, indefinite shelf-life and trouble-free operation under the most adverse conditions.

STANDARD PAPER TUBULAR CAPACITOR KIT

SPECIAL KIT LIST PRICE **$37.50**



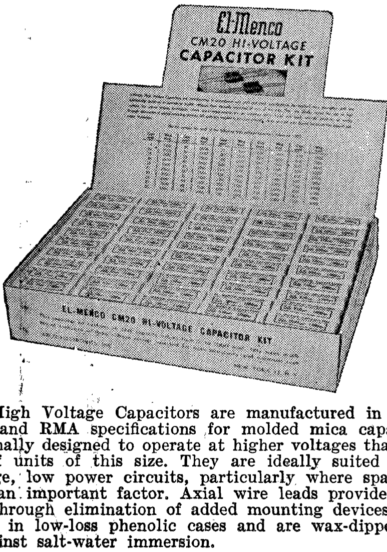
This Kit contains 5 EACH of the following PAPER TUBULAR CAPACITOR SIZES

PART NUMBER	CAPACITY MFD.	WORKING VOLTAGE
CP-1-102	.001	600
CP-1-152	.0015	600
CP-1-202	.002	600
CP-1-222	.0022	600
CP-1-252	.0025	600
CP-1-302	.003	600
CP-1-332	.0033	600
CP-1-402	.004	600
CP-1-472	.0047	600
CP-1-502	.005	600
CP-2-602	.006	600
CP-2-682	.0068	600
CP-2-752	.0075	600
CP-2-103	.01	600
CP-2-153	.015	600
CP-3-203	.02	600
CP-3-223	.022	600
CP-4-303	.03	600
CP-4-333	.033	600
CP-4-403	.04	600
CP-4-473	.047	600
CP-4-503	.05	600
CP-5-104	.1	600
CP-6-254	.25	400
CP-6-504	.5	200

CM20 HI VOLTAGE CAPACITOR KIT

This Kit contains 10 EACH of the following HIGH VOLTAGE CAPACITORS, Tolerance ±20%

CAP. MMF.	WKG. VOLT.	CAP. MMF.	WKG. VOLT.	CAP. MMF.	WKG. VOLT.
5	2500	56	2500	270	1500
10	2500	62	2500	300	1000
12	2500	68	2500	330	1000
15	2500	75	1500	360	1000
18	2500	82	1500	390	1000
20	2500	91	1500	430	1000
22	2500	100	1500	470	1000
24	2500	110	1500	500	1000
27	2500	120	1500	510	1000
30	2500	130	1500	560	1000
33	2500	150	1500	620	1000
36	2500	160	1500	680	1000
39	2500	180	1500	750	1000
43	2500	200	1500	820	1000
47	2500	220	1500	910	1000
50	2500	240	1500	1000	1000
51	2500	250	1500		


El-Menco
CM20 HI-VOLTAGE CAPACITOR KIT
EL-MENCO CM20 HI-VOLTAGE CAPACITOR KIT

El-Menco High Voltage Capacitors are manufactured in accordance with JAN and RMA specifications for molded mica capacitors and are additionally designed to operate at higher voltages than normally expected of units of this size. They are ideally suited for use in high voltage, low power circuits, particularly where space requirements are an important factor. Axial wire leads provide simplicity of wiring through elimination of added mounting devices. All units are molded in low-loss phenolic cases and are wax-dipped for protection against salt-water immersion.

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

El-Menco
SILVERED MICA
CAPACITOR KIT
El-Menco

JAN-C-5
ELMENCO
CAPACITOR KITS

All capacitors contained in these handy ARCO kits are ELMENCO, a name known world-wide for quality and dependability of performance, the finest products in their field.

●●●

SILVERED MICA KIT

This kit contains the complete range of ELMENCO silvered molded mica capacitors from 5 mmf. to 10,000 mmf. manufactured in accordance with JAN-C-5 specifications. All units are of letters "C", "D" or "E" characteristics as specified and letter "J" (5%) tolerance and are JAN color coded.

SPECIAL KIT LIST PRICE $325

PURCHASED INDIVIDUALLY THE TOTAL LIST PRICE VALUE OF THE CAPACITORS CONTAINED IN THIS KIT WOULD BE . . . . $\$385^{00}$

THESE KITS CONTAIN FIVE EACH OF THE FOLLOWING ELMENCO MOLDED MICA CAPACITORS:

47 JAN capacity values CM20 case size, max. dim. 25/32 x 7/16 x 7/32", from 5 to 1000 mmf. 500VDCW.

12 JAN capacity values CM30 case size, max. dim. 13/16 x 13/16 x 9/32", from 1100 to 3300 mmf. 500VDCW.

7 JAN capacity values CM35 case size, max. dim. 13/16 x 13/16 x 11/32", from 3600 to 6200 mmf. 500VDCW.

5 JAN capacity values CM35 case size, max. dim. 13/16 x 13/16 x 11/32", from 6800 to 10,000 mmf. 300VDCW.

PER JAN-C-5 SPECIFICATIONS

El-Menco
REGULAR FOIL MICA
JAN-C-5
CAPACITOR KIT
El-Menco

REG. FOIL MICA KIT

SPECIAL KIT LIST PRICE $140

PURCHASED INDIVIDUALLY THE TOTAL LIST PRICE VALUE OF THE CAPACITORS CONTAINED IN THIS KIT WOULD BE . . . . $\$158^{40}$

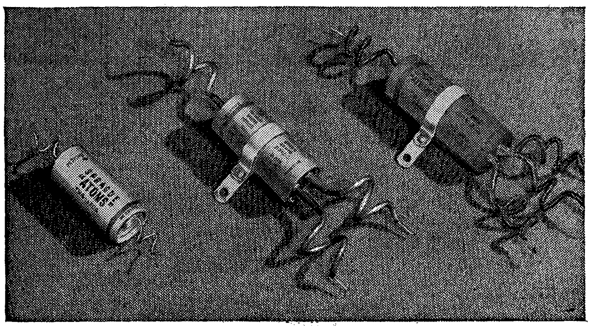
This kit contains the complete range of ELMENCO regular foil molded mica capacitors from 5 mmf. to 10,000 mmf. manufactured in accordance with JAN-C-5 specifications. All units are of the letter "B" characteristic and letter "K" (10%) tolerance and are JAN color coded.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

SPRAGUE CAPACITORS

ATOM® ELECTROLYTICS

- The Smallest Dependable Dry Electrolytic—the Only Small Size Capacitor Designed for 85°C. operation in Voltages from 6 to 450 WVDC
- Whether for AC-DC Sets, Auto Radios, Home Radio-phono Combinations, or TV Sets, the SPRAGUE Line Will Handle All your Replacement Requirements—No Dual Inventory Problems
- Small Enough to Fit Anywhere, Work Anywhere
- Guaranteed to Have Low Leakage and Long Shelf Life
- Will Withstand High Temperatures, High Ripple Currents, High Surge Voltages



SINGLE UNITS

MF	WVDC	Diam. x Length	Cat. No.	List
50	6	3/8 x 1 1/4	TVA-1100	$ .95
100	6	1/2 x 1 1/8	TVA-1101	1.20
250	6	5/8 x 1 7/16	TVA-1102	1.35
500	6	5/8 x 2 3/16	TVA-1103	1.55
1000	6	11/16 x 2 3/16	TVA-1104	1.90
1500	6	13/16 x 2 11/16	TVA-1105	2.10
2000	6	13/16 x 2 15/16	TVA-1106	2.30
100	12	9/16 x 1 3/16	TVA-1130	1.20
250	12	5/8 x 1 11/16	TVA-1131	1.45
500	12	3/4 x 1 11/16	TVA-1132	1.70
1000	12	13/16 x 2 3/16	TVA-1133	2.25
100	15	5/8 x 1 3/16	TVA-1160	1.25
250	15	5/8 x 1 11/16	TVA-1161	1.55
500	15	11/16 x 2 3/16	TVA-1162	1.75
1000	15	7/8 x 2 3/16	TVA-1163	2.30
2	25	3/8 x 1 1/4	TVA-1201	.90
5	25	3/8 x 1 1/4	TVA-1203	1.00
10	25	3/8 x 1 1/4	TVA-1204	1.00
25	25	3/8 x 1 1/4	TVA-1205	1.00
50	25	9/16 x 1 3/16	TVA-1206	1.10
100	25	9/16 x 1 11/16	TVA-1207	1.35
250	25	3/4 x 1 11/16	TVA-1208	1.70
500	25	7/8 x 2 3/16	TVA-1209	2.30
1	50	3/8 x 1 1/4	TVA-1300	.90
2	50	3/8 x 1 1/4	TVA-1301	.90
5	50	3/8 x 1 1/4	TVA-1303	1.00
10	50	3/8 x 1 1/4	TVA-1304	1.00
25	50	7/16 x 1 7/16	TVA-1306	1.05
50	50	9/16 x 1 11/16	TVA-1308	1.20
100	50	5/8 x 1 11/16	TVA-1310	1.40
150	50	3/4 x 1 11/16	TVA-1311	1.55
250	50	15/16 x 1 11/16	TVA-1312	1.75
4	150	3/8 x 1 1/4	TVA-1402	1.00
8	150	3/8 x 1 3/4	TVA-1405	1.05
10	150	3/8 x 1 3/4	TVA-1406	1.05
12	150	3/8 x 1 3/4	TVA-1407	1.10
16	150	9/16 x 1 11/16	TVA-1409	1.15
20	150	9/16 x 1 11/16	TVA-1410	1.20
30	150	5/8 x 1 11/16	TVA-1412	1.30
40	150	3/4 x 1 11/16	TVA-1413	1.35
50	150	13/16 x 1 11/16	TVA-1414	1.40
80	150	7/8 x 1 15/16	TVA-1418	1.60
100	150	7/8 x 2 3/16	TVA-1420	1.75
150	150	1 x 2 3/16	TVA-1422	1.90
4	250	7/16 x 1 5/8	TVA-1501	1.00
8	250	1/2 x 1 5/8	TVA-1503	1.15
10	250	9/16 x 1 11/16	TVA-1504	1.20
12	250	9/16 x 1 11/16	TVA-1505	1.25
16	250	5/8 x 1 11/16	TVA-1507	1.30
20	250	11/16 x 1 11/16	TVA-1508	1.35
30	250	11/16 x 2 3/16	TVA-1510	1.45
40	250	3/4 x 2 3/16	TVA-1511	1.55
4	350	1/2 x 1 5/8	TVA-1601	1.05
8	350	5/8 x 1 11/16	TVA-1603	1.20
10	350	11/16 x 1 11/16	TVA-1604	1.25
12	350	11/16 x 1 11/16	TVA-1605	1.30
16	350	3/4 x 1 11/16	TVA-1607	$1.40
20	350	13/16 x 1 11/16	TVA-1608	1.45
30	350	13/16 x 2 3/16	TVA-1610	1.65
40	350	7/8 x 2 7/16	TVA-1611	1.75
60	350	1 x 2 7/16	TVA-1613	1.95
2	450	7/16 x 1 5/8	TVA-1701	1.10
4	450	9/16 x 1 11/16	TVA-1702	1.15
8	450	11/16 x 1 11/16	TVA-1704	1.25
10	450	11/16 x 1 11/16	TVA-1705	1.30
12	450	3/4 x 1 11/16	TVA-1706	1.35
16	450	3/4 x 2 3/16	TVA-1708	1.40
20	450	3/4 x 2 3/16	TVA-1709	1.55
30	450	7/8 x 2 3/16	TVA-1711	1.70
40	450	7/8 x 2 11/16	TVA-1712	1.80
50	450	7/8 x 3 3/16	TVA-1713	2.10
80	450	1 x 3 11/16	TVA-1716	2.80
10	475	3/4 x 1 15/16	TVA-1802	1.35
20	475	7/8 x 2 7/16	TVA-1804	1.60
8	500	7/8 x 1 11/16	TVA-1902	1.30
16	500	15/16 x 2 3/16	TVA-1905	1.50
20	500	1 x 2 3/16	TVA-1906	1.60

DUAL UNITS
COMMON NEGATIVE—3 LEADS

MF	WVDC	Diam. x Length	Cat. No.	List
10-10	25-25	7/8 x 1 7/16	TVA-2210	$1.40
10-10	50-50	7/8 x 1 7/16	TVA-2315	1.40
8-8	150-150	7/8 x 1 7/16	TVA-2415	1.50
16-16	150-150	7/8 x 1 7/16	TVA-2420	1.80
20-12	150-150	7/8 x 1 7/16	TVA-2425	1.60
20-20	150-150	7/8 x 1 7/16	TVA-2428	1.65
30-20	150-150	7/8 x 1 11/16	TVA-2421	1.70
30-30	150-150	7/8 x 1 11/16	TVA-2434	1.80
40-20	150-150	7/8 x 1 11/16	TVA-2438	1.75
40-30	150-150	7/8 x 1 15/16	TVA-2442	1.80
40-40	150-150	7/8 x 1 15/16	TVA-2445	1.85
50-30	150-150	7/8 x 1 15/16	TVA-2450	1.95
50-50	150-150	7/8 x 2 7/16	TVA-2453	2.10
80-30	150-150	7/8 x 2 7/16	TVA-2460	2.20
16-8	200-200	3/4 x 2 3/8	TA-816	1.55
16-16	250-250	15/16 x 2 3/8	AT-261	1.70
20-20	250-250	7/8 x 1 15/16	TVA-2515	1.85
40-10	250-250	7/8 x 2 3/16	TVA-2520	2.05
80-10	250-250	15/16 x 3 3/16	TVA-2525	2.55
8-8	450-450	7/8 x 1 11/16	TVA-2720	1.70
10-10	450-450	7/8 x 1 15/16	TVA-2722	1.85
16-8	450-450	7/8 x 2 3/16	TVA-2725	2.00
20-20	450-450	7/8 x 2 15/16	TVA-2730	2.50
30-30	450-450	1 x 3 3/16	TVA-2735	3.00
40-40	450-450	1 x 3 15/16	TVA-2740	3.40

SEPARATE SECTIONS—4 LEADS

MF	WVDC	Diam. x Length	Cat. No.	List
20-20	150-150	1 x 2 3/8	TU-220	2.05
40-20	150-150	1 1/16 x 2 5/8	TU-420	2.20
16-16	250-250	1 x 2 7/8	TU-216	2.20
8-8	450-450	1 1/16 x 3 3/8	TU-88	2.15
16-16	450-450	1 3/8 x 3 1/8	TU-1616	2.80

All prices subject to change without notice.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

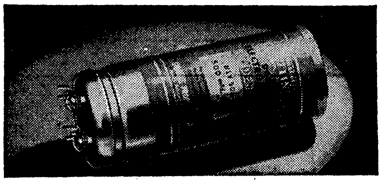
SPRAGUE CAPACITORS

MF	WVDC	Diam. x Length	Cat. No.	List
TRIPLE UNITS				
20-20-20	150-150-25	⅞ x 2⅜	TVA-3415	$2.05
30-30-100	150-150-12	⅞ x 2⅞	TVA-3419	2.30
40-30-20	150-150-25	⅞ x 2⅞	TVA-3423	2.20
40-40-100	150-150-25	15/16 x 3⅜	TVA-3427	2.45
50-30-20	150-150-25	15/16 x 2⅞	TVA-3430	2.35
50-30-200	150-150-25	1 x 3⅜	TVA-3433	2.75

MF	WVDC	Diam. x Length	Cat. No.	List
50-50-20	150-150-25	1 x 2⅞	TVA-3436	$2.50
20-20-20	150-150-150	15/16 x 2⅜	TVA-3440	2.20
30-30-30	150-150-150	1 x 2⅞	TVA-3444	2.35
40-30-20	150-150-150	1 x 2⅝	TVA-3448	2.35
40-40-40	150-150-150	⅞ x 3⅞	TVA-3451	2.45
80-40-20	150-150-150	1 x 3⅞	TVA-3455	2.75
12-12-20	450-450-25	1 x 2⅞	TVA-3716	2.30

HLV 'LYTICS

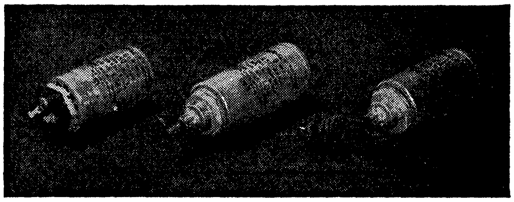
HIGH CAPACITY LOW VOLTAGE



- Especially Designed for Filter Circuits in Motion Picture Amplifiers and Other Critical Equipment
- Eliminates All Hum
- Compact Construction
- Hermetically Sealed in Aluminum Can
- Has Outer Insulating Cardboard Tube

MF	WVDC	Dia. x Length	Cat. No.	List
500	6	1 x 2⅛	HLV-506	$3.05
1000	6	1⅜ x 2¼	HLV-106	3.40
1500	6	1⅜ x 2¾	HLV-156	3.60
2000	6	1⅜ x 3¼	HLV-206	3.80
500	12	1⅜ x 2¼	HLV-5012	3.20
1000	12	1⅜ x 2¼	HLV-1012	3.75
1500	12	1⅜ x 2¾	HLV-1512	3.95
2000	12	1⅜ x 3¼	HLV-2012	4.15
500	15	1⅜ x 2¼	HLV-5015	3.25
1000	15	1⅜ x 2¼	HLV-1015	3.80
1500	15	1⅜ x 3¼	HLV-1515	4.00
2000	15	1½ x 3¾	HLV-2015	4.70
500	25	1⅜ x 2¼	HLV-525	3.80
1000	25	1⅜ x 3¼	HLV-1025	4.80
2000	25	1¾ x 4¼	HLV-2025	5.75

SCREWBASE ELECTROLYTICS



Type PLS—Capacitor sections have separate positive leads and common negative lead

Type LS—Positive terminal is lug connection, can is negative terminal

Type SC—For use where high peaks may occur . . . Lug connection is positive, can is negative

Type CL—Same as Type SC, but with can insulated from Sections . . . Separate positive and negative leads

Type WR—Designed to replace wet electrolytics . . . Will withstand A-C ripples that may break down ordinary drys . . . Has lug terminal

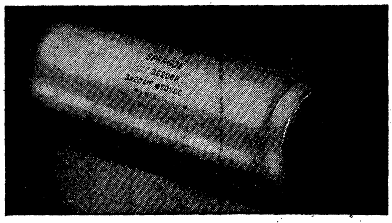
Type AP—For high voltage applications . . . Sections are connected in series . . . Insulated leads

MF	Dia. x Length	Cat. No.	List
TYPE PLS—450 WVDC, 525 V Surge			
4	1⅜ x 2 7/16	PLS-4	$2.00
8	1⅜ x 2 7/16	PLS-8	2.20
12	1⅜ x 2 7/16	PLS-12	2.40
16	1⅜ x 2 7/16	PLS-16	2.45
20	1⅜ x 2 7/16	PLS-20	2.70
25	1⅜ x 3 7/16	PLS-25	2.90
30	1⅜ x 3 7/16	PLS-30	3.00
40	1⅜ x 3 15/16	PLS-40	3.15
4+8	1⅜ x 2 15/16	PLS-48	2.95
8+8	1½ x 2 15/16	PLS-88	3.00
8+16	1½ x 2 15/16	PLS-816	3.30
16+16	1½ x 3 15/16	PLS-216	3.55
8+8+8	1½ x 2 15/16	PLS-888	5.00
TYPE LS—450 WVDC, 525 V Surge			
8	1⅜ x 2 15/16	LS-8	2.20
12	1⅜ x 2 15/16	LS-12	2.40
16	1⅜ x 2 15/16	LS-16	2.45
20	1⅜ x 2 15/16	LS-20	2.70
25	1⅜ x 3 7/16	LS-25	2.90
30	1⅜ x 3 7/16	LS-30	3.00
40	1⅜ x 3 15/16	LS-40	3.15
8+8	1⅜ x 2¼	LS-88	3.00

MF	Dia. x Length	Cat. No.	List
TYPE SC—475 WVDC, 600 V Surge			
4	1 x 3 7/16	SC-4	$2.55
8	1⅜ x 4 7/16	SC-8	2.75
12	1⅜ x 4 7/16	SC-12	2.95
16	1½ x 4 7/16	SC-16	3.15
8+8	1⅜ x 4¼	SC-88	4.10
TYPE CL—475 WVDC, 600 V Surge			
8	1⅜ x 4 7/16	CL-8	2.75
16	1½ x 4 7/16	CL-16	3.15
8+8	1½ x 4 15/16	CL-88	4.10
TYPE WR—500 WVDC, 600 V Surge			
8	1⅜ x 3 15/16	WR-8	2.85
16	1⅜ x 4 7/16	WR-16	3.30
25	1½ x 5 7/16	WR-25	3.75
TYPE AP—600 WVDC, 800 V Surge			
4	1 x 4 7/16	AP-46	2.95
8	1⅜ x 4 7/16	AP-86	3.15
16	1½ x 4 7/16	AP-16	3.75

OCTAL-BASE "PLUG-IN" ELECTROLYTICS

MF	WVDC	Dia. x Length	Cat. No.	List
100	350	1⅜ x 3	PE-1636	$5.85
10	450	1 5/32 x 2½	PE-1705	4.05
20	450	1 5/32 x 2½	PE-1714	4.30
40	450	1⅜ x 2½	PE-1725	4.55
80	450	1⅜ x 3½	PE-1730	5.55
20-20	150-150	1 5/32 x 2½	PE-2415	4.20
40-40	150-150	1 5/32 x 2½	PE-2428	4.40
10-10	450-450	1 5/32 x 2½	PE-2750	4.40
20-20	450-450	1⅜ x 2½	PE-2755	5.05
40-40	450-450	1⅜ x 2½	PE-2764	5.95
10-10-10	450-450-450	1 5/32 x 2½	PE-3776	5.10
20-20-20	450-450-450	1⅜ x 3	PE-3780	6.10
30-30-10-20	450-450-450-50	1⅓ x 3½	PE-4741	6.85



- For Broadcast Amplifiers, Police Radio, and Other Applications where Rapid Changing of Capacitors is Desired
- Will Fit Standard Octal Base Tube Sockets
- Hermetically Sealed in Aluminum Cans for Long Life
- Will Stand Up under Extremely High Temperatures, High Ripple Currents, and High Surge Voltages

All prices subject to change without notice.

3-53

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

SPRAGUE CAPACITORS

TVL TWIST-LOK* ELECTROLYTICS

SPRAGUE
1600 LINE
DRY ELECTROLYTIC
CAPACITOR
TVL-4415
30-30-30-40 MFD
150-25 VDC

- Especially Designed for Tough TV Replacement Applications
- Hermetically Sealed in Aluminum Cans for Long Life
- The Most Dependable Electrolytic in Such Compact Size
- Stand Up Under Extremely High Temperatures, High Ripple Currents, High Surge Voltages
- Easy to Mount—A Twist of the Tabs Locks Unit in Place
- Complete with Bakelite and Metal Washers, They're ideal for Above-chassis Mounting
- Designed for 85°C Operation, Up to 450 WVDC

★ Trademark

MF	WVDC	Diam. x Length	Cat. No.	List
SINGLE UNITS				
.5Ω@15.75 KC	3N.P.	1 x 2	TVL-1010	$2.10
1Ω@60 CPS	3N.P.	1⅜ x 2½	TVL-1015	3.20
10Ω@30 CPS	3N.P.	¾ x 2	TVL-1020	2.20
2000	6	1⅜ x 2	TVL-1115	2.55
3000	10	1⅜ x 2½	TVL-1140	2.90
1000	15	1 x 2½	TVL-1165	2.55
2000	15	1⅜ x 2	TVL-1168	3.45
3000	15	1⅜ x 3	TVL-1170	3.50
40	25	¾ x 2	TVL-1210	1.35
100	25	¾ x 2	TVL-1215	1.60
500	25	1 x 2	TVL-1220	2.55
1000	25	1⅜ x 2	TVL-1230	3.55
150	50	¾ x 2½	TVL-1320	1.80
500	50	1⅜ x 2½	TVL-1330	2.65
20	150	1 x 2	TVL-1405	1.45
30	150	1 x 2	TVL-1408	1.55
40	150	1 x 2	TVL-1412	1.60
50	150	1 x 2	TVL-1415	1.65
80	150	1 x 2½	TVL-1420	1.85
80	150	1⅜ x 2	TVL-1421	1.85
100	150	1 x 2½	TVL-1423	2.00
120	150	1 x 3½	TVL-1425	2.15
140	150	1⅜ x 3	TVL-1428	2.15
150	150	1⅜ x 3	TVL-1430	2.15
200	150	1⅜ x 4	TVL-1431	2.45
300	150	1⅜ x 3½	TVL-1434	2.80
40	200	1 x 2	TVL-1460	1.70
15	250	1 x 2	TVL-1505	1.55
20	250	1 x 2	TVL-1509	1.60
30	250	1 x 2	TVL-1516	1.70
40	250	1 x 2	TVL-1519	1.80
50	250	1 x 2½	TVL-1522	1.95
60	250	1 x 3	TVL-1525	2.05
80	250	1 x 3½	TVL-1530	2.15
100	250	1 x 3	TVL-1535	2.70
150	250	1⅜ x 3	TVL-1540	3.10
15	300	1 x 2	TVL-1560	1.60
30	300	1 x 2	TVL-1563	1.75
50	300	1 x 2½	TVL-1567	2.05
60	300	1 x 3	TVL-1570	2.10
80	300	1 x 3½	TVL-1573	2.55
100	300	1 x 4	TVL-1578	2.90
125	300	1⅜ x 3½	TVL-1580	3.50
150	300	1⅜ x 3½	TVL-1584	3.50
30	350	1 x 2½	TVL-1617	1.90
40	350	1 x 2	TVL-1621	2.00
50	350	1 x 3	TVL-1622	2.10
80	350	1⅜ x 3	TVL-1630	$2.85
125	350	1⅜ x 3½	TVL-1638	3.95
10	400	1 x 2	TVL-1655	1.50
20	400	1 x 2	TVL-1660	1.75
80	400	1⅜ x 3	TVL-1675	2.95
10	450	1 x 2	TVL-1705	1.55
15	450	1 x 2	TVL-1709	1.70
20	450	1 x 2	TVL-1714	1.80
30	450	1 x 2½	TVL-1720	1.95
40	450	1 x 3	TVL-1725	2.05
80	450	1⅜ x 2½	TVL-1735	3.05
125	450	1⅜ x 4	TVL-1760	3.85
30	475	1 x 3	TVL-1810	2.00
40	475	1⅜ x 2	TVL-1820	2.50
90	475	1⅜ x 3½	TVL-1850	3.50
10	525	1 x 2	TVL-1940	1.70
DUAL UNITS				
5.Ω@15.75 KC- 2.5Ω@60 CPS		1⅜ x 2	TVL-2010	3.60
1000-500	6 N.P.-6 N.P.	1⅜ x 2	TVL-2120	3.90
250-1000	10-6	1⅜ x 2	TVL-2140	2.85
1000-1000	15-15	1 x 3½	TVL-2160	4.40
40-40	25-25	1 x 2	TVL-2210	1.60
150-50	25-25	1 x 2	TVL-2230	1.90
50-50	50-50	1 x 2	TVL-2320	1.70
50-500	150-5	1 x 3	TVL-2404	2.45
20-20	150-150	1 x 2	TVL-2415	1.70
30-15	150-150	1 x 2	TVL-2418	1.75
30-30	150-150	1 x 2	TVL-2422	1.85
40-20	150-150	1 x 2	TVL-2425	1.85
40-40	150-150	1 x 2½	TVL-2428	1.90
50-30	150-150	1 x 2½	TVL-2432	2.00
50-50	150-150	1 x 2½	TVL-2435	2.15
60-60	150-150	1 x 3½	TVL-2438	2.35
80-40	150-150	1⅜ x 3½	TVL-2442	2.30
200-5	150-150	1⅜ x 3	TVL-2444	2.70
200-125	150-150	1⅜ x 3½	TVL-2445	3.75
200-200	150-150	1⅜ x 4	TVL-2447	4.00
40-40	200-200	1 x 3	TVL-2460	2.30
40-25	250-25	1 x 2½	TVL-2505	2.00
10-10	250-250	1 x 2	TVL-2510	1.70
20-20	250-250	1 x 2	TVL-2515	1.90
40-40	250-250	1 x 3½	TVL-2520	2.50
150-150	250-250	1⅜ x 4	TVL-2535	5.15
20-20	200-25	1 x 2	TVL-2555	1.85
10-10	300-300	1 x 2	TVL-2565	1.75
15-15	300-300	1 x 2	TVL-2568	1.90
40-40	300-300	1⅜ x 2½	TVL-2575	3.00
60-60	300-300	1⅜ x 2½	TVL-2579	3.40

SPRAGUE CAPACITORS

MF	WVDC	Diam. x Length	Cat. No.	List
80-40	300-300	1⅜ x 2½	TVL-2582	$3.55
80-60	300-300	1⅜ x 3½	TVL-2584	3.70
80-80	300-300	1⅜ x 3½	TVL-2585	4.05
120-20	300-300	1⅜ x 3½	TVL-2588	4.00
120-40	300-300	1⅜ x 3½	TVL-2589	4.35
20-30	350-250	1 x 3	TVL-2615	2.30
40-10	350-250	1 x 3	TVL-2617	2.45
60-80	350-250	1⅜ x 2½	TVL-2618	3.45
30-30	350-300	1 x 3½	TVL-2621	2.65
20-20	350-350	1 x 3	TVL-2626	2.30
30-20	350-350	1 x 3½	TVL-2627	2.60
80-80	350-350	1⅜ x 4	TVL-2635	4.70
40-100	400-50	1⅜ x 2	TVL-2653	2.70
60-80	400-250	1⅜ x 4	TVL-2657	3.90
15-15	400-400	1 x 2½	TVL-2660	2.25
30-10	400-400	1 x 3	TVL-2663	2.35
60-60	400-400	1⅜ x 4	TVL-2668	4.40
80-10	400-400	1⅜ x 3½	TVL-2672	3.40
80-40	400-400	1⅜ x 4	TVL-2675	4.10
80-10	450-25	1⅜ x 3	TVL-2705	3.40
10-100	450-50	1 x 2½	TVL-2708	2.05
80-50	450-50	1⅜ x 3	TVL-2710	3.50
20-100	450-100	1⅜ x 2	TVL-2713	2.90
20-80	450-350	1⅜ x 3½	TVL-2730	3.65
40-10	450-350	1⅜ x 2½	TVL-2735	2.60
10-10	450-450	1 x 2	TVL-2750	1.90
15-10	450-450	1 x 2½	TVL-2752	2.25
15-15	450-450	1 x 2½	TVL-2753	2.25
20-20	450-450	1 x 3	TVL-2755	2.55
30-30	450-450	1⅜ x 2½	TVL-2759	3.05
40-40	450-450	1⅜ x 3	TVL-2764	3.45
60-40	450-450	1⅜ x 3½	TVL-2770	3.95
80-10	450-450	1⅜ x 3	TVL-2776	3.60
80-30	450-450	1⅜ x 4	TVL-2777	4.20
20-100	475-300	1⅜ x 3½	TVL-2810	3.95
40-40	475-475	1⅜ x 3	TVL-2830	4.30
80-40	475-475	1⅜ x 4	TVL-2850	5.05
40-50	500-200	1⅜ x 3	TVL-2920	3.35

TRIPLE UNITS

MF	WVDC	Diam. x Length	Cat. No.	List
1500-1500-1500	3-3-3	1 x 3½	TVL-3015	6.00
20-20-20	25-25-25	1 x 2	TVL-3210	1.95
40-40-40	25-25-25	1 x 2	TVL-3230	2.15
30-30-30	50-50-50	1 x 2	TVL-3320	2.15
20-250-100	150-15-15	1⅜ x 2	TVL-3403	2.90
100-50-25	150-50-25	1 x 3	TVL-3407	3.00
30-20-100	150-150-6	1 x 2	TVL-3412	2.40
20-20-20	150-150-25	1 x 2	TVL-3415	2.20
30-20-20	150-150-25	1 x 2	TVL-3417	2.25
30-30-20	150-150-25	1 x 2	TVL-3419	2.30
40-20-20	150-150-25	1 x 2½	TVL-3422	2.30
40-30-20	150-150-25	1 x 2	TVL-3424	2.35
40-30-25	150-150-25	1 x 2½	TVL-3425	2.35
50-30-100	150-150-25	1 x 3	TVL-3427	2.70
50-50-20	150-150-25	1 x 3	TVL-3430	2.65
20-20-20	150-150-150	1 x 2½	TVL-3433	2.30
30-30-10	150-150-150	1 x 2	TVL-3435	2.35
40-20-20	150-150-150	1 x 2½	TVL-3437	2.40
40-40-40	150-150-150	1 x 3½	TVL-3440	2.60
50-50-50	150-150-150	1 x 3	TVL-3442	3.00
80-80-80	150-150-150	1⅜ x 3	TVL-3446	3.75
120-80-40	150-150-150	1⅜ x 3½	TVL-3448	3.80
70-70-20	250-250-50	1⅜ x 3	TVL-3470	3.90
100-10-40	200-200-50	1⅜ x 2	TVL-3475	3.15
15-15-20	250-250-25	1 x 2	TVL-3510	2.35
30-30-20	250-250-25	1 x 3	TVL-3513	2.80
40-20-10	250-250-150	1⅜ x 2	TVL-3517	2.75
80-80-60	250-250-200	1⅜ x 3½	TVL-3525	4.50
15-15-10	250-250-250	1 x 2	TVL-3530	2.45
30-15-10	250-250-250	1 x 2½	TVL-3534	2.70
40-20-20	250-250-250	1 x 3½	TVL-3540	$2.90
100-60-20	300-150-25	1⅜ x 3	TVL-3560	4.20
100-60-20	300-250-250	1⅜ x 4	TVL-3562	4.90
200-60-20	300-250-250	1⅜ x 4	TVL-3563	5.50
20-20-20	300-300-25	1 x 2½	TVL-3565	2.75
40-15-20	300-300-25	1 x 3	TVL-3570	2.95
40-20-20	300-300-25	1⅜ x 2	TVL-3573	3.10
200-20-10	300-300-100	1⅜ x 4	TVL-3575	4.90
10-10-15	300-300-250	1 x 2	TVL-3578	2.45
10-10-10	300-300-300	1 x 2	TVL-3580	2.40
80-40-40	300-300-300	1⅜ x 3½	TVL-3583	4.75
120-50-40	300-300-300	1⅜ x 4	TVL-3585	5.85
10-50-100	350-150-50	1 x 3½	TVL-3608	2.85
125-5-100	350-200-75	1⅜ x 3½	TVL-3610	5.30
20-30-20	350-250-25	1 x 3	TVL-3612	2.80
30-20-10	350-250-250	1 x 3½	TVL-3615	3.00
20-40-10	350-300-150	1 x 3½	TVL-3619	3.15
30-30-20	350-300-25	1 x 3	TVL-3620	3.15
40-20-10	350-300-200	1⅜ x 2	TVL-3623	3.30
10-10-20	350-350-25	1 x 2	TVL-3628	3.25
15-10-20	350-350-25	1 x 2½	TVL-3630	2.50
15-15-20	350-350-25	1 x 2½	TVL-3632	2.70
20-5-30	350-350-25	1 x 2	TVL-3633	2.45
20-10-20	350-350-25	1 x 2½	TVL-3634	2.55
30-20-20	350-350-25	1 x 3½	TVL-3636	3.10
10-5-150	350-350-50	1 x 3	TVL-3638	2.70
60-40-20	350-350-350	1⅜ x 4	TVL-3640	4.25
80-60-60	350-350-350	1⅜ x 4	TVL-3642	5.55
90-40-20	350-350-350	1⅜ x 4	TVL-3645	5.25
60-40-20	400-300-25	1⅜ x 3½	TVL-3663	4.20
10-40-10	400-300-150	1⅜ x 2	TVL-3665	2.90
10-50-30	400-350-25	1 x 3½	TVL-3670	3.10
100-10-20	400-350-50	1⅜ x 3½	TVL-3672	4.50
15-15-40	400-400-25	1 x 3	TVL-3675	2.80
20-20-20	400-400-25	1 x 3	TVL-3678	2.85
20-10-40	400-400-50	1 x 3	TVL-3682	2.65
80-40-150	400-400-50	1⅜ x 4	TVL-3684	5.25
20-10-10	400-400-350	1 x 3	TVL-3687	2.70
10-10-10	400-400-400	1 x 2½	TVL-3690	2.40
30-100-25	450-25-25	1⅜ x 2	TVL-3703	2.95
80-100-20	450-50-50	1⅜ x 3	TVL-3704	4.25
40-40-130	450-150-50	1⅜ x 3	TVL-3706	3.70
40-90-50	450-150-150	1⅜ x 3	TVL-3708	4.00
20-80-50	450-200-50	1⅜ x 2½	TVL-3709	3.40
20-60-100	450-250-25	1⅜ x 2½	TVL-3711	3.65
10-80-80	450-250-250	1⅜ x 4	TVL-3712	4.15
20-40-10	450-250-250	1⅜ x 2	TVL-3713	3.15
10-100-20	450-300-300	1⅜ x 3	TVL-3715	4.35
20-15-10	450-300-300	1 x 3½	TVL-3716	2.85
10-10-20	450-350-25	1 x 2½	TVL-3719	2.30
10-10-50	450-350-25	1 x 3	TVL-3721	2.40
20-80-100	450-350-50	1⅜ x 3½	TVL-3722	4.50
30-40-50	450-350-25	1 x 4	TVL-3723	3.70
15-20-20	450-350-250	1⅜ x 2	TVL-3724	2.95
60-20-20	450-350-350	1⅜ x 3½	TVL-3725	4.30
10-30-30	450-400-300	1⅜ x 2½	TVL-3726	3.35
20-80-10	450-350-350	1⅜ x 3½	TVL-3727	4.25
40-40-40	450-400-300	1⅜ x 3	TVL-3728	4.60
10-10-10	450-450-25	1 x 2½	TVL-3729	2.40
10-10-20	450-450-25	1 x 2½	TVL-3731	2.40
15-15-20	450-450-25	1 x 3	TVL-3733	2.70
20-10-20	450-450-25	1 x 3	TVL-3735	2.70
20-15-20	450-450-25	1 x 3½	TVL-3737	2.90
20-20-20	450-450-25	1 x 3½	TVL-3739	3.05
30-30-20	450-450-25	1⅜ x 2½	TVL-3741	3.55
30-30-125	450-450-25	1⅜ x 3	TVL-3743	3.95
80-10-125	450-450-25	1⅜ x 3½	TVL-3745	4.45
80-40-100	450-450-25	1⅜ x 4	TVL-3746	5.05
10-10-40	450-450-50	1 x 2½	TVL-3749	2.50
20-10-50	450-450-50	1 x 3	TVL-3751	2.85
30-15-150	450-450-50	1⅜ x 2½	TVL-3753	3.70

All prices subject to change without notice.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

TVL TWIST-LOK ELECTROLYTICS, continued

MF	WVDC	Dia. x Length	Cat. No.	List
40-10-40	450-450-50	1⅜ x 2½	TVL-3754	$3.25
60-40-75	450-450-50	1⅜ x 4	TVL-3756	4.65
80-20-100	450-450-50	1⅜ x 4	TVL-3757	4.80
40-40-40	450-450-150	1⅜ x 3½	TVL-3758	4.15
40-10-80	450-450-200	1⅜ x 3	TVL-3761	3.90
40-10-100	450-450-200	1⅜ x 3½	TVL-3762	4.15
40-40-60	450-450-200	1⅜ x 3½	TVL-3763	4.45
40-40-100	450-450-200	1⅜ x 4	TVL-3764	4.95
15-10-120	450-450-300	1⅜ x 3½	TVL-3765	4.70
15-15-10	450-450-300	1 x 3½	TVL-3766	2.85
15-5-15	450-450-350	1 x 3	TVL-3768	2.85
20-20-60	450-450-350	1⅜ x 3½	TVL-3770	5.05
40-10-10	450-450-350	1⅜ x 3	TVL-3772	3.30
10-10-10	450-450-450	1 x 3	TVL-3776	2.60
15-15-10	450-450-450	1 x 3½	TVL-3778	2.95
20-20-20	450-450-450	1⅜ x 2½	TVL-3780	3.60
30-30-30	450-450-450	1⅜ x 3½	TVL-3782	4.35
40-40-10	450-450-450	1⅜ x 3½	TVL-3785	4.15
40-40-20	450-450-450	1⅜ x 3	TVL-3786	4.45
40-40-40	450-450-450	1⅜ x 3½	TVL-3787	4.90
60-20-20	450-450-450	1⅜ x 4	TVL-3789	4.60
60-30-10	450-450-450	1⅜ x 3	TVL-3790	4.50
80-40-10	450-450-450	1⅜ x 4	TVL-3792	5.05
10-100-40	475-200-50	1⅜ x 2½	TVL-3800	3.35
20-50-20	475-50-25	1 x 3	TVL-3801	2.75
40-40-100	475-250-50	1⅜ x 3	TVL-3802	4.30
20-20-40	475-300-25	1⅜ x 2	TVL-3805	3.10
40-80-10	475-300-300	1⅜ x 3½	TVL-3806	4.80
10-4-40	475-350-250	1⅜ x 2	TVL-3807	2.75
40-40-25	475-400-50	1⅜ x 3	TVL-3813	4.30
20-10-100	475-475-50	1⅜ x 2	TVL-3817	3.25
20-20-60	475-475-400	1⅜ x 3½	TVL-3820	4.80
10-10-10	475-475-475	1 x 3	TVL-3835	2.70
30-30-20	475-475-475	1⅜ x 3	TVL-3840	4.45
40-30-30	475-475-475	1⅜ x 4	TVL-3843	5.15
20-40-100	500-300-25	1⅜ x 2½	TVL-3908	3.60
10-40-40	500-450-450	1⅜ x 3½	TVL-3911	4.15

QUADRUPLE UNITS

MF	WVDC	Dia. x Length	Cat. No.	List
30-30-30-40	150-150-150-25	1⅜ x 2	TVL-4415	3.10
40-40-30-20	150-150-150-25	1⅜ x 2	TVL-4420	3.10
50-50-50-20	150-150-150-25	1⅜ x 2	TVL-4425	3.55
60-60-10-60	150-150-150-25	1⅜ x 2	TVL-4428	3.50
40-20-10-20	200-200-200-25	1⅜ x 2	TVL-4470	3.20
100-40-10-100	250-250-250-50	1⅜ x 3½	TVL-4516	5.15
80-60-40-20	250-250-250-150	1⅜ x 4	TVL-4524	5.10
100-40-80-20	300-50-25-25	1⅜ x 3	TVL-4555	4.55
10-200-140-30	300-150-150-150	1⅜ x 3½	TVL-4559	5.10
100-10-200-30	300-300-150-150	1⅜ x 4	TVL-4561	5.90
120-20-20-100	300-250-25-30	1⅜ x 3½	TVL-4562	5.25
10-10-10-20	300-300-300-25	1⅜ x 2	TVL-4565	2.95
60-40-20-50	300-300-300-25	1⅜ x 3½	TVL-4570	4.70
40-40-40-20	300-300-300-150	1⅜ x 3	TVL-4575	4.90
40-20-10-10	300-300-300-300	1⅜ x 2	TVL-4578	3.95
40-40-20-10	300-300-300-300	1⅜ x 3½	TVL-4579	4.55
20-150-80-20	350-150-150-25	1⅜ x 3	TVL-4603	4.55
40-40-20-20	350-300-300-25	1⅜ x 3½	TVL-4605	4.50
40-10-100-25	350-350-25-25	1⅜ x 2	TVL-4606	3.75
60-4-100-40	350-350-25-25	1⅜ x 2½	TVL-4607	3.80
60-40-60-20	350-350-200-150	1⅜ x 3½	TVL-4609	5.05
10-10-10-10	350-350-300-300	1⅜ x 2	TVL-4612	3.10
20-10-5-10	350-350-350-25	1⅜ x 2	TVL-4620	3.10
40-40-40-150	350-350-350-50	1⅜ x 4	TVL-4628	5.65
60-25-25-100	350-350-350-50	1⅜ x 3½	TVL-4630	5.15
100-10-10-20	350-350-350-50	1⅜ x 3½	TVL-4632	5.15
10-100-10-100	400-300-75-25	1⅜ x 3½	TVL-4638	4.70
80-40-20-10	400-300-300-300	1⅜ x 3½	TVL-4641	5.55
20-10-10-20	400-350-200-25	1⅜ x 2	TVL-4652	3.20
40-10-80-10	400-350-250-250	1⅜ x 4	TVL-4657	4.65
80-40-10-10	400-350-350-25	1⅜ x 4	TVL-4659	5.30
10-10-25-25	400-400-25-25	1⅜ x 2	TVL-4662	$2.80
20-20-20-20	400-400-400-25	1⅜ x 2½	TVL-4667	3.85
80-40-30-40	400-400-400-25	1⅜ x 4	TVL-4670	5.95
80-10-10-10	400-400-400-400	1⅜ x 3½	TVL-4675	4.70
80-25-10-10	400-400-400-400	1⅜ x 4	TVL-4680	5.25
10-80-40-100	450-200-200-50	1⅜ x 3	TVL-4700	4.25
20-80-20-50	450-200-200-50	1⅜ x 3	TVL-4701	4.10
40-40-40-20	450-250-250-25	1⅜ x 4	TVL-4702	4.55
10-40-40-100	450-300-250-50	1⅜ x 3½	TVL-4703	4.40
10-100-20-20	450-300-300-200	1⅜ x 3	TVL-4704	5.05
10-10-60-100	450-300-200-50	1⅜ x 2½	TVL-4705	3.80
10-100-10-20	450-350-350-25	1⅜ x 3	TVL-4706	5.20
10-60-40-25	450-350-350-25	1⅜ x 4	TVL-4707	4.60
20-15-15-20	450-350-350-25	1⅜ x 2½	TVL-4708	3.80
5-60-50-20	450-400-350-25	1⅜ x 4	TVL-4709	5.05
80-10-30-40	450-400-300-150	1⅜ x 4	TVL-4710	5.25
20-80-50-100	450-350-350-50	1⅜ x 4	TVL-4711	6.00
20-15-20-20	450-450-25-25	1⅜ x 2	TVL-4712	3.45
10-10-60-100	450-450-200-50	1⅜ x 3	TVL-4713	3.85
35-25-20-100	450-450-200-50	1⅜ x 3	TVL-4714	4.65
20-20-30-30	450-450-300-300	1⅜ x 3½	TVL-4715	4.50
40-10-35-10	450-450-350-350	1⅜ x 3½	TVL-4718	4.60
40-40-30-30	450-450-350-350	1⅜ x 4	TVL-4720	5.90
10-10-10-20	450-450-450-25	1⅜ x 2	TVL-4723	3.15
30-30-10-125	450-450-450-25	1⅜ x 3	TVL-4725	4.70
40-10-10-250	450-450-450-25	1⅜ x 3	TVL-4726	4.70
40-15-10-20	450-450-450-25	1⅜ x 3	TVL-4729	4.10
40-20-20-40	450-450-450-25	1⅜ x 3	TVL-4732	4.65
40-30-10-20	450-450-450-25	1⅜ x 3½	TVL-4734	4.50
40-40-10-20	450-450-450-25	1⅜ x 3½	TVL-4736	4.70
40-40-40-40	450-450-450-25	1⅜ x 4	TVL-4739	5.50
20-20-20-100	450-450-450-50	1⅜ x 2½	TVL-4740	4.55
30-30-15-30	450-450-450-50	1⅜ x 3	TVL-4742	4.55
40-40-10-25	450-450-450-50	1⅜ x 3½	TVL-4745	4.70
40-40-10-100	450-450-450-100	1⅜ x 3½	TVL-4747	5.55
10-10-10-10	450-450-450-150	1⅜ x 2	TVL-4750	3.15
60-10-10-20	450-450-450-150	1⅜ x 3	TVL-4753	4.55
35-35-10-10	450-450-450-200	1⅜ x 3½	TVL-4755	4.60
10-10-10-10	450-450-450-450	1⅜ x 2	TVL-4760	3.35
20-10-10-10	450-450-450-450	1⅜ x 2½	TVL-4761	3.70
20-20-20-20	450-450-450-450	1⅜ x 3	TVL-4763	4.70
30-15-15-15	450-450-450-450	1⅜ x 3	TVL-4766	4.45
30-30-15-10	450-450-450-450	1⅜ x 3½	TVL-4769	4.70
35-35-10-5	450-450-450-450	1⅜ x 3½	TVL-4771	4.60
40-40-30-30	450-450-450-450	1⅜ x 4	TVL-4774	6.05
20-40-100-80	475-300-50-25	1⅜ x 3	TVL-4800	4.45
10-30-5-80	475-350-350-50	1⅜ x 2½	TVL-4803	3.70
10-40-100-10	475-400-50-25	1⅜ x 2½	TVL 4804	4.00
10-10-80-50	475-450-200-60	1⅜ x 3	TVL-4806	3.85
25-20-20-100	475-450-300-50	1⅜ x 3	TVL-4809	4.60
10-60-30-125	475-450-400-50	1⅜ x 4	TVL-4811	5.55
10-50-30-30	475-450-450-25	1⅜ x 3	TVL-4813	4.75
15-15-80-40	475-475-300-50	1⅜ x 3	TVL-4815	4.80
40-10-4-40	475-475-350-300	1⅜ x 3	TVL-4817	4.95
10-5-80-40	475-475-450-50	1⅜ x 3½	TVL-4819	4.90
40-20-10-10	475-475-475-25	1⅜ x 3	TVL-4822	4.85
20-20-10-10	475-475-475-300	1⅜ x 2½	TVL-4826	4.30
50-30-10-20	475-475-475-300	1⅜ x 3½	TVL-4827	5.60
10-10-10-10	475-475-475-475	1⅜ x 2	TVL-4830	3.50
40-20-10-10	475-475-475-475	1⅜ x 3	TVL-4840	5.10

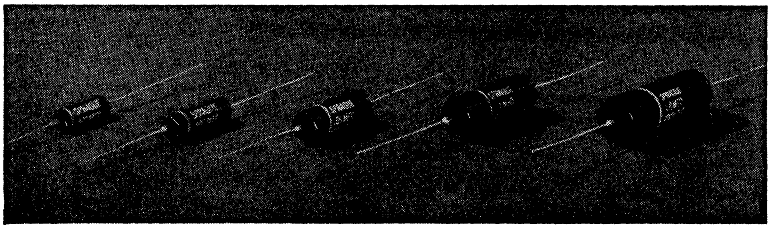
INSULATING TUBES

These closed-top black insulating sleeves are made of tightly fitting Kraftboard. Order with capacitors as required.

Cat. No.	Description	Cat. No.	Description
HKT-1	For 1″ x 2″ can	HKT-6	For 1⅜″ x 2½″ can
HKT-2	For 1″ x 2½″ can	HKT-7	For 1⅜″ x 3″ can
HKT-3	For 1″ x 3″ can	HKT-8	For 1⅜″ x 3½″ can
HKT-4	For 1″ x 4″ can	HKT-9	For 1⅜″ x 4″ can
HKT-5	For 1⅜″ x 2″ can		

SPRAGUE CAPACITORS

TELECAP® BLACK BEAUTY® MOLDED TUBULARS



- Premium Quality at No Extra Cost
- Made Under Exclusive "Dry" Process, just like Costly Metal-Encased Oil Units
- Molded in Tough Bakelite Phenolic
- Non-Flammable Case
- Only Telecaps are Oil-impregnated in Ratings from 600 to 12,500 WVDC
- Extremely High Insulation Resistance
- Withstand Severe Heat, Moisture, Shock
- Rated for 85°C Operation

MF	D. x L.	Cat. No.	List
	200 WVDC		
.02	⅜ x 1¼	2TM-S2	$ .25
.047	⅜ x 1¼	2TM-S47	.25
.05	⅜ x 1¼	2TM-S5	.25
.1	7/16 x 1¼	2TM-P1	.35
.15	½ x 1½	2TM-P15	.35
.22	⅝ x 1⅞	2TM-P22	.40
.25	⅝ x 1⅞	2TM-P25	.40
.47	⅝ x 1⅞	2TM-P47	.60
.5	⅝ x 1⅞	2TM-P5	.60
1.0	¾ x 2¼	2TM-M1	.90
	400 WVDC		
.01	5/16 x 1	4TM-S1	.25
.02	⅜ x 1¼	4TM-S2	.25
.022	⅜ x 1¼	4TM-S22	.25
.047	7/16 x 1¼	4TM-S47	.30
.05	7/16 x 1¼	4TM-S5	.30
.068	½ x 1½	4TM-S68	.35
.1	½ x 1½	4TM-P1	.35
.15	⅝ x 1⅞	4TM-P15	.35
.22	⅝ x 1⅞	4TM-P22	.40
.25	⅝ x 1⅞	4TM-P25	.40
.5	¾ x 2¼	4TM-P5	.60
	600 WVDC		
.0001	5/16 x 1	6TM-T1	.25
.00025	5/16 x 1	6TM-T25	.25
.0004	5/16 x 1	6TM-T4	.25
.0005	5/16 x 1	6TM-T5	.25
.001	5/16 x 1	6TM-D1	.25
.0015	5/16 x 1	6TM-D15	.25
.002	5/16 x 1	6TM-D2	.25
.0022	5/16 x 1	6TM-D22	.25
.003	5/16 x 1	6TM-D3	.25
.004	5/16 x 1	6TM-D4	.25
.0047	5/16 x 1	6TM-D47	.25
.005	⅜ x 1¼	6TM-D5	.25
.006	⅜ x 1¼	6TM-D6	.25
.0068	⅜ x 1¼	6TM-D68	.30
.01	⅜ x 1¼	6TM-S1	.30
.015	⅜ x 1¼	6TM-S15	.30
.02	7/16 x 1¼	6TM-S2	.30
.022	7/16 x 1¼	6TM-S22	.30
.03	7/16 x 1¼	6TM-S3	.35
.04	½ x 1½	6TM-S4	$ .35
.047	½ x 1½	6TM-S47	.40
.05	½ x 1½	6TM-S5	.40
.06	⅝ x 1⅞	6TM-S6	.40
.1	⅝ x 1⅞	6TM-P1	.45
.15	¾ x 2¼	6TM-P15	.50
.2	¾ x 2¼	6TM-P2	.55
.25	¾ x 2¼	6TM-P25	.55
.5	1 x 2⅝	6TM-P5	.80
1.0	1 x 2⅝	*TC-10	1.25
	1600 WVDC		
.0005	⅜ x 1¼	MB-T5	.65
.001	⅜ x 1¼	MB-D1	.65
.0015	⅜ x 1¼	MB-D15	.65
.002	⅜ x 1¼	MB-D2	.65
.0022	⅜ x 1¼	MB-D22	.65
.003	⅜ x 1¼	MB-D3	.65
.0033	⅜ x 1¼	MB-D33	.65
.004	⅜ x 1¼	MB-D4	.65
.0047	7/16 x 1¼	MB-D47	.65
.005	7/16 x 1¼	MB-D5	.65
.006	7/16 x 1¼	MB-D6	.65
.0068	7/16 x 1¼	MB-D68	.65
.007	7/16 x 1¼	MB-D7	.65
.0075	7/16 x 1¼	MB-D75	.65
.008	½ x 1½	MB-D8	.65
.01	½ x 1½	MB-S1	.70
.015	½ x 1½	MB-S15	.70
.02	⅝ x 1⅞	MB-S2	.70
.022	⅝ x 1⅞	MB-S22	.70
.03	⅝ x 1⅞	MB-S3	.70
.04	¾ x 2¼	MB-S4	.70
.05	¾ x 2⅛	*TR-15	.70
2 x .015	¾ x 2	*TR-215	.80
	6000 WVDC		
.0005	½ x 1½	TVM-356	1.35
.001	½ x 1½	TVM-216	1.35
.005	⅝ x 1⅞	TVM-256	1.35
	10,000 WVDC		
.0005	⅝ x 1⅞	TVM-351	1.50
	12,500 WVDC		
.00025	⅝ x 1⅞	12TVM-325	1.70

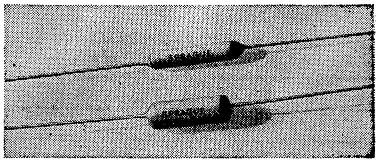
*Supplied in waxed cardboard units pending completion of molds.

TVQ VITAMIN Q® TUBULARS

- High Voltage Units that are Amazingly Small in Size
- High Insulation Resistance
- Exclusive Internal Humidity Barrier
- Heavy Outer Wax Coating

MF	WVDC	Dia. x Length	Cat. No.	List
.01	6000	13/16 x 2	TVQ-116	$1.40
.03	6000	1 x 2⅝	TVQ-136	1.50
.05	6000	1 3/16 x 3	TVQ-156	1.60

68P MIDGET® TUBULARS



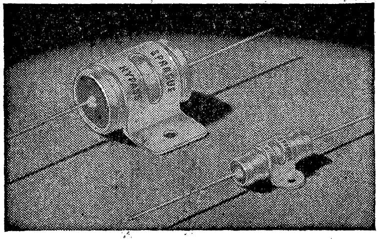
- Smallest Reliable Paper Tubular
- Fit Tight Spots in Pocket and Auto Radios
- Outstanding Humidity Performance
- Rated for 85°C Operation

MF	Dia. x Length	Cat. No.	List
	100 WVDC		
.25	15/32 x 1⅛	68P19	$ .70
.5	⅝ x 1⅛	68P20	.80
	200 WVDC		
.005	¼ x 11/16	68P11	.35
.006	¼ x 11/16	68P12	.35
.01	9/32 x 11/16	68P14	.40
.02	9/32 x 13/16	68P15	.45
.05	5/16 x 1	68P16	.50
.1	13/32 x 1	68P17	.60
.2	15/32 x 1⅛	68P18	.65
.25	17/32 x 1⅛	68P24	.70
.5	⅝ x 1⅜	68P25	.80
	400 WVDC		
.001	¼ x 11/16	68P1	.35
.003	¼ x 11/16	68P3	.35
.004	¼ x 11/16	68P4	.35
.005	¼ x 13/16	68P5	.35
.006	¼ x 13/16	68P6	.35
.01	5/16 x 13/16	68P8	.40
.02	5/16 x 1	68P9	.45
.05	13/32 x 1	68P10	.50
.1	15/32 x 1⅛	68P21	.65
.2	⅝ x 1⅛	68P38	.70
.25	⅝ x 1⅜	68P22	.75
.5	⅝ x 2 5/16	68P23	.85
	600 WVDC		
.001	¼ x 11/16	68P26	.35
.002	¼ x 11/16	68P27	.35
.003	9/32 x 11/16	68P28	.35
.004	9/32 x 13/16	68P29	.35
.005	9/32 x 13/16	68P30	.40
.006	5/16 x 13/16	68P31	.40
.008	5/16 x 1	68P32	.40
.01	5/16 x 1	68P33	.45
.02	11/32 x 1	68P34	.50
.05	15/32 x 1⅛	68P35	.55
.1	⅝ x 1⅛	68P36	.70
.2	⅝ x 1 11/16	68P40	.80
.25	⅝ x 2	68P37	.80

All prices subject to change without notice.

SPRAGUE CAPACITORS

HYPASS® CAPACITORS



- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are Ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

MF	Dia. x Length	Cat. No.	List
50 WVDC			
.5	1 x 1 13/16	*48P18	$3.80
250 WVAC			
.1	11/16 x 1 13/16	*48P9	2.60
600 WVDC			
.002	¼ x 1⅝	46P12	2.15
.005	¼ x 1⅝	46P8	2.15
.01	7/16 x 1¼	47P6	2.35
.1	11/16 x 1 13/16	**80P3	2.95
1000 WVDC			
.005	7/16 x 1¼	47P12	2.40
.01	7/16 x 1½	47P13	2.60
2500 WVDC			
.005	1 x 1 9/16	47P14	2.90
.01	1 x 1 9/16	47P15	3.10
5000 WVDC			
.002	1 x 1 9/16	47P16	3.20

* Has female screw terminals
**Bulkhead Mounting

72P RESONANT CAPACITORS

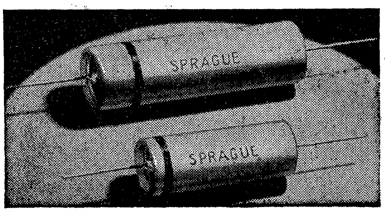
PEP UP OLD RADIO SETS!

- Stabilize Any ac-dc "Squealer" Receiver
- Stop Self-oscillation, Permitting "On-the-nose" alignment
- Very Low Impedance at 465 KC Intermediate Frequency
- By-pass Unwanted I-F Signals
- Improve Set Performance

MF	WVDC	Dia. x Length	Cat. No.	List
.05	400	½ x 1⅛	72P51	$ .50
.1	400	½ x 1⅝	72P52	.65
.2	400	9/16 x 1⅞	72P53	.70

PX METAL TUBULARS

HERMETICALLY SEALED

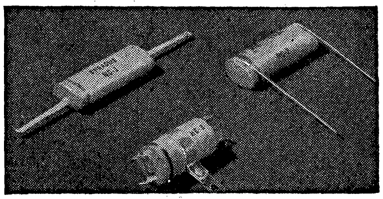


- Non-inductively Wound
- Oil-filled
- Oil-impregnated
- Insulating Cardboard Sleeve

MF	Dia. x Length	Cat. No.	List
600 WVDC			
.0001	½ x 1¼	PX-316	$ .95
.00025	½ x 1¼	PX-3256	.95
.0005	½ x 1¼	PX-356	.95
.001	½ x 1¼	PX-216	.95
.002	½ x 1¼	PX-226	.95
.003	½ x 1¼	PX-236	.95
.004	½ x 1¼	PX-246	.95
.005	½ x 1¼	PX-256	.95
.006	½ x 1¼	PX-266	.95
.007	½ x 1¼	PX-276	.95
.008	½ x 1¼	PX-286	.95
.009	½ x 1¼	PX-296	.95
.01	½ x 1¼	PX-116	.95
.02	½ x 1¾	PX-126	1.05
.03	⅝ x 1⅝	PX-136	1.10
.04	⅝ x 1⅝	PX-146	1.10
.05	⅝ x 1⅝	PX-156	1.10
.06	11/16 x 1⅝	PX-166	1.20
.08	11/16 x 1⅞	PX-186	1.20
.1	11/16 x 1⅞	PX-16	1.25
.25	13/16 x 2 13/16	PX-26	1.70
.5	1 1/16 x 2 13/16	PX-56	2.20
1.0	1 1/16 x 3 11/16	PX-106	3.00
1000 WVDC			
.0001	11/16 x 1¼	PX-311	1.10
.00025	11/16 x 1¼	PX-3251	1.10
.0005	11/16 x 1¼	PX-351	1.10
.001	11/16 x 1¼	PX-211	1.10
.002	11/16 x 1¼	PX-221	1.10
.003	11/16 x 1¼	PX-231	1.10
.004	11/16 x 1¼	PX-241	1.10
.005	11/16 x 1¼	PX-251	1.10
.006	11/16 x 1¼	PX-261	1.10
.007	11/16 x 1¼	PX-271	1.10
.008	11/16 x 1¼	PX-281	1.10
.009	11/16 x 1¼	PX-291	1.10
.01	11/16 x 1¼	PX-111	1.10
.02	⅝ x 1⅝	PX-121	1.20
.03	11/16 x 1¾	PX-131	1.20
.04	11/16 x 1¾	PX-141	1.20
.05	11/16 x 1¾	PX-151	1.30
.06	1 1/16 x 2	PX-161	1.35
.08	1 1/16 x 2	PX-181	1.40
.1	1 1/16 x 2	PX-11	1.50
.25	1 1/16 x 2 13/16	PX-21	2.00
.5	1 1/16 x 3 11/16	PX-51	2.85
1500 WVDC			
.002	⅝ x 1¼	PX-2215	1.20
.005	⅝ x 1¼	PX-2515	1.20
.01	11/16 x 1⅝	PX-1115	1.20
.02	11/16 x 1⅝	PX-1215	1.30
2000 WVDC			
.0005	13/16 x 1⅜	PX-352	1.25
.001	13/16 x 1⅜	PX-212	1.25
.005	13/16 x 1¾	PX-252	1.25
.006	13/16 x 1¾	PX-262	1.25
.0075	13/16 x 1¾	PX-2752	1.25
.01	13/16 x 1¾	PX-112	1.25
.02	13/16 x 2⅛	PX-122	1.35
.03	13/16 x 2⅛	PX-132	1.40
.04	13/16 x 2½	PX-142	1.40
.05	13/16 x 2½	PX-152	1.45

HC HASH CAPACITORS

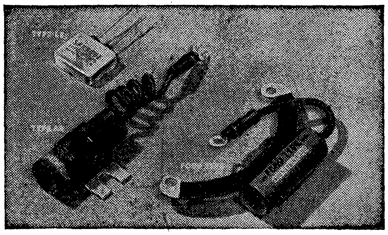
FOR AUTOMOBILE RADIOS



- HC-1—Braided leads for Low R-F Resistance
- HC-2—Radial Side Leads
- HC-3—Flat Strap Leads for Minimum R-F Impedance

MF	WVDC	Size	Cat. No.	List
.5	120	7/16 x ¾ x 2 (oval tube)	HC-1	$ .90
.5	120	5/16 x ¾ x 2 (oval tube)	HC-2	.90
.5	120	¾ x 1⅜ (round tube)	HC-3	1.10

AR & LR AUTO GENERATOR AND VIBRATOR TYPES



AR LR FORD

- Exceptionally Sturdy Design
- Withstand Bouncing and Vibration
- Oil-impregnated, Metal Encased
- Resist Heat and Humidity

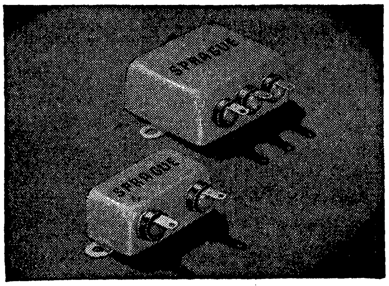
MF	WVDC	Size	Cat. No.	List
AR (GENERATOR TYPES)				
1.0		1 x 2 3/16	AR-1	$1.75
.5		11/16 x 1⅛	AR-2	.90
.5+.5		1 x 2 3/16	AR-25	3.25
.5		11/16 x 1⅞	AR-Ford	1.45
LR (VIBRATOR TYPES)				
.01	1600	¼ x ⅞ x 1 1/16	LR-11	$2.00
.02	1600	¼ x ⅞ x 1 1/16	LR-12	2.90
.007	1600	¼ x ⅞ x 1 1/16	LR-27	2.65

SPECIAL AUTO TYPES

Cat. No.	MF	WVDC	D. X L.	List
DL-1 Dome Light Filter	.2	200	1 x 2 3/16	$4.20
GG-5 Gas Gauge Filter	.05	200	7/16 x 1 7/32	1.20
OG-50 Oil Gauge Filter	.25	200	11/16 x 1⅞	1.40
P-2077 Ford Replacement	.5	200	11/16 x 1⅞	1.25
P-3402 Ammeter Capacitor	.5	200	11/16 x 2	.90
P-2153 Motorola Replacement	.0008+.0008	1000	¾ x 1⅜	.80

SPRAGUE CAPACITORS

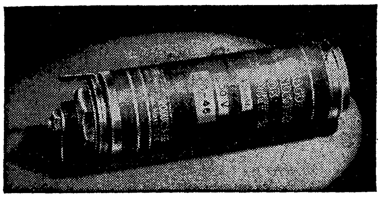
BP BATHTUB UNITS



- Hermetically Sealed
- Drawn Can
- Oil-impregnated
- Oil-filled

MF	L. x W. x H.	Cat. No.	List
400 WVDC			
.1	1 13/16 x 1 x ¾	BP-1	$2.20
.25	1 13/16 x 1 x ¾	BP-25	2.50
.5	1 13/16 x 1 x ⅞	BP-50	2.65
1.0	2 x 1¾ x ⅞	BP-10	3.15
.1 + .1	1 13/16 x 1 x ¾	BP-21	3.30
.25 + .25	1 13/16 x 1 x ⅞	BP-225	3.60
.5 + .5	2 x 1¾ x ⅞	BP-250	4.15
.1 + .1 + .1	1 13/16 x 1 x ¾	BP-31	4.00
600 WVDC			
.05	1 13/16 x 1 x ¾	BP-56	2.90
.1	1 13/16 x 1 x ¾	BP-16	2.95
.25	1 13/16 x 1 x ¾	BP-256	3.10
.5	1 13/16 x 1 x ⅞	BP-506	3.30
1.0	2 x 1¾ x ⅞	BP-106	3.75
2.0	2 x 2 x 1⅛	BP-206	5.00
.05 + .05	1 13/16 x 1 x ¾	BP-2056	3.65
.1 + .1	1 13/16 x 1 x ¾	BP-216	3.70
.25 + .25	1 13/16 x 1 x ⅞	BP-2256	3.75
.5 + .5	2 x 1¾ x ⅞	BP-2506	4.30
1.0 + 1.0	2 x 2 x 1⅛	BP-116	5.30
.1 + .1 + .1	1 13/16 x 1 x ¾	BP-316	4.20
.25 + .25 + .25	2 x 1¾ x ⅞	BP-3256	4.75
.5 + .5 + .5	2 x 2 x 1⅛	BP-356	5.75
1000 WVDC			
.05	1 13/16 x 1 x ¾	BP-51	3.05
.1	1 13/16 x 1 x ¾	BP-11	3.15
.25	1 13/16 x 1 x ¾	BP-251	3.25
.5	2 x 1¾ x ⅞	BP-501	3.55
1.0	2 x 2 x 1⅛	BP-101	4.40
.05 + .05	1 13/16 x 1 x ¾	BP-2051	3.85
.1 + .1	1 13/16 x 1 x ¾	BP-211	4.00
.25 + .25	2 x 1¾ x ⅞	BP-2251	4.20
.5 + .5	2 x 2 x 1⅛	BP-2501	5.45
.1 + .1 + .1	1 13/16 x 1 x ⅞	BP-311	4.60
.25 + .25 + .25	2 x 2 x 1⅛	BP-3251	5.50

PC TRANSMITTING TYPES



- Oil-impregnated
- Oil-filled
- Screwbase Can
- Fit Tight Spaces
- "Lifeguard" Protective Caps

MF	Dia. x Length	Cat. No.	List
600 WVDC			
2.0	1½ x 2⅞	PC-26	$5.40
3.0	1½ x 3½	PC-36	6.15
4.0	1½ x 4½	PC-46	7.10
1000 WVDC			
1.0	1½ x 2⅞	PC-11	5.00
2.0	1½ x 4½	PC-21	6.30
1500 WVDC			
0.5	1½ x 2⅜	PC-515	5.85
1.0	1½ x 3⅞	PC-115	6.30

OT TRANSMITTING TYPES

- Oil-impregnated and Filled
- Hermetically Sealed
- Ceramic Terminals
- "Lifeguard" Protective Caps

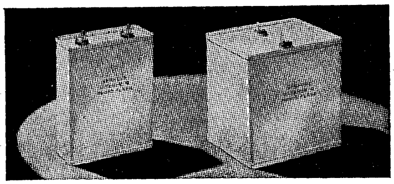
MF	Dia. x Length	Cat. No.	List
600 WVDC			
2	2 x 2 15/32	OT-26	$5.45
1000 WVDC			
1	2 x 2 15/32	OT-11	4.65
2	2 x 3 3/32	OT-21	6.30
4	2 x 5 3/32	OT-41	8.00
1500 WVDC			
0.5	2 x 2 15/32	OT-515	5.05
1	2 x 2 21/32	OT-115	5.85
2	2 x 4 15/32	OT-215	8.00
2000 WVDC			
1	2 x 4 3/32	OT-12	7.55
2	2½ x 4 15/32	OT-22	8.40
3000 WVDC			
1	2½ x 4 23/32	OT-13	15.15

CR TRANSMITTING TYPES

- Oil-Filled
- Hermetically Sealed
- High Insulation Resistance
- Universal Mounting
- "Lifeguard" Protective Caps

MF	T. x W. x L.	Cat. No.	List
600 WVDC			
.5	1 1/16 x 1 13/16 x 2¼	CR-056	$4.70
1.0	1 1/16 x 1 13/16 x 2¼	CR-16	5.80
2.0	1 1/16 x 1 13/16 x 2⅞	CR-26	7.15
3.0	1 1/16 x 1 13/16 x 3¼	CR-36	8.25
4.0	1 3/16 x 2½ x 3½	CR-46	9.10
6.0	1 3/16 x 2½ x 4¾	CR-66	11.30
8.0	1¼ x 3¾ x 3⅞	CR-86	13.50
10.0	1¼ x 3¾ x 4¾	CR-106	15.15
1000 WVDC			
.1	1 1/16 x 1 13/16 x 1⅝	CR-011	4.15
.25	1 1/16 x 1 13/16 x 2¼	CR-0251	4.70
.5	1 1/16 x 1 13/16 x 2¼	CR-051	4.95
1.0	1 1/16 x 1 13/16 x 2¼	CR-11	6.35
2.0	1 1/16 x 1 13/16 x 3⅞	CR-21	8.25
4.0	1 3/16 x 2½ x 4¾	CR-41	10.45
8.0	1¼ x 3¾ x 4¾	CR-81	15.15
10.0	1¾ x 3¾ x 4¾	CR-101	16.80
12.0	2¼ x 3¾ x 4½	CR-121	18.15
15.0	2½ x 3¾ x 4¾	CR-151	20.10
1500 WVDC			
.5	1 1/16 x 1 13/16 x 2⅞	CR-0515	6.35
1.0	1 1/16 x 1 13/16 x 3⅞	CR-115	7.45
2.0	1 3/16 x 2½ x 4¼	CR-215	10.20
4.0	1¼ x 3¾ x 4¾	CR-415	14.05
5.0	1¼ x 3¾ x 4¾	CR-515	15.15
8.0	2½ x 3¾ x 4¾	CR-815	20.90
10.0	3 3/16 x 3¾ x 4¾	CR-1015	25.05
2000 WVDC			
.1	1 3/16 x 2½ x 2½	CR-012	6.60
.25	1 3/16 x 2½ x 2½	CR-0252	7.15
.5	1 3/16 x 2½ x 2⅞	CR-052	7.45
1.0	1 3/16 x 2½ x 3½	CR-12	9.10
2.0	1¼ x 3¾ x 4¼	CR-22	10.75
3.0	1¼ x 3¾ x 4¾	CR-32	13.20
4.0	2¼ x 3¾ x 3⅞	CR-42	15.15
6.0	3 3/16 x 3¾ x 4½	CR-62	20.10
10.0	4 9/16 x 3¾ x 4¾	CR-102	30.55
2500 WVDC			
.1	1 3/16 x 2½ x 2½	CR-0125	10.15
.5	1¼ x 3¾ x 3¼	CR-0525	11.55
1.0	1¾ x 3¾ x 3¼	CR-125	13.20
2.0	1¾ x 3¾ x 4¾	CR-225	21.45
4.0	4 9/16 x 3¾ x 4⅜	CR-425	30.00
3000 WVDC			
.1	1 3/16 x 2½ x 2½	CR-013	14.05
.25	1 3/16 x 2½ x 2⅞	CR-0253	14.85
.5	1 3/16 x 2½ x 4¼	CR-053	16.80
1.0	2¼ x 3¾ x 3⅞	CR-13	20.10
2.0	3 3/16 x 3¾ x 4½	CR-23	25.05
4.0	4 9/16 x 3¾ x 4¾	CR-43	36.85
4000 WVDC			
.1	2¼ x 3¾ x 2¾	CR-014	18.00
.25	2¼ x 3¾ x 2¾	CR-0254	20.00
.5	2¼ x 3¾ x 3⅞	CR-054	23.00
1.0	2¼ x 3¾ x 5⅛	CR-14	29.00
2.0	4 9/16 x 3¾ x 5⅛	CR-24	39.00
5000 WVDC			
.2	1¾ x 3¾ x 3⅞	CR-025	20.00
.5	2¼ x 3¾ x 4½	CR-055	25.00
1.0	4 9/16 x 3¾ x 4⅜	CR-15	34.00
2.0	4 9/16 x 3¾ x 6	CR-25	52.00
6000 WVDC			
.1	2¼ x 3¾ x 3⅜	CR-0160	27.00
.2	1¾ x 3¾ x 4¼	CR-0260	30.00
1.0	4 9/16 x 3¾ x 7½	CR-160	49.00
7500 WVDC			
.1	2¼ x 3¾ x 3⅞	CR-0175	29.00
.2	1¾ x 3¾ x 4¾	CR-0275	33.00

PQ PHOTOFLASH CAPACITORS



DESIGNED EXPRESSLY FOR PHOTOFLASH USE ONLY

NOT COMPARABLE TO STANDARD HEAVY DUTY CAPACITORS SUCH AS THE CR TYPES

- Oil-impregnated
- Hermetically Sealed
- Oil Filled
- High Insulation Resistance
- Smallest Construction with Maximum Dependability—Uniform Energy Storage.

MF	DC Peak* Photoflash Volts	Watt/Sec. Total	Dimensions T. x W. x H.	Weight lbs.	Cat. No.	List Price
10	2500	31	2¼ x 3¾ x 4½	1¾	PQ-2510	$17.00
15	2500	47	3 3/16 x 3¾ x 4⅝	2½	PQ-2515	20.00
25	2500	78	4 9/16 x 3¾ x 5¼	4¼	PQ-2525	26.50
35	2500	109	4 9/16 x 3¾ x 7	6	PQ-2535	32.50
15	3000	67	3 3/16 x 3¾ x 4⅞	3	PQ-315	24.50
25	4000	200	4 9/16 x 3¾ x 9¼	7¼	PQ-425	42.50

*Do not exceed Peak Voltage Rating under highest line voltage condition

All prices subject to change without notice.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

SPRAGUE CAPACITORS

MILITARY-GRADE PAPER CAPACITORS IN STOCK AT SPRAGUE INDUSTRIAL DISTRIBUTORS

Always in stock to meet your emergency needs are the Sprague Military-Grade Paper-Dielectric Capacitors listed on these pages. Types and ratings carried here are those we have found to be in greatest demand to meet circuit design problems as they arise in laboratory work.

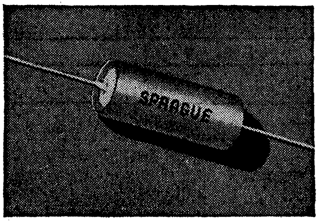
A stock of these military-quality capacitors, made by the world's largest capacitor manufacturer, is ready for delivery by any Sprague Industrial Distributor. Of course, when time is not of the essence you can order from the whole broad range of Sprague Military capacitors. But when you need capacitors "yesterday," you'll do well to draw on our "emergency" stock as shown here.

65P PROKARS®

Subminiature molded capacitors unmatched by any other supplier. Special impregnation gives excellent capacitance stability and high insulation resistance. Operating temperature range is —55°C. to +125°C. These rugged units have a capacitance tolerance of ±5%.

MF	D. x L.	Cat. No.	List
200 WVDC			
.01	.195 x 1 1/16	65P10352	$2.00
.015	.195 x 1 1/16	65P15352	2.00
.02	.250 x 1 1/16	65P20352	2.25
.022	.250 x 1 1/16	65P22352	2.25
.03	.250 x 1 1/16	65P30352	2.25
.033	.250 x 1 1/16	65P33352	2.25
.039	.375 x 1 1/16	65P39352	2.50
.047	.375 x 1 1/16	65P47352	2.50
.051	.375 x 1 1/16	65P51352	2.50
.056	.375 x 1 1/16	65P56352	2.50
.062	.375 x 1 1/16	65P62352	2.50
.082	.375 x 1 1/16	65P82352	2.50
.091	.375 x 1 1/16	65P91352	2.50
.1	.375 x 1 1/16	65P10452	2.50
300 WVDC			
.001	.175 x 1 1/16	65P10253	2.00
.0015	.175 x 1 1/16	65P15253	2.00
.002	.175 x 1 1/16	65P20253	2.00
.0034	.175 x 1 1/16	65P39253	2.00
.0047	.175 x 1 1/16	65P47253	2.00
.0051	.175 x 1 1/16	65P51253	2.00
.0056	.175 x 1 1/16	65P56253	2.00
.0068	.175 x 1 1/16	65P68253	2.00
.0082	.195 x 1 1/16	65P82253	2.00
.0091	.195 x 1 1/16	65P91253	2.00

96P AND 196P VITAMIN Q® SUBMINIATURES



These super-JAN capacitors are designed to operate from —55°C. to + 125°C. Capacitance tolerance on these glass-to-metal seal high I-R units is ± 10%. Terminals are insulated from case. Exclusive Vitamin Q impregnation means unmatched performance at high temperatures. Type 96P has inserted tab construction, and Type 196P is of extended foil construction. 196P units are furnished with heavy plastic insulating sleeves.

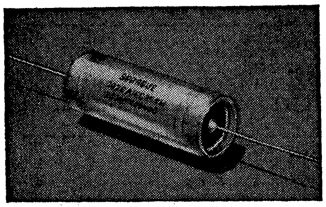
TYPE 96P

MF	D. x L.	Cat. No.	List
100 WVDC			
.10	.312 x ⅞	96P10491S2	$5.06
.47	.562 x 1 ⅛	96P47491S2	5.94
200 WVDC			
.10	.400 x ⅞	96P10492S2	5.28
.47	.562 x 1 ⅜	96P47492S2	6.38
400 WVDC			
.10	.400 x 1 ⅜	96P10494S2	5.72
.22	.562 x 1 ⅜	96P22494S2	6.38
.47	.670 x 1 ⅞	96P47494S2	7.37
600 WVDC			
.001	.235 x ¾	96P10296S2	4.95
.0022	.235 x ¾	96P22296S2	4.95
.0047	.235 x ¾	96P47296S2	5.00
.0068	.235 x ¾	96P68296S2	5.00
.01	.312 x ⅞	96P10396S2	5.17
.022	.312 x ⅞	96P22396S2	5.28
.047	.400 x 1 ⅛	96P47396S2	5.55
.068	.400 x 1 ⅜	96P68396S2	5.77
.10	.562 x 1 ⅛	96P10496S2	6.16
.22	.562 x 1 ⅞	96P22496S2	6.82
.47	.750 x 2 ⅛	96P47496S2	7.97

TYPE 196P

MF	D. x L.	Cat. No.	List
100 WVDC			
.01	.235 x ¾	196P10391S4	$5.15
.047	.312 x ⅞	196P47391S4	5.43
.1	.400 x ⅞	196P10491S4	5.54
.33	.562 x 1⅛	196P33491S4	6.31
.47	.562 x 1⅜	196P47491S4	6.64
300 WVDC			
.01	.312 x ⅞	196P10393S4	5.54
400 WVDC			
.033	.400 x ⅞	196P33394S4	5.81
.047	.400 x 1⅛	196P47394S4	5.92
.22	.562 x 1⅝	196P22494S4	7.08
600 WVDC			
.001	.235 x ¾	196P10296S4	5.32
.0022	.235 x ¾	196P22296S4	5.32
.0047	.312 x ⅞	196P47296S4	5.59
.01	.312 x ⅞	196P10396S4	5.65
.022	.400 x ⅞	196P22396S4	5.92
.047	.400 x 1⅜	196P47396S4	6.14
.1	.562 x 1⅜	196P10496S4	6.75
.22	.670 x 1⅝	196P22496S4	7.96
.47	.750 x 2⅜	196P47496S4	8.62

TYPE CP26 OIL-FILLED TUBULARS



Hermetically sealed, mineral oil impregnated to meet Characteristic E requirements for operation from −55°C. to +85°C. Capacitor section is insulated from case. Units have plastic outer insulating tube. Capacitance tolerances: K, ±10%; M, ±20%; V, −10% +20%.

MF	WVDC	Dia. x Length	Cat. No.	List
.5	200	1 1/16 x 2 5/16	SP—CP26A1EC504K	$2.60
.006	600	½ x 1 5/16	SP—CP26A1EF602M	1.55
.01	600	½ x 1 5/16	SP—CP26A1EF103V	1.55
.02	600	½ x 1 13/16	SP—CP26A1EF203K	1.80
.05	600	11/16 x 1 11/16	SP—CP26A1EF503K	1.90

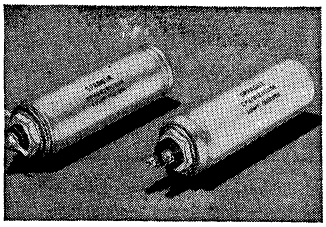
TYPE CP28 TUBULARS

Similar to Type CP26, except for addition of radial mounting bracket. This is usually necessary for higher capacitance range tubulars if capacitor is to withstand equipment vibration tests. Units listed below have ±10% capacitance tolerance. These units are oil-filled and oil-impregnated to meet Characteristic E requirements.

MF	WVDC	Dia. x Length	Cat. No.	List
.1	600	11/16 x 2 1/16	SP—CP28A1EF104K	$2.15
.25	600	1 1/16 x 2 5/16	SP—CP28A1EF254K	2.70
.5	600	1 1/16 x 2 13/16	SP—CP28A1EF504K	3.30

SPRAGUE CAPACITORS

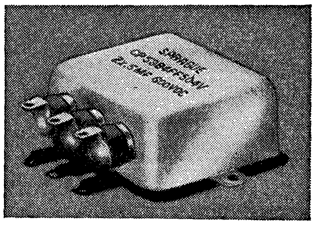
SCREWBASE TYPES CP40, 41



These cylindrical capacitors are easily mounted in small power supplies. They are mineral oil impregnated to meet Characteristic E requirements. Designed to operate from −55°C. to +85 °C. The capacitance tolerance for these metal-encased units is ±10°.

MF	WVDC	Dia. x Length	Cat. No.	List
TYPE CP40—GROUNDED CASE				
2	600	1½ x 3⅜	SP—CP40C2EF205K	$5.10
4	600	1½ x 5¼	SP—CP40C2EF405K	6.95
TYPE CP41—INSULATED CASE				
2	600	1½ x 3⅜	SP—CP41B1EF205K	$5.60
4	600	1½ x 5¼	SP—CP41B1EF405K	7.45

"BATHTUB" TYPE CP53



Drawn-shell case with silicone rubber side-terminal bushings. Will meet Characteristic E requirements. Can is grounded on triple section units. Capacitance tolerances: K, ±10%. V, −10+20%.

MF	WVDC	L. x W. x H.	Cat. No.	List
.1	600	1¹³⁄₁₆ x 1 x ¾	SP—CP53B1EF104K	$3.25
.25	600	1¹³⁄₁₆ x 1 x ¾	SP—CP53B1EF254K	3.40
.5	600	1¹³⁄₁₆ x 1 x 1	SP—CP53B1EF504K	3.65
1.0	600	2 x 1¾ x 1	SP—CP53B1EF105K	4.15
2.0	600	2 x 2 x 1⅛	SP—CP53B1EF205K	5.50
.1-.1	600	1¹³⁄₁₆ x 1 x ¾	SP—CP53B4EF104V	4.10
.25-.25	600	1¹³⁄₁₆ x 1 x 1	SP—CP53B4EF254V	4.15
.5-.5	600	2 x 1¾ x 1	SP—CP53B4EF504V	4.75
.1-.1-.1	600	2 x 1¾ x ⅞	SP—CP53B5EF104V	4.60
.25	1000	1¹³⁄₁₆ x 1 x ⅞	SP—CP53B1EG254K	3.60
.5	1000	2 x 1¾ x ⅞	SP—CP53B1EG504K	3.90
1.0	1000	2 x 2 x 1⅛	SP—CP53B1EG105K	4.85
.25-.25	1000	2 x 1¾ x ⅞	SP—CP53B4EG254V	4.60

TYPE CP61 RECTANGULARS

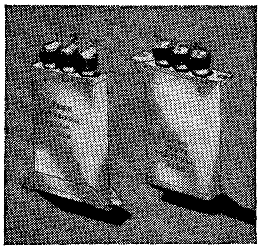
Characteristic E impregnation for −55°C. to +85°C. operation. Capacitance tolerance: K, ±10%; V, −10+20%. Silicone rubber terminal bushings. Can is grounded on dual units. Spade brackets may be mounted so terminals project through chassis or far above it. List price for all brackets: $.25 each, when ordered with capacitors.

MF	WVDC	W. x T. x H.	Cat. No.	List
.05	600	1⁵⁄₁₆ x ⅝ x 1¹⁄₁₆	SP—CP61B1EF503K	$4.10
.1	600	1⁵⁄₁₆ x ⅝ x 1⅜	SP—CP61B1EF104K	4.40
.25	600	1⁵⁄₁₆ x ⅝ x 1⅝	SP—CP61B1EF254K	4.70
.5	600	1⁵⁄₁₆ x ⅝ x 2	SP—CP61B1EF504K	5.00
1.0	600	1⁵⁄₁₆ x ⅝ x 2¾	SP—CP61B1EF105K	5.65
.1-.1	600	1⁵⁄₁₆ x ⅝ x 1⅝	SP—CP61B6EF104V	5.50
.25-.25	600	1⁵⁄₁₆ x ⅝ x 2	SP—CP61B6EF254V	5.65
.5-.5	600	1⁵⁄₁₆ x ⅝ x 2¾	SP—CP61B6EF504V	6.50

BRACKETS

Case Height	Cat. No.	Case Height	Cat. No.
1¹⁄₁₆	SP—CP06SA1	2	SP—CP06SA4
1⅜	SP—CP06SA2	2¾	SP—CP06SA6
1⅝	SP—CP06SA3		

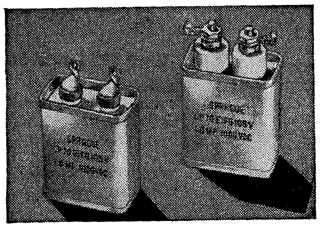
TYPES CP67, 69 RECTANGULARS



Channel-bracket mounting capacitors impregnated with mineral oil to meet Characteristic E requirements. Silicone-rubber terminal bushings insure continued hermetic seal. Capacitance tolerance is ±10%

MF	WVDC	W. x T. x H.	Cat. No.	List
TYPE CP67—Mounting Bracket Away from Terminal				
.1	600	1¾ x ⁹⁄₁₆ x 1¹⁄₁₆	SP—CP67B1EF104K	$3.95
.25	600	1¾ x ⁹⁄₁₆ x 1½	SP—CP67B1EF254K	4.25
.5	600	1¾ x ⁹⁄₁₆ x 2	SP—CP67B1EF504K	4.55
1.0	600	1¾ x ⁹⁄₁₆ x 2¾	SP—CP67B1EF105K	5.15
TYPE CP69—Mounting Bracket at Terminal End				
.05	600	1¾ x ⁹⁄₁₆ x 1¹⁄₁₆	SP—CP69B1EF503K	$3.95
.1	600	1¾ x ⁹⁄₁₆ x 1¹⁄₁₆	SP—CP69B1EF104K	3.95
.25	600	1¾ x ⁹⁄₁₆ x 1½	SP—CP69B1EF254K	4.25
.5	600	1¾ x ⁹⁄₁₆ x 2	SP—CP69B1EF504K	4.55
1.0	600	1¾ x ⁹⁄₁₆ x 2¾	SP—CP69B1EF105K	5.15

TYPE CP70 RECTANGULARS



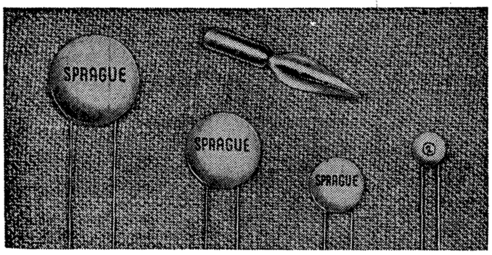
Soldered "squeeze-seam" metal case filter capacitors for power supplies. Units are mineral oil impregnated for −55°C. to +85°C. operation. Capacitance tolerance is ±10%.

BRACKETS: List price for all footed brackets: $.60 pr. when supplied with capacitors. Order separately as indicated.

MF	WVDC	W. x T. x H.	Cat. No.	List
SILICONE RUBBER BUSHINGS				
2	600	1¹³⁄₁₆ x 1¹⁄₁₆ x 3¼*	SP—CP70B1EF205K	$ 8.30
4	600	2½ x 1³⁄₁₆ x 3⅞†	SP—CP70B1EF405K	10.65
6	600	3¾ x 1¼ x 4⅜‡	SP—CP70B1EF605K	13.35
10	600	3¾ x 1¾ x 4 #	SP—CP70B1EF106K	17.95
.5	1000	1¹³⁄₁₆ x 1¹⁄₁₆ x 2¼§	SP—CP70B1EG504K	5.65
1.0	1000	1¹³⁄₁₆ x 1¹⁄₁₆ x 2⅞★	SP—CP70B1EG105K	7.35
2.0	1000	1¹³⁄₁₆ x 1¹⁄₁₆ x 4¾◆	SP—CP70B1EG205K	9.65
4.0	1000	3¾ x 1¼ x 3⅞°	SP—CP70B1EG405K	12.30
CERAMIC STANDOFF BUSHINGS				
.1	1500	1¹³⁄₁₆ x 1¹⁄₁₆ x 2¼§	SP—CP70E1EH104K	$ 6.60
.5	1500	1¹³⁄₁₆ x 1¹⁄₁₆ x 2⅞★	SP—CP70E1EH504K	8.15
1.0	1500	1¹³⁄₁₆ x 1¹⁄₁₆ x 4¾◆	SP—CP70E1EH105K	9.00

*CP07FA4 §CP07FA2 ‡CP07FC2 ◆CP07FA6
†CP07FB4 ★CP07FA3 #CP07FD3 °CP07FC2

SPRAGUE CAPACITORS



CERA-MITE* DISC CERAMICS

- Tiny, Tough, Dependable in Every Application
- Low Self-inductance of Silvered Flat-plate Design means Very High By-pass Efficiency in All TV Circuits
- Moisture-resistant Insulating Coating
- Cera-mite Disc Ceramics Easily Fit into Tight Spaces
- Designed for 85° C Continuous Operation

★Trademark

G-A TYPES

- Ideal Where Temperature Coefficient is Not Important, such as By-pass and Coupling Uses
- Excellent Replacements for Foil-micas and Tubular Ceramics

400 WVDC

Std. Tolerance ±20%

MMF	Cat. No.	List
10	4GA-Q1	$.25
15	4GA-Q15	.25
22	4GA-Q22	.25
33	4GA-Q33	.25
47	4GA-Q47	.25
68	4GA-Q68	.25
100	4GA-T1	.25
150	4GA-T15	.25
220	4GA-T22	.25
330	4GA-T33	.25
470	4GA-T47	.25

500 WVDC

Std. Tolerance ±20%

MMF	Cat. No.	List
5	5GA-V5	$.25
6	5GA-V6	.25
7.5	5GA-V75	.25
8	5GA-V8	.25
10	5GA-Q1	.25
12	5GA-Q12	.25
15	5GA-Q15	.25
18	5GA-Q18	.25
20	5GA-Q2	.25
22	5GA-Q22	.25
25	5GA-Q25	.25
27	5GA-Q27	.25
30	5GA-Q3	.25
33	5GA-Q33	.25
39	5GA-Q39	.25
47	5GA-Q47	.25
50	5GA-Q5	.25
56	5GA-Q56	.25
68	5GA-Q68	.25
75	5GA-Q75	.25
82	5GA-Q82	.25
91	5GA-Q91	.25
100	5GA-T1	.25
120	5GA-T12	.25
130	5GA-T13	.25
150	5GA-T15	.25
180	5GA-T18	.25
200	5GA-T2	.25
220	5GA-T22	.25
240	5GA-T24	.25
250	5GA-T25	.25
270	5GA-T27	.25
300	5GA-T3	.25
330	5GA-T33	.25
350	5GA-T35	.25
360	5GA-T36	.25
390	5GA-T39	.25
400	5GA-T4	.25
470	5GA-T47	.25
500	5GA-T5	.25
560	5GA-T56	.25
600	5GA-T6	.25
680	5GA-T68	.25
750	5GA-T75	.25
800	5GA-T8	.25
820	5GA-T82	.25
1000	5GA-D1	.25
1200	5GA-D12	.25
1300	5GA-D13	.25
1500	5GA-D15	.25
1600	5GA-D16	.25
1800	5GA-D18	.25
2000	5GA-D2	.25
2200	5GA-D22	.25
2500	5GA-D25	.25
2700	5GA-D27	.25
3000	5GA-D3	.25
3300	5GA-D33	$.25
3900	5GA-D39	.25
4000	5GA-D4	.25
4300	5GA-D43	.30
4700	5GA-D47	.30
5000	5GA-D5	.30

1000 WVDC

Std. Tolerances:
thru 680 MMF ±10%,
thru 3300 MMF ±20%,
thru 10,000 MMF MRC

MMF	Cat. No.	List
4.7	10GA-V47	$.30
10	10GA-Q1	.30
15	10GA-Q15	.30
18	10GA-Q18	.30
22	10GA-Q22	.30
27	10GA-Q27	.30
33	10GA-Q33	.30
39	10GA-Q39	.30
47	10GA-Q47	.30
68	10GA-Q68	.30
75	10GA-Q75	.30
82	10GA-Q82	.30
100	10GA-T1	.30
120	10GA-T12	.30
150	10GA-T15	.30
180	10GA-T18	.30
200	10GA-T2	.30
220	10GA-T22	.30
250	10GA-T25	.30
270	10GA-T27	.30
300	10GA-T3	.30
330	10GA-T33	.30
390	10GA-T39	.30
470	10GA-T47	.30
500	10GA-T5	.30
560	10GA-T56	.50
680	10GA-T68	.50
1000	10GA-D1	.50
1200	10GA-D12	.50
1500	10GA-D15	.50
2200	10GA-D22	.50
3300	10GA-D33	.50
4700	*10HK-D47	.50
6800	*10HK-D68	.60
10000	*10HK-S1	.60

2000 WVDC

Std. Tolerances:
thru 5 MMF ±.5 MMF,
thru 82 MMF ±10%,
thru 1000 MMF ±20%,
thru 6000 MMF MRC

MMF	Cat. No.	List
3.3	20GA-V33	$.35
5	20GA-V5	.35
7.5	20GA-V75	.35
10	20GA-Q1	.35
12	20GA-Q12	.35
15	20GA-Q15	.35
18	20GA-Q18	.35
20	20GA-Q2	.35
22	20GA-Q22	.35
33	20GA-Q33	.35
39	20GA-Q39	.35
47	20GA-Q47	.35
56	20GA-Q56	.35
62	20GA-Q62	.35
68	20GA-Q68	.35
75	20GA-Q75	.35
82	20GA-Q82	.35
100	20GA-T1	.35
120	20GA-T12	.35
150	20GA-T15	.35
180	20GA-T18	$.35
200	20GA-T2	.35
220	20GA-T22	.35
300	20GA-T3	.35
330	20GA-T33	.35
390	20GA-T39	.35
470	20GA-T47	.35
500	20GA-T5	.35
1000	20GA-D1	.55
4000	*20HK-D4	.55
5000	*20HK-D5	.70
6000	*20HK-D6	.70

3000 WVDC

Std. Tolerances:
1.5 MMF ±.25 MMF,
4.7 MMF ±.5 MMF,
thru 68 MMF ±10%,
thru 500 MMF ±20%

MMF	Cat. No.	List
1.5	30GA-V15	$.40
4.7	30GA-V47	.40
10	30GA-Q1	.40
12	30GA-Q12	.40
15	30GA-Q15	.40
25	30GA-Q25	.40
30	30GA-Q3	.40
39	30GA-Q39	.40
50	30GA-Q5	.40
60	30GA-Q6	.40
68	30GA-Q68	.40
100	30GA-T1	.40
120	30GA-T12	.40
150	30GA-T15	.40
180	30GA-T18	.40
200	30GA-T2	.40
220	30GA-T22	.40
250	30GA-T25	.40
270	30GA-T27	.40
300	30GA-T3	.40
500	30GA-T5	.40

5000 WVDC

Std. Tolerances:
4.7 MMF ±.5 MMF,
thru 220 MMF ±10%,
thru 500 MMF ±20%

MMF	Cat. No.	List
4.7	50GA-V47	$.45
10	50GA-Q1	.45
22	50GA-Q22	.45
47	50GA-Q47	.45
100	50GA-T1	.45
220	50GA-T22	.45
330	50GA-T33	.55
500	50GA-T5	1.00

7500 WVDC

Std. Tolerances:
4.7 MMF ±.5 MMF,
thru 18 MMF ±10%,
thru 470 MMF ±20%

MMF	Cat. No.	List
4.7	75GA-V47	$.50
8.2	75GA-V82	.50
10	75GA-Q1	.50
12	75GA-Q12	.50
15	75GA-Q15	.50
18	75GA-Q18	.50
20	75GA-Q2	.50
22	75GA-Q22	.50
30	75GA-Q3	.50
33	75GA-Q33	.50
47	75GA-Q47	.50
56	75GA-Q56	.50
100	75GA-T1	.50
470	75GA-T47	.65

NPO TYPES

- Zero Temperature-coefficient Capacitors
- Used Where Capacitance Change with Temperature is Undesirable
- Superior to Silvered-mica Types in Stability, High "Q", and Insulation Resistance
- Rated at 500 WVDC

MMF	Cat. No.	List
**		
10	5TCC-Q1	$.50
15	5TCC-Q15	.50
20	5TCC-Q2	.50
22	5TCC-Q22	.50
25	5TCC-Q25	.50
33	5TCC-Q33	.50
39	5TCC-Q39	.55
47	5TCC-Q47	.55
50	5TCC-Q5	.55
68	5TCC-Q68	.55
75	5TCC-Q75	.55
100	5TCC-T1	.55
120	5TCC-T12	.60
150	5TCC-T15	.60
175	5TCC-T175	.60
220	5TCC-T22	.70
270	5TCC-T27	.80

N750 TYPES

- Used For Temperature Compensation to Eliminate Frequency Drifts
- Negative Temperature Coefficient is 750 ppm/° C.
- Often Used in Combination with NPO Types
- Rated at 500 WVDC

MMF	Cat. No.	List
**		
10	5TCU-Q1	$.50
15	5TCU-Q15	.50
20	5TCU-Q2	.50
22	5TCU-Q22	.50
25	5TCU-Q25	.50
33	5TCU-Q33	.50
47	5TCU-Q47	.50
68	5TCU-Q68	50
75	5TCU-Q75	.50
100	5TCU-T1	.50
150	5TCU-T15	.50
200	5TCU-T2	.50
220	5TCU-T22	.50
330	5TCU-T33	.50

** For Ratings lower than 10 MMF, see Bulplate Temperature Compensating Ceramics.

HIGH-K TYPES

- Designed Specifically for Minimum Capacitance Requirements
- Intended for By-pass and Coupling Applications where Additional Capacitance is Not Important
- Rated at 500 WVDC

MF	Cat. No.	List
SINGLE UNITS		
.001	5HK-D1	$.25
.0015	5HK-D15	.25
.002	5HK-D2	.25
.0022	5HK-D22	.25
.0025	5HK-D25	.25
.0033	5HK-D33	.25
.004	5HK-D4	.25
.0047	5HK-D47	.25
.005	5HK-D5	.25
.0068	5HK-D68	.25
.01	5HK-S1	.30
.015	5HK-S15	.40
.02	5HK-S2	.60
.03	5HK-S3	.65
DUAL UNITS		
2 x .001	5HK-2D1	$.40
2 x .0015	5HK-2D15	.40
2 x .002	5HK-2D2	.40
2 x .0022	5HK-2D22	.40
2 x .004	5HK-2D4	.45
2 x .0047	5HK-2D47	.45
2 x .01	5HK-2S1	.50
2 x .02	5HK-2S2	.70

BULPLATE®

Temperature Compensating CAPACITORS

- These tiny Bulplates meet the same requirements of disc ceramics, but rectangular plates are used instead of round discs. Numbers 5TCCB are NPO Types, and 5TCUB is Type N750. Rated at 500 WVDC

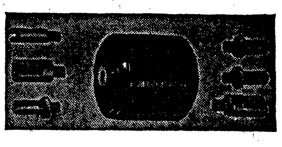
MMF	Cat. No.	List
1.0	5TCCB-V1	$.50
1.5	5TCCB-V15	.50
2.2	5TCCB-V22	.50
3.3	5TCCB-V33	.50
4.7	5TCCB-V47	.50
5.0	5TCUB-V5	.50
6.8	5TCCB-V68	.50

DOORKNOB CERAMIC

(MOLDED PLASTIC)

WITH SCREW-IN TERMINALS TO FIT ALL TV SETS

- A New Idea in High Voltage Ceramic Capacitor Design
- Packaged Two to a Clear Plastic Box With Giant Assortment of Screw-in Terminals



- Molded in Non-flammable, Moisture-resistant Thermosetting Plastic — Molded Guard Rings Lengthen Surface Creepage Path

MMF	WVDC	Dia. x Length	Cat. No.	List
500	20,000	1 x 31/32	20DK-T5	$1.85

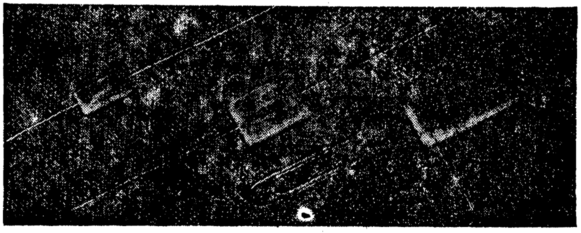
*High-K Types

All prices subject to change without notice.

SPRAGUE CAPACITORS

BULPLATE® CERAMICS

- Another FIRST in the Ceramic Field
- Amazingly Small in Size—Can Be Used Almost Anywhere
- Ideal for Replacing Older Types of General Application Capacitors such as Molded Micas, Tubular Ceramics, and Paper Tubulars
- Heavy Moisture-resistant Insulating Coating
- Designed for 85° C. Operation



300 WVDC

Std. Tolerance ±20%

MMF	Cat. No.	List
470	3GAB-T47	$.35
1000	3GAB-D1	.35
2200	3GAB-D22	.45
4700	3GAB-D47	.45
10000	3GAB-S1	.65
.022 MF	3GAB-S22	.65
.047	3GAB-S47	.70
.1	3GAB-P1	.75
.15	3GAB-P15	.80

1000 WVDC

Std. Tolerances:
Type 10GAB-V47 ±.5 MMF,
other types 10GAB ±20%,
types 10HKB MRC

MMF	Cat. No.	List
4.7	10GAB-V47	$.30
10	10GAB-Q1	30
18	10GAB-Q18	.30
22	10GAB-Q22	.30
25	10GAB-Q25	30
33	10GAB-Q33	$.30
39	10GAB-Q39	.30
47	10GAB-Q47	.30
68	10GAB-Q68	.30
75	10GAB-Q75	.30
82	10GAB-Q82	.30
100	10GAB-T1	.30
120	10GAB-T12	.30
150	10GAB-T15	.30
180	10GAB-T18	.30
200	10GAB-T2	.30
220	10GAB-T22	.30
250	10GAB-T25	30
270	10GAB-T27	.30
300	10GAB-T3	.30
330	10GAB-T33	.30
390	10GAB-T39	.30
470	10GAB-T47	.30
500	10GAB-T5	.30
560	10GAB-T56	.50
680	10HKB-T68	.50
1000	10HKB-D1	.50
1200	10HKB-D12	.50
1500	10HKB-D15	.50
2200	10HKB-D22	.50
3300	10HKB-D33	.50
4700	10HKB-D47	.50
.01 MF	10HKB-S1	.60
.015	10HKB-S15	1.10
.022	10HKB-S22	1.35

1500 WVDC

Std. Tolerances:
thru 4.7 MMF ±.5 MMF,
all others ±20%

MMF	Cat. No.	List
3.3	15GAB-V33	$.30
4.7	15GAB-V47	.30
6	15GAB-V6	.30
7.5	15GAB-V75	.30
10	15GAB-Q1	.30
12	15GAB-Q12	.30
15	15GAB-Q15	.30
18	15GAB-Q18	.30
20	15GAB-Q2	.30
22	15GAB-Q22	.30
33	15GAB-Q33	.30
47	15GAB-Q47	.30
56	15GAB-Q56	.30
62	15GAB-Q62	.30
68	15GAB-Q68	.30
82	15GAB-Q82	.35
100	15GAB-T1	.35
150	15GAB-T15	.35
180	15GAB-T18	.35
220	15GAB-T22	.35
300	15GAB-T3	.35
330	15GAB-T33	.35
390	15GAB-T39	.35
470	15GAB-T47	.35

2000 WVDC

Std. Tolerances:
5 MMF ±.5 MMF,
other types 20GAB ±20%,
types 20HKB MRC

MMF	Cat. No.	List
5	20GAB-V5	$.35
10	20GAB-Q1	.35
15	20GAB-Q15	.35
22	20GAB-Q22	.35
30	20GAB-Q3	.35
33	20GAB-Q33	.35
39	20GAB-Q39	.35
47	20GAB-Q47	.35
100	20GAB-T1	.35
150	20GAB-T15	.35
200	20GAB-T2	.35
220	20HBK-T22	.35
300	20HKB-T3	.35
500	20HKB-T5	.35
1000	20HKB-D1	.55
5000	20HKB-D5	.70
8000	20HKB-D8	.70
10000	20HKB-S1	.70

3000 WVDC

Std. Tolerances:
1.5 MMF ±.25 MMF,
4.7 MMF ±.5 MMF,
other types 30GAB ±20%

MMF	Cat. No.	List
1.5	30GAB-V15	$.40
4.7	30GAB-V47	.40
10	30GAB-Q1	.40
15	30GAB-Q15	.40
47	30GAB-Q47	.40
60	30GAB-Q6	.40
68	30GAB-Q68	.40
100	30GAB-T1	40
120	30GAB-T12	.40
150	30GAB-T15	.40
180	30GAB-T18	.40

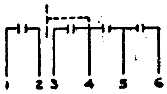
6000 WVDC

Std. Tolerances:
4.7 MMF ±.5 MMF,
other types 60GAB ±20%,
types 60HKB MRC

MMF	Cat. No.	List
4.7	60GAB-V47	$.50
8.2	60GAB-V82	50
10	60GAB-Q1	.50
12	60GAB-Q12	.50
15	60GAB-Q15	.50
18	60GAB-Q18	.50
20	60GAB-Q2	.50
22	60GAB-Q22	.50
30	60GAB-Q3	.50
33	60GAB-Q33	.50
47	60GAB-Q47	.50
100	60HKB-T1	.50
470	60HKB-T47	65

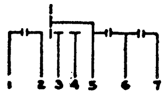
BULPLATE® MULTIPLE CERAMICS

- These Rugged Units Combine in One Compact Assembly All the Capacitors Used in One or More Stages of a Radio Circuit
- Fit Tight Spaces in Miniature Sets
- Rated at 500 WVDC, 1000 VDC Test



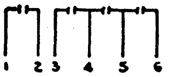
	MFD.
1&2	.002 $^{+100}_{-25}$ %
3&4	.00022 ±50%
4&5	.00022 ±50%
5&6	.005 $^{+100}_{-25}$ %

Cat. No. 34C3 List, $.75



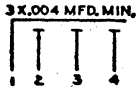
	MFD.
1&2	.002 $^{+100}_{-25}$ %
3&5	.00015 $^{+100}_{-0}$ %
4&5	.005 MIN.
5&6	.0001 $^{+75}_{-25}$ %
6&7	.005 $^{+100}_{-25}$ %

Cat. No. 34C4 List, $.90



	MFD.
1&2	.002 $^{+100}_{-25}$ %
3&4	.005 MIN.
4&5	.0001 $^{+75}_{-25}$ %
5&6	.005 $^{+100}_{-25}$ %

Cat. No. 34C5 List, $.75



MFD.

3 x .004

Cat. No. 34C6 List, $.65

BUTTON CERAMICS

TYPE 501C

MMF	Class	List
100	GA ± 20%	$.70
470	GA ± 20%	.70
1000	MRC	.70
1500	MRC	.70

TYPE 502C

MMF	Class	List
10	SL	.65
22	SL	.65

TYPE 503C

MMF	Class	List
100	GA ± 20%	.75
470	GA ± 20%	.75
1000	MRC	$.75
1500	MRC	.75

TYPE 505C

MMF	Class	List
100	GA ± 20%	.70
220	GA ± 20%	.70
470	MRC	.70
1000	MRC	.70

TYPE 506C

MMF	Class	List
470	GA ± 20%	.75
1000	MRC	.75
1500	MRC	.75

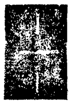
TYPE 507C

MMF	Class	List
100	GA ± 20%	$.90
220	GA ± 20%	.90
470	MRC	.90
680	MRC	.90
1000	MRC	.90

TYPE 508C

MMF	Class	List
470	GA ± 20%	.95
1000	MRC	.95
1500	MRC	.95

501C



502C

503C

505C, 506C

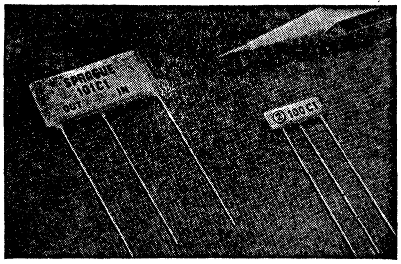
507C, 508C

- Designed for Ultra-high-frequency TV Receivers and Electronic Equipment
- Flat Disc Design Means Low Self-Inductance and High Self-resonant Frequency — Superior to Similar Units using Tubular Ceramic Elements
- Capacitor Element Sealed in Top of Ferrule or Screwhead with Plastic Resin
- 502C "shirt studs" are for u-h-f Coupling Applications in TV Sets
- 503C are Feed-thru Capacitors Intended for Filtering Leads thru Chassis—Ferrule Shank fits Standard Push Clip
- Stand-off Capacitors for By-pass Applications: 501C has Ferrule Shank to fit Standard push clip, 505C has Self-tapping 6-32 Thread, 507C has Standard 6-32 Thread, 506C has Self-tapping 10-32 Thread, 508C has Standard 10-32 Thread—All Screw-mounting Types Have Hexagon Heads
- Order by Type, Capacitance, Voltage, Class—Units Listed here are Rated at 500 WVDC

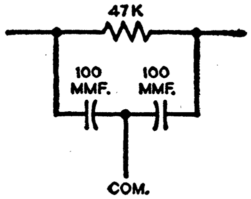
All prices subject to change without notice.

SPRAGUE CAPACITORS

BULPLATE® PRINTED CIRCUITS

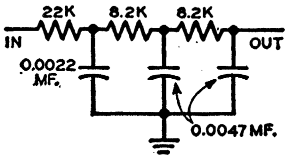

SPRAGUE
101C1
OUT
IN
② 100C1

- Especially Designed to Save Space and Reduce Assembly Time
- A Combination of Resistors and Capacitors of Maximum Compactness
- Integral Connections are "Printed" and Brought Out to External Leads Which Are Anchored to the Basic Ceramic Plate
- Completed Unit is Protected by a Moisture-proof Coating
- Capacitors are rated at 475 volts d-c, 850 volts test, while the maximum voltage to be applied across the resistors is 250 volts d-c; except on 100C1 where all elements are rated at 100 volts d-c.


47K
100 MMF.
100 MMF.
COM.

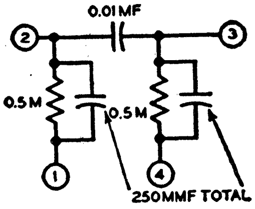
Cat. No. 100C1 **List, $.60**

DIODE FILTER


22K
8.2K
8.2K
IN
OUT
0.0022 MF.
0.0047 MF.

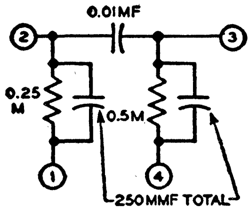
Cat. No. 101C1 **List, $1.10**

VERTICAL INTEGRATOR


0.01 MF
②
③
0.5M
0.5M
①
④
250MMF TOTAL

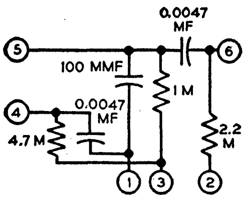
Cat. No. 102C1 **List, $.75**

STD. TRIODE COUPLING


0.01 MF
②
③
0.25 M
0.5M
①
④
250MMF TOTAL

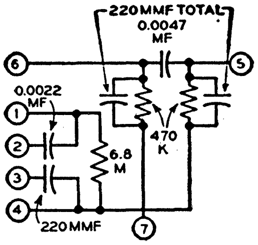
Cat. No. 102C2 **List, $.75**

STD. TRIODE COUPLING


0.0047 MF
⑤
⑥
100 MMF
1 M
④
0.0047 MF
4.7 M
2.2 M
①
③
②

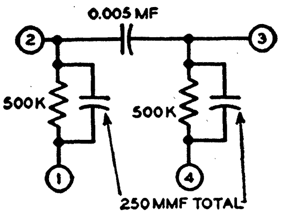
Cat. No. 103C3 **List, $.90**

PENTODE COUPLING


220MMF TOTAL
0.0047 MF
⑥
⑤
0.0022 MF
①
②
③
④
470 K
6.8 M
220MMF
⑦

Cat. No. 103C4 **List, $1.00**

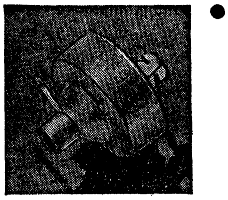
AUDIO OUTPUT


0.005 MF
②
③
500K
500K
①
④
250MMF TOTAL

Cat. No. 104C4 **List, $.70**

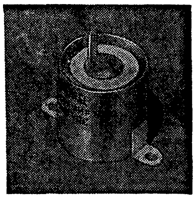
MIDGET TRIODE COUPLING

CUP CERAMICS



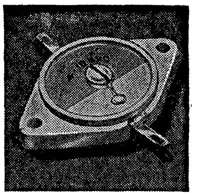
- These precision capacitors are widely used in high stability r-f oscillators where frequency control is important. Tolerance on capacitance can be held to ± 1%, and on temperature coefficient to ± 10 ppm.
- Hermetically sealed construction and low self inductance are noteworthy as are high Q, capacitance stability, and retrace characteristics.
- Available in 500, 1000, 1500 volt ratings for all standard temperature coefficients from P100 to N750. Write on company letterhead for complete details.

PRECISION TUBULARS



- Designed for exacting circuitry in electronic instrumentation and high stability oscillators. The same stacked disc construction as metal cup ceramics but with higher capacitance range.
- Hermetically sealed in plated metal tubes for moisture protection. Rated for −55°C to +85°C operation as are cup ceramics
- Available in ±1% capacitance tolerances!
- Available in 500, 1000, 1500 volt ratings for all standard temperature coefficients from P100 to N750. Write on company letterhead for complete details

CERAMIC TRIMMERS



- Widely used in military equipment and precision circuitry where maximum stability is required — Characteristics remain constant under most severe vibration and atmospheric conditions
- Unlike ordinary low cost trimmers, the special construction of these top-quality units prevents corrosion, permits mounting against chassis, and guarantees long, trouble-free life

Write on company letterhead for complete details

MMF(Min.)	MMF(Max.)	Cat. No.	List
4	18	A08-006	$10.00
5	30	A08-007	10.00
8	75	A08-001	10.00
10	110	A08-002	10.00

All prices subject to change without notice.

SPRAGUE FILTERS

FILTEROL® TYPES

Filterol 1
Filterol 2
Filterol 3
Filterol 4

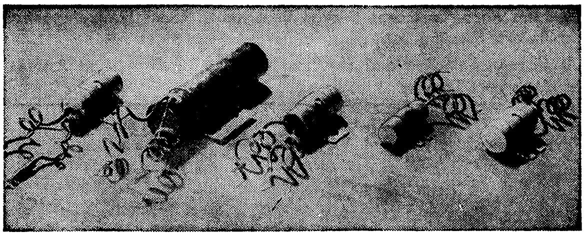
- Suppress Man-made Radio and TV Interference
- Small, Completely Self-contained
- Quickly, Easily Installed

Filterol Types 1, 2, and 3—Designed for connection in series with power supply lines to interference-producing devices . . . A 3-terminal network with the case as one terminal . . . The selected filter should have a rating higher than the continuous operating current of the offending device . . . A single Filterol connected to the high side of the line is usually sufficient . . . In severe cases a Filterol in each leg of the power line may be necessary . . . For three or four-wire systems, a Filterol in each wire is necessary.

Filterol Type 4—A new, exclusive Sprague development incorporating a Sprague HYPASS® Capacitor . . . Provides exceptionally high attenuation at frequencies above 5 megacycles . . . Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size	List
Filterol 1	1	115	7/8 x 1 1/4 x 1 3/4	$13.50
Filterol 2	10	115	1 1/8 x 2 x 2	14.80
Filterol 3	35	115	1 7/8 x 2 7/8 x 3 1/8	27.40
Filterol 4	20	115	1" dia. x 1 13/16" long	3.05

IF TYPES



IF-15—TRIPLE-SECTION FILTER for all small motor-operated devices such as food and drink mixers, vacuum cleaners, fans, drills, etc. Especially designed to prevent accidental shocks from discharge of filter capacitors.

IF-11—DUAL HIGH-CAPACITY FILTER with completely enclosed safety construction. Designed for use on motors over 1 horsepower and up to 220 volts AC or DC. Also used on high-current arcing or sparking devices.

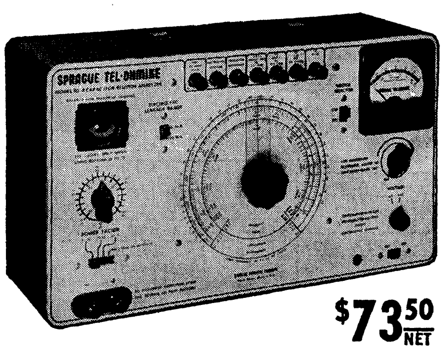
IF-21—COMPACT DUAL FILTER for use across brushes of fractional horsepower motors with the can grounded to motor frame. May also be used across line terminals of motors.

IF-S1—SINGLE SECTION 2-LEAD FILTER with can completely insulated. For use across make-and-break contacts, such as thermostats, circuit breakers, door-bells, buzzers, relays, etc.

IF-37—3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Only one IF-37 required for each offending fixture. Also effective on make-and-break governor-type motors. Underwriters' Laboratories approved.

Cat. No.	Volts AC or DC	Dia. x Length	List
IF-15	220	1 x 2 3/16	$2.60
IF-11	220	1 3/8 x 3 1/2	7.80
IF-21	220	1 x 2 3/16	1.75
IF-S1	220	3/4 x 2 1/16	1.15
IF-37	220	1 x 2 7/16	2.25

MODEL TO-4 TEL-OHMIKE® CAPACITOR-RESISTOR ANALYZER



$73.50 NET

PRICED SO YOU CAN AFFORD IT!

- **CAPACITANCE BRIDGE** measures up to 2000 mf in five overlapping ranges. The special 1 mmf to 100 mmf range is exclusive with the Sprague Tel-Ohmike.
- **INSULATION RESISTANCE** directly read on large meter up to 20,000 megohms for paper, ceramic, and mica capacitors. No guessing with neon lamps.
- **LEAKAGE CURRENT** of electrolytics measured directly on meter, with exact rated voltage up to 600v. applied from continuously adjustable power supply. Two ranges: 0-6-60 ma. No guessing on eye-width or counting lamp blinks when you use a TO-41
- **POWER FACTOR** of electrolytic capacitors measured by Wien Bridge up to 55% in three ranges.
- **RESISTANCE BRIDGE** measures from 2.5 ohms to 25 megohms at line frequency.
- **MAGIC-EYE TUBE** simplifies bridge balancing for capacitance, power factor, and resistance measurements.
- **PUSH-BUTTONS** for instant range selection, also discharge capacitors for safety automatically upon release.
- **POWER SUPPLY** self contained for 115 volt, 50 to 60 cycle a-c operation.
- **MODERN CASE** finished in two-tone gray; measures 8 7/8" high, 14 5/8" wide, 6 1/8" deep. Weight only 12 1/2 pounds.

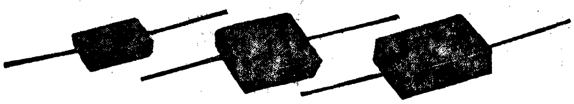
The handiest instrument you can buy! Modern service shops find it a must. Although moderately priced for radio and television repair shops, it offers you the quality and the accuracy required by the nation's outstanding laboratories. The TO-4 comes complete with step-by-step instruction manual and capacitor guide.

SPRAGUE CAPACITORS

MICA TYPES

- Each Mica Capacitor Section Receives a Radio Frequency Test Before Molding
- Careful Selection and Electrical Grading of Raw Mica Assures Maximum Quality
- Section Foils on Foil Micas are Connected to Terminals through Special Low-resistance R-F Bonds
- R-F Current Tested for Peak Ratings After Impregnation and Molding

TYPES MS & 1FM



TYPE MS—SILVERED MICA

(Standard Capacity Tolerance ± 5%)

MF	Cat. No.	List
500 WVDC, 1000 V TEST		
.000005	MS-55	$ .45
.00001	MS-41	.40
.000015	MS-415	.40
.00002	MS-42	.40
.000025	MS-425	.40
.00003	MS-43	.40
.00004	MS-44	.40
.00005	MS-45	.40
.00006	MS-46	.40
.00007	MS-47	.40
.0001	MS-31	.40
.0002	MS-32	.45
.0003	MS-33	.55
.0004	MS-34	.65
.0005	MS-35	.70
.0006	MS-36	.80
.0007	MS-37	.85
.0008	MS-38	.95
.0009	MS-39	1.00
.001	MS-21	1.10
.002	MS-22	1.35
.003	MS-23	2.05
.004	MS-24	2.15
.005	MS-25	2.25
.006	MS-26	2.40
300 WVDC, 600 V TEST		
.007	MS-27	2.60
.008	MS-28	2.80
.009	MS-29	3.10
.01	MS-11	3.40

Catalog Nos.	L x W x T
MS-55 through MS-35	21/32 x 13/32 x 7/32
MS-36 through MS-23	25/32 x 25/32 x 9/32
MS-24 through MS-28	25/32 x 25/32 x 11/32
MS-29 through MS-11	1 x 5/8 x 5/16

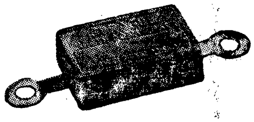
TYPE 1FM

(Standard Capacity Tolerance ± 20%)

MF	Cat. No.	List
500 WVDC, 1000 V TEST		
.00001	1FM-41	$ .25
.00002	1FM-42	.25
.00004	1FM-44	.25
.00005	1FM-45	.20
.000075	1FM-475	.20
.0001	1FM-31	.20
.00015	1FM-315	.20
.0002	1FM-32	.20
.00025	1FM-325	.25
.00035	1FM-335	.25
.0004	1FM-34	.25
.0005	1FM-35	.25
.0007	1FM-37	.25
.001	1FM-21	.30
.0015	1FM-215	.30
.002	1FM-22	.40
.003	1FM-23	.50
.004	1FM-24	.55
.005	1FM-25	.60
.006	1FM-26	.65
300 WVDC, 600 V TEST		
.007	1FM-27	$ .85
.008	1FM-28	1.00
.009	1FM-29	1.00
.01	1FM-11	1.20

Catalog Nos.	L x W x T
1 FM-44 through 1 FM-35	51/64 x 15/32 x 7/32
1 FM-37 through 1 FM-23	53/64 x 53/64 x 9/32
1 FM-24 through 1 FM-28	53/64 x 53/64 x 11/32
1 FM-29 through 1 FM-11	1 x 5/8 x 5/16

TYPES 3AFM, 3BFM, & 3CFM



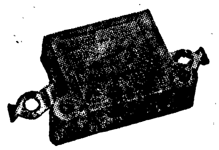
(Standard Capacity Tolerance ± 10%)

MF	Cat. No.	List
3AFM—300 WVDC, 600 V TEST		
.005	3AFM-25	$ .65
.006	3AFM-26	.70
.007	3AFM-27	.95
.008	3AFM-28	1.10
.01	3AFM-11	1.30
.015	3AFM-115	1.35
3BFM—500 WVDC, 1000 V TEST		
.0001	3BFM-31	.30
.0002	3BFM-32	.30
.00025	3BFM-325	.30
.0003	3BFM-33	.30
.0004	3BFM-34	.30
.0005	3BFM-35	.30
.001	3BFM-21	.35
.0015	3BFM-215	.35

MF	Cat. No.	List
.002	3BFM-22	$ .45
.0025	3BFM-225	.50
.003	3BFM-23	.55
.004	3BFM-24	.60
.005	3BFM-25	.65
.006	3BFM-26	.75
.007	3BFM-27	1.00
.008	3BFM-28	1.15
3CFM—1000 WVDC, 2000 V TEST		
.00005	3CFM-45	1.00
.0001	3CFM-31	1.00
.0002	3CFM-32	1.00
.00025	3CFM-325	1.00
.0003	3CFM-33	1.00
.0004	3CFM-34	1.00
.0005	3CFM-35	1.00
.001	3CFM-21	1.25
.0015	3CFM-215	1.50
.002	3CFM-22	1.50
.0025	3CFM-225	1.50

Catalog Nos.	L x W x T
3AFM Types	1 x 5/8 x 5/16
3BFM Types	1 x 5/8 x 5/16
3CFM Types	1 x 5/8 x 5/16

TYPES XFM, YFM & ZFM



(Standard Capacity Tolerance ±10%)

MF	Cat. No.	List
XFM—600 WVDC, 1200 V TEST		
.00005	XFM-45	$1.20
.0001	XFM-31	1.20
.0002	XFM-32	1.20
.00025	XFM-325	1.20
.0003	XFM-33	1.20
.0004	XFM-34	1.20
.0005	XFM-35	1.20
.001	XFM-21	1.20
.0015	XFM-215	1.20
.002	XFM-22	1.30
.0025	XFM-225	1.30
.003	XFM-23	1.45
.004	XFM-24	1.50
.005	XFM-25	1.55
.006	XFM-26	1.80
.007	XFM-27	1.85
.008	XFM-28	1.90
.01	XFM-11	2.15
.02	XFM-12	3.05
.03	XFM-13	4.45

Catalog Nos.	L x W x T
XFM-45 thru XFM-11	1 5/8 x 1 1/8 x 11/32
XFM-12 thru XFM-13	1 5/8 x 1 1/8 x 7/16

MF	Cat. No.	List
YFM—1200 WVDC, 2500 V TEST		
.00005	YFM-45	1.60
.0001	YFM-31	1.60
.0002	YFM-32	1.60
.00025	YFM-325	1.60
.0003	YFM-33	1.60
.0004	YFM-34	1.60
.0005	YFM-35	1.60
.001	YFM-21	1.80
.0015	YFM-215	2.30
.002	YFM-22	2.40
.0025	YFM-225	2.80
.003	YFM-23	3.05
.004	YFM-24	3.05
.005	YFM-25	3.30
.006	YFM-26	3.30
.007	YFM-27	3.45
.008	YFM-28	3.85
.01	YFM-11	5.10

Catalog Nos.	L x W x T
YFM-45 thru YFM-24	1 5/8 x 1 1/8 x 11/32
YFM-25 thru YFM-11	1 5/8 x 1 1/8 x 7/16

MF	Cat. No.	List
ZFM—2500 WVDC, 5000 V TEST		
.00005	ZFM-45	1.90
.0001	ZFM-31	1.90
.0002	ZFM-32	1.90
.00025	ZFM-325	2.20
.0003	ZFM-33	2.25
.0004	ZFM-34	2.30
.0005	ZFM-35	2.40
.001	ZFM-21	2.80
.0015	ZFM-215	3.55
.002	ZFM-22	4.15
.003	ZFM-23	4.90
.004	ZFM-24	5.65
.005	ZFM-25	6.40

Catalog Nos.	L x W x T
ZFM-45 thru ZFM-22	1 5/8 x 1 1/8 x 11/32
ZFM-23 thru ZFM-25	1 5/8 x 1 1/8 x 7/16

TYPES 7FM, 8FM & 9FM

(Standard Capacity Tolerance ±10%)

MF	Cat. No.	List
7FM—600 WVDC, 1200 V TEST		
.00005	7FM-45	$1.45
.0001	7FM-31	1.45
.00015	7FM-315	1.45
.0002	7FM-32	1.45
.00025	7FM-325	1.45
.0005	7FM-35	1.45
.001	7FM-21	1.45
.002	7FM-22	1.65
.0025	7FM-225	1.70
.003	7FM-23	1.85
.004	7FM-24	2.00
.005	7FM-25	2.10
.006	7FM-26	2.20
.008	7FM-28	2.45
.01	7FM-11	2.80
.015	7FM-115	3.05
.02	7FM-12	3.55
.03	7FM-13	4.55
.04	7FM-14	5.85
.05	7FM-15	7.10
.06	7FM-16	8.05

Catalog Nos.	L x W x T
7FM-45 thru 7FM-13	1 3/4 x 1 5/16 x 7/16
7FM-14 thru 7FM-16	1 3/4 x 1 5/16 x 3/4

MF	Cat. No.	List
8FM—1200 WVDC, 2500 V TEST		
.00005	8FM-45	1.60
.0001	8FM-31	1.60
.00015	8FM-315	1.60
.0002	8FM-32	1.60
.00025	8FM-325	1.60
.0005	8FM-35	1.60
.001	8FM-21	1.90
.002	8FM-22	2.50
.0025	8FM-225	2.80
.003	8FM-23	2.95
.004	8FM-24	3.10
.005	8FM-25	3.30
.006	8FM-26	3.45
.008	8FM-28	4.10
.01	8FM-11	4.70
.015	8FM-115	5.80
.02	8FM-12	7.05
.025	8FM-125	7.90
.03	8FM-13	8.10

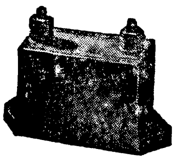
Catalog Nos.	L x W x T
8FM-45 thru 8FM-115	1 3/4 x 1 5/16 x 7/16
8FM-12 thru 8FM-13	1 3/4 x 1 5/16 x 3/4

MF	Cat. No.	List
9FM—2500 WVDC, 5000 V TEST		
.00005	9FM-45	1.90
.0001	9FM-31	1.90
.00025	9FM-325	2.15
.0005	9FM-35	2.55
.001	9FM-21	2.90
.002	9FM-22	4.25
.0025	9FM-225	4.60
.003	9FM-23	5.10
.004	9FM-24	5.65
.005	9FM-25	6.20
.006	9FM-26	6.35
.008	9FM-28	6.85
.01	9FM-11	7.30
.015	9FM-115	8.05

Catalog Nos.	L x W x T
9FM-45 thru 9FM-26	1 3/4 x 1 5/16 x 7/16
9FM-28 thru 9FM-115	1 3/4 x 1 5/16 x 3/4

SPRAGUE CAPACITORS

TYPES 1MC & 2MC



(Standard Capacity Tolerance ±5%)

TYPE 1MC

MF	VAC Peak	Cat. No.	List
.00005	3000	1MC-45	$12.60
.0001	3000	1MC-31	12.60
.00015	3000	1MC-315	12.60
.0002	3000	1MC-32	12.60
.00025	3000	1MC-325	12.60
.0003	3000	1MC-33	12.60
.0004	3000	1MC-34	12.60
.0005	3000	1MC-35	12.60
.0006	3000	1MC-36	12.60
.0007	3000	1MC-37	12.60
.0008	3000	1MC-38	12.60
.001	3000	1MC-21	12.60
.0015	3000	1MC-215	12.60
.002	3000	1MC-22	12.60
.003	2000	1MC-23	12.60
.004	2000	1MC-24	12.60
.005	2000	1MC-25	12.60
.006	2000	1MC-26	12.60
.007	2000	1MC-27	12.60
.008	1500	1MC-28	12.60
.01	1000	1MC-11	12.60
.015	1000	1MC-115	12.60
.02	1000	1MC-12	14.30
.03	500	1MC-13	14.30
.04	500	1MC-14	14.30
.05	250	1MC-15	14.30
.1	250	1MC-1	15.10

1MC Dimensions — L x W x H: 2 x 15/16 x 1 19/32

TYPE 2MC

MF	VAC Peak	Cat. No.	List
.00005	5000	2MC-45	17.30
.0001	5000	2MC-31	17.30
.00015	5000	2MC-315	17.30
.0002	5000	2MC-32	17.30
.00025	5000	2MC-325	17.30
.0003	5000	2MC-33	17.30
.0004	5000	2MC-34	17.30
.0005	5000	2MC-35	17.30
.0006	5000	2MC-36	17.30
.0007	5000	2MC-37	17.30
.0008	5000	2MC-38	17.30
.001	5000	2MC-21	17.30
.0015	5000	2MC-215	17.30
.002	5000	2MC-22	17.30
.003	3000	2MC-23	17.30
.004	3000	2MC-24	17.30
.005	3000	2MC-25	17.30
.006	3000	2MC-26	17.30
.007	3000	2MC-27	17.30
.008	2000	2MC-28	17.30
.01	2000	2MC-11	17.30
.015	2000	2MC-115	17.30
.02	2000	2MC-12	17.30
.03	1500	2MC-13	17.30
.04	1500	2MC-14	17.30
.05	1500	2MC-15	17.30
.06	1000	2MC-16	18.60
.07	1000	2MC-17	18.60
.08	500	2MC-18	19.20
.1	500	2MC-1	19.20

2MC Dimensions — L x W x H: 2¼ x 1¼ x 1 13/16

TYPES 1CC, 2CC, 3CC & 4CC

(Standard Capacity Tolerance ±5%)

TYPE 1CC

MF	Cat. No.	List
6000 VAC Peak		
.00005	1CC-45	$38.20
.000075	1CC-475	40.00
.0001	1CC-31	40.60
.00015	1CC-315	40.60
.0002	1CC-32	40.60
.00025	1CC-325	40.60
.0003	1CC-33	44.35
.0004	1CC-34	44.35
.0005	1CC-35	46.65
.0006	1CC-36	46.65
.0007	1CC-37	46.65
.0008	1CC-38	46.65
.001	1CC-21	46.65
.0015	1CC-215	48.90
.002	1CC-22	48.90
.003	1CC-23	50.60
.004	1CC-24	50.60
4000 VAC Peak		
.005	1CC-25	50.60
.006	1CC-26	51.45
.007	1CC-27	51.45
.008	1CC-28	51.45
.01	1CC-11	51.45
3000 VAC Peak		
.015	1CC-115	51.45
2000 VAC Peak		
.02	1CC-12	51.45
.025	1CC-125	51.80
1500 VAC Peak		
.03	1CC-13	55.75
.04	1CC-14	58.50
.05	1CC-15	60.75
.06	1CC-16	62.80
1000 VAC Peak		
.07	1CC-17	64.25
.08	1CC-18	65.75
.1	1CC-1	68.50

1CC Dimensions — Dia. x Height: 2 13/16 x 2½

TYPE 2CC

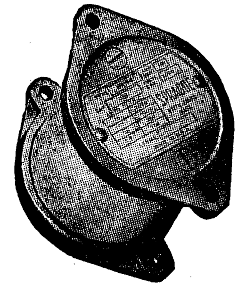
MF	Cat. No.	List
10,000 VAC Peak		
.00005	2CC-45	65.55
.000075	2CC-475	65.55
.0001	2CC-31	65.55
.00015	2CC-315	65.55
.0002	2CC-32	65.55
.0003	2CC-33	65.55
.0004	2CC-34	65.55
.0005	2CC-35	65.55
.0006	2CC-36	65.55
.0007	2CC-37	65.55
.0008	2CC-38	65.55
.001	2CC-21	65.55
.0015	2CC-215	65.55
.002	2CC-22	65.55
8000 VAC Peak		
.003	2CC-23	65.55
.004	2CC-24	65.55
6000 VAC Peak		
.005	2CC-25	65.55
5000 VAC Peak		
.006	2CC-26	69.15
.007	2CC-27	69.15
.008	2CC-28	69.15
.01	2CC-11	69.15
4000 VAC Peak		
.015	2CC-115	$ 69.15
3000 VAC Peak		
.02	2CC-12	69.15
.025	2CC-125	72.00
2000 VAC Peak		
.03	2CC-13	73.50
.04	2CC-14	77.80
.05	2CC-15	80.75
.06	2CC-16	83.00
1500 VAC Peak		
.07	2CC-17	85.00
.08	2CC-18	86.50
.1	2CC-1	90.00

2CC Dimensions — Dia. x Height: 3½ x 3

TYPE 3CC

MF	Cat. No.	List.
20,000 VAC Peak		
.00005	3CC-45	110.90
.000075	3CC-475	121.00
.0001	3CC-31	121.00
.00015	3CC-315	131.10
.0002	3CC-32	131.10
.0003	3CC-33	131.10
.0004	3CC-34	137.15
.0005	3CC-35	137.15
.0006	3CC-36	137.15
.0007	3CC-37	137.15
.0008	3CC-38	137.15
.001	3CC-21	141.15
15,000 VAC Peak		
.0015	3CC-215	143.20
.002	3CC-22	143.20
12,000 VAC Peak		
.003	3CC-23	151.25
.004	3CC-24	151.25
10,000 VAC Peak		
.005	3CC-25	151.25
.006	3CC-26	151.25
.007	3CC-27	151.25
.008	3CC-28	151.25
8000 VAC Peak		
.01	3CC-11	151.25
5000 VAC Peak		
.015	3CC-115	151.25
.02	3CC-12	151.25
3000 VAC Peak		
.025	3CC-125	151.25
.03	3CC-13	151.25
.04	3CC-14	151.25
.05	3CC-15	151.25
.06	3CC-16	158.50
2000 VAC Peak		
.07	3CC-17	164.00
.08	3CC-18	172.00
.1	3CC-1	182.00

3CC Dimensions — Dia. x Height: 5 x 4



(Standard Capacity Tolerance ± 5%)

TYPE 4CC

MF	Cat. No.	List
30,000 VAC Peak		
.0001	4CC-31	$210.30
.00015	4CC-315	210.30
.0002	4CC-32	221.16
.0003	4CC-33	221.16
.0004	4CC-34	221.16
.0005	4CC-35	221.16
.0006	4CC-36	221.16
.0007	4CC-37	221.16
.0008	4CC-38	221.16
.001	4CC-21	229.10
25,000 VAC Peak		
.0015	4CC-215	229.10
20,000 VAC Peak		
.002	4CC-22	229.10
.003	4CC-23	229.10
15,000 VAC Peak		
.004	4CC-24	234.35
.005	4CC-25	242.00
.006	4CC-26	252.25
.007	4CC-27	260.00
12,000 VAC Peak		
.008	4CC-28	260.00
.009	4CC-29	260.00
10,000 VAC Peak		
.01	4CC-11	272.44
8000 VAC Peak		
.015	4CC-115	272.44
6000 VAC Peak		
.02	4CC-12	272.44
.03	4CC-13	272.44
5000 VAC Peak		
.04	4CC-14	272.44
.05	4CC-15	272.44
.06	4CC-16	290.00
4000 VAC Peak		
.07	4CC-17	300.00
3000 VAC Peak		
.08	4CC-18	308.00
.1	4CC-1	326.00

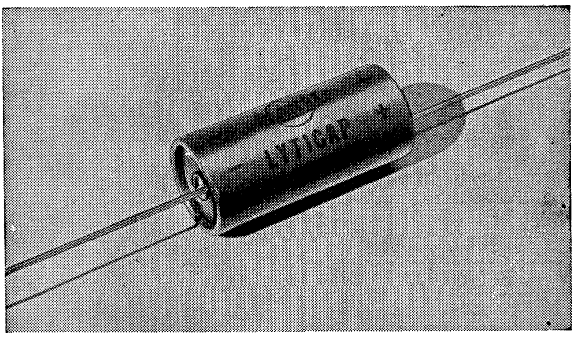
4CC Dimensions — Dia. x Height: 5 x 5¾

All prices subject to change without notice.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

PLANET MANUFACTURING CORPORATION

BLOOMFIELD, NEW JERSEY



Universal Replacement Type Electrolytics

"LYTICAP"
DRY ELECTROLYTICS

Hermetically sealed in aluminum tubes, covered with red kraftboard insulating jackets — tinned copper leads — dual capacitors have common negative and are provided with mounting strap.

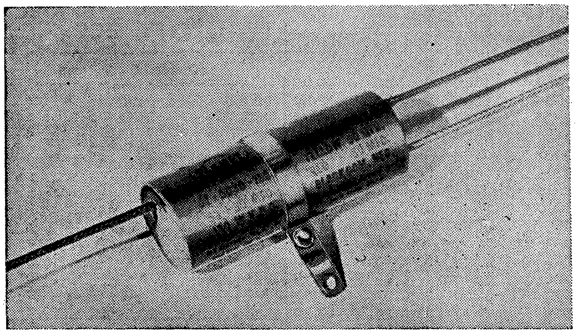
CAT. NO.	MFD.	SIZE*	LIST PRICE	DEALER NET
525 WVDC				
L– 8–525	8	7/8x2 1/16	$1.30	$ .78
L–16–525	16	1x2 3/8	2.00	1.20
450 WVDC				
L– 4–450	4	5/8x1 5/8	1.15	.69
L– 8–450	8	3/4x1 5/8	1.25	.75
L–10–450	10	3/4x1 5/8	1.30	.78
L–12–450	12	7/8x1 5/8	1.35	.81
L–16–450	16	7/8x2 1/16	1.40	.84
L–20–450	20	1x2 1/16	1.55	.93
L–30–450	30	1x2 3/8	1.70	1.02
L–40–450	40	1x2 11/16	1.80	1.08
L–80–450	80	1 3/8x2 11/16	2.80	1.68
L–2 x 8–450	8 + 8	7/8x2 1/16	1.70	1.02
L–2x20–450	20+20	1x2 11/16	2.50	1.50
L–2x30–450	30+30	1 1/4x2 11/16	3.00	1.80
L–2x40–450	40+40	1 3/8x2 11/16	3.40	2.04
350 WVDC				
L– 8–350	8	3/4x1 5/8	1.20	.72
L–20–350	20	7/8x1 5/8	1.45	.87
L–40–350	40	1x2 1/16	1.75	1.05
250 WVDC				
L–10–250	10	5/8x1 5/8	1.15	.69
L–24–250	24	3/4x1 5/8	1.35	.81
150 WVDC				
L– 5–150	5	5/8x1 1/8	1.00	.60
L– 8–150	8	1/2x1 5/8	1.05	.63
L– 10–150	10	1/2x1 5/8	1.05	.63
L– 16–150	16	5/8x1 5/8	1.15	.69
L– 20–150	20	5/8x1 5/8	1.20	.72
150 WVDC (Continued)				
L– 30–150	30	3/4x1 5/8	$1.30	$ .78
L– 40–150	40	3/4x1 5/8	1.35	.81
L– 50–150	50	3/4x2 1/16	1.40	.84
L– 80–150	80	7/8x2 1/16	1.60	.96
L–150–150	150	1x2 11/16	2.10	1.26
L–2x20–150	20+20	3/4x1 5/8	1.65	.99
L–2x30–150	30+30	7/8x1 5/8	1.80	1.08
L–4020–150	40+20	7/8x1 5/8	1.75	1.05
L–2x40–150	40+40	7/8x2 1/16	1.85	1.11
L–5030–150	50+30	7/8x2 1/16	1.95	1.17
L–2x50–150	50+50	1x2 1/16	2.10	1.26
L–8040–150	80+40	1x2 3/8	2.25	1.35
50 WVDC				
L– 5–50	5	5/8x1 1/8	1.00	.60
L– 10–50	10	1/2x1 5/8	1.00	.60
L– 25–50	25	1/2x1 5/8	1.05	.63
L– 50–50	50	5/8x1 5/8	1.20	.72
L–100–50	100	3/4x1 5/8	1.40	.84
25 WVDC				
L– 10–25	10	1/2x1 5/8	1.00	.60
L– 25–25	25	1/2x1 5/8	1.00	.60
L–100–25	100	5/8x1 5/8	1.35	.81
L–250–25	250	7/8x2 1/16	1.70	1.02
L–500–25	500	1x2 3/8	2.30	1.38
6 WVDC				
L–1000–6	1000	7/8x2 1/16	1.90	1.14
L–2000–6	2000	1x2 3/8	2.40	1.44
3 WVDC				
L–1000–3	1000	7/8x2 1/16	1.80	1.08
L–1500–3	1500	7/8x2 1/16	2.40	1.44

*—Dimensions are for metal tubes. Add 1/16" to diameter and 1/8" to length for over-all dimensions over cardboard insulating tube.

Universal Replacement Type Electrolytics

"CT"
DRY ELECTROLYTICS

Constructed in strong cardboard tubes, impregnated under pressure — long insulated leads of UL approved wire out both ends — mounting strap.



CAT NO.	MFD.	WVDC	SIZE	LIST PRICE	DEALER NET
DUAL UNITS — COMMON NEGATIVE					
CT–2x20–150	20+20	150	3/4x2 1/2	$1.65	$ .99
CT–2x30–150	30+30	150	7/8x2 1/2	1.80	1.08
CT–4020–150	40+20	150	7/8x2 1/2	1.75	1.05
CT–2x40–150	40+40	150	1x2 1/2	1.85	1.11
CT–5030–150	50+30	150	1x2 1/2	1.95	1.17
CT–2x50–150	50+50	150	1x3	2.10	1.26
DUAL UNITS — SEPARATE SECTIONS					
CT–2x20–150–SS	20+20	150	1x2 3/8	$2.05	$1.23
TRIPLE UNITS — COMMON NEGATIVE					
CT-403020–150	40+30+20	150	1x3	2.35	1.41
CT–302	30+20/ 20	150/25	1x2 1/2	2.10	1.26
CT–303	40+30/ 20	150/25	1x3	2.20	1.32
CT–304	50+50/ 20	150/25	1x3 1/4	2.50	1.50
CT–305	50+30/ 20	150/25	1x3	2.35	1.41

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

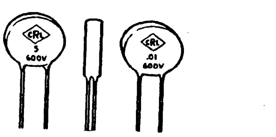
SAFEST FOR SERVICING
FIRST IN COMPONENTS RESEARCH

CRL **Centralab**

CERAMIC CAPACITORS

MOLDED DISC CERAMIC HI-KAPS®

For Bypass, Coupling and General Applications



Molded disc ceramics feature highest available breakdown to ground, highest lead strength, and resistance to mechanical damage, closest tolerance. "MD's" can be placed directly against a chassis, or adjacent to high voltage leads without danger of flashover or breakdown. Low inductance makes these units highly efficient in high frequency circuits. They are not recommended for use in resonant or tuning applications. Voltage Rating — Ultra conservative 600 V.D.C.W., 1,800 V.D.C. test. Maintain high capacity and stand up under +85° C. operation. Insulation — Molded Centrathene†. 2,500 V.D.C. breakdown to ground. Electrical properties constant to 3,000 megacycles. Insulation resistance of molding 300,000 megohms. Moisture absorption .005%. Power factor of molding .02%. Fungus resistant. Unaffected by ozone, salt water, any known acid, or solvent at room temperature. Will not become brittle at –55° C. Leads — No. 22 tinned copper 1½" long. All units one size — 11/16" diameter, 3/16" thick, maximum. Packaged — 5 units per polyethelene bag. 5 bags (25 units) per carton.

TYPE MD MOLDED DISC CERAMIC HI-KAPS®

Cap. mmf.	Per Cent Tolerance	CRL Cat. No.	Cap. mmf.	Per Cent Tolerance	CRL Cat. No.
5	±10%	—MD-050	390	±10%	—MD-391
10	±10%	—MD-100	400	±10%	—MD-401
12	±10%	—MD-120	470	±10%	—MD-471
15	±10%	—MD-150	500	±10%	—MD-501
18	±10%	—MD-180	560	±10%	—MD-561
20	±10%	—MD-200	600	±10%	—MD-601
22	±10%	—MD-220	680	±10%	—MD-681
25	±20%	—MD-250	750	±20%	—MD-751
27	±10%	—MD-270	820	±20%	—MD-821
33	±10%	—MD-330	1,000	±20%	—MD-102
39	±10%	—MD-390	1,200	±20%	—MD-122
47	±10%	—MD-470	1,500	±20%	—MD-152
50	±10%	—MD-500	1,800	±20%	—MD-182
56	±10%	—MD-560	2,000	±20%	—MD-202
68	±10%	—MD-680	2,200	±20%	—MD-222
75	±10%	—MD-750	2,500	±20%	—MD-252
82	±10%	—MD-820	2,700	±20%	—MD-272
100	±10%	—MD-101	3,000	±20%	—MD-302
120	±10%	—MD-121	3,300	±20%	—MD-332
150	±10%	—MD-151	4,000	GMV	—MD-402
180	±10%	—MD-181	4,700	GMV	—MD-472
200	±10%	—MD-201	5,000	GMV	—MD-502
220	±10%	—MD-221	5,600	GMV	—MD-562
250	±10%	—MD-251	6,800	GMV	—MD-682
270	±10%	—MD-271	7,500	GMV	—MD-752
300	±10%	—MD-301	10,000	GMV	—MD-103
330	±10%	—MD-331			

List Price..........$0.25 — $1.25 per envelope

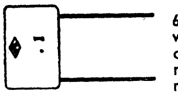
TYPE DD16 DISCS

1600 V.D.C.W., 3000 V.D.C. Test—Originally designed for use in electric shavers, these units are finding wide acceptance for use as buffers in auto radio sets as they are totally unaffected by heat, humidity or vibration.

Cap. mmf.	Cat. No.	Tolerance	Diam.	Thick	List Price
4,000	DD16-402*	GMV	7/8"	5/32"	$0.50
5,000	DD16-502*	GMV	7/8"	5/32"	.50
6,000	DD16-602*	GMV	7/8"	5/32"	.50
7,500	DD16-752*	GMV	7/8"	5/32"	.50
8,000	DD16-802*	GMV	7/8"	5/32"	.50
10,000	DD16-103*	GMV	7/8"	5/32"	.50
15,000	DD16-153*	—20%+80%	7/8"	1/4"	.60

*Packaged 2 per envelope—10 units per carton.

TYPE DF FLAT-PLATE HI-KAP® CAPACITORS

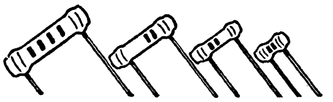


600 V.D.C.W., 1200 V.D.C. Test—Low mass weight, unusual thinness plus inherent Centralab ceramic capacitor stability and permanence make these units extremely popular for general replacement application.

Cap. mmf.	Cat. No.	Tolerance	Length	Height	Thick	List Price
5,000	DF-503**	GMV	1-9/32"	27/32"	3/32"	$0.70
1,000	DF-104**	GMV	1-9/32"	27/32"	1/8"	.80

**Packaged 1 per envelope—5 units per carton.

BC HI-KAP® TUBULARS



For bypass, coupling and general use in AM, FM, TV, Audio or other r.f. circuits. Tolerance ±20% through 2200 mmf.; over 2200 guaranteed minimum values (GMV), 85° C. plus operation. Tropicalized. 1200 volts D.C. test; 600 volts D.C. working. Packaged 5 per envelope.

D6 SERIES BC HI-KAP® TUBULARS

Capacity mmf.	CRL Cat. No.	Size	Capacity mmf.	CRL Cat. No.	Size
3	D6-030	A	300	D6-301	A
5	D6-050	A	330	D6-331	A
10	D6-100	A	390	D6-391	A
12	D6-120	A	400	D6-401	A
15	D6-150	A	470	D6-471	A
18	D6-180	A	500	D6-501	A
20	D6-200	A	560	D6-561	A
22	D6-220	A	600	D6-601	A
25	D6-250	A	680	D6-681	A
27	D6-270	A	750	D6-751	A
33	D6-330	A	820	D6-821	A
39	D6-390	A	1,000	D6-102	A
40	D6-400	A	1,200	D6-122	B
47	D6-470	A	1,500	D6-152	B
50	D6-500	A	1,800	D6-182	B
56	D6-560	A	2,000	D6-202	B
68	D6-680	A	2,200	D6-222	B
75	D6-750	A	2,500	D6-252	B
82	D6-820	A	2,700	D6-272	B
91	D6-910	A	3,000	D6-302	B
100	D6-101	A	3,300	D6-332	C
120	D6-121	A	4,000	D6-402	C
150	D6-151	A	4,700	D6-472	C
180	D6-181	A	5,000	D6-502	C
200	D6-201	A	5,600	D6-562	D
220	D6-221	A	6,800	D6-682	D
250	D6-251	A	7,500	D6-752	D
270	D6-271	A	10,000	D6-103	D

List Price..........$0.25 each — $1.25 per envelope

D16 SERIES

1600 V.D.C. Working—3000 V.D.C. Test. Packaged 2 per envelope, 10 per carton.

3	D16-030	B	68	D16-680	D
5	D16-050	B	75	D16-750	D
7.5	D16-7R5	B	100	D16-101	D
12	D16-120	B	120	D16-121	D
20	D16-200	B	150	D16-151	E
39	D16-390	C	180	D16-181	E
47	D16-470	C	200	D16-201	E
56	D16-560	C			

List Price..........$0.30 each — $0.60 per envelope

D30 SERIES

3000 V.D.C. Working—6000 V.D.C. Test. Packaged 2 per envelope.

150	D30-151	E	180	D30-181	E

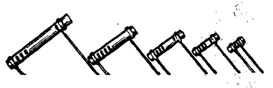
List Price..........$0.50 each — $1.00 per envelope

BODY DIMENSIONS

Size	Diameter	Length
A	.250"	.500"
B	.250"	.750"
C	.280"	.900"
D	.335"	1.210"
E	.290"	1.630"

CERAMIC CAPACITORS *(Cont'd)*

TC TEMPERATURE COMPENSATING TUBULARS



Designed especially to limit frequency drift in r.f. circuits where temperature variations are prevalent. These capacitors are constructed with a ceramic body which changes capacities as the temperature varies. Use Centralab TC Hi-Kaps when servicing superhet receivers—replace older types in oscillator and detector circuits in TV, AM and FM receivers. 1,200 volts D.C. test; 600 volts D.C. working.

TCZ TUBULAR HI-KAP®

All TC Hi-Kaps conform to JAN-C-20A specifications. NPO Units (JAN-CH-CJ-CK) which show zero capacitance change over temperature range —20° C. to +85° C.

Cap. mmf.	Tolerance	CRL Cat. No.	Size Type
.5	±.25 mmf.	TCZ-.5	CC20
.68	±.25 mmf.	TCZ-.68	CC20
1.0	±.25 mmf.	TCZ-1	CC20
1.5	±.25 mmf.	TCZ-1.5	CC20
2.2	±.25 mmf.	TCZ-2.2	CC20
3.3	±.25 mmf.	TCZ-3.3	CC20

List Price $0.75 each

Cap. mmf.	Tolerance	CRL Cat. No.	Size Type
4.7	±.5 mmf.	TCZ-4.7	CC20
6.8	±.5 mmf.	TCZ-6.8	CC20
10	±.5 mmf.	TCZ-10	CC20
12	±.5 mmf.	TCZ-12	CC20
15	±.5 mmf.	TCZ-15	CC20
18	±.5 mmf.	TCZ-18	CC20
20	±.5 mmf.	TCZ-20	CC20

List Price $0.60 each

Cap. mmf.	Tolerance	CRL Cat. No.	Size Type
22	±2½%	TCZ-22	CC20
24	±2½%	TCZ-24	CC20
25	±2½%	TCZ-25	CC25
27	±2½%	TCZ-27	CC25
30	±2½%	TCZ-30	CC25
33	±2½%	TCZ-33	CC25
36	±2½%	TCZ-36	CC25
39	±2½%	TCZ-39	CC25
43	±2½%	TCZ-43	CC25
47	±2½%	TCZ-47	CC25
50	±2½%	TCZ-50	CC25
51	±2½%	TCZ-51	CC25
56	±2½%	TCZ-56	CC25
62	±2½%	TCZ-62	CC32
68	±2½%	TCZ-68	CC32
75	±2½%	TCZ-75	CC32
82	±2½%	TCZ-82	CC32
91	±2½%	TCZ-91	CC32
100	±2½%	TCZ-100	CC32
110	±5%	TCZ-110	CC32
120	±5%	TCZ-120	CC32
130	±5%	TCZ-130	CC35
150	±5%	TCZ-150	CC35
160	±5%	TCZ-160	CC35
180	±5%	TCZ-180	CC35
200	±5%	TCZ-200	CC45
220	±5%	TCZ-220	CC45
240	±5%	TCZ-240	CC45
270	±5%	TCZ-270	CC45
300	±5%	TCZ-300	CC45

List Price $0.50 each

TCN TUBULAR HI-KAP®

N750 Units (JAN-UJ, UK) which show capacity change of minus 750 parts per million[2a] per each degree C rise in temperature.

Cap. mmf.	Tolerance	CRL Cat. No.	Size Type
3.3	—.5 mmf.	TCN-3.3	CC20
5	—.5 mmf.	TCN-5	CC20
10	—.5 mmf.	TCN-10	CC20
12	—.5 mmf.	TCN-12	CC20
15	—.5 mmf.	TCN-15	CC20
18	—.5 mmf.	TCN-18	CC20
20	—.5 mmf.	TCN-20	CC20

List Price $0.60 each

Cap. mmf.	Tolerance	CRL Cat. No.	Size Type
22	—2½%	TCN-22	CC20
24	—2½%	TCN-24	CC20
25	—2½%	TCN-25	CC20
27	—2½%	TCN-27	CC20
30	—2½%	TCN-30	CC20
33	—2½%	TCN-33	CC20
36	—2½%	TCN-36	CC20
39	—2½%	TCN-39	CC20
43	—2½%	TCN-43	CC20
47	—2½%	TCN-47	CC20
50	—2½%	TCN-50	CC20
51	—2½%	TCN-51	CC20
56	—2½%	TCN-56	CC20
62	—2½%	TCN-62	CC20
68	—2½%	TCN-68	CC25
75	—2½%	TCN-75	CC25
82	—2½%	TCN-82	CC25
91	—2½%	TCN-91	CC25
100	—2½%	TCN-100	CC25
110	—5%	TCN-110	CC25
120	—5%	TCN-120	CC25
130	—5%	TCN-130	CC25
150	—5%	TCN-150	CC25
160	—5%	TCN-160	CC25
180	—5%	TCN-180	CC32
200	—5%	TCN-200	CC32
220	—5%	TCN-220	CC32
240	—5%	TCN-240	CC32
270	—5%	TCN-270	CC32
300	—5%	TCN-300	CC32
330	—5%	TCN-330	CC32
360	—5%	TCN-360	CC32
390	—5%	TCN-390	CC35
430	—5%	TCN-430	CC35
470	—5%	TCN-470	CC35
510	—5%	TCN-510	CC35
560	—5%	TCN-560	CC45
620	—5%	TCN-620	CC45
680	—5%	TCN-680	CC45
750	—5%	TCN-750	CC45

List Price $0.50 each

BODY DIMENSIONS

Size	Diameter	Length
CC20	.200"	.400"
CC25	.200"	.690"
CC32	.225"	.860"
CC35	.285"	1.165"
CC45	.285"	1.625"

CERAMIC CAPACITOR KITS

METAL KIT NO. DK-200—200 assorted BC tubular and molded disc Hi-Kaps. 31 types most commonly used—600 V.D.C.W., plus one 4 drawer metal cabinet........List Price $50.00

PLASTI-PAK KIT DK-100—100 ceramic capacitors, 10 tubular and 10 discs each of the 5 most popular capacity values in handy plastic box........List Price $25.00

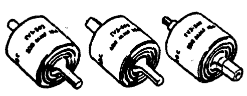
PLASTI-PAK KIT MDK-40—40 MD disc ceramic capacitors: 5 each of 8 most popular values in handy plastic box. List Price $10.00

PLASTI-PAK KIT MDK-25—25 molded ceramic disc Hi-Kaps: 5 each of 5 popular values in handy plastic box........List Price $6.25

PLASTI-PAK KIT DK-25—25 tubular Hi-Kaps: 5 each of 5 popular values in handy plactic box........List Price $6.25

PLASTI-PAK KIT DDK-12—12 disc Hi-Kaps, 1600 V.D.C.W.: 2 each of 6 most popular values used in buffers in handy plastic box........List Price $6.00

TV-HI-VO KAPS®



Factory guaranteed exact replacement. Accepted standard for filter and bypass applications in TV high voltage power supplies. Brass cadmium terminals available in combinations shown below. Capacity tolerance —20% +50%.

Voltage D.C.W.	Cap. mmf.	CRL Cat. No.	Voltage D.C. Test	Terminals	List Price
10,000	500	TV1-501	20,000	2 Rod	$1.75
10,000	500	TV2-501	20,000	1 Slot, 1 Tap	1.75
10,000	500	TV3-501	20,000	1 Tap, 1 Thread	1.75
20,000	500	TV1-502	40,000	2 Rod	1.85
20,000	500	TV2-502	40,000	1 Slot, 1 Tap	1.85
20,000	500	TV3-502	40,000	1 Tap, 1 Thread	1.85
20,000	500	TV4-502	40,000	2 Male Thread	1.85
20,000	500	TV5-502	40,000	2 Female Tap	1.85
20,000	500	TV7-502	40,000	1 8-32 thd., 1, 6-32 thd.	1.85
30,000	500	TV1-503	48,000	2 Rod	3.00
30,000	500	TV8-503	48,000	2 Spec. 8-32 thd.	3.00

TV6 MOLDED 6000 VOLT REPLACEMENT TUBULARS

Used in capacity deflection circuits in electrostatic TV sets, also in voltage divider circuits in electro dynamic TV sets. Molded casing assures adequate external insulation. Tolerance GMV. Body size ¾" diam. x 2¾".

Cap. Mfd.	Cat. No.	V.D.C. Working	List Price
.005	TV6-502	6000	$1.10

D60-200 TO D60-600

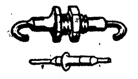
A smaller tubular type high voltage capacitor, especially suited for conversion of TV sets for larger size picture tubes. Reliable, lasting performance. All units rated with ±20% tolerance. 6000 V.D.C.W., 10,000 V.D.C. Test. Max. size, length 1.118", diam. .310".

Cap. mmf.	CRL Cat. No.	Cap. mmf.	CRL Cat. No.
20	D60-200	50	D60-500
30	D60-300	60	D60-600
40	D60-400		

List Price $0.50

CERAMIC FEED-THRU HI-KAPS®

TYPES FT AND MFT



Type FT Feed-Thru or bushing mounted capacitor has been specifically designed and widely used in high frequency circuits where, in addition to feed thru, a capacity ground to either chassis or shield is desired. Lead inductance is virtually eliminated. Type MFT MINIATURE Eyelet Feed-Thru is a condensed version of the above units required in many new ultra-high frequency applications where space is at a premium. VOLTAGES—Both styles—500 V.D.C.W., 1,000 V.D.C. Test.

Cap. mmf.	CRL Cat. No.	Tolerance
500	FT-500	±20%
1,000	FT-1,000	±20%
1,500	FT-1,500	—20% +50%
1,800	FT-1,800	—20% +50%
2,300	FT-2,300	—20% +50%

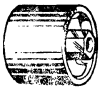
List Price $1.00 each

Cap. mmf.	CRL Cat. No.	Tolerance
50	MFT-50	±10%
100	MFT-100	±10%
500	MFT-500	±20%
1,000	MFT-1,000	GMV

List Price $0.50 each

CERAMIC CAPACITORS (Cont'd)

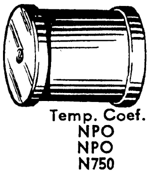
TRANSMITTING CAPACITORS



VOLTAGE—20,000 V.D.C.W., 30,000 V.D.C.T. R.F. LOAD—30 amps or greater for 30° C. rise at 30 mc. MOUNTING—Terminal ends tapped 10-32. DIMENSIONS—Overall length 2⅞", diam. 2". Tolerance ±10%

Cap. mmf.	CRL Cat. No.	Temp. Coef.
50	859S-50Z	NPO
100	859S-100Z	NPO
250	859S-250N	N750
500	859S-500N	N2200

List Price............$75.00 each



Type 851 ceramic capacitors are high voltage units, held to ±10% tolerance. Size 1-9/32" diam. x 1-15/32". End terminal plates are center tapped 10-32. 851-200N 7500 V.D.C.W. — All others 15000 V.D.C.W.

Cap. mmf.	CRL Cat. No.	Temp. Coef.
25	851-25Z	NPO
50	851-50Z	NPO
100	851-100N	N750
200	851-200N	N750

List Price............$10.00 each

SMALL HIGH VOLTAGE UNITS

TYPES 853-853A, 854-854A, 855-855A

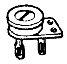
The three series which follow are exceedingly compact ceramic capacitors. 5000 V.D.C.W. Mounting is with axial screw type terminals tapped 2-56. Tolerance ±10%. Sizes: 853, $\frac{9}{16}$" diam. x ½". 854, $\frac{7}{16}$" diam. x $\frac{7}{16}$". 855, $\frac{5}{16}$" diam. x ⅜". Types 853, 854 and 855 also available with axial leads, 1½" long, in place of screw terminals. For lead types, use same Cat. Nos., omitting "A". Same price.

Cap. mmf.	Cat. No.	Temp. Coef.	Cap. mmf.	Cat. No.	Temp. Coef.
10	853A-10Z	NPO	3	855A-3Z	NPO
20	853A-20Z	NPO	5	855A-5Z	NPO
20	853A-20N	N750	10	855A-10N	N750
40	853A-40N	N750			

List Price............$3.00 each

TYPE 827 MINIATURE MOLDED CERAMIC TRIMMER

(Replaces Type 820)

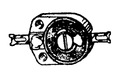


Base, high grade phenolic. Two .120" diam. mounting holes spaced $\frac{5}{16}$". Can be mounted on chassis through $\frac{9}{16}$" diam. hole. Initial Insulation Resistance—10,000 megohms minimum. Body size: 17/32" x ¾".

Cap. Range mmf.	CRL Cat. No.	Cap. Range mmf.	CRL Cat. No.
2.5 to 7	827A	5.0 to 30	827C
3.0 to 12	827B	8.0 to 50	827D

List Price............$1.00 each

TYPE 822 CERAMIC TRIMMER

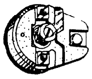


Medium weight Steatite body. Numbers ending in Z are of zero temperature coefficient (NPO); those ending in N are negative temperature coefficient. Both rotor and stator plates are of metallic silver fired to ceramic rotor and stator. Mounting holes are clearance for No. 4 machine screws. Body size, approx. 27/32" x 21/32".

Cap. Range mmf.	CRL Cat. No.	Cap. Range mmf.	CRL Cat. No.
1.5 to 3	822-DZ	2.0 to 6.0	822-DN
1.5 to 7	822-EZ	4.5 to 25	822-CN
2.0 to 7.5	822-CZ	7.0 to 45	822-BN
2.5 to 13.0	822-BZ	5.0 to 50	822-AN
4.5 to 25	822-AZ		

List Price............$1.50 each

TYPE 823 CERAMIC TRIMMER

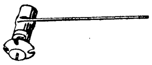


A trimmer of highest quality. Medium heavy Steatite base. Numbers ending in Z are of zero temperature coefficient (NPO); those ending in N are of negative temperature coefficient. Both rotor and stator plates are of metallic silver fired to ceramic rotor and stator. Mounting studs are set in the base, tapped $\frac{3}{16}$" deep for 4-40 machine screws. Body size, approx. 1¼" x 1$\frac{5}{16}$".

Cap. Range mmf.	CRL Cat. No.	Cap. Range mmf.	CRL Cat. No
5 to 12	823-EZ	8 to 25	823-EN
6 to 25	823-DZ	8 to 50	823-DN
10 to 50	823-BZ	10 to 100	823-BN
12 to 60	823-AZ	20 to 125	823-AN

List Price............$2.50 each

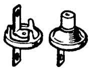
TYPE 829 TUBULAR CERAMIC TRIMMER



Special tiny, tubular trimmer, widely used in TV and FM applications. Ceramic body, .215' diameter.

Capacity Range mmf.	Body Length(B)	Cat. No.	List Price	Capacity Range mmf.	Body Length(B)	Cat. No.	List Price
.5 to 3	½"	829-3	$0.50	1 to 7.5	¾"	829-7	$0.60
1 to 4	½"	829-4	.50	1.5 to 10	¾"	829-10	.60
1 to 6	⅝"	829-6	.50				

TYPE ZA & ZB—"ZIPPERS"† BUTTON-STYLE CERAMICS



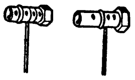
This solder-sealed "Button-type" ceramic capacitor is an accurate, dependable, long-life replacement for old style mica "Buttons" . . . Zippers. Packaged—Singly—Five envelopes per carton. 500 V.D.C.W., 1,000 V.D.C. Flash Test.

TYPE ZA TAPPED GROUND TERMINAL			TYPE ZB RIM TYPE FEED-THRU		
Cap. mmf.	CRL Cat. No.	Tolerance	Cap. mmf.	CRL Cat. No.	Tolerance
10	ZA-100	±10%	10	ZB-100	±10%
15	ZA-150	±10%	15	ZB-150	±10%
25	ZA-250	±10%	25	ZB-250	±10%
33	ZA-330	±10%	33	ZB-330	±10%
50	ZA-500	±10%	50	ZB-500	±10%
75	ZA-750	±20%	75	ZB-750	±20%
100	ZA-101	±20%	100	ZB-101	±20%
150	ZA-151	±20%	150	ZB-151	±20%
200	ZA-201	±20%	200	ZB-201	±20%
250	ZA-251	±20%	250	ZB-251	±20%
300	ZA-301	±20%	300	ZB-301	±20%
400	ZA-401	±20%	400	ZB-401	±20%
500	ZA-501	±20%	500	ZB-501	±20%
600	ZA-601	±20%	600	ZB-601	±20%
750	ZA-751	±20%	750	ZB-751	±20%
1,000	ZA-102	GMV	1,000	ZB-102	GMV

List Price............$1.25 each

†Trade Mark

TYPE S1 & S2 TUBULAR STANDOFF CAPACITORS



Designed for bypassing RF to ground in low power transmitter-exciter units, receivers and similar HF, UHF, and VHF circuits. Size—Type S1—⅝" maximum length. S2—⅞" maximum length. 500 V.D.C.W., 1,000 V.D.C. Flash Test.

TYPE S1 CERAMIC STANDOFF

Cap. mmf.	CRL Cat. No.	Tolerance
50	S1-500	±10%
100	S1-101	±10%
250	S1-251	±10%
500	S1-501	±10%
1,000	S1-102	±20%
1,500	S1-152	±20%
2,400	S1-242	±20%
2,500	S1-252	±20%

List Price............$0.60 each

TYPE S2 CERAMIC STANDOFF

Cap. mmf.	CRL Cat. No.	Tolerance
5,000	S2-502	±20%
7,500	S2-752	GMV
10,000	S2-103	—20% +80%

List Price............$1.00 each

PRINTED ELECTRONIC CIRCUITS (P.E.C.)®

The term "printed circuit" has come to be a catch-phrase to describe anything from a piece of tinfoil cemented on a plastic plate to a carbon-backed piece of adhesive tape. As the pioneer and leader in the field, we designate the true Printed ELECTRONIC Circuit as a complete circuit element . . . wiring, capacitors, and resistors. Centralab Printed ELECTRONIC Circuits offer a combination of resistors and capacitors of ultra-compactness and permanence. No other modern development in electronic circuitry offers so many advantages in low powered applications such as small size, low assembly cost, and utmost reliability. 25,000,000 now in use.

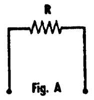


Fig. A

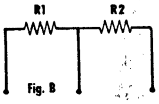


Fig. B

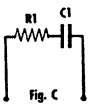


Fig. C

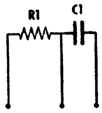


Fig. D

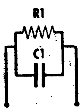


Fig. E

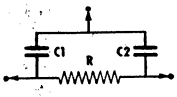


Fig. F

RESISTOR AND RESIST. — CAP. UNITS

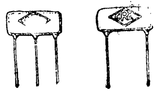


Plate size 17/32" x 7/32" x 7/64" thick max.
Capacitors 150 V.D.C.W. Resistors, 1/5 Watt.

Cat. No.	Dwg.	Consists of	List Price
PC-2	A	2 meg. Resis.	$0.35
PC-21	B	½ meg.; 110,000 ohms	.50
PC-30	D	R=240,000 ohms. C=1000 mmf.	.50
PC-33	D	R=1 meg. C=1000 mmf.	.50
PC-36	E	R=100,000 ohms. C=100 mmf.	.50

FILPEC® BALANCED DIODE LOAD FILTER

Plate size, 17/32" x 9/32" x 7/64" thick max. Capacitors, 100 V.D.C.W. Resistors, 1/5 Watt. Dwg. F.

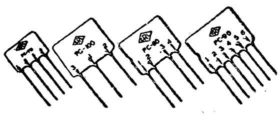
Cat. No.	Consists of		
PC-50	C1=100 mmf.	C2=100 mmf.	R=47,000 ohms.
PC-51	C1=150 mmf.	C2=150 mmf.	R=47,000 ohms.
PC-52	C1= 50 mmf.	C2= 50 mmf.	R=47,000 ohms.

List Price............$0.60 each

PRINTED ELECTRONIC CIRCUITS (P.E.C.) *(Cont'd)*

P.E.C. INTERSTAGE COUPLING PLATES AND VERTICAL INTEGRATORS

The couplate combines three capacitors and two resistors and is designed to replace the normal components of the audio circuit.



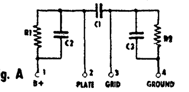


Fig. A

MIDGET NO. 2 TRIODE COUPLATES®

Plate size, 13/16" x 9/16" x 5/32" thick. Capacitors rated at 450 V.D.C.W. Resistors 1/5 Watt.

CAT. NO. PC-70 MIDGET NO. 2 COUPLATE

Consisting of
C1=.005 mfd. and C3=250 mmf.
R1=500 K ohms. R2=500 K ohms.
List Price $0.70

CAT. NO. PC-71 MIDGET NO. 2 COUPLATE

Consisting of
C1=.005 mfd. C2 and C3=250 mmf. R1=K ohms.
List Price $0.70

STANDARD TRIODE COUPLATES®

Plate size, 1-3/32" x 13/16" x 11/64" thick, max. Capacitors, 450 V.D.C.W. Resistors, 1/5 Watt.

CAT. NO. PC-80 STANDARD COUPLATE

Consisting of
C1=.01 mfd. C2 and C3=250 mmf.
R1=500 K ohms. R2=500 K ohms.
List Price $0.75

CAT. NO. PC-81 STANDARD COUPLATE

Consisting of
C1=.01 mfd. C2 and C3=250 mmf.
R1=250 K ohms. R2=500 K ohms.
List Price $0.75

CAT. NO. PC-84 STANDARD COUPLATE

Consisting of
C1—.01 mfd. R1, R2=500 K ohms.
C2 and C3=500 mmf.
List Price $0.75

PENTODE COUPLATES®

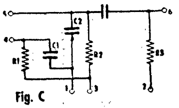


Fig. C

Plate size, 1-3/32" x 13/16" x 1/8" thick max. Capacitors, 450 V.D.C.W. Resistors, 1/5 Watt.

Cat. No. PC-90 Pentode Couplate

Consisting of
C1=.005 mfd. C2=50 mmf.
C3=2000 mmf. R1=4.7 megohms.
R2=1 megohm. R3=2.2 megohms.
List Price $0.90

Cat. No. PC-91 Pentode Couplate

Consisting of
C1=.005 mfd. C2=100 mmf.
C3=.005 mfd. R1=4.7 megohms.
R2=1 megohm. R3=2.2 megohms.
List Price $0.90

CAT. NO. PC-92 PENTODE COUPLATE

Consisting of
C1=.005 mfd. C2=100 mmf. C3=2000 mmf. R1=4.7 megohms.
R2=1 megohm. R3=2.2 megohms.
List Price $1.00

TV VERTICAL INTEGRATOR PLATES

Due to great saving in assembly costs, this Centralab printed circuit is being used widely in television vertical integrator networks. Two forms are available. Either one has only three external leads. Size, PC-100, 1-3/32" x 13/16" x 1/8" thick, max. PC-101, 1-5/16" x 7/8" x 1/8" thick, max. Capacitors, 450 V.D.C.W. Resistor, 1/5 Watt.

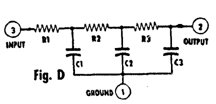


Fig. D

CAT. NO. PC-100 VERTICAL INTEGRATOR PLATE

Consisting of
C1=.002 mfd. C2=.005 mfd.
C3=.005 mfd. R1=2200 ohms.
R2=8200 ohms. R3=8200 ohms.
List Price $1.10

CAT. NO. PC-101 VERTICAL INTEGRATOR PLATE

Consisting of
C1=.01 mfd. C2=.002 mfd.
C3=.005 mfd. C4=.005 mfd.
R1=22000 ohms. R2=8200 ohms.
R3=8200 ohms. R4=22000 ohms.
List Price $1.25

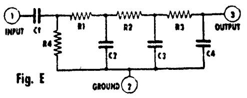
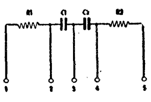


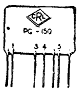
Fig. E

FILPLATES®

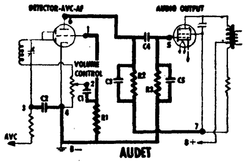


Filter plates for bypass and filter application in TV I.F. Circuits, FM and AM receivers. Size—1-3/32" x 13/16" x 1/8".

Cat. No.	Consisting of	List Price
PC-110	C1, C2=.005 mfd. R1=1,000 ohms. R2=820 ohms.	$0.75
PC-111	C1, C2=.005 mfd. R1=220 ohms. R2=1,000 ohms.	$0.75



AUDET® P.E.C. OUTPUT STAGE FOR A.C.-D.C. RECEIVERS



Audet is a P.E.C. audio-detector plate, with seven leads, and furnishes the values of all components which generally comprise the output stage of 5 and 6 tube AC-DC radio receivers. Where there is trouble with old style components in this part of the set, it is easy to replace the entire audio-detector stage with Audet. Capacitors, 450 V.D.C.W. Resistors, 1/5 Watt.

Cat. No. PC-150 Audet

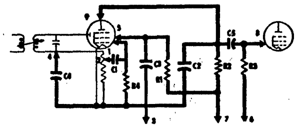
1-3/32" x 13/16" x 11/64" thick.
Consisting of List Price $1.00
C1=.002 mfd. C2=220 mmf.
C3 and C5=250 mmf.
C4=.005 mfd. R1=6.8 megohms.
R2=470,000 ohms.
R3=470,000 ohms.

Cat. No. PC-151 Audet

5/16" x 7/8" x 11/64" thick
(For use where greater low frequency response is required)
Consisting of List Price $1.15
C1=.005 mfd. C2=220 mmf.
C3 and C5=250 mmf.
C4=.005 mfd. R1=6.8 megohms.
R2 and R3=470,000 ohms.

PENDET®

PENTODE DETECTOR COUPLATE FOR PORTABLE RECEIVERS



Nine leads . . . five capacitors, four resistors . . . nine components commonly used to couple the combination detector and first audio pentode tube to the audio output tube . . . circuitry widely used in three-way (A.C.-D.C.-BAT.) portables. Similar to AUDET in many ways, PENDET too, is a time, money and space saver for servicing the usually ultra-compact portables. Complete, easy to follow instructions with each unit. Packaged singly, five per carton. Size 1-5/16" x 7/8" x 11/64" thick.

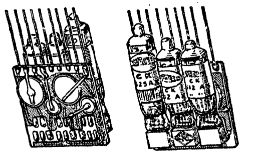
Cat. No.	Consisting of	List Price
PC-160	R1=4.7 megohms. R2=1.0 megohms. R3=3.3 megohms. R4=10 megohms. C1=.002 mfd. C2=150 mmf. C3=.01 mfd. C4=150 mmf. C5=.005 mfd.	$1.25

SPECIAL PLATES

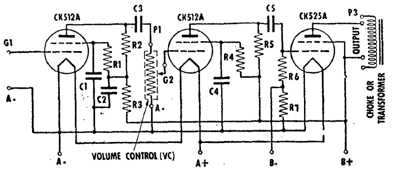
The following four special plates deviate slightly from "Standard" plates and have been used in large quantities. The units are "referenced" by "MFG. NO." under which they are found in sets.

Cat. No.	Replaces	Mfg. No.	List Price	Cat. No.	Replaces	Mfg. No.	List Price
PC-176	G.E.	K82J458	$0.75	PC-178	Admiral	63B6-3	$0.75
PC-177	Admiral	63B6-3	1.00	PC-179	Stewart-Warner	452268A-1	.90

MODEL II AMPEC® COMPLETE THREE STAGE AMPLIFIER



There is no other electronic device like Centralab's Ampec. In this compact unit, permanently bonded to a master plate, are all the components of an audio amplifier-tube socket, capacitators, resistors, wiring, a three tube, three stage speech amplifier. Similar Centralab units are used widely in hearing aids, for the most trouble-free performance ever attained. Ampec has other interesting applications such as mike pre-amplifier, miniature or portable radio receiver (pocket type), amplification for walkie-talkie or portable amateur field equipment. Each unit packaged in a hinged cover plastic box, with complete instructions for use.



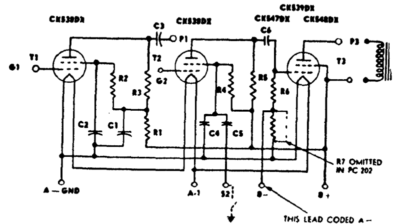
PRINTED ELECTRONIC CIRCUITS (P.E.C.) *(Cont'd)*

MODEL II AMPEC® COMPLETE THREE STAGE AMPLIFIER *(Cont'd)*

Size, 1¼" x 1⅛" x 1-1/32" over tube sockets. Capacitors, 100 V.D.C.W. Resistors, 1/5 Watt. Gain frequency performance—A voltage 1,2; input voltage, 1 millivolt; B voltage, 22. 50,000 ohm plate output load. At 1000 cycles per second the amplification factor is 4000. Volume control (VC in dwg.) not furnished. The ideal control is Centralab Cat. No. B16-128 or switch type Cat. No. B16-228.

Cat. No.	Type	Consisting of	List Price
PC-200	AMPEC	Complete Three Stage Speech Amplifier, including three built-in sockets, less tubes	$15.00
PC-201	AMPEC	Same as PC-200, but furnished complete with tubes, two CK512AX and one CK525AX	[illegible]

MODEL III AMPEC®



MODEL III

The ultimate development in circuit miniaturization. A complete three-stage amplifier smaller than a postage stamp. Size—1-3/32" x 15/16" x 11/32" thick over sockets. Types—PC-202, 203 zero bias output stage (without R7). PC-204, 205 grid bias output stage (with R7).

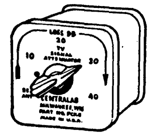
Cat. No.	Description	List Price
PC-202	Zero bias output stage with tube sockets, less tubes	$17.50
PC-203	Same as PC-202 complete with 2 CK538DX, 1 CK547DX Raytheon tubes	32.00
PC-204	Grid bias output stage complete with tube sockets, less tubes	17.50
PC-205	Same as PC-204 complete with 2 CK538DX, 1 CK548DX Raytheon tubes	33.50

RAYTHEON TUBES

(Listed Separately for Convenience)

TUBE NUMBER	USED IN	LIST PRICE
CK512AX	PC-201	$3.40
CK525AX	PC-201	3.40
CK538DX	PC-203, PC-205	4.60
CK547DX	PC-203	5.70
CK548DX	PC-205	5.70

TV ATTENUATOR SWITCH CAT. No. PCH-4
PRINTED ELECTRONIC CIRCUIT H PADS



The Centralab PCH-4 Television Attenuator Switch is designed as a service tool to determine the amount of attenuation required to secure best TV reception. It is also valuable for permanent installation in receivers. The switch incorporates Centralab's exclusive Printed Circuit TV H-Pads.

ADVANTAGES OF SWITCH

The switching arrangement makes it possible to attenuate each station as much or as little as necessary depending on daily conditions such as weather or existing interference, and allows for proper attenuation to balance two or more stations. Switching also eliminates the "hit-or-miss" method of installing H-Pads. Switch is installed in series with 300 ohm—twin-lead. PCH-4. List Price $7.50

SEPARATE H-PADS

(Listed for Convenience)

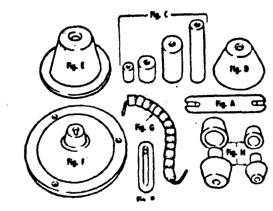
Cat. No.	Attenuation Rating	Cat. No.	Attenuation Rating
PCH-10	10 db.	PCH-30	30 db.
PCH-20	20 db.	PCH-40	40 db.

List Price..........$0.80 each

PCH-100 SET OF FOUR H-PADS

One each of the above, in plastic box..........List Price $3.00

STEATITE



Centralab has been producing fine ceramics since 1928 . . . primarily for its own use in fixed resistors, ceramic capacitors, switches, and more recently, printed electronic circuits. Often called upon by other manufacturers to produce many "standard" and custom designs, some very intricate. Centralab is the only ceramic manufacturer capable of producing many of these in quantity. All items listed are Grade L-5 Steatite, approved without limitation for Army and Navy use. Characteristics: Uniform, white appearance, high dielectric strength, exceedingly low loss at high frequencies, and strong mechanically. Impervious to moisture and common acids, will not warp, withstands high temperatures; harder than hardest quartz.

SPREADERS—STRAIN INSULATORS

Deluxe Grade—Fig. A. Rounded and grooved. Packaged singly.

Cat. No.	O.A. Length	Diam.	Line Spacing	List Price
X-1	2¾"	½"	2"	$0.70
X-2	4"	¾"	3"	1.00
X-3	6"	¾"	5"	1.25

Standard Grade—Not illustrated. Square and rectangular bars. Packaged singly.

Cat. No.	O.A. Length	Size	Line Spacing	List Price
X-4	3"	½" x ⅜"	2"	$0.15
X-5	5"	½" x ½"	4"	.25
X-6	7"	½" x ½"	6"	.45

Deluxe Aircraft Type Insulator—Fig. B. Fully glazed. Packaged singly.

Cat. No.	O.A. Length	Diam.	Line Spacing	List Price
X-7	1½"	17/32"	¾"	$0.65

STANDOFF OR PILLAR INSULATORS

See Figure C. Circumference glazed, tapped for screw sizes shown. "X" numbers below are catalog numbers.

¼" DIAM.*

Length	#6-32 Thd.	List Price
¼"	X-63	$0.50 pkg.
⅜"	X-64	.50 pkg.
½"	X-8	.55 pkg.
¾"	X-9	.55 pkg.
1"	X-10	.60 pkg.
1¼"	X-11	.70 pkg.

½" DIAM.**

Length	#6-32 Thd.	List Price
½"	X-12	$0.12
¾"	X-13	.15
1"	X-14	.16
1¼"	X-15	.17
1½"	X-16	.17
2"	X-17	.18
2½"	X-18	.19
3"	X-19	.20

1" DIAM.**

Length	¼"-20 Thd.	List Price
1"	X-28	$0.18
1¼"	X-29	.19
1½"	X-30	.20
2"	X-31	.21

⅜" DIAM.**

Length	#6-32 Thd.	List Price
⅜"	X-65	$0.12
½"	X-48	.12
⅝"	X-50	.12
¾"	X-52	.12
1"	X-54	.15
1¼"	X-56	.16
1½"	X-58	.17
2"	X-60	.17
2¼"	X-62	.18

¾" DIAM.**

Length	#10-32 Thd.	List Price
¾"	X-20	$0.16
1"	X-21	.17
1¼"	X-22	.18
1½"	X-23	.18
2"	X-24	.19
2½"	X-25	.20
3"	X-26	.22
4"	X-27	.25

1" DIAM.**

Length	¼"-20 Thd.	List Price
2½"	X-32	$0.23
3"	X-33	.28
4"	X-34	.33
5"	X-35	.37

*5 per carton. **1 per carton.

FEED-THROUGH INSULATORS

Glazed Surface—No hardware included. Packaged Singly.

Cat. No.	Fig.	Height	Base Diam.	Max. Screw Size	List Price
X-36	D	⅞"	1¼"	10-32	$0.25
X-37	D	1⅛"	1¾"	¼"-20	.30
X-38	E	1⅝"	2½"	⅜"-16	1.50
X-39	F	1"	3⅛"	8-32	1.50

FISH SPINE BEADS

See Fig. G. Four Beads will cover 1", or package of 100 covers 25" of buss wire. 5/16" O.D., ⅛" I.D. Packaged 100 per envelope.

Cat. No. X-40 Carton of 100 Beads..........List Price $ 1.00
Cat. No. X-40G Giant 2 lb. pack (approx. 1200)..........List Price 10.00

THROUGH PANEL BUSHINGS

See Fig. H. Matched pairs of male and female bushings for feeding through chassis, panels, shields, racks or cases. No hardware included. Packaged one matched pair per carton.

Cat. No. Pair	Top Height	Max. Diam.	Panel Hole	Panel Thickness	Max. Screw Size	List Price
X-41	⅛"	½"	5/16"	to ⅛"	6-32	$0.30
X-42	7/32"	⅝"	7/16"	to ⅛"	8-32	.40
X-43	⅜"	½"	¼"	to 3/16"	6-32	.35
X-44	⅜"	⅝"	⅜"	to ⅜"	8-32	.40
X-45	¾"	1⅛"	¾"	to ⅜"	10-32	1.00
X-46	1⅝"	1¼"	½"	to 2"	10-32	1.70

FOR MORE COMPLETE INFORMATION ON CRL COMPONENTS SEE YOUR DISTRIBUTOR

PYRAMID

METALLIZED PAPER CAPACITORS

ENGINEERING DATA

GENERAL DATA

The major constructional difference between conventional paper capacitors and metallized paper capacitors lies in the replacement of the separate layers of metallic foil with an extremely thin metallic film, deposited directly on a lacquered surface of the paper dielectric by a high vacuum vaporizing process. This lacquer coating considerably improves the dielectric strength and insulation resistance of the paper.

The metallic films most commonly used are zinc and aluminum. Zinc has a lower melting point and is much easier to apply to the dielectric. It is not, however, as stable as aluminum and yields a slightly higher power factor. Therefore, aluminum coated paper is preferred and used for most metallized paper capacitors produced in this country.

SELF-HEALING CHARACTERISTIC

The unique characteristic of self-healing is derived from the thinness of the deposited film, which is in the order of three millionths of an inch. This film oxidizes, melts or vaporizes away from any conducting particle or other flaw within the dielectric layer when voltage is applied. Thus, the weak particle is isolated from the rest of the winding. This characteristic permits the use of less insulation between the electrodes than is commonly used in conventional capacitors. The combination of a very thin aluminum deposit and less insulation accounts for the marked reduction in volume and weight. This is dramatically shown in the following table:

Rated Voltage DC	Approximate Volume Reduction in % (as against conventional capacitors)
200	75
400	50
600	30

VOLTAGE DATA

Due to the self-healing characteristic, metallized paper capacitors will rarely fail, assuring long life when operated within proper voltage and temperature limits. As a matter of fact, the insulation resistance generally improves with time. Since the insulation is normally highly stressed, the application of over-voltages or excessive temperatures will increase the frequency of sparking. If the over-voltages are of an intermittent, momentary nature, shorts that may develop will clear themselves and the capacitor will continue to operate normally. Should over-voltages be prolonged, continuous sparking will occur, causing carbonization of the impregnant and of the dielectric. Thus, the insulation resistance is rapidly reduced making the capacitor unsuitable. It is for these reasons that accelerated life tests are not considered a reliable measure of the quality of metallized paper capacitors and are therefore not recommended.

The test voltage of metallized paper capacitors is normally not in excess of 150% of the rated working voltage at 25°C. applied for a period not exceeding 5 seconds.

The term "test voltage" as applied to metallized paper capacitors, is taken to mean the value at which the number of sparks is relatively small indicating that the faults have been cleared. The test voltage is applied through a resistance that limits the charging current to 50 milliamperes. The capacitor is then discharged through the same resistance.

DERATING

To prevent the reduction in life expectancy at high temperatures, metallized paper capacitors are derated when operated at ambient temperatures exceeding 55°C. as follows:

Reduction in Operating Voltage from Rated Voltage, in %

Temperature Centigrade	Mineral Wax Impregnant Rating up to 200 VDC	Mineral Oil Impregnant Rating 400 and 600 VDC
55°	0	0
60°	5	5
65°	10	10
70°	15	15
75°	20	20
80°	25	25
85°	35	30
90°	50	40
95°	65	50

INSULATION RESISTANCE

The average value of the insulation resistance of metallized paper capacitors is lower than that of conventional paper capacitors, particularly those with a single paper dielectric where a larger number of conducting paths are present. This is due to the higher voltage stresses employed and to a certain amount of deterioration of the impregnant around the

(continued on next page)

ENGINEERING DATA — Continued

conducting paths that occurs during self-healing, or clearing of the fault. Because the number of faults cleared varies with the number of conducting paths, the variation in insulation resistance is greater than in conventional capacitors. For most applications, the minimum insulation resistance limits exceed actual circuit requirements.

The insulation resistance measured at 25°C., and for an electrification time of two minutes maximum, equals or exceeds the megohm values listed below. The applied voltage will range from 100 VDC to not more than rated working voltage.

Working Voltage	Capacitance	Minimum Megohms/Mfd.	Capacitor Need Not Exceed Megohm Value of
150 VDC	all capacities	250	750
200 VDC	up to 2. mfd.	500	1500
400 VDC	all capacities	1000	3000
600 VDC	all capacities	1000	3000

LIFE TESTS

A resistance of one ohm per volt to 200 ohms per volt of applied voltage should be connected in series with each capacitor during life test.

Normal life tests are conducted for 1000 hours at DERATED working voltage at 85°C. for hermetically sealed units and 65°C. for non-hermetically sealed units.

As noted previously, accelerated life tests are not recommended. If conducted, however, the applied voltage should be 125% of the DERATED working voltage for 250 hours at 85°C. for hermetically sealed units, and at 65°C. for non-hermetically sealed units.

On completion of tests, the capacity change will not exceed 5% and the power factor will not exceed 1½%.

APPLICATIONS

At radio frequencies, the RF impedance of metallized capacitors is of about the same order of magnitude as for conventional capacitors. They are ideal for use as by-pass capacitors and for use in interference filters. Because of their light-weight and small size, they are well suited for use in portable radios, instruments, aircraft noise suppression systems and other communications equipment.

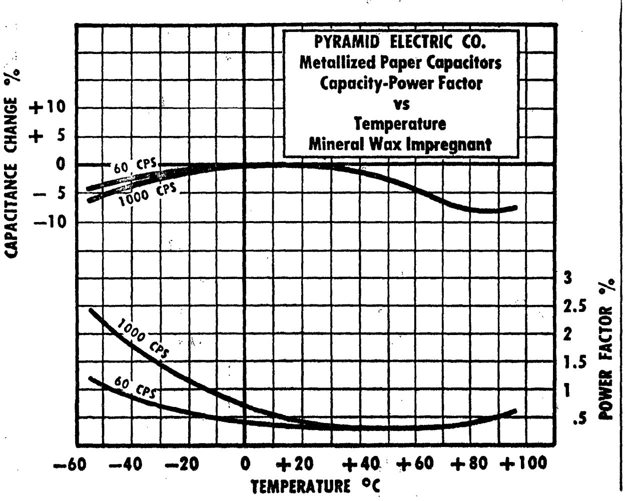
For use in AC circuits, it is important that the capacitor selected have a DC rating in excess of the peak voltage present.

Due to the generally lower insulation resistance they are not recommended for high impedance circuits, coupling circuits, RC timing circuits, RC oscillators, or grid-plate blocking capacitors. The thinness of the aluminum film limits the current carrying capacity of metallized paper capacitors. Therefore, they are not suitable for photoflash circuits or similar heavy current pulse applications.

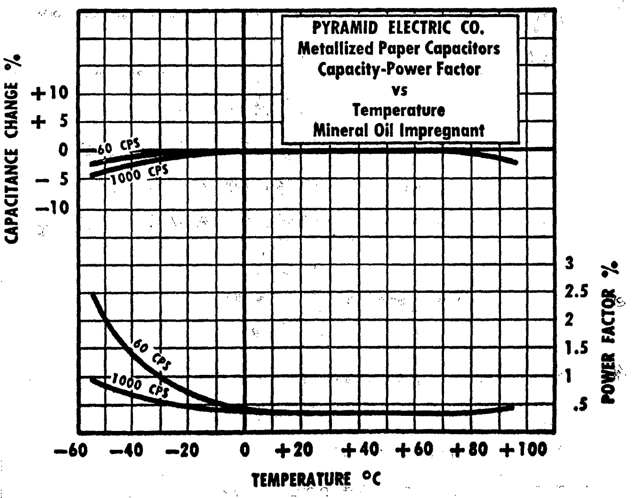
POWER FACTOR: The power factor limit of metallized paper capacitors is 1% maximum when measured at or referred to 1000 cycles per second at 25° C.

CAPACITY AND POWER FACTOR CHANGES WITH TEMPERATURE

MINERAL WAX IMPREGNANT

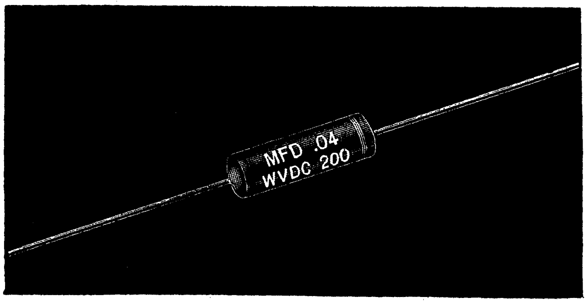


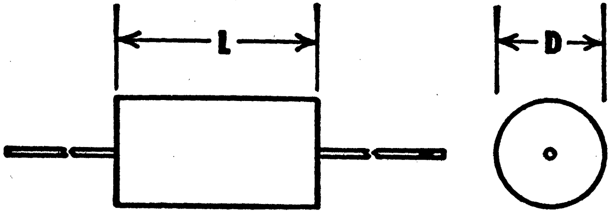
MINERAL OIL IMPREGNANT



PYRAMID METALLIZED PAPER CAPACITORS

SERIES MT
METALLIZED PAPER CAPACITORS IN IMPREGNATED KRAFT TUBES





1. CONSTRUCTION—Extended foil section assembled in phenolic impregnated kraft tube with plastic end seals. Vacuum impregnated in microcrystalline mineral wax. Overall coating of highly moisture resistant mineral wax.

2. Leads 1½" minimum length in AWG sizes as follows:

Case Diameter	Wire Size
¼"	No. 24 AWG (.020 dia.)
5/16" to 13/32"	No. 22 AWG (.025 dia.)
7/16" to 11/16"	No. 20 AWG (.032 dia.)
3/4" and over	No. 18 AWG (.040 dia.)

3. Standard tolerance +30% –20%.

4. Operating temperature range –40°C. to +70°C.

   For use at ambient temperatures exceeding 55°C., see derating chart on page P-94.

TYPE MT METALLIZED PAPER CAPACITORS

Capacity MFD.	Size, in Inches D	L	List Price
200 WVDC			
.01	1/4	25/32	$ .65
.02	1/4	25/32	.65
.03	1/4	25/32	.65
.05	1/4	25/32	.65
.1	5/16	25/32	.70
.25	7/16	25/32	.90
.5	7/16	1-1/8	1.05
1.	9/16	1-1/8	1.30
2.	9/16	1-13/16	1.80
400 WVDC			
.01	1/4	25/32	.70
.02	1/4	25/32	.70
.03	5/16	25/32	.70
.05	3/8	25/32	.70
.1	13/32	1-1/8	.80
.25	9/16	1-1/8	1.00
.5	9/16	1-13/16	1.15
1.	3/4	1-13/16	1.60
2.	1	2-3/8	2.75
600 WVDC			
.01	1/4	25/32	.70
.02	5/16	25/32	.70
.03	3/8	25/32	.80
.05	7/16	25/32	.80
.1	15/32	1-1/8	.90
.25	5/8	1-1/8	1.10
.5	5/8	1-13/16	1.45
1.	3/4	2-3/8	1.80
2.	1-1/8	2-3/8	3.10

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

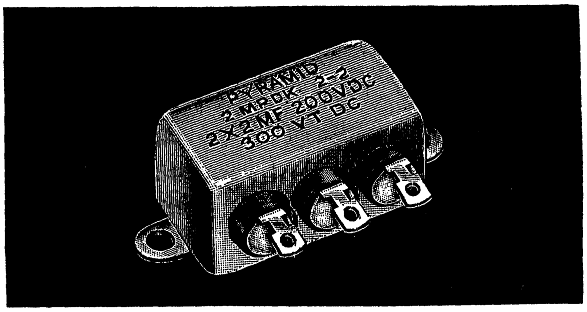
PYRAMID METALLIZED PAPER CAPACITORS

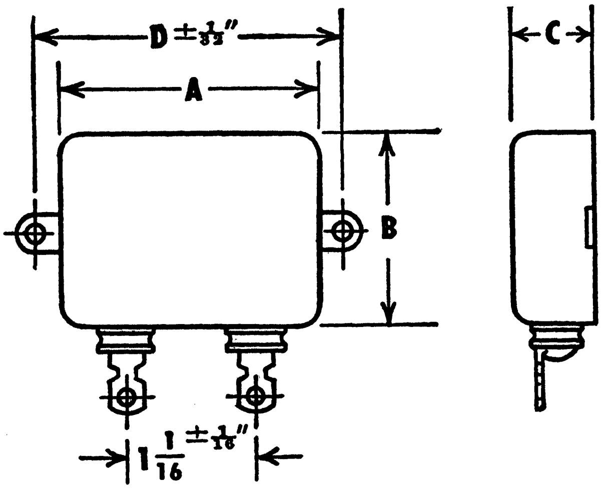
SERIES MPD

METALLIZED PAPER CAPACITORS IN DRAWN SHELL CONTAINERS

1. Construction—Extended foil section assembled in hermetically sealed, tinned bathtub type cases. Standard terminals consist of compression insulators with fixed riveted lugs, located on side.
2. Microcrystalline mineral wax impregnant for units rated up through 200 W.V.D.C.
   Mineral oil impregnant for units rated at 400 and 600 W.V.D.C.
3. Standard tolerance ± 20%.
4. Operating temperature range –55°C. to +95°C. For use at ambient temperatures exceeding 55°C., see derating chart on page P-94.
5. Will meet JAN tests for vibration, humidity, and temperature and immersion cycling.

Capacity MFD.	Size, in Inches A	B	C	D	List Price
Type MPDK					
150 WVDC					
3.	1-3/4	1	3/4	2-1/8	$ 5.10
4.	1-3/4	1	7/8	2-1/8	5.75
6.	2	1-3/4	7/8	2-3/8	6.10
8.	2	2	7/8	2-3/8	8.40
10.	2	2	1	2-3/8	9.70
12.	2	2	1	2-3/8	11.00
4.+4.	2	2	7/8	2-3/8	9.00
6.+6.	2	2	1	2-3/8	11.50
200 WVDC					
.5	1-3/4	1	3/4	2-1/8	3.30
1.	1-3/4	1	3/4	2-1/8	3.55
2.	1-3/4	1	3/4	2-1/8	4.45
1.+1.	1-3/4	1	3/4	2-1/8	5.00
2.+2.	1-3/4	1	7/8	2-1/8	6.30
Type MPDM					
400 WVDC					
.25	1-3/4	1	3/4	2-1/8	3.35
.5	1-3/4	1	3/4	2-1/8	3.55
1.	1-3/4	1	7/8	2-1/8	3.95
2.	2	1-3/4	7/8	2-3/8	4.90
4.	2	2	1-1/8	2-3/8	7.85
.25+.25	1-3/4	1	3/4	2-1/8	3.80
.5+.5	1-3/4	1	7/8	2-1/8	4.35
1.+1.	2	1-3/4	7/8	2-3/8	5.50
2.+2.	2	2	1-1/8	2-3/8	8.10
600 WVDC					
.1	1-3/4	1	3/4	2-1/8	3.50
.25	1-3/4	1	3/4	2-1/8	3.55
.5	1-3/4	1	3/4	2-1/8	4.25
1.	1-3/4	1-1/4	7/8	2-1/8	4.90
2.	2	2	1	2-3/8	6.25
.1+.1	1-3/4	1	3/4	2-1/8	4.10
.25+.25	1-3/4	1	3/4	2-1/8	4.95
.5+.5	1-3/4	1-1/4	7/8	2-1/8	5.70
1.+1.	2	2	1	2-3/8	6.60





Type MPDK

Microcrystalline mineral wax impregnant.

W.V.D.C. up to 200.

Terminals—Compression insulators with fixed riveted lugs, located on side.

OR

Type MPDM

Mineral oil impregnant.

W.V.D.C.—400 and 600.

Terminals—Compression insulators with fixed riveted lugs, located on side.

OTHER AVAILABLE STYLES FOR SERIES MPD CAPACITORS

With stud and nut type terminals, add suffix S to basic type designation, as MPDKS. Add $2.00 to list price.

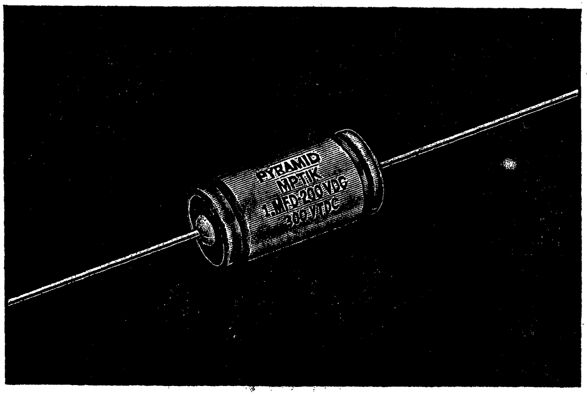
With glass to metal type terminals, add suffix G to basic type designation, as MPDKG. Add $3.00 to list price.

For terminals located on top, add suffix T to basic type designation, as MPDKT or MPDKGT. Add $2.00 to list price.

For terminals located on bottom, add suffix B to basic type designation, as MPDKB or MPDKGB. Add $2.00 to list price.

For terminals located on end, add suffix E to basic type designation, as MPDKE or MPDKGE. Add $2.00 to list price.

PYRAMID METALLIZED PAPER CAPACITORS



1. Construction — Extended foil section assembled in non-ferrous metal tubular cases, hermetically sealed by spun-over synthetic rubber end discs.
2. Microcrystalline mineral wax impregnant for units rated up through 200 W.V.D.C.

   Mineral oil impregnant for units rated at 400 and 600 W.V.D.C.
3. Leads 1½″ minimum length in AWG sizes as follows:

Case Diameter	**Wire Size**
.375	No. 22 AWG (.025 dia.)
.437 thru .670	No. 20 AWG (.032 dia.)
.750 and over	No. 18 AWG (.040 dia.)

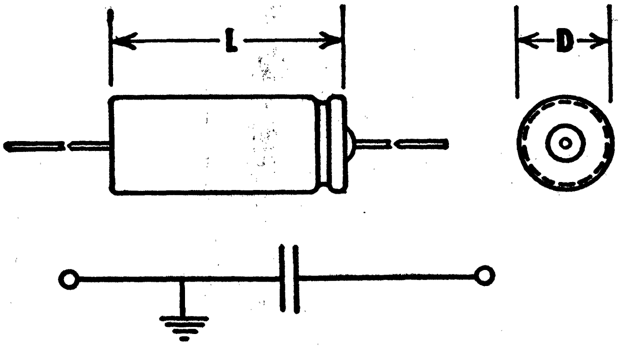
4. Standard tolerance +30% −20%.
5. Operating temperature range −55°C. to +85°C.

   For use at ambient temperatures exceeding 55°C., see derating chart on page P-94.
6. Will meet JAN tests for vibration, humidity, and temperature and immersion cycling.

SERIES MPT
METALLIZED PAPER CAPACITORS IN HERMETICALLY SEALED METAL TUBES

Capacity MFD.	Size, in Inches D±.015	Size, in Inches L±1/32	List Price	Size, in Inches D±.015	Size, in Inches L±1/32	List Price
	Type MPTK Case Grounded			**Type MPTIK Case Floating**		
			150 WVDC			
3.	3/4	1-13/16	$3.35	3/4	1-15/16	$3.35
4.	7/8	1-13/16	4.35	7/8	1-15/16	4.35
6.	1	1-13/16	5.30	1	1-15/16	5.30
			200 WVDC			
.05	3/8	13/16	1.40	3/8	15/16	1.40
.1	7/16	13/16	1.45	7/16	15/16	1.45
.25	1/2	13/16	1.60	1/2	15/16	1.60
.5	1/2	1-1/8	1.70	1/2	1-1/4	1.70
1.	5/8	1-5/16	2.10	5/8	1-7/16	2.10
2.	5/8	1-13/16	2.60	5/8	1-15/16	2.60
	Type MPTM Case Grounded			**Type MPTIM Case Floating**		
			400 WVDC			
.03	3/8	13/16	1.35	3/8	15/16	1.35
.05	7/16	13/16	1.45	7/16	15/16	1.45
.1	7/16	1-1/8	1.60	7/16	1-1/4	1.60
.25	5/8	1-1/8	1.80	5/8	1-1/4	1.80
.5	5/8	1-13/16	2.00	5/8	1-15/16	2.00
1.	3/4	2-5/16	2.50	3/4	2-7/16	2.50
2.	1	2-5/16	3.60	1	2-7/16	3.60
			600 WVDC			
.01	3/8	13/16	1.35	3/8	15/16	1.35
.02	7/16	13/16	1.45	7/16	15/16	1.45
.03	7/16	13/16	1.50	7/16	15/16	1.50
.05	1/2	13/16	1.55	1/2	15/16	1.55
.1	1/2	1-5/16	1.70	1/2	1-7/16	1.70
.25	5/8	1-5/16	2.00	5/8	1-7/16	2.00
.5	3/4	1-13/16	2.40	3/4	1-15/16	2.40
1.	13/16	2-5/16	3.00	13/16	2-7/16	3.00
2.	1-1/4	2-5/16	4.00	1-1/4	2-7/16	4.00

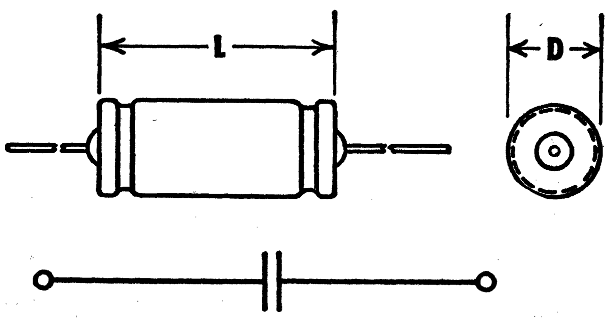
BASIC TYPES



Type MPTK
Case grounded.
Mineral wax impregnation.
W.V.D.C. up to 200.

OR

Type MPTM
Case grounded.
Mineral oil impregnation.
W.V.D.C. — 400-600.



Type MPTIK
Case floating.
Mineral wax impregnation.
W.V.D.C. up to 200.

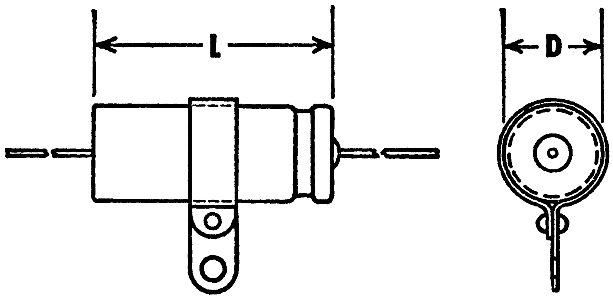
OR

Type MPTIM
Case floating.
Mineral oil impregnation.
W.V.D.C. — 400-600.

PYRAMID METALLIZED PAPER CAPACITORS

OTHER AVAILABLE STYLES FOR SERIES MPT CAPACITORS

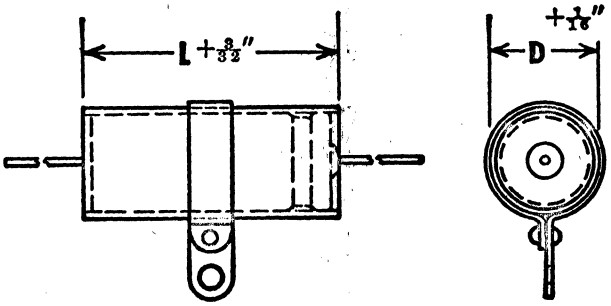
Style 4



With riveted wrap around bracket over case. Located in center unless otherwise specified. Add prefix 4 to basic type designation, as 4MPTK.

Add $.10 to list price.

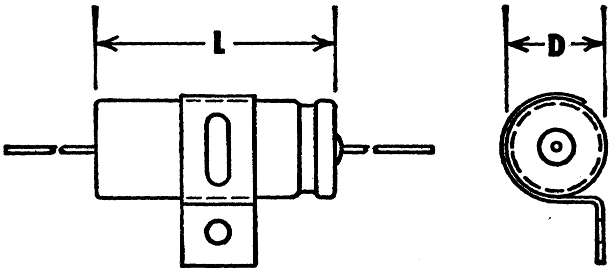
Style 4V



With riveted wrap around bracket over plastic sleeve. Located in center unless otherwise specified. Add prefix 4 and suffix V to basic type designation, as 4MPTKV.

Add $.30 to list price.

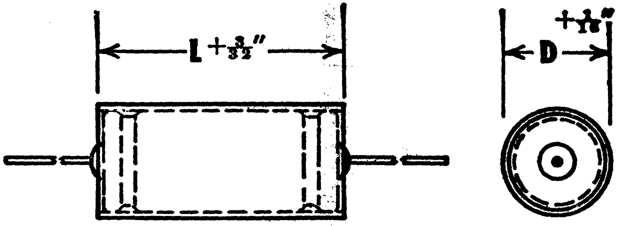
Style 7



With soldered tangential bracket. Mounting face parallel to axis of capacitor and located in center, unless otherwise specified. Add prefix 7 to basic designation, as 7MPTK.

Add $.15 to list price.

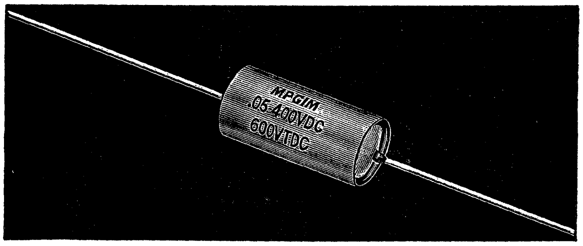
Style V



Case insulated with outer plastic sleeve. Add suffix V to basic type designation, as MPT1KV.

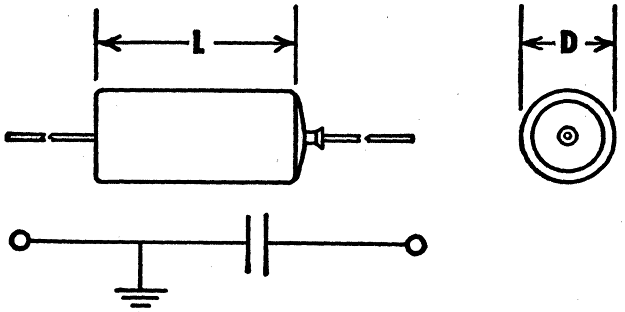
Add $.20 to list price.

PYRAMID METALLIZED PAPER CAPACITORS



SERIES MPG METALLIZED PAPER CAPACITORS IN METAL TUBES WITH "GLASSEAL" TERMINALS

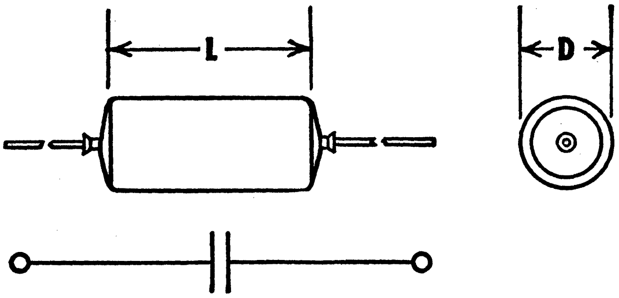
SERIES MPG — BASIC TYPES



Type MPGK
Case grounded.
Mineral wax impregnation.
W.V.D.C. up to 200.

OR

Type MPGM
Case grounded.
Mineral oil impregnation.
W.V.D.C. — 400-600.



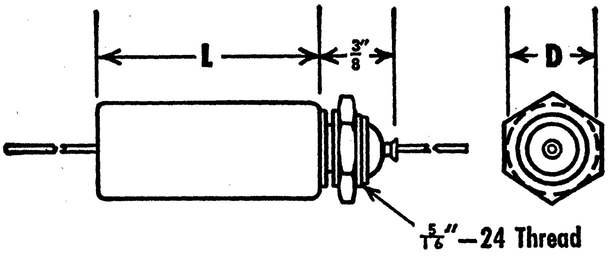
Type MPGIK
Case floating.
Mineral wax impregnation.
W.V.D.C. up to 200.

OR

Type MPGIM
Case floating.
Mineral oil impregnation.
W.V.D.C. — 400-600.

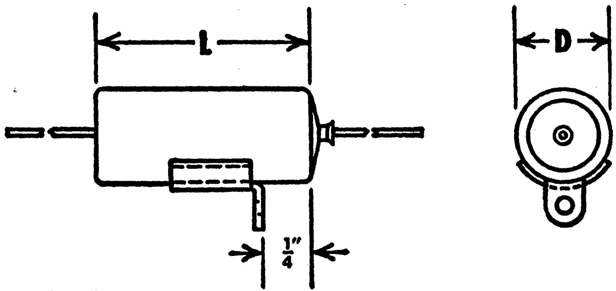
OTHER AVAILABLE STYLES FOR SERIES MPG CAPACITORS

Style 3



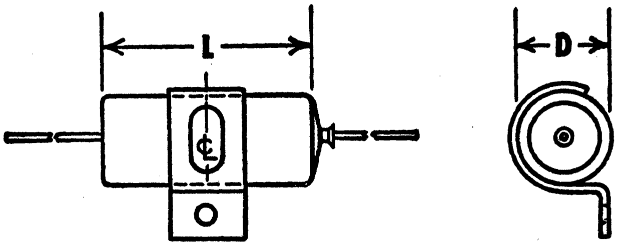
With threaded end bushing for vertical mounting. Supplied with lockwasher and nut. Minimum diameter = .400. Add prefix 3 to basic type designation, as 3MPGK. Add $.75 to list price.

Style 6



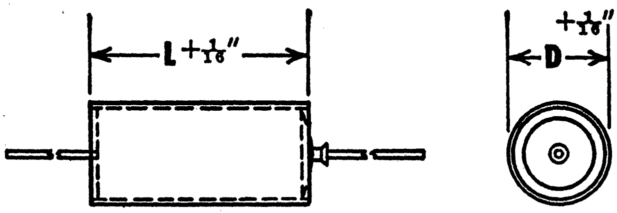
With soldered bracket. Mounting face at right angles to axis of capacitor, and 1/4" from end, unless otherwise specified. Add prefix 6 to basic designation, as 6MPGK. Add $.40 to list price.

Style 7



With soldered tangential bracket. Mounting face parallel to axis of capacitor and located in center, unless otherwise specified. Add prefix 7 to basic type designation, as 7MPGK. Add $.35 to list price.

Style V



Case insulated with outer plastic sleeve. Add suffix V to basic type designation, as MPGKV. Add $.20 to list price.

PYRAMID METALLIZED PAPER CAPACITORS

1. Construction—Extended foil sections assembled in non-ferrous metal tubular cases, hermetically sealed with glass to metal "Glasseal" solder terminals.
2. Microcrystalline mineral wax impregnant for units rated up through 200 W.V.D.C.

   Mineral oil impregnant for units rated at 400 and 600 W.V.D.C.
3. Leads 1½" minimum length in AWG sizes as follows:

Case Diameter	**Wire Size**
.235	No. 24 AWG (.020 dia.)
.312	No. 22 AWG (.025 dia.)
.400 thru .562	No. 20 AWG (.032 dia.)
.670 and over	No. 18 AWG (.040 dia.)

4. Standard tolerance ± 20%.
5. Operating temperature range —55°C. to +95°C.

   For use at ambient temperatures exceeding 55°C., see derating chart on page P-94.
6. Will meet JAN tests for vibration, humidity, and temperature and immersion cycling.

TYPE MPGK METALLIZED PAPER CAPACITORS MINERAL WAX IMPREGNATED

Capacity MFD.	Size, in Inches D±.010	L±1/32	List Price	Size, in Inches D±.010	L±1/32	List Price
	Type MPGK Case Grounded			**Type MPGIK Case Floating**		
			150 WVDC			
3.	.750	1-3/4	$5.95	.750	1-13/16	$ 6.95
4.	1.000	1-3/4	7.50	1.000	1-13/16	8.50
6.	1.000	1-3/4	8.75	1.000	1-13/16	9.75
8.	1.000	2-1/4	9.75	1.000	2-5/16	10.75
			200 WVDC			
.01	.235	3/4	2.65	.235	13/16	3.65
.02	.235	3/4	2.70	.235	13/16	3.70
.03	.235	3/4	2.75	.235	13/16	3.75
.04	.235	3/4	2.80	.235	13/16	3.80
.047	.235	3/4	2.85	.235	13/16	3.85
.05	.235	3/4	2.85	.235	13/16	3.85
.068	.312	3/4	2.90	.312	13/16	3.90
.1	.312	3/4	2.95	.312	13/16	3.95
.15	.312	1-1/16	3.00	.312	1-1/8	4.00
.2	.312	1-1/16	3.15	.312	1-1/8	4.15
.22	.312	1-1/16	3.25	.312	1-1/8	4.25
.25	.312	1-1/16	3.40	.312	1-1/8	4.40
.33	.400	1-1/16	3.55	.400	1-1/8	4.55
.47	.400	1-1/16	3.85	.400	1-1/8	4.85
.5	.400	1-1/16	4.00	.400	1-1/8	5.00
.68	.562	1-1/16	4.15	.562	1-1/8	5.15
1.	.562	1-1/4	4.70	.562	1-5/16	5.70
1.5	.562	1-3/4	5.40	.562	1-13/16	6.40
2.	.562	1-3/4	6.80	.562	1-13/16	7.80

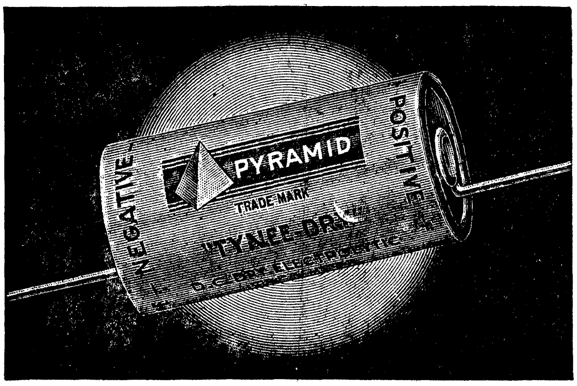
TYPE MPGM METALLIZED PAPER CAPACITORS MINERAL OIL IMPREGNATED

Capacity MFD.	Size, in Inches D±.010	L±1/32	List Price	Size, in Inches D±.010	L±1/32	List Price
	Type MPGM Case Grounded			**Type MPGIM Case Floating**		
			400 WVDC			
.01	.235	3/4	$2.80	.235	13/16	$3.80
.02	.235	3/4	2.90	.235	13/16	3.90
.022	.312	3/4	2.90	.312	13/16	3.90
.03	.312	3/4	2.95	.312	13/16	3.95
.033	.312	3/4	2.95	.312	13/16	3.95
.04	.312	3/4	3.00	.312	13/16	4.00
.047	.400	3/4	3.05	.400	13/16	4.05
.05	.400	3/4	3.10	.400	13/16	4.10
.068	.400	1-1/16	3.15	.400	1-1/8	4.15
.1	.400	1-1/16	3.30	.400	1-1/8	4.30
.15	.500	1-1/16	3.55	.500	1-1/8	4.55
.2	.500	1-1/16	3.70	.500	1-1/8	4.70
.22	.562	1-1/16	3.85	.562	1-1/8	4.85
.25	.562	1-1/16	3.95	.562	1-1/8	4.95
.33	.562	1-1/4	4.10	.562	1-5/16	5.10
.47	.562	1-3/4	4.65	.562	1-13/16	5.65
.5	.562	1-3/4	4.85	.562	1-13/16	5.85
.68	.670	1-3/4	5.05	.670	1-13/16	6.05
1.	.670	2-1/4	5.65	.670	2-5/16	6.65
2.	1.000	2-1/4	6.95	1.000	2-5/16	7.95
			600 WVDC			
.01	.235	3/4	2.90	.235	13/16	3.90
.015	.312	3/4	2.95	.312	13/16	3.95
.02	.312	3/4	2.95	.312	13/16	3.95
.022	.312	3/4	3.00	.312	13/16	4.00
.03	.312	3/4	3.10	.312	13/16	4.10
.033	.400	3/4	3.15	.400	13/16	4.15
.04	.400	3/4	3.15	.400	13/16	4.15
.047	.400	3/4	3.20	.400	13/16	4.20
.05	.400	3/4	3.25	.400	13/16	4.25
.068	.400	1-1/16	3.35	.400	1-1/8	4.35
.1	.500	1-1/16	3.65	.500	1-1/8	4.65
.15	.500	1-1/16	3.85	.500	1-1/8	4.85
.2	.562	1-1/4	4.00	.562	1-5/16	5.00
.22	.562	1-1/4	4.20	.562	1-5/16	5.20
.25	.562	1-1/4	4.50	.562	1-5/16	5.50
.33	.562	1-3/4	4.80	.562	1-13/16	5.80
.47	.670	1-3/4	5.15	.670	1-13/16	6.15
.5	.670	1-3/4	5.85	.670	1-13/16	6.85
.68	.670	2-1/4	6.05	.670	2-5/16	7.05
1.	.750	2-1/4	6.70	.750	2-5/16	7.70
1.5	1.000	2-1/4	7.50	1.000	2-5/16	8.50

PYRAMID ELECTROLYTIC CAPACITORS

"TYNEE-DRY" TYPE TD

D. C. DRY ELECTROLYTIC CAPACITORS IN METAL TUBES



- Top quality, in minimum space.
- Low leakage, long shelf life.
- Each unit sealed in metal tube, with insulating cardboard sleeve.
- 3" bare wire leads.
- Attractively packaged.

SINGLE CAPACITANCE UNITS

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
6 VOLTS WORKING				
TD-1000-6	1000	15/16	2-1/8	$1.90
TD-1500-6	1500	1-1/16	2-1/8	2.10
TD-2000-6	2000	1-1/16	2-5/8	2.30
12 VOLTS WORKING				
TD-250-12	250	15/16	1-3/4	1.45
TD-500-12	500	15/16	2-1/8	1.70
15 VOLTS WORKING				
TD-100-15	100	11/16	1-3/4	1.25
TD-250-15	250	15/16	1-3/4	1.55
TD-500-15	500	15/16	2-1/8	1.75
25 VOLTS WORKING; 40 VOLTS PEAK				
TD-10-25	10	11/16	1-3/8	1.00
TD-25-25	25	11/16	1-3/8	1.00
TD-50-25	50	11/16	1-3/8	1.10
TD-100-25	100	13/16	1-3/4	1.35
TD-150-25	150	13/16	1-3/4	1.50
TD-200-25	200	15/16	1-3/4	1.60
TD-250-25	250	15/16	1-3/4	1.70
TD-500-25	500	1-1/16	2-1/8	2.30

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
50 VOLTS WORKING; 70 VOLTS PEAK				
TD-5-50	5	11/16	1-3/8	$1.00
TD-10-50	10	11/16	1-3/8	1.00
TD-25-50	25	11/16	1-3/8	1.05
TD-50-50	50	11/16	1-3/8	1.20
TD-100-50	100	13/16	1-3/4	1.40
100 VOLTS WORKING UNITS FOR SMALL BATTERY RECEIVERS				
TD-8-100	8	1/2	1-3/16	1.00
TD-16-100	16	9/16	1-3/16	1.00
TD-20-100	20	9/16	1-3/16	1.00
150 VOLTS WORKING; 225 VOLTS PEAK				
TD-4-150	4	11/16	1-3/4	1.00
TD-8-150	8	11/16	1-3/4	1.05
TD-12-150	12	11/16	1-3/4	1.10
TD-16-150	16	11/16	1-3/4	1.15
TD-20-150	20	11/16	1-3/4	1.20
TD-24-150	24	13/16	1-3/4	1.25
TD-30-150	30	13/16	1-3/4	1.30
TD-40-150	40	13/16	1-3/4	1.35
TD-50-150	50	13/16	1-3/4	1.40
TD-80-150	80	15/16	2-1/8	1.60

Continued on opposite page

PYRAMID ELECTROLYTIC CAPACITORS

"TYNEE-DRY" TYPE TD, continued

SINGLE CAPACITANCE UNITS—continued

250 VOLTS WORKING; 325 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
TD-8-250	8	11/16	1-3/4	$1.15
TD-16-250	16	13/16	1-3/4	1.30
TD-20-250	20	13/16	1-3/4	1.35
TD-24-250	24	13/16	1-3/4	1.40
TD-30-250	30	15/16	1-3/4	1.45
TD-40-250	40	15/16	1-3/4	1.55

350 VOLTS WORKING; 425 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
TD-8-350	8	11/16	1-3/4	1.20
TD-16-350	16	13/16	1-3/4	1.40
TD-20-350	20	13/16	1-3/4	1.45
TD-30-350	30	15/16	2-1/8	1.65
TD-40-350	40	1-1/16	2-1/8	1.75

450 VOLTS WORKING; 525 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
TD-4-450	4	13/16	1-3/4	1.15
TD-8-450	8	13/16	1-3/4	1.25
TD-10-450	10	13/16	1-3/4	1.30
TD-12-450	12	15/16	2-1/8	1.35
TD-16-450	16	15/16	2-1/8	1.40
TD-20-450	20	15/16	2-1/8	1.55
TD-30-450	30	1-1/16	2-1/8	1.70
TD-40-450	40	1-1/16	2-5/8	1.80
TD-80-450	80	1	3-11/16	2.80

525 VOLTS WORKING; 600 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
TD-8-525	8	15/16	1-3/4	1.40
TD-16-525	16	1-1/16	2-1/8	2.20

*DUAL CAPACITANCE UNITS

Two Positive Bare Wire Leads At One End; Common Negative At Opposite End

50 VOLTS WORKING; 70 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
TD-D10-50	10+10	13/16	1-3/4	$1.40

150 VOLTS WORKING; 225 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
TD-D8-150	8+8	13/16	1-3/4	1.50
TD-816-150	8+16	13/16	1-3/4	1.55
TD-D16-150	16+16	13/16	1-3/4	1.80
TD-D20-150	20+20	13/16	1-3/4	1.65
TD-D30-150	30+30	15/16	2-1/8	1.75
TD-4020-150	40+20	15/16	2-1/8	1.75
TD-D40-150	40+40	15/16	2-1/8	1.80
TD-5030-150	50+30	15/16	2-1/8	1.95
TD-D50-150	50+50	15/16	2-1/8	2.10
TD-8040-150	80+40	1-1/16	2-1/8	2.40

450 VOLTS WORKING; 525 VOLTS PEAK

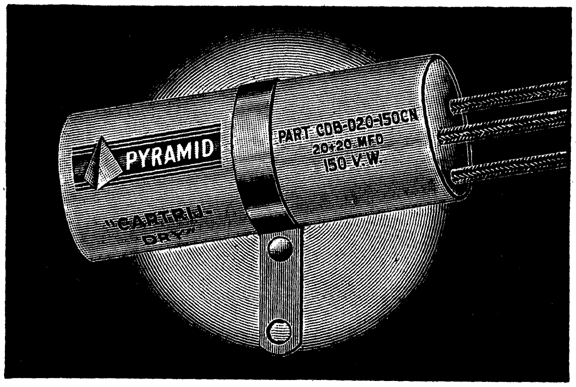
Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
TD-D4-450	4+4	15/16	2-1/8	1.60
TD-48-450	4+8	15/16	2-1/8	1.65
TD-D8-450	8+8	15/16	2-1/8	1.70
TD-D10-450	10+10	15/16	2-1/8	1.80
TD-816-450	8+16	1-1/16	2-1/8	2.00
TD-D16-450	16+16	1-1/16	2-5/8	2.40
TD-D20-450	20+20	1-1/16	2-5/8	2.50

*For dual units in wax-filled tubes, with flexible leads and assembled mounting brackets, see Type CDB capacitors on page following.

PYRAMID ELECTROLYTIC CAPACITORS

"CARTRIJ-DRY" TYPE CDB

D. C. DRY ELECTROLYTIC CAPACITORS IN IMPREGNATED CARDBOARD CONTAINERS



- Low leakage, long shelf life.
- Wax-filled, impregnated cardboard tubes.
- 6" flexible insulated leads at one end of tube.
- Assembled mounting strap.
- Attractively packaged.

*Duals, Common Negative; Three Leads; 150 Volts Working; 225 Volts Peak

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
CDB-D16-150CN	16+16	7/8	2 3/8	$1.60
CDB-D20-150CN	20+20	7/8	2 3/8	1.65
CDB-D30-150CN	30+30	1	2 3/8	1.75
CDB-4020-150CN	40+20	1	2 3/8	1.75
CDB-D40-150CN	40+40	1	2 3/8	1.80
CDB-5030-150CN	50+30	1	2 3/8	1.95
CDB-D50-150CN	50+50	1	2 3/8	2.10
CDB-8050-150CN	80+50	1	3	2.30

*For dual units, in small metal tubes with 3" bare wire leads but less mounting strap, see Type TD capacitors on Pages P-124 and P-125.

Duals, Common Negative; Three Leads; 450 Volts Working; 525 Volts Peak

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
CDB-D8-450CN	8+8	1	2 3/8	$1.70

Duals, Separate Sections; Four Leads; 150 Volts Working; 225 Volts Peak

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
CDB-D16-150SS	16+16	1	2 3/8	$1.95
CDB-D20-150SS	20+20	1	2 3/8	2.05
CDB-D40-150SS	40+40	1 1/4	3	2.30

Duals, Separate Sections; Four Leads; 450 Volts Working; 525 Volts Peak

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
CDB-D8-450SS	8+8	1	3	$2.15

Triples, Common Negative; Four Leads; 150 Volts Working; 225 Volts Peak

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage in Sequence	Outside Dimensions, Inches Diameter	Outside Dimensions, Inches Length	List Price
CDB-T20-150CN	20+20+20	150	1	2 3/8	$2.15
CDB-404020-150CN	40+40+20	150	1	3	2.30
CDB-T40-150CN	40+40+40	150	1	3	2.45
CDB-21	40+40+25	150-150-25	1	3	2.20
CDB-41	50+30+25	150-150-25	1	3	2.35
CDB-43	50+30+100	150-150-25	1	3	2.55
CDB-45	50+30+200	150-150-10	1	3	2.75
CDB-47	70+30+150	150-150-25	1	3 5/8	3.25

PYRAMID ELECTROLYTIC CAPACITORS

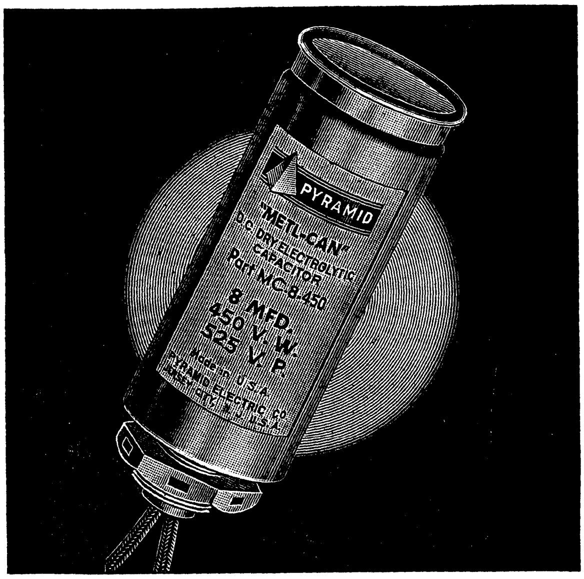
"METL-CAN" TYPE MC

D. C. DRY ELECTROLYTIC CAPACITORS IN SCREW-BASE METAL CONTAINERS

- Low leakage, long shelf life.
- Insulated screw-base aluminum containers provide maximum protection against humidity.
- 6" flexible insulated leads.
- Supplied with palnut for mounting.
- Attractively packaged.

Single Section Units; Two 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches Diameter	Height	List Price
450 VOLTS WORKING; 525 VOLTS PEAK				
MC-4-450	4	1 3/8	3 1/8	$2.00
MC-8-450	8	1 3/8	3 1/8	2.20
MC-12-450	12	1 3/8	3 1/8	2.35
MC-16-450	16	1 3/8	3 1/8	2.45
MC-20-450	20	1 3/8	3 1/8	2.70
MC-30-450	30	1 3/8	3 1/8	3.00
MC-40-450	40	1 3/8	3 1/8	3.15
525 VOLTS WORKING; 600 VOLTS PEAK				
MC-8-525	8	1 3/8	3 1/8	3.30
MC-16-525	16	1 3/8	3 1/8	3.75
600 VOLTS WORKING; HIGHEST QUALITY SERIES-WOUND CONSTRUCTION				
MC-4-600	4	1 3/8	3 1/8	3.30
MC-8-600	8	1 3/8	3 1/8	3.15
MC-12-600	12	1 3/8	3 1/8	3.50
MC-16-600	16	1 3/8	3 1/8	3.70



Dual Section Units; 450 Volts Working; 525 Volts Peak; Separate Section Construction; Four 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches Diameter	Height	List Price
MC-D4-450SS	4+4	1 3/8	3 1/8	$2.40
MC-48-450SS	4+8	1 3/8	3 1/8	3.00
MC-D8-450SS	8+8	1 3/8	3 1/8	3.00
MC-816-450SS	8+16	1 3/8	3 1/8	3.30
MC-D16-450SS	16+16	1 3/8	3 1/8	3.55
MC-D20-450SS	20+20	1 3/8	3 1/8	4.10

Dual Section Units; 450 Volts Working; 525 Volts Peak; Common Negative Construction; Three 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches Diameter	Height	List Price
MC-D4-450CN	4+4	1 3/8	3 1/8	$2.40
MC-48-450CN	4+8	1 3/8	3 1/8	3.00
MC-D8-450CN	8+8	1 3/8	3 1/8	3.00
MC-816-450CN	8+16	1 3/8	3 1/8	3.30
MC-D16-450CN	16+16	1 3/8	3 1/8	3.55
MC-D20-450CN	20+20	1 3/8	3 1/8	4.10

PYRAMID ELECTROLYTIC CAPACITORS

"TWIST-MOUNT" TYPE TM

D. C. DRY ELECTROLYTIC CAPACITORS IN METAL CONTAINERS

PYRAMID
450W.V.
450W.V.
NEGATIVE
MADE IN U.S.A.
472831

- Grounded aluminum containers provide maximum protection against moisture.
- Low leakage, long shelf life.
- Easily identified terminal coding.
- Supplied with both metal and bakelite mounting plates.
- Attractively packaged.

SINGLE CAPACITANCE UNITS

Part Number	Capacity Mfd.	D.C. Working Voltage	Can Size, Inches Diameter	Height	List Price
TM-1000-6	1000	6	1	3	$1.90
TM-1000-12	1000	12	1	3	2.25
TM-100-25	100	25	1	2	1.60
TM-250-25	250	25	1	2	1.70
TM-500-25	500	25	1	2-1/2	2.55
TM-1000-25	1000	25	1	3	3.55
TM-500-50	500	50	1	2-1/2	2.65
TM-20-150	20	150	1	2	1.45
TM-30-150	30	150	1	2	1.55
TM-40-150	40	150	1	2	1.60
TM-80-150	80	150	1	2	1.85
TM-100-150	100	150	1	3	2.10
TM-80-300	80	300	1	3	2.55
TM-10-450	10	450	1	2	1.55
TM-20-450	20	450	1	2	1.80
TM-30-450	30	450	1	3	1.95
TM-40-450	40	450	1	3	2.05
TM-80-450	80	450	1-3/8	3	3.05
TM-10-525	10	525	1	2	1.60
TM-20-525	20	525	1	3	1.85
TM-40-525	40	525	1-3/8	3	2.50
TM-80-525	80	525	1-3/8	3-1/2	4.20

NOTE: Each of the units listed above is regularly supplied with a bakelite as well as a metal mounting plate. Where additional hardware is required, order from listing at bottom of page P-108.

"TWIST-MOUNT" TYPE TM, continued

DUAL CAPACITANCE UNITS

Part Number	Capacity Mfd.	D.C. Working Voltage	Can Size, Inches		List Price
			Diameter	Height	
TM-D1000-15	1000+1000	15	1-3/8	3	$4.40
TM-D20-150	20+20	150	1	2	1.70
TM-D30-150	30+30	150	1	2	1.80
TM-4020-150	40+20	150	1	2	1.80
TM-D40-150	40+40	150	1	2	1.85
TM-5030-150	50+30	150	1	2	2.00
TM-D50-150	50+50	150	1	2	2.15
TM-8040-150	80+40	150	1	3	2.30
TM-D100-150	100+100	150	1-3/8	3	3.45
TM-D80-300	80+80	300	1-3/8	3	4.05
TM-D40-350	40+40	350	1-3/8	3	2.95
TM-D10-450	10+10	450	1	2	1.85
TM-D16-450	16+16	450	1	3	2.35
TM-D20-450	20+20	450	1	3	2.55
TM-3015-450	30+15	450	1-3/8	2-1/2	2.80
TM-D30-450	30+30	450	1-3/8	2-1/2	3.05
TM-D40-450	40+40	450	1-3/8	3	3.40
TM-D40-525	40+40	525	1-3/8	3-1/2	4.30

TRIPLE CAPACITANCE UNITS

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage, in Sequence	Can Size, Inches		List Price
			Diameter	Height	
TM-1	20+20+25	150-150-25	1	2	$2.20
TM-21	20+20+100	150-150-25	1	2	2.50
TM-41	40+40+25	150-150-25	1	2-1/2	2.50
TM-49	50+30+100	150-150-25	1	3	2.70
TM-T20-150	20+20+20	150	1	2	2.30
TM-402020-150	40+20+20	150	1	2-1/2	2.45
TM-403020-150	40+30+20	150	1	2-1/2	2.45
TM-404020-150	40+40+20	150	1	2-1/2	2.50
TM-T40-150	40+40+40	150	1	3	2.60
TM-804020-150	80+40+20	150	1	3	2.80
TM-61	50+50+25	150-150-25	1	2-1/2	2.65
TM-81	80+40+25	150-150-25	1	3	2.85
TM-808060-300	80+80+60	300	1-3/8	3-1/2	4.50
TM-101	10+10+20	450-450-25	1	3	2.35
TM-T10-450	10+10+10	450	1	3	2.60
TM-T16-450	16+16+16	450	1-3/8	3	3.30
TM-T20-450	20+20+20	450	1-3/8	3	3.55
TM-111	30+15+30	450-450-150	1-3/8	3	3.70

PYRAMID ELECTROLYTIC CAPACITORS

"TWIST-MOUNT" TYPE TM, continued

QUADRUPLE CAPACITANCE UNITS

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage, in Sequence	Can Size, Inches Diameter	Can Size, Inches Height	List Price
TM-140	40+40+40+25	150-150-150-25	1-3/8	2-1/2	$3.20
TM-143	80+40+30+100	150-150-150-25	1-3/8	2-1/2	3.90
TM-151	10+10+10+20	450-450-450-25	1-3/8	2	3.10
TM-Q10-450	10+10+10+10	450	1-3/8	2	3.35
TM-Q16-450	16+16+16+16	450	1-3/8	3	3.95
TM-Q20-450	20+20+20+20	450	1-3/8	3	4.70
TM-146	20+20+20+20	450-450-450-25	1-3/8	3	3.85
TM-148	30+30+10+20	500-500-450-25	1-3/8	3-1/2	4.90

EXACT REPLACEMENTS FOR MODEL 630 RECEIVERS

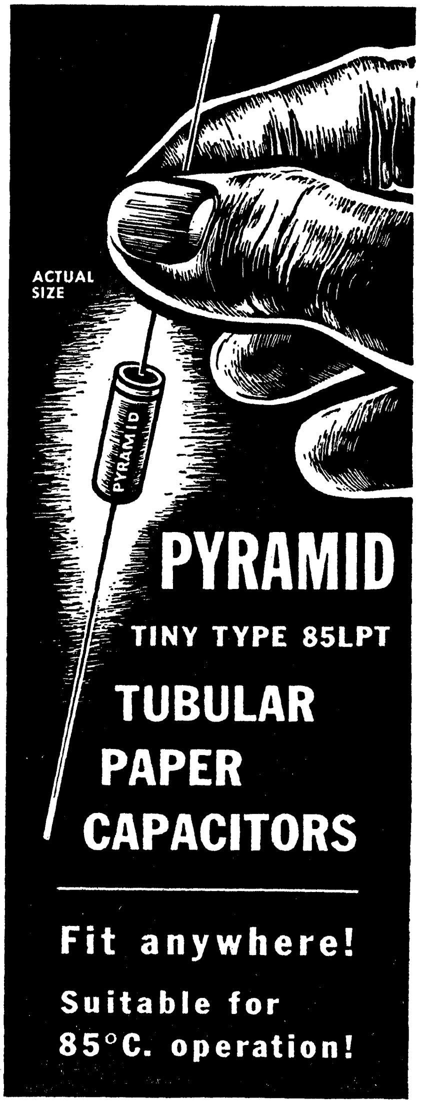
Built to Original Size and High Quality Specifications, Including Rigid Requirement for Satisfactory Operation at 85° C. (185° F.)

RCA Original Part No.	RCA Stock No.	Pyramid Replacement No.	Description	List Price
M-95681-6	71431	22.22	40+10 mfd. 450 v.w. + 80 mfd. 150 v.w.	$3.90
M-95681-7	71432	22.23	40+40+10 mfd. 450 v.w.	4.15
M-95681-8	71433	22.24	80 mfd. 450 v.w. + 50 mfd. 50 v.w.	3.50
M-95681-9	71434	22.25	40+10 mfd. 450 v.w. + 10 mfd. 350 v.w.	3.30
M-95681-10	71435	22.26	20 mfd. 450 v.w. + 80 mfd. 350 v.w.	3.60
M-95686-6	71436	22.27	250 mfd. 10 v.w. + 1000 mfd. 6 v.w.	3.90

NOTE: Each of the units listed above is regularly supplied with a bakelite as well as a metal mounting plate. Where additional hardware is required, order from this listing.

Part Number	Description	List Price
TMMP-1	Metal grounding plate for 1" dia. cans	$.06
TMMP-2	Bakelite insulating plate for 1" dia. cans	.06
TMMP-8	Metal grounding plate for 1⅜" dia. cans	.06
TMMP-9	Bakelite insulating plate for 1⅜" dia. cans	.06

PYRAMID PAPER CAPACITORS



MINIATURE TUBULAR PAPER CAPACITORS

FOR 85°C. APPLICATIONS

PYRAMID TYPE 85LPT

CONSTRUCTION: Sturdily built in phenolic-impregnated tubes, plastic end-filled.

VOLTAGE: Designed for continuous operation at rated D.C. voltage.

TEMPERATURE: Will operate at maximum temperature of 85° C.

DIELECTRIC STRENGTH: Will withstand 2½ times rated voltage for 5 seconds.

HUMIDITY: Satisfactorily withstand standard RMA humidity test.

LIFE TEST: Designed to withstand life test of 250 hours at 85° C.

200 V. D. C. W.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85LPT2-D1	.001	1/4	5/8	$.35
85LPT2-D2	.002	1/4	5/8	.35
85LPT2-D3	.003	1/4	5/8	.35
85LPT2-D4	.004	1/4	5/8	.35
85LPT2-D5	.005	1/4	5/8	.35
85LPT2-D6	.006	1/4	5/8	.35
85LPT2-S1	.01	1/4	5/8	.40
85LPT2-S2	.02	9/32	13/16	.45
85LPT2-S5	.05	5/16	1	.50
85LPT2-P1	.1	13/32	1	.60
85LPT2-P15	.15	15/32	1-1/8	.60
85LPT2-P2	.2	15/32	1-1/8	.65
85LPT2-P25	.25	17/32	1-1/8	.70
85LPT2-P5	.5	5/8	1-1/2	.80

400 V. D. C. W.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85LPT4-D1	.001	1/4	5/8	$.35
85LPT4-D2	.002	1/4	5/8	.35
85LPT4-D3	.003	1/4	5/8	.35
85LPT4-D4	.004	1/4	5/8	.35
85LPT4-D5	.005	1/4	13/16	.35
85LPT4-D6	.006	1/4	13/16	.35
85LPT4-S1	.01	5/16	13/16	.40
85LPT4-S2	.02	5/16	1	.45
85LPT4-S5	.05	13/32	1	.50
85LPT4-P1	.1	15/32	1-1/8	.65
85LPT4-P15	.15	5/8	1-1/8	.65
85LPT4-P2	.2	5/8	1-1/8	.70
85LPT4-P25	.25	5/8	1-1/2	.75
85LPT4-P5	.5	5/8	2-5/16	.85

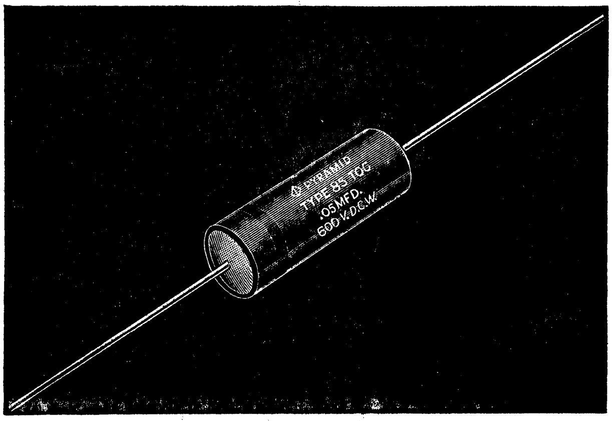
600 V. D. C. W.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85LPT6-T1	.0001	1/4	5/8	$.35
85LPT6-T5	.0005	1/4	5/8	.35
85LPT6-D1	.001	1/4	5/8	.35
85LPT6-D2	.002	1/4	5/8	.35
85LPT6-D3	.003	9/32	13/16	.35
85LPT6-D4	.004	9/32	13/16	.35
85LPT6-D5	.005	9/32	13/16	.40
85LPT6-D6	.006	5/16	13/16	.40
85LPT6-S1	.01	5/16	1	.45
85LPT6-S2	.02	11/32	1	.50
85LPT6-S5	.05	15/32	1-1/8	.55
85LPT6-P1	.1	5/8	1-1/8	.70
85LPT6-P15	.15	5/8	1-3/4	.75
85LPT6-P2	.2	5/8	1-3/4	.80
85LPT6-P25	.25	5/8	2	.80

PYRAMID PAPER CAPACITORS

TYPE 85TOC

TUBULAR PAPER CAPACITORS



- Designed for 85° C. operation.
- Plastic-impregnated tubes prevent absorption of moisture.
- Mineral oil impregnated.
- Ends are plastic sealed against humidity.
- Leads securely anchored.
- Attractively packaged.

200 D.C. VOLTS WORKING

Catalog Number	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85TOC2-S1	.01	5/16	1	$.23
85TOC2-S2	.02	3/8	1-3/16	.23
85TOC2-S25	.025	7/16	1-3/16	.27
85TOC2-S5	.05	7/16	1-1/2	.27
85TOC2-P1	.1	1/2	1-5/8	.32
85TOC2-P15	.15	9/16	1-5/8	.36
85TOC2-P2	.2	5/8	2	.36
85TOC2-P25	.25	5/8	2	.41
85TOC2-P5	.5	3/4	2	.54
85TOC2-1	1.0	1	2	.81

400 D.C. VOLTS WORKING

Catalog Number	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85TOC4-D1	.001	5/16	1	$.23
85TOC4-D2	.002	5/16	1	.23
85TOC4-D3	.003	5/16	1	.23
85TOC4-D4	.004	3/8	1-3/16	.23
85TOC4-D5	.005	3/8	1-3/16	.23
85TOC4-S1	.01	3/8	1-3/16	.23
85TOC4-S15	.015	3/8	1-3/16	.23
85TOC4-S2	.02	7/16	1-3/16	.23
85TOC4-S25	.025	7/16	1-1/2	.27
85TOC4-S3	.03	7/16	1-1/2	.27
85TOC4-S4	.04	7/16	1-5/8	.27
85TOC4-S5	.05	7/16	1-5/8	.27
85TOC4-S6	.06	7/16	1-5/8	.32
85TOC4-P1	.1	9/16	1-5/8	.32
85TOC4-P15	.15	5/8	2	.36
85TOC4-P2	.2	3/4	1-3/4	.36
85TOC4-P25	.25	3/4	1-3/4	.41
85TOC4-P5	.5	7/8	2	.54
85TOC4-1	1.0	1	2-3/4	.81

600 D.C. VOLTS WORKING

Catalog Number	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85TOC6-T1	.0001	5/16	1	$.23
85TOC6-T25	.00025	5/16	1	.23
85TOC6-T5	.0005	5/16	1	.23
85TOC6-D1	.001	5/16	1	.23
85TOC6-D2	.002	5/16	1	.23
85TOC6-D3	.003	5/16	1	.23
85TOC6-D4	.004	3/8	1-3/16	.23

(Continued in next column)

600 D.C. VOLTS WORKING—Continued

Catalog Number	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85TOC6-D5	.005	3/8	1-3/16	$.23
85TOC6-D6	.006	3/8	1-3/16	.23
85TOC6-S1	.01	7/16	1-3/16	.27
85TOC6-S15	.015	7/16	1-3/16	.27
85TOC6-S2	.02	7/16	1-1/2	.27
85TOC6-S25	.025	7/16	1-1/2	.32
85TOC6-S3	.03	1/2	1-5/8	.32
85TOC6-S4	.04	1/2	1-5/8	.32
85TOC6-S5	.05	9/16	1-5/8	.36
85TOC6-S6	.06	9/16	1-5/8	.36
85TOC6-P1	.1	11/16	1-3/4	.41
85TOC6-P2	.2	13/16	2	.50
85TOC6-P25	.25	13/16	2-1/8	.50
85TOC6-P5	.5	1-1/8	2	.72

1000 D.C. VOLTS WORKING

Catalog Number	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85TOC10-D1	.001	5/16	1	$.45
85TOC10-D2	.002	3/8	1-3/16	.45
85TOC10-D5	.005	7/16	1-3/16	.45
85TOC10-S1	.01	7/16	1-5/8	.45
85TOC10-S2	.02	9/16	1-5/8	.45
85TOC10-S35	.035	9/16	1-7/8	.50
85TOC10-S5	.05	5/8	1-3/4	.54
85TOC10-P1	.1	13/16	2	.68

1600 D.C. VOLTS WORKING

Catalog Number	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85TOC16-D1	.001	7/16	1-3/16	$.50
85TOC16-D2	.002	7/16	1-3/16	.50
85TOC16-D5	.005	1/2	1-1/2	.50
85TOC16-D6	.006	1/2	1-1/2	.50
85TOC16-S1	.01	9/16	1-1/2	.54
85TOC16-S2	.02	9/16	2	.54
85TOC16-S5	.05	3/4	2	.68

6000 D.C. VOLTS WORKING

Catalog Number	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85TOC60-T5	.0005	5/8	1-7/8	$1.10
85TOC60-D1	.001	3/4	2	1.10
85TOC60-D5	.005	7/8	2-3/4	1.15

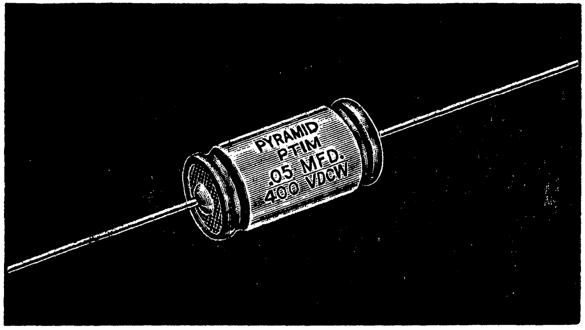
PYRAMID OIL-PAPER CAPACITORS

SERIES PTIM

(Commercial Equivalents of JAN Types CP25, CP26, CP27, CP28, CP29)

HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS IN METAL TUBES

- Temperature range: —55° C. to +85° C.
- Highest quality, non-inductively wound sections.
- Housed in insulated metal tubes, sealed with Neoprene-bakelite end discs.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: —10%, +20%.



NOTE: If outer insulating sleeve is required, add letter V to catalog type, as PTIMV. Add $.10 to list price. If assembled mounting strap is required, add letter S to catalog type, as PTIMS. Add $.10 to list price.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
400 VOLTS D.C. OPERATING				
PTIM4-D5	.005	11/16	1-5/16	$ .80
PTIM4-D6	.006	11/16	1-5/16	.80
PTIM4-D8	.008	11/16	1-5/16	.80
PTIM4-S1	.01	11/16	1-5/16	.80
PTIM4-S2	.02	11/16	1-5/16	.90
PTIM4-S3	.03	11/16	1-5/16	.95
PTIM4-S4	.04	11/16	1-5/16	.95
PTIM4-S5	.05	11/16	1-5/16	.95
PTIM4-P1	.1	11/16	1-11/16	1.10
PTIM4-P25	.25	11/16	2-3/16	1.55
PTIM4-P5	.5	1-1/16	2-11/16	2.10
600 VOLTS D.C. OPERATING				
PTIM6-D5	.005	11/16	1-5/16	$ .80
PTIM6-D6	.006	11/16	1-5/16	.80
PTIM6-D8	.008	11/16	1-5/16	.80
PTIM6-S1	.01	11/16	1-5/16	.80
PTIM6-S2	.02	11/16	1-5/16	.90
PTIM6-S3	.03	11/16	1-5/16	.95
PTIM6-S4	.04	11/16	1-5/16	.95
PTIM6-S5	.05	11/16	1-5/16	.95
PTIM6-P1	.1	11/16	1-11/16	1.10
PTIM6-P25	.25	13/16	2-3/16	1.50
PTIM6-P5	.5	1-1/16	2-11/16	2.00

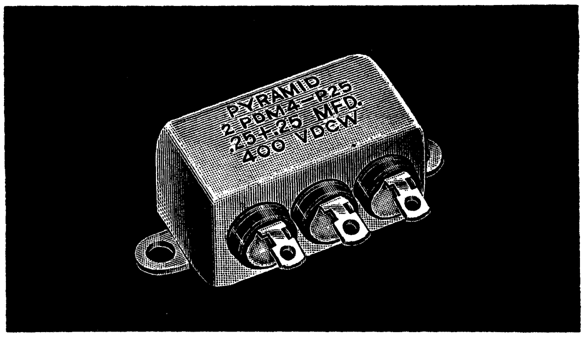
Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
1000 VOLTS D.C. OPERATING				
PTIM10-T5	.0005	11/16	1-5/16	$ .95
PTIM10-D1	.001	11/16	1-5/16	95
PTIM10-D2	.002	11/16	1-5/16	95
PTIM10-D5	.005	11/16	1-5/16	.95
PTIM10-D8	.008	11/16	1-5/16	.95
PTIM10-S1	.01	11/16	1-5/16	.95
PTIM10-S2	.02	11/16	1-5/16	1.05
PTIM10-S3	.03	11/16	1-5/16	1.05
PTIM10-S5	.05	11/16	1-11/16	1.10
PTIM10-S8	.08	11/16	2-1/16	1.30
PTIM10-P1	.1	11/16	2-1/16	1.35
1600 VOLTS D.C. OPERATING				
PTIM16-T5	.0005	11/16	1-5/16	$1.00
PTIM16-D1	.001	11/16	1-5/16	1.00
PTIM16-D2	.002	11/16	1-5/16	1.00
PTIM16-D5	.005	11/16	1-5/16	1.00
PTIM16-S1	.01	11/16	1-11/16	1.05
PTIM16-S2	.02	11/16	1-11/16	1.15
PTIM16-S5	.05	11/16	2-1/16	1.20
PTIM16-P1	.1	1-1/16	2-1/16	2.00
2000 VOLTS D.C. OPERATING				
PTIM20-T5	.0005	13/16	1-11/16	$1.10
PTIM20-D1	.001	13/16	1-11/16	1.10
PTIM20-D5	.005	13/16	1-11/16	1.10
PTIM20-D8	.008	13/16	1-11/16	1.10
PTIM20-S1	.01	13/16	1-11/16	1.10
PTIM20-S2	.02	13/16	2-3/16	1.20
PTIM20-S5	.05	13/16	2-15/16	1.30

PYRAMID OIL-PAPER CAPACITORS

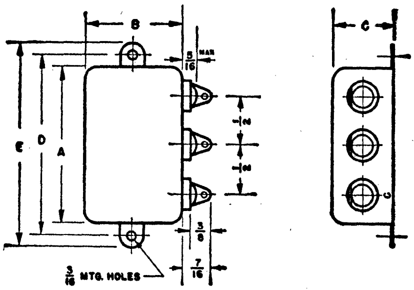
SERIES PDM

(Commercial Equivalents of JAN Types CP53, CP54, CP55)

HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS IN DRAWN SHELL CONTAINERS



TYPE PDM



- Temperature range: –55° C. to +85° C.
- Highest quality, non-inductively wound sections.
- Mineral oil impregnated, mineral oil filled.
- Housed in seamless tin-coated drawn shell containers, with rivet lug terminals.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: –10%, +20%.

NOTE: Where commercial equivalents of JAN types are required, use the following Pyramid type designations:

JAN TYPE	PYRAMID COMMERCIAL EQUIVALENT TYPE
CP53	PDM (followed by catalog number)
CP54	PDMT (followed by catalog number)
CP55	PDMB (followed by catalog number)

Catalog Number	Capacity Mfd.	Dimensions, Inches A	B	C	D	List Price
400 VOLTS D.C. OPERATING						
PDM4-S5	.05	1-13/16	1	3/4	2-1/8	$1.85
PDM4-P1	.1	1-13/16	1	3/4	2-1/8	1.95
PDM4-P25	.25	1-13/16	1	3/4	2-1/8	2.20
PDM4-P5	.5	1-13/16	1	7/8	2-1/8	2.35
PDM4-1	1.0	2	1-3/4	7/8	2-3/8	3.35
PDM4-2	2.0	2	2	1-1/8	2-3/8	4.30
2PDM4-S5	.05+.05	1-13/16	1	3/4	2-1/8	2.95
2PDM4-P1	.1+.1	1-13/16	1	3/4	2-1/8	3.05
2PDM4-P25	.25+.25	1-13/16	1	7/8	2-1/8	3.30
2PDM4-P5	.5+.5	2	1-3/4	7/8	2-3/8	3.85
2PDM4-1	1.0+1.0	2	2	1-1/8	2-3/8	4.80
3PDM4-P1	.1+.1+.1	1-13/16	1	3/4	2-1/8	3.75
3PDM4-P25	.25+.25+.25	2	1-3/4	7/8	2-3/8	4.40
3PDM4-P5	.5+.5+.5	2	2	1-1/8	2-3/8	5.10
600 VOLTS D.C. OPERATING						
PDM6-S5	.05	1-13/16	1	3/4	2-1/8	$2.85
PDM6-P1	.1	1-13/16	1	3/4	2-1/8	2.95
PDM6-P25	.25	1-13/16	1	3/4	2-1/8	3.10
PDM6-P5	.5	1-13/16	1	7/8	2-1/8	3.30
PDM6-1	1.0	2	1-3/4	7/8	2-3/8	3.75
Continued in next column						
600 VOLTS D.C. OPERATING—Continued						
PDM6-2	2.0	2	2	1-1/8	2-3/8	$4.90
2PDM6-S5	.05+.05	1-13/16	1	3/4	2-1/8	3.65
2PDM6-P1	.1+.1	1-13/16	1	3/4	2-1/8	3.70
2PDM6-P25	.25+.25	1-13/16	1	7/8	2-1/8	3.75
2PDM6-P5	.5+.5	2	1-3/4	7/8	2-3/8	4.30
2PDM6-1	1.0+1.0	2	2	1-1/8	2-3/8	5.30
3PDM6-P1	.1+.1+.1	1-13/16	1	3/4	2-1/8	4.20
3PDM6-P25	.25+.25+.25	2	1-3/4	7/8	2-3/8	4.75
3PDM6-P5	.5+.5+.5	2	2	1-1/8	2-3/8	5.75
1000 VOLTS D.C. OPERATING						
PDM10-S5	.05	1-13/16	1	3/4	2-1/8	$3.00
PDM10-P1	.1	1-13/16	1	3/4	2-1/8	3.15
PDM10-P25	.25	1-13/16	1	7/8	2-1/8	3.20
PDM10-P5	.5	2	1-3/4	7/8	2-3/8	3.55
PDM10-1	1.0	2	2	1-1/8	2-3/8	4.40
2PDM10-S5	.05+.05	1-13/16	1	3/4	2-1/8	3.85
2PDM10-P1	.1+.1	1-13/16	1	7/8	2-1/8	4.00
2PDM10-P25	.25+.25	2	1-3/4	7/8	2-3/8	4.20
2PDM10-P5	.5+.5	2	2	1-1/8	2-3/8	5.50
3PDM10-P1	.1+.1+.1	2	1-3/4	7/8	2-3/8	4.60
3PDM10-P25	.25+.25+.25	2	2	1-1/8	2-3/8	5.50

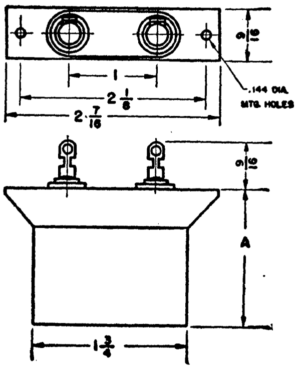
PYRAMID OIL-PAPER CAPACITORS

SERIES PEM & PKM

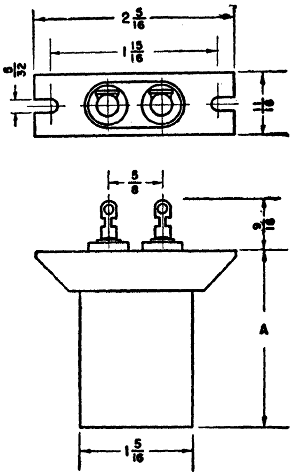
(Commercial equivalents of JAN Types CP61, CP63, CP65, CP67, CP69)

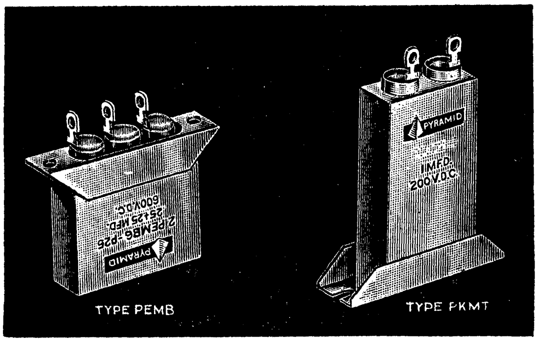
SMALL, HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS

TYPE PEMB



TYPE PKMB





TYPE PEMB TYPE PKMT

- Temperature range: −55° C. to +85° C.
- Minimum base area makes these ideal for compact equipment.
- Mineral oil impregnated and filled.
- Housed in tin-coated containers with lug terminals.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: −10%, +20%.

NOTE: Where commercial equivalents of JAN types are required, use the following Pyramid type designations:

JAN TYPE	PYRAMID COMMERCIAL EQUIVALENT TYPE
CP61	PKM (followed by catalog number)
CP61 with spade mounting	PKMS (followed by catalog number)
CP61 with footed bracket	PKMF (followed by catalog number)
CP63	PKMT (followed by catalog number)
CP65	PKMB (followed by catalog number)
CP67	PEM (followed by catalog number)
CP69	PEMB (followed by catalog number)

SERIES PEM

Capacity Mfd.	Catalog Number	Can Height "A"	List Price
200 V. D.C. OPERATING			
.05	PEM2-S5	1	$2.80
.1	PEM2-P1	1	3.05
.25	PEM2-P25	1-1/2	3.10
.5	PEM2-P5	1-1/2	3.15
1.0	PEM2-1	1-7/8	3.55
.05+.05	2PEM2-S5	1	3.90
.1+.1	2PEM2-P1	1	4.05
.25+.25	2PEM2-P25	1-1/2	4.20
.5+.5	2PEM2-P5	1-7/8	4.60
.05+.05+.05	3PEM2-S5	1	4.85
.1+.1+.1	3PEM2-P1	1-1/2	5.20
.25+.25+.25	3PEM2-P25	1-7/8	5.60
400 V. D.C. OPERATING			
.05	PEM4-S5	1	$2.90
.1	PEM4-P1	1	3.15
.25	PEM4-P25	1-1/2	3.20
.5	PEM4-P5	1-7/8	3.25
1.0	PEM4-1	2-1/2	3.65
.05+.05	2PEM4-S5	1	4.00
.1+.1	2PEM4-P1	1-1/2	4.15
.25+.25	2PEM4-P25	1-7/8	4.30
.5+.5	2PEM4-P5	2-1/2	4.70
.05+.05+.05	3PEM4-S5	1	4.95
.1+.1+.1	3PEM4-P1	1-1/2	5.30
.25+.25+.25	3PEM4-P25	2-1/2	5.70

SERIES PEM—Continued

Capacity Mfd.	Catalog Number	Can Height "A"	List Price
600 V. D.C. OPERATING			
.05	PEM6-S5	1	$3.10
.1	PEM6-P1	1	3.20
.25	PEM6-P25	1-1/2	3.25
.5	PEM6-P5	1-7/8	3.35
1.0	PEM6-1	2-1/2	3.75
.05+.05	2PEM6-S5	1	4.20
.1+.1	2PEM6-P1	1-1/2	4.30
.25+.25	2PEM6-P25	1-7/8	4.55
.5+.5	2PEM6-P5	2-1/2	4.95
.05+.05+.05	3PEM6-S5	1	5.00
.1+.1+.1	3PEM6-P1	1-1/2	5.60
.25+.25+.25	3PEM6-P25	2-1/2	5.95
1000 V. D.C. OPERATING			
.05	PEM10-S5	1	$3.15
.1	PEM10-P1	1	3.25
.25	PEM10-P25	1-7/8	3.35
.5	PEM10-P5	2-1/2	3.65
.05+.05	2PEM10-S5	1-1/2	4.55
.1+.1	2PEM10-P1	1-1/2	4.90
.25+.25	2PEM10-P25	2-1/2	5.00
.05+.05+.05	3PEM10-S5	1-1/2	5.90
.1+.1+.1	3PEM10-P1	2-1/2	6.10

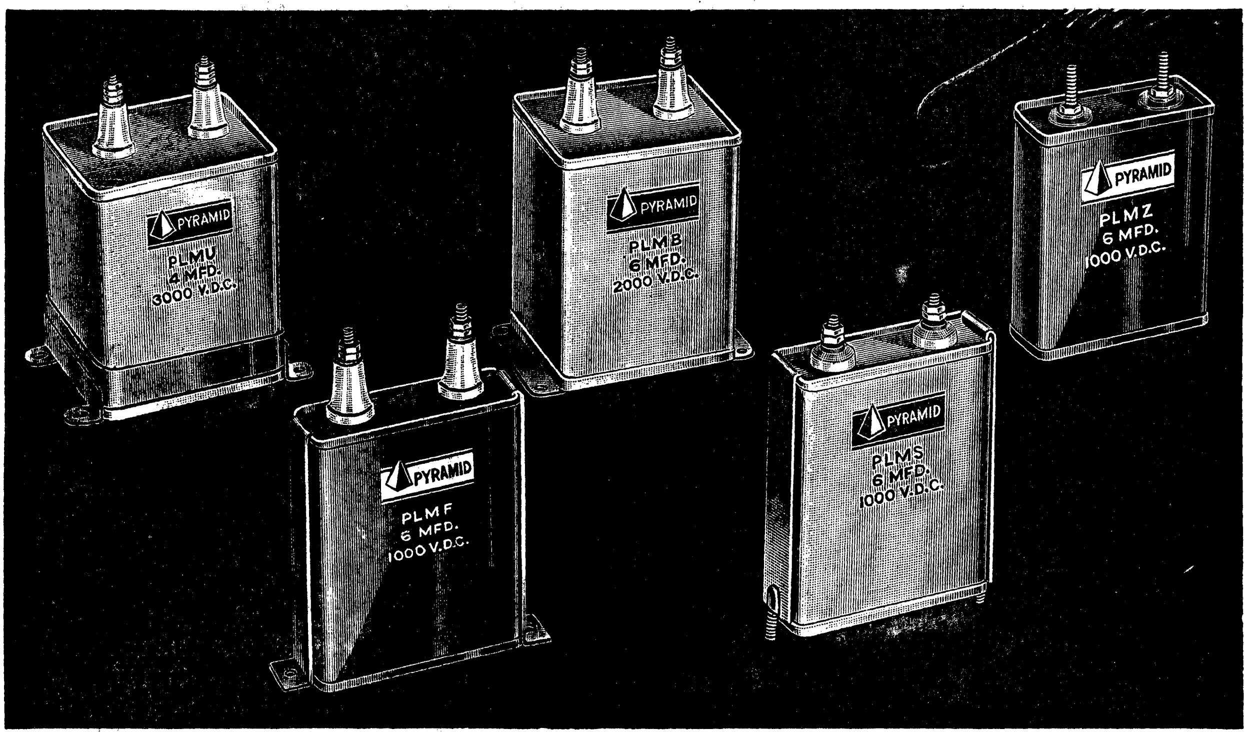
SERIES PKM

Capacity Mfd.	Catalog Number	Can Height "A"	List Price
200 V. D.C. OPERATING			
.05	PKM2-S5	1-7/16	$2.80
.1	PKM2-P1	1-7/16	3.05
.25	PKM2-P25	1-7/16	3.10
.5	PKM2-P5	1-11/16	3.15
1.0	PKM2-1	2-1/16	3.55
400 V. D.C. OPERATING			
.05	PKM4-S5	1-7/16	$2.90
.1	PKM4-P1	1-7/16	3.15
.25	PKM4-P25	1-11/16	3.20
.5	PKM4-P5	2-1/16	3.25
1.0	PKM4-1	2-9/16	3.65
600 V. D.C. OPERATING			
.05	PKM6-S5	1-7/16	$3.10
.1	PKM6-P1	1-7/16	3.20
.25	PKM6-P25	1-11/16	3.25
.5	PKM6-P5	2-1/16	3.35
1.0	PKM6-1	2-9/16	3.75
1000 V. D.C. OPERATING			
.05	PKM10-S5	1-7/16	$3.15
.1	PKM10-P1	1-7/16	3.25
.25	PKM10-P25	2-1/16	3.35
.5	PKM10-P5	2-9/16	3.65

PYRAMID OIL-PAPER CAPACITORS

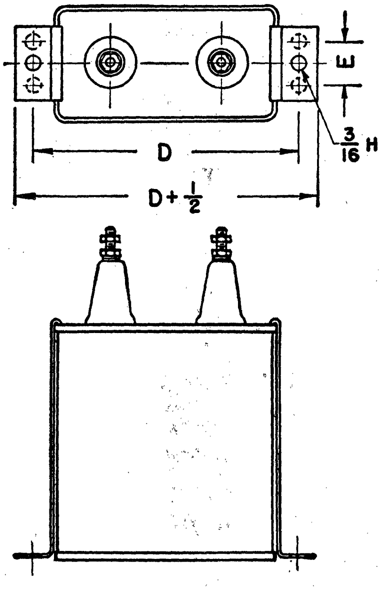
SERIES PLM (Commercial equivalent of JAN Type CP70)

HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS

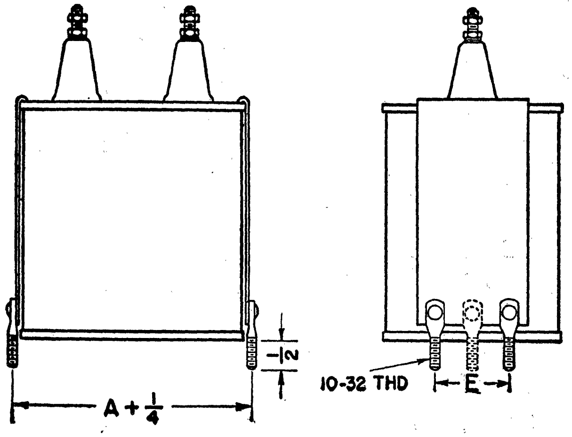

PYRAMID
PLMU
4 MFD.
3000 V.D.C.
PYRAMID
PLMB
6 MFD.
2000 V.D.C.
PYRAMID
PLMZ
6 MFD.
1000 V.D.C.
PYRAMID
PLMF
6 MFD.
1000 V.D.C.
PYRAMID
PLMS
6 MFD.
1000 V.D.C.

- Temperature range: –55° C. to +85° C.
- Designed for the exacting requirements of power supply and filter applications.
- Mineral oil impregnated, mineral oil filled.
- Housed in lacquer-finished terneplate cases with porcelain bushings.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: –10%, +20%.

TYPE PLMF

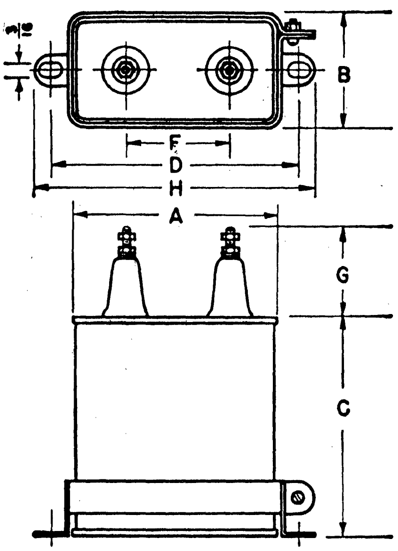

E
3/16 HOLES
D
D+1/2

TYPE PLMS

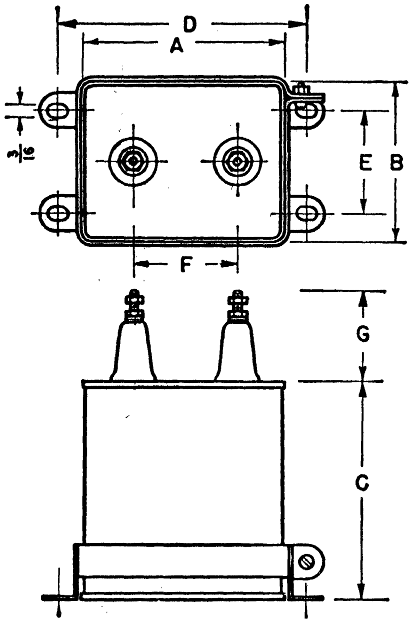

1/2
10-32 THD
E
A+1/4

TYPE PLM—Continued

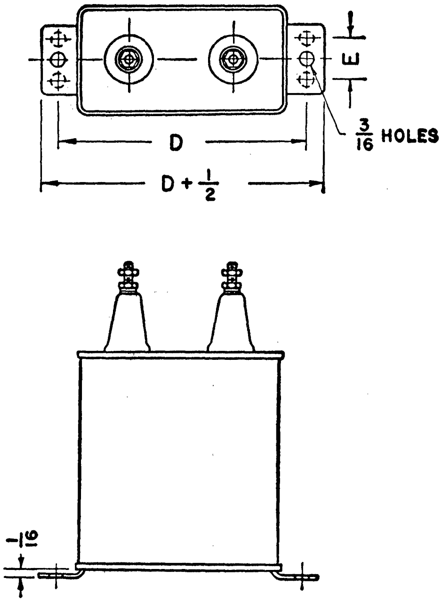
TYPE PLMU



TYPE PLMU



TYPE PLMB



IMPORTANT: CATALOG DESIGNATIONS FOR VARIOUS MOUNTING ARRANGEMENTS

Type PLM capacitors are available in a variety of mounting arrangements as shown in the outline drawings on pages P-114 and P-115. These are identified by adding one of the following suffix letters to the basic designation PLM:

B — Mounting flange soldered to the bottom of the container. Available for all container sizes. Refer to drawing of Type PLMB.

F — Footed side mounting straps. Refer to drawing on Type PLMF on page P-114.

S — Spade side mounting straps. Refer to drawing of Type PLMS on page P-114. Available for all container sizes.

U — Universal mounting bracket. Refer to drawing of Type PLMU above. Available for containers with base dimensions 3-3/4" x 3-3/16" or smaller. Single mounting holes on center line are provided for all bases except the 3-3/4" x 3-3/16" sizes.

Capacity Mfd.	Catalog Number	Dimensions, Inches A	B	C	D	E	F	G	H	List Price
				600 VOLTS D.C. OPERATING						
.5	PLM6-P5	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	$ 4.70
1.0	PLM6-1	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	5.80
2.0	PLM6-2	1-3/4	1	4	2-1/4		13/16	1-1/4	3	7.15
3.0	PLM6-3	1-3/4	1	4-3/4	2-1/4		13/16	1-1/4	3	8.25
4.0	PLM6-4	2-1/2	1-3/16	3-5/8	3		1-1/8	1-1/4	3-3/4	9.00
5.0	PLM6-5	2-1/2	1-3/16	4-3/4	3		1-1/8	1-1/4	3-3/4	10.50
8.0	PLM6-8	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	13.50
10.0	PLM6-10	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	15.00
				1000 VOLTS D.C. OPERATING						
.1	PLM10-P1	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	4.15
.25	PLM10-P25	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	4.70
.5	PLM10-P5	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	5.00
1.0	PLM10-1	1-3/4	1	2-7/8	2-1/4		13/16	1-1/4	3	6.35
2.0	PLM10-2	1-3/4	1	4-3/4	2-1/4		13/16	1-1/4	3	8.25
3.0	PLM10-3	2-1/2	1-3/16	3-5/8	3		1-1/8	1-1/4	3-3/4	9.50
4.0	PLM10-4	2-1/2	1-3/16	4-3/4	3		1-1/8	1-1/4	3-3/4	10.50
5.0	PLM10-5	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	12.50
6.0	PLM10-6	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	14.00
8.0	PLM10-8	3-3/4	1-3/4	4-3/4	4-3/8		2	1-1/4	5	15.00
10.0	PLM10-10	3-3/4	2	4-3/4	4-3/8		2	1-1/4	5	16.75
15.0	PLM10-15	3-3/4	2-1/2	4-3/4	4-3/8		2	1-1/4	5	20.00

Continued on page P-116

PYRAMID OIL-PAPER CAPACITORS

TYPE PLM—Continued

IMPORTANT: CATALOG DESIGNATIONS FOR VARIOUS MOUNTING ARRANGEMENTS

Type PLM capacitors are available in a variety of mounting arrangements as shown in the outline drawings on pages P-114 and P-115. These are identified by adding one of the following suffix letters to the basic designation PLM:

B — Mounting flange soldered to the bottom of the container. Available for all container sizes. Refer to drawing of Type PLMB on page P-137.

F — Footed side mounting straps. Refer to drawing on Type PLMF on page P-114.

S — Spade side mounting straps. Refer to drawing of Type PLMS on page P-114. Available for all container sizes.

U — Universal mounting bracket. Refer to drawing of Type PLMU on page P-115. Available for containers with base dimensions 3-3/4" x 3-3/16" or smaller. Single mounting holes on center line are provided for all bases except the 3-3/4" x 3-3/16" sizes.

Capacity Mfd.	Catalog Number	Dimensions, Inches								List Price
		A	B	C	D	E	F	G	H	
1500 VOLTS D.C. OPERATING										
.5	PLM15-P5	1-3/4	1	2-7/8	2-1/4		13/16	1-1/4	3	$ 6.25
1.0	PLM15-1	1-3/4	1	4-3/4	2-1/4		13/16	1-1/4	3	7.50
2.0	PLM15-2	2-1/2	1-3/16	4-3/4	3		1-1/8	1-1/4	3-3/4	10.50
3.0	PLM15-3	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	12.50
4.0	PLM15-4	3-3/4	1-1/2	4-3/4	4-3/8		2	1-1/4	5	14.00
5.0	PLM15-5	3-3/4	1-3/4	4-3/4	4-3/8		2	1-1/4	5	15.00
6.0	PLM15-6	3-3/4	2-1/4	4-3/4	4-3/8		2	1-1/4	5	17.00
8.0	PLM15-8	3-3/4	2-1/4	4-3/4	4-3/8		2	1-1/4	5	21.00
10.0	PLM15-10	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-1/4	5	25.00
12.0	PLM15-12	3-3/4	3-3/16	5-1/2	4-3/8	2-1/2	2	1-1/4	5	27.50
15.0	PLM15-15	3-3/4	4-9/16	4-3/4	4-3/8	3-3/8	2	1-1/4	5	30.00
2000 VOLTS D.C. OPERATING										
.1	PLM20-P1	1-3/4	1	2-1/8	2-1/4		13/16	1-7/16	3	6.50
.25	PLM20-P25	1-3/4	1	2-7/8	2-1/4		13/16	1-7/16	3	7.00
.5	PLM20-P5	1-3/4	1	4	2-1/4		13/16	1-7/16	3	7.50
1.0	PLM20-1	2-1/2	1-3/16	4-3/4	3		1-1/8	1-7/16	3-3/4	9.00
2.0	PLM20-2	3-3/4	1-1/4	4-3/4	4-3/8		2	1-7/16	5	10.75
3.0	PLM20-3	3-3/4	1-3/4	4-3/4	4-3/8		2	1-7/16	5	13.25
4.0	PLM20-4	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	15.00
5.0	PLM20-5	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	16.75
6.0	PLM20-6	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	20.00
8.0	PLM20-8	3-3/4	4-9/16	4-3/4	4-3/8	3-3/8	2	1-7/16	5	25.00
10.0	PLM20-10	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	30.50
12.0	PLM20-12	3-3/4	4-9/16	6-1/2	4-3/8	3-3/8	2	1-7/16	5	33.00
2500 VOLTS D.C. OPERATING										
.5	PLM25-P5	3-3/4	1-1/4	3-3/4	4-3/8		2	1-7/16	5	11.50
1.0	PLM25-1	3-3/4	1-1/4	4-3/4	4-3/8		2	1-7/16	5	13.00
2.0	PLM25-2	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	21.50
4.0	PLM25-4	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	30.00
10.0	PLM25-10	3-3/4	4-9/16	8-1/2	4-3/8	3-3/8	2	1-7/16	5	75.00
3000 VOLTS D.C. OPERATING										
.1	PLM30-P1	1-3/4	1	2-7/8	2-1/4		13/16	1-7/16	3	14.00
.25	PLM30-P25	2-1/2	1-3/16	3-5/8	3		1-1/8	1-7/16	3-3/4	15.00
.5	PLM30-P5	2-1/2	1-3/16	4-3/4	3		1-1/8	1-7/16	3-3/4	17.00
1.0	PLM30-1	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	20.00
2.0	PLM30-2	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	25.00
4.0	PLM30-4	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	36.50
4000 VOLTS D.C. OPERATING										
.1	PLM40-P1	2-1/2	1-3/16	3-5/8	3		1-1/8	1-7/16	3-3/4	25.00
.25	PLM40-P25	2-1/2	1-3/16	4-3/4	3		1-1/8	1-7/16	3-3/4	26.50
.5	PLM40-P5	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	30.00
1.0	PLM40-1	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	36.50
2.0	PLM40-2	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	46.50
4.0	PLM40-4	3-3/4	4-9/16	9-1/2	4-3/8	3-3/8	2	1-7/16	5	67.00
5000 VOLTS D.C. OPERATING										
.5	PLM50-P5	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	33.00
1.0	PLM50-1	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	42.00
2.0	PLM50-2	3-3/4	4-9/16	7-1/2	4-3/8	3-3/8	2	1-7/16	5	53.50

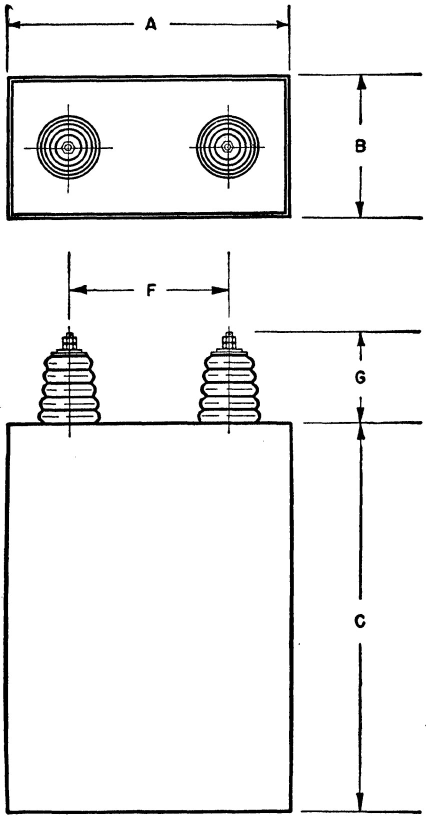
FOR HIGHER VOLTAGES, SEE TYPE PJ ON PAGE P-117

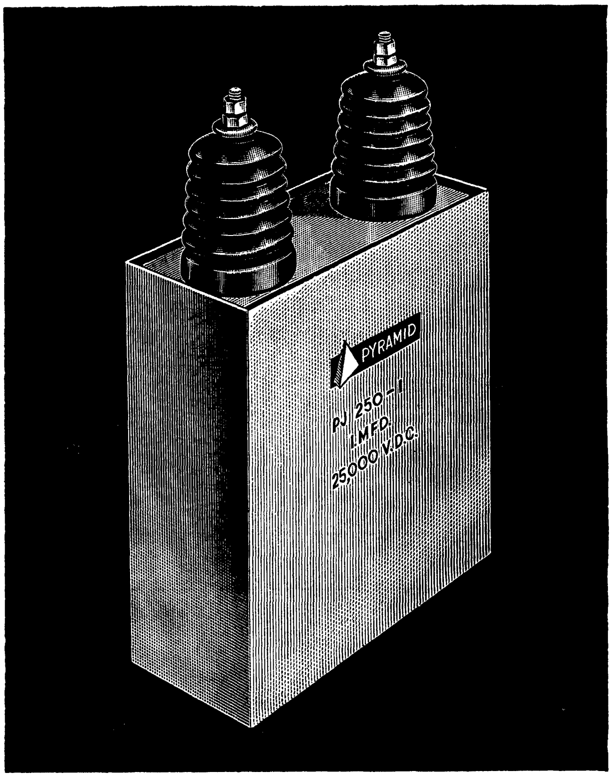
PYRAMID OIL-PAPER CAPACITORS

TYPE PJ

(Commercial equivalent of JAN Type CP70)

HERMETICALLY SEALED MINERAL OIL-PAPER HIGH VOLTAGE CAPACITORS





- Temperature range: —55°C. to +85° C.
- Mineral oil impregnated and filled.
- Rugged, dependable construction.
- Housings are heavy gauge steel, welded oil tight and hot tinned.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: —10%, +20%.

Capacity Mfd.	Catalog Number	Dimensions, Inches A	B	C	F	G	List Price
600 V.D.C.W. TO 5000 V.D.C.W.: SEE SERIES PLM ON PAGES P-114 through P-116							
6000 VOLTS D.C. OPERATING							
2	PJ60-2	8	4	11	4-1/2	2-5/8	$147.00
4	PJ60-4	12	4	11	6	2-5/8	180.00
5	PJ60-5	12	6	11	6	2-5/8	210.00
6	PJ60-6	12	6	11	6	2-5/8	230.00
10	PJ60-10	12	6	16	6	2-5/8	295.00

(Continued on following page)

PYRAMID OIL-PAPER CAPACITORS

TYPE PJ—Continued

(Commercial equivalent of JAN Type CP70)

HERMETICALLY SEALED MINERAL OIL-PAPER HIGH VOLTAGE CAPACITORS

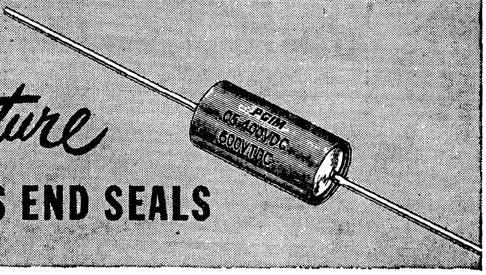
Standard tolerance: —10%, +20%

Capacity Mfd.	Catalog Number	Dimensions, Inches					List Price
		A	B	C	F	G	
7500 VOLTS D.C. OPERATING							
.5	PJ75-P5	8	4	11	4-1/2	2-5/8	$ 83.00
1	PJ75-1	8	4	11	4-1/2	2-5/8	110.00
2	PJ75-2	12	4	11	6	2-5/8	165.00
4	PJ75-4	12	6	13	6	2-5/8	245.00
6	PJ75-6	12	7-1/2	15	6	2-5/8	300.00
10,000 VOLTS D.C. OPERATING							
.5	PJ100-P5	8	4	11	4-1/2	2-5/8	175.00
1	PJ100-1	12	4	11	6	2-5/8	215.00
2	PJ100-2	12	6	11	6	2-5/8	275.00
4	PJ100-4	12	7-1/2	16	6	2-5/8	330.00
5	PJ100-5	12	8	18	6	2-5/8	370.00
12,500 VOLTS D.C. OPERATING							
.5	PJ125-P5	12	4	11	6	2-5/8	185.00
1	PJ125-1	12	6	11	6	2-5/8	230.00
2	PJ125-2	12	6	16	6	2-5/8	290.00
5	PJ125-5	12	12	18	6	2-5/8	550.00
15,000 VOLTS D.C. OPERATING							
.25	PJ150-P25	8	4	11	4-1/2	4-3/4	175.00
.5	PJ150-P5	12	4	11	6	4-3/4	210.00
1	PJ150-1	12	6	13	6	4-3/4	290.00
2	PJ150-2	12	8	18	6	4-3/4	385.00
3	PJ150-3	12	11	18	6	4-3/4	520.00
20,000 VOLTS D.C. OPERATING							
.25	PJ200-P25	12	4	11	4-1/2	4-3/4	210.00
.5	PJ200-P5	12	6	13	6	4-3/4	265.00
1	PJ200-1	12	8	18	6	4-3/4	360.00
1.5	PJ200-1.5	12	12	18	6	4-3/4	485.00
25,000 VOLTS D.C. OPERATING							
.25	PJ250-P25	12	6	11	6	4-3/4	290.00
.5	PJ250-P5	12	7-1/2	16	6	4-3/4	315.00
.75	PJ250-P75	12	11	16	6	4-3/4	400.00
1	PJ250-1	12	12	18	6	4-3/4	475.00

PYRAMID

GLASSEAL

HERMETICALLY SEALED *Miniature*
PAPER CAPACITORS with METAL-GLASS END SEALS



"GLASSEAL H": Temperature Range −40 to +85° C.

INSERTED TAB CONSTRUCTION	TYPE PGH—Section grounded to container. TYPE PGIH—Section insulated from container.
EXTENDED FOIL CONSTRUCTION	TYPE EPGH—Section grounded to container. TYPE EPGIH—Section insulated from container.

"GLASSEAL M": Temperature Range −55 to +85° C.

INSERTED TAB CONSTRUCTION	TYPE PGM—Section grounded to container. TYPE PGIM—Section insulated from container.
EXTENDED FOIL CONSTRUCTION	TYPE EPGM—Section grounded to container. TYPE EPGIM—Section insulated from container.

"GLASSEAL X": Temperature Range −55 to +125° C.

INSERTED TAB CONSTRUCTION	TYPE PGX—Section grounded to container. TYPE PGIX—Section insulated from container.
EXTENDED FOIL CONSTRUCTION	TYPE EPGX—Section grounded to container. TYPE EPGIX—Section insulated from container.

TYPE COMPARISONS

PYRAMID	SPRAGUE	CORNELL-DUBILIER
PGH	78P	TWH----G
PGM	81P	TWC----G
PGX	86P	
PGIH	88P	TWH
PGIM	91P	TWC
PGIX	96P	
EPGH	178P	TWH----EG
EPGM	181P	TWC----EG
EPGX	186P	
EPGIH	188P	TWH----E
EPGIM	191P	TWC----E
EPGIX	196P	

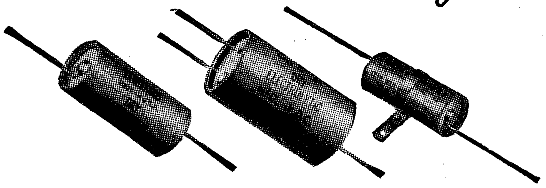
For complete catalog, contact your local distributor or write to:

PYRAMID ELECTRIC COMPANY
1445 Hudson Blvd., North Bergen, N. J., U. S. A.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE MT-MTD-MTH *Chieftain*



SANGAMO Type MT "Chieftain" electrolytics are especially designed for television and other electronic applications where operation at 85°C. temperatures is required. They are hermetically sealed in round aluminum containers which are encased in heavy insulating sleeves on which polarity is clearly indicated. Being small in physical size they are most popular where mounting in limited space is required — They will fit anywhere and can be mounted in almost any position. Double-thick paper spacers assure adequate breakdown characteristics and all sections are tightly held in place within the container. Multiple staking connects the terminal tabs to the electrodes and provides permanent low resistance contact throughout the life of the capacitor. Low voltage units utilize etched cathodes to maintain uniform capacity when they are subjected to combined conditions of heat and high ripple currents.

Single Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MT-0210	10	25	⅝ x 1 1/16	$1.00	$0.60
MT-0225	25	25	⅝ x 1 1/16	1.00	.60
MT-0250	50	25	⅝ x 1 5/16	1.10	.66
MT-0510	10	50	⅝ x 1 1/16	1.00	.60
MT-0525	25	50	⅝ x 1 5/16	1.05	.63
MT-0550	50	50	¾ x 1 9/16	1.20	.72
MT-1504	4	150	⅝ x 1 1/16	1.00	.60
MT-1508	8	150	⅝ x 1 5/16	1.05	.63
MT-1512	12	150	⅝ x 1 5/16	1.10	.66
MT-1516	16	150	⅝ x 1 9/16	1.15	.69
MT-1520	20	150	⅝ x 1 9/16	1.20	.72
MT-1530	30	150	¾ x 1 9/16	1.30	.78
MT-1540	40	150	¾ x 1 13/16	1.35	.81
MT-1550	50	150	⅞ x 1 13/16	1.40	.84
MT-2508	8	250	⅝ x 1 9/16	1.15	.69
MT-2512	12	250	⅝ x 1 13/16	1.25	.75
MT-2516	16	250	¾ x 1 9/16	1.30	.78
MT-2520	20	250	¾ x 1 13/16	1.35	.81
MT-2540	40	250	⅞ x 2 5/16	1.55	.93
MT-3508	8	350	¾ x 1 9/16	1.20	.72
MT-3512	12	350	¾ x 1 13/16	1.30	.78
MT-3516	16	350	⅞ x 1 13/16	1.40	.84
MT-4504	4	450	⅝ x 1 5/16	1.15	.69
MT-4508	8	450	¾ x 1 9/16	1.25	.75
MT-4510	10	450	¾ x 1 9/16	1.30	.78
MT-4512	12	450	⅞ x 1 9/16	1.35	.81
MT-4516	16	450	⅞ x 1 13/16	1.40	.84
MT-4520	20	450	1 x 1 13/16	1.55	.93
MT-4530	30	450	1 x 2 5/16	1.70	1.02
MT-4540	40	450	1 x 2⅞	1.80	1.08

Dual Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MTD-0210	10-10	25	⅞ x 1 1/16	$1.40	$0.84
MTD-0220	20-20	25	⅞ x 1 1/16	1.40	.84
MTD-1520	20-20	150	¾ x 1 9/16	1.65	.99
MTD-1530	30-30	150	⅞ x 1 9/16	1.80	1.08
MTD-301	50-30	150	1 x 1 13/16	1.95	1.17
MTD-302	40-20	150	1 x 1 13/16	1.75	1.05
MTD-1540	40-40	150	1 x 1 13/16	1.85	1.11
MTD-1550	50-50	150	1 x 2 5/16	2.10	1.26
MTD-2520	20-20	250	1 x 1 13/16	1.85	1.11
MTD-3520	20-20	350	1 x 2⅞	2.25	1.35
MTD-4508	8- 8	450	⅞ x 1 13/16	1.70	1.02
MTD-4510	10-10	450	1 x 1 13/16	1.85	1.11
MTD-4520	20-20	450	1 x 2⅞	2.50	1.50

NOTE: Packaging: 10, 25, or 50 capacitors per display carton.

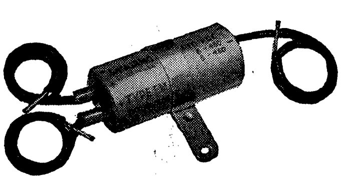
NOTE: Diagram dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tubes.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MTH-0610	100	6	⅝ x 1 1/16	$1.20	$0.72
MTH-0625	250	6	⅝ x 1 9/16	1.35	.81
MTH-0650	500	6	¾ x 2 5/16	1.55	.93
MTH-06100	1000	6	1 x 1 13/16	1.90	1.14
MTH-06150	1500	6	1 x 2 5/16	2.10	1.26
MTH-1210	100	12	⅝ x 1 9/16	1.20	.72
MTH-1225	250	12	¾ x 1 13/16	1.45	.87
MTH-1250	500	12	⅞ x 2 5/16	1.70	1.02
MTH-1510	100	15	⅝ x 1 9/16	1.25	.75
MTH-1525	250	15	¾ x 1 13/16	1.55	.93
MTH-1550	500	15	⅞ x 2 5/16	1.75	1.05
MTH-2510	100	25	¾ x 1 9/16	1.35	.81
MTH-2525	250	25	⅞ x 1 13/16	1.70	1.02
MTH-2550	500	25	1 x 2 5/16	2.30	1.38
MTH-5010	100	50	⅞ x 1 9/16	1.40	.84

NOTE: Dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tube.

NOTE: Packaging 10, 25, or 50 capacitors per display carton.

TYPE FM *Arrowhead*



The SANGAMO Type FM "Arrowhead" electrolytic capacitors are similar in design to the Type MT "Chieftain" in every respect except leads. The Type FM is equipped with flexible, insulated wire leads and stud terminals eliminating the problem of crossed wires and the necessity for the use of insulating sleeves. They are much smaller than the wax-end filled types with insulated leads. The capacitors themselves are housed in round aluminum containers which are encased in heavy insulating sleeves. They are especially designed for the rugged television requirements where 85°C. operating temperatures are encountered.

Dual Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
FMD-0210	10-10	25	⅞ x 1 1/16	$1.40	$0.84
FMD-0510	10-10	50	⅞ x 1 5/16	1.40	.84
FMD-1520	20-20	150	¾ x 1 9/16	1.65	.99
FMD-305	30-20	150	⅞ x 1 9/16	1.70	1.02
FMD-1530	30-30	150	⅞ x 1 9/16	1.80	1.08
FMD-302	40-20	150	1 x 1 13/16	1.75	1.05
FMD-304	40-30	150	1 x 1 13/16	1.80	1.08
FMD-1540	40-40	150	1 x 1 13/16	1.85	1.11
FMD-301	50-30	150	1 x 1 13/16	1.95	1.17
FMD-1550	50-50	150	1 x 2 5/16	2.10	1.26
FMD-4508	8- 8	450	⅞ x 1 13/16	1.70	1.02
FMD-308	8-16	450	1 x 1 13/16	2.00	1.20
FMD-4520	20-20	450	1 x 2⅞	2.50	1.50

Triple Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
FMT-1520	20-20-20	150	⅞ x 1 9/16	$2.20	$1.32
FMT-1530	30-30-30	150	⅞ x 2 5/16	2.35	1.41
FMT-310	40-20-20	150	⅞ x 2 5/16	2.25	1.35
FMT-312	40-30-20	150	⅞ x 2 5/16	2.35	1.41
FMT-1540	40-40-40	150	1 x 2 5/16	2.45	1.47
FMT-315	50-30-20	150	1 x:2 5/16	2.45	1.47

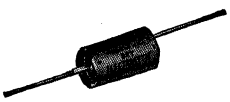
NOTE: All units are supplied with mounting strap attached.

NOTE: Packaging: 10, 25, or 50 capacitors per display carton.

NOTE: Diagram dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tube.

TYPE MMT

MINIATURE TUBES



SANGAMO Type MMT miniature tubular electrolytic capacitors are designed for use in miniaturized equipment and are ideally suited to meet the precise operating requirements of low voltage circuits. They are small in physical size and are self supporting by means of strong bare tinned copper wire leads. The Type MMT capacitors are contained in drawn aluminum tubes encased in a fitted cardboard insulating sleeve. Polarity of all units is clearly marked on the cardboard sleeve.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MMT-605	5	6	⅜ x 1 1/16	$0.80	$0.48
MMT-0505	5	50	⅜ x 1 1/16	1.00	.60
MMT-0210	10	25	⅜ x 1 1/16	1.00	.60
MMT-0510	10	50	⅜ x 1 1/16	1.00	.60
MMT-0220	20	25	⅜ x 1 1/16	1.00	.60
MMT-325	25	3	⅜ x 1 1/16	.85	.51
MMT-625	25	6	⅜ x 1 1/16	.85	.51
MMT-350	50	3	⅜ x 1 1/16	.95	.57
MMT-650	50	6	⅜ x 1 1/16	.95	.57
MMT-1505	5	150	⅜ x 1 1/16	1.00	.60
MMT-4501	1	450	⅜ x 1 1/16	1.00	.60

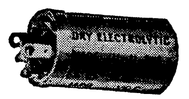
NOTE: Diagram dimensions are for metal tubes. Add 1/16 inch to diameter and 3/16 inch to length for dimensions over cardboard insulating tube.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE PL

FOR TELEVISION AND OTHER ELECTRONIC APPLICATIONS . . .



The SANGAMO Type PL "Warrior" electrolytic capacitors are specially designed for all television and electronic applications requiring long life and dependable performance at 85°C under conditions of extreme ripple currents and high surge voltages. They are sealed in round aluminum cans and have twist-prong tabs for washer or direct chassis mounting. The capacitor element current carrying tabs are securely clamped and staked to the terminal lugs, providing permanent, low resistance connections. In all cases the aluminum can is negative and the mounting ring provides the negative electrical connection.

The Type PL has been specially engineered for the rigid TV replacement applications found in all of the leading television receivers manufactured in the industry.

Stock No.	Catalog No.	Capacity mfd.	Wkg. Volts D.C.	— Size —		List Price	Resale Net Price
				Dia.	Len.		
S-005	PL-7001	2000	6	1⅜	x 2	$2.55	$1.53
S-010	PL-7002	1000	10	1	x 3	2.55	1.53
S-015	PL-700	3000	10	1⅜	x 3	2.90	1.74
S-020	PL-701	1000	15	1	x 3	2.55	1.53
S-025	PL-703	2000	15	1⅜	x 3	3.45	2.07
S-035	PL-02100	100	25	1	x 2	1.35	.81
S-035	PL-02100	100	25	1	x 2	1.60	.96
S-040	PL-02500	500	25	1	x 3	2.55	1.53
S-045	PL-705	1000	25	1⅜	x 3	3.55	2.13
S-050	PL-0525	25	50	¾	x 2	1.35	.81
S-055	PL-05150	150	50	1	x 2	1.80	1.08
S-060	PL-05500	500	50	1⅜	x 3	2.65	1.59
S-065	PL-1520	20	150	1	x 2	1.45	.87
S-070	PL-1530	30	150	1	x 2	1.55	.93
S-075	PL-1540	40	150	1	x 2	1.60	.96
S-080	PL-1550	50	150	1	x 2	1.65	.99
S-085	PL-1580	80	150	1	x 2	1.85	1.11
S-090	PL-15100	100	150	1	x 3	2.00	1.20
S-095	PL-15120	120	150	1⅜	x 2	2.10	1.26
S-100	PL-15140	140	150	1⅜	x 2½	2.15	1.29
S-105	PL-15150	150	150	1⅜	x 2½	2.15	1.29
S-110	PL-15200	200	150	1⅜	x 3	2.45	1.47
S-115	PL-15300	300	150	1⅜	x 3½	2.80	1.68
S-120	PL-2040	40	200	1	x 2	1.70	1.02
S-125	PL-2515	15	250	1	x 2	1.55	.93
S-130	PL-2520	20	250	1	x 2	1.60	.96
S-135	PL-2530	30	250	1	x 2	1.70	1.02
S-140	PL-2540	40	250	1	x 2	1.80	1.08
S-145	PL-2550	50	250	1	x 2½	1.95	1.17
S-150	PL-2560	60	250	1	x 2½	2.05	1.23
S-155	PL-2580	80	250	1	x 3	2.15	1.29
S-160	PL-25150	150	250	1⅜	x 3	3.10	1.86
S-165	PL-3015	15	300	1	x 2	1.60	.96
S-170	PL-3030	30	300	1	x 2	1.75	1.05
S-175	PL-3050	50	300	1	x 2½	2.05	1.23
S-180	PL-3060	60	300	1	x 3	2.10	1.26
S-185	PL-3080	80	300	1	x 3	2.55	1.53
S-190	PL-30100	100	300	1⅜	x 3	2.90	1.74
S-195	PL-30125	125	300	1⅜	x 3	3.50	2.10
S-200	PL-30150	150	300	1⅜	x 3½	3.50	2.10
S-205	PL-3520	20	350	1	x 2	1.75	1.05
S-210	PL-3530	30	350	1	x 2½	1.90	1.14
S-215	PL-3540	40	350	1	x 2½	2.00	1.20
S-220	PL-3550	50	350	1	x 3	2.10	1.26
S-225	PL-3580	80	350	1⅜	x 2½	2.85	1.71
S-230	PL-35125	125	350	1⅜	x 3	3.65	2.19
S-235	PL-4050	50	400	1⅜	x 2½	2.20	1.32
S-240	PL-4080	80	400	1⅜	x 2½	2.95	1.77
S-245	PL-4504	4	450	1	x 2	1.50	.90
S-250	PL-4510	10	450	1	x 2	1.55	.93
S-255	PL-4515	15	450	1	x 2	1.70	1.02
S-260	PL-4520	20	450	1	x 2	1.80	1.08
S-265	PL-4530	30	450	1	x 2½	1.95	1.17
S-270	PL-4540	40	450	1	x 3	2.05	1.23
S-275	PL-4550	50	450	1	x 3½	2.35	1.41
S-280	PL-4580	80	450	1⅜	x 3	3.05	1.83
S-285	PL-45100	100	450	1⅜	x 3½	3.50	2.10
S-290	PL-45125	125	450	1⅜	x 4	3.85	2.31
S-295	PL-4730	30	475	1	x 3	2.00	1.20
S-300	PL-4740	40	475	1⅜	x 2	2.50	1.50
S-305	PL-4790	90	475	1⅜	x 3½	3.50	2.10
S-310	PL-5010	10	500	1	x 2½	1.60	.96
S-315	PL-5020	20	500	1	x 3	1.85	1.11
D-005	PLD-7057	250-50	6	1	x 2	2.50	1.50
D-010	PLD-7059	100-100	10	1	x 2	1.75	1.05
D-015	PLD-706	1000-1000	15	1⅜	x 2½	4.40	2.64
D-020	PLD-0240	40-40	25	1	x 2	1.60	.96
D-025	PLD-7065	150-50	25	1	x 2	$1.90	$1.14
D-030	PLD-0550	50-50	50	1	x 2	1.70	1.02
D-035	PLD-7067	100-25	50	1	x 2	1.80	1.08
D-040	PLD-1520	20-20	150	1	x 2	1.70	1.02
D-045	PLD-707	30-15	150	1	x 2	1.75	1.05
D-050	PLD-1530	30-30	150	1	x 2	1.85	1.11
D-055	PLD-712	40-20	150	1	x 2	1.80	1.08
D-060	PLD-1540	40-40	150	1	x 2	1.90	1.14
D-065	PLD-716	50-30	150	1	x 2	2.00	1.20
D-070	PLD-1550	50-50	150	1	x 2½	2.15	1.29
D-075	PLD-7163	60-20	150	1	x 3	2.00	1.20
D-080	PLD-1560	60-60	150	1	x 3	2.35	1.41
D-085	PLD-7165	80-40	150	1	x 3	2.30	1.38
D-090	PLD-7166	200-125	150	1⅜	x 3½	3.75	2.25
D-095	PLD-15200	200-200	150	1⅜	x 4	4.00	2.40
D-100	PLD-20100	100-100	200	1⅜	x 3	3.45	2.07
D-105	PLD-2510	10-10	250	1	x 2	1.70	1.02
D-110	PLD-2520	20-20	250	1	x 2	1.90	1.14
D-115	PLD-2540	40-40	250	1	x 3	2.55	1.53
D-120	PLD-3010	10-10	300	1	x 2	1.75	1.05
D-125	PLD-3015	15-15	300	1	x 2	1.90	1.14
D-130	PLD-3040	40-40	300	1⅜	x 2½	3.00	1.80
D-135	PLD-3060	60-60	300	1⅜	x 3	3.40	2.04
D-140	PLD-7167	80-40	300	1⅜	x 3	3.55	2.13
D-145	PLD-3080	80-80	300	1⅜	x 3½	4.05	2.43
D-150	PLD-715	120-20	300	1⅜	x 3½	3.80	2.28
D-155	PLD-3515	15-15	350	1	x 2	2.25	1.35
D-160	PLD-3520	20-20	350	1	x 2½	2.30	1.38
D-165	PLD-7175	30-20	350	1	x 3	2.60	1.56
D-170	PLD-7177	50-30	350	1⅜	x 2½	3.15	1.89
D-175	PLD-3580	80-80	350	1⅜	x 4	4.70	2.82
D-180	PLD-4015	15-15	400	1	x 2½	2.25	1.35
D-185	PLD-4040	40-40	400	1⅜	x 3	3.30	1.98
D-190	PLD-4060	60-60	400	1⅜	x 3½	4.40	2.64
D-195	PLD-717	80-10	400	1⅜	x 3	3.40	2.04
D-200	PLD-4510	10-10	450	1	x 2	1.90	1.14
D-205	PLD-718	15-10	450	1	x 3	2.25	1.35
D-210	PLD-7185	20-10	450	1	x 3	2.25	1.35
D-215	PLD-4520	20-20	450	1	x 3	2.55	1.53
D-220	PLD-7186	25-20	450	1	x 3	2.65	1.59
D-225	PLD-4530	30-30	450	1⅜	x 2½	3.05	1.83
D-230	PLD-7187	40-20	450	1⅜	x 2½	3.00	1.80
D-235	PLD-4540	40-40	450	1⅜	x 3	3.45	2.07
D-240	PLD-7188	60-40	450	1⅜	x 3	3.95	2.37
D-245	PLD-719	80-10	450	1⅜	x 3	3.60	2.16
D-250	PLD-7193	80-30	450	1⅜	x 4	4.20	2.52
D-255	PLD-7195	80-40	450	1⅜	x 4	4.35	2.61
D-260	PLD-4720	20-20	475	1	x 3	2.80	1.68
D-265	PLD-4740	40-40	475	1⅜	x 3	4.30	2.58
D-270	PLD-5020	20-20	500	1⅜	x 2½	2.85	1.71
D-275	PLD-5040	40-40	500	1⅜	x 3½	4.30	2.58
D-280	PLD-7196	500/50	5/150	1	x 3	2.45	1.47
D-285	PLD-7197	250/1000	10/6	1⅜	x 2	2.85	1.71
D-290	PLD-7198	40/20	150/25	1	x 2	1.70	1.02
D-295	PLD-7199	40/150	150/25	1	x 2	2.05	1.23
D-300	PLD-71995	150/100	150/25	1⅜	x 2½	2.70	1.62
D-305	PLD-71997	40/25	250/25	1	x 2½	1.70	1.02
D-310	PLD-720	20/20	300/25	1	x 2	1.85	1.11
D-315	PLD-7201	20/60	300/350	1⅜	x 2½	2.85	1.71
D-320	PLD-7202	20/20	350/25	1	x 2	1.90	1.14
D-325	PLD-7203	20/30	350/250	1	x 3	2.30	1.38
D-330	PLD-7204	60/80	350/250	1⅜	x 3½	3.45	2.07
D-335	PLD-72045	20/10	350/300	1	x 2	2.05	1.23
D-340	PLD-7205	30/30	350/300	1	x 3	2.65	1.59
D-345	PLD-7207	10/20	450/25	1	x 2	1.90	1.14
D-350	PLD-7209	20/20	450/25	1	x 2½	2.00	1.20
D-355	PLD-7215	40/20	450/25	1	x 3	2.35	1.41
D-360	PLD-725	80/10	450/25	1⅜	x 3	3.40	2.04
D-365	PLD-726	80/50	450/50	1⅜	x 3	3.50	2.10
D-370	PLD-7261	20/100	450/100	1⅜	x 2½	2.65	1.59
D-375	PLD-7263	30/40	450/150	1⅜	x 2	2.50	1.50
D-380	PLD-7265	40/150	450/150	1⅜	x 3	3.45	2.07
D-385	PLD-7267	80/50	450/150	1⅜	x 3	3.75	2.25
D-390	PLD-721	20/80	450/350	1⅜	x 3½	3.65	2.19
D-395	PLD-7217	25/15	450/350	1	x 3	2.55	1.53
D-400	PLD-722	40/10	450/350	1⅜	x 2	2.60	1.56
D-405	PLD-7225	40/20	450/350	1⅜	x 2½	2.85	1.71
D-410	PLD-727	20/100	475/300	1⅜	x 3½	3.95	2.37
D-415	PLD-728	40/50	500/200	1⅜	x 3½	3.35	2.01
T-005	PLT-0220	20-20-20	25	1	x 2	1.95	1.17
T-010	PLT-0240	40-40-40	25	1	x 2	2.15	1.27
T-015	PLT-0530	30-30-30	50	1	x 2	2.15	1.27
T-020	PLT-1520	20-20-20	150	1	x 2	2.30	1.38
T-025	PLT-730	30-30-10	150	1	x 2	2.35	1.41
T-030	PLT-7305	40-20-10	150	1	x 2	2.35	1.41
T-035	PLT-731	40-20-20	150	1	x 2	2.40	1.44
T-040	PLT-738	40-30-20	150	1	x 2	2.50	1.50
T-045	PLT-1540	40-40-40	150	1	x 3	2.60	1.56
T-050	PLT-1550	50-50-50	150	1	x 3	3.00	1.80
T-055	PLT-7385	80-40-20	150	1	x 3	2.90	1.74
T-060	PLT-1580	80-80-80	150	1⅜	x 3	3.75	2.25
T-065	PLT-7387	120-80-40	150	1⅜	x 3½	3.80	2.28
T-070	PLT-739	10-15-15	250	1	x 2	2.45	1.47
T-075	PLT-7393	20-20-10	250	1	x 2½	2.50	1.50

SANGAMO CAPACITORS

TYPE PL ELECTROLYTIC CAPACITORS (Continued)

Stock No.	Catalog No.	Capacity mfd.	Wkg. Volts D.C.	Size		List Price	Resale Net Price
				Dia.	Len.		
T-080	PLT-7395	30-15-10	250	1	x 2½	$2.70	$1.62
T-085	PLT-7397	40-20-10	250	1⅜	x 2	2.85	1.71
T-090	PLT-740	40-20-20	250	1	x 3	2.90	1.74
T-095	PLT-3010	10-10-10	300	1	x 2	2.40	1.44
T-100	PLT-3020	20-20-20	300	1	x 3	3.10	1.86
T-105	PLT-3510	10-10-10	350	1	x 2	2.40	1.44
T-110	PLT-7407	60-40-20	350	1⅜	x 3	4.25	2.55
T-115	PLT-7409	80-60-60	350	1⅜	x 5	5.60	3.36
T-120	PLT-4010	10-10-10	400	1	x 2½	2.40	1.44
T-125	PLT-4510	10-10-10	450	1	x 2½	2.60	1.56
T-130	PLT-741	15-15-10	450	1	x 3	2.95	1.77
T-135	PLT-7412	20-10-10	450	1	x 3	2.95	1.77
T-140	PLT-4520	20-20-20	450	1⅜	x 2½	3.60	2.16
T-145	PLT-7413	30-20-20	450	1⅜	x 3	3.85	2.31
T-150	PLT-7414	30-30-20	450	1⅜	x 3	4.10	2.46
T-155	PLT-4530	30-30-30	450	1⅜	x 3	4.35	2.61
T-160	PLT-74145	40-30-20	450	1⅜	x 3	4.30	2.58
T-165	PLT-7415	40-40-10	450	1⅜	x 3	4.15	2.49
T-170	PLT-4540	40-40-40	450	1⅜	x 3½	4.90	3.54
T-175	PLT-7417	60-30-10	450	1⅜	x 3	4.50	2.70
T-180	PLT-7419	80-40-20	450	1⅜	x 4	5.40	3.24
T-185	PLT-4710	10-10-10	475	1	x 3	2.70	1.62
T-190	PLT-742	30-30-20	475	1⅜	x 3	4.45	2.67
T-195	PLT-4730	30-30-30	475	1⅜	x 3½	4.65	2.79
T-200	PLT-5010	10-10-10	500	1	x 3	2.70	1.62
T-205	PLT-7425	30-20-20	500	1⅜	x 3	4.20	2.52
T-210	PLT-745	20/250-100	150/15-15	1⅜	x 2	2.90	1.74
T-215	PLT-746	100/50/25	150/50/25	1	x 3	3.00	1.80
T-220	PLT-747	30-20/100	150-150/6	1	x 2	2.40	1.44
T-225	PLT-7471	30-20/100	150-150/10	1	x 2	2.40	1.44
T-230	PLT-7473	30-30/200	150-150/10	1	x 2	2.50	1.50
T-235	PLT-7475	40-20/150	150-150/10	1	x 2	2.40	1.44
T-240	PLT-7477	40-20/200	150-150/10	1	x 2	2.56	1.50
T-245	PLT-748	20-20/20	150-150/25	1	x 2	.2.20	1.32
T-250	PLT-750	30-20/20	150-150/25	1	x 2	2.25	1.35
T-255	PLT-751	30-30/20	150-150/25	1	x 2	2.30	1.38
T-260	PLT-749	40-20/20	150-150/25	1	x 2	2.30	1.38
T-265	PLT-7517	40-20/100	150-150/25	1	x 2½	2.50	1.50
T-270	PLT-7519	40-20/200	150-150/25	1	x 2½	2.70	1.62
T-275	PLT-752	40-30/20	150-150/25	1	x 2	2.35	1.41
T-280	PLT-7521	40-30/25	150-150/25	1	x 2½	2.35	1.41
T-285	PLT-7525	40-40/20	150-150/25	1	x 2½	2.40	1.44
T-290	PLT-7526	40-40/40	150-150/25	1	x 2½	2.45	1.47
T-295	PLT-7527	50-30/20	150-150/25	1	x 2	2.50	1.50
T-300	PLT-753	50-30/100	150-150/25	1	x 2½	2.70	1.62
T-305	PLT-754	50-50/20	150-150/25	1	x 2½	2.65	1.59
T-310	PLT-7541	60-40/25	150-150/25	1	x 3	2.65	1.59
T-315	PLT-7543	120-60/20	150-150/25	1⅜	x 2½	3.35	2.01
T-320	PLT-7545	30-20/20	200-200/25	1	x 2½	2.55	1.53
T-325	PLT-7547	100-10/40	200-200/50	1⅜	x 2½	3.15	1.89
T-330	PLT-757	15-15/20	250-250/25	1	x 2	2.35	1.41
T-335	PLT-7575	20-15/20	250-250/25	1	x 2	2.35	1.41
T-340	PLT-758	30-30/20	250-250/25	1	x 2½	2.80	1.68
T-345	PLT-7585	70-70/20	250-250/50	1⅜	x 3	3.90	2.34
T-350	PLT-7587	40-20/10	250-250/150	1⅜	x 2	2.75	1.65
T-355	PLT-7588	40-40/10	250-250/200	1⅜	x 3	2.10	1.86
T-360	PLT-759	80-80/60	250-250/200	1⅜	x 3½	4.50	2.70
T-365	PLT-7593	30/20/20	250/350/25	1	x 3	2.80	1.68
T-370	PLT-7595	100/60/20	300/150/25	1⅜	x 3	4.20	2.52
T-375	PLT-7597	100/60-20	300/250-250	1⅜	x 3½	4.90	2.94
T-380	PLT-762	20-20/20	300-300/25	1	x 2½	2.75	1.65
T-385	PLT-763	40-15/20	300-300/25	1	x 3	2.95	1.77
T-390	PLT-7631	40-20/20	300-300/25	1⅜	x 2	3.10	1.86
T-395	PLT-7632	30-30/25	300-300/50	1	x 3	2.90	1.74
T-400	PLT-7635	10-10/15	300-300/250	1	x 2	2.45	1.47
T-405	PLT-7633	20/100/100	350/100/50	1⅜	x 3	3.45	2.07
T-410	PLT-7636	10/50/100	350/100/75	1	x 3	3.05	1.83
T-415	PLT-7638	10/50/100	350/150/50	1	x 3½	2.85	1.71
T-420	PLT-76385	20/30/20	350/250/25	1	x 3	2.80	1.68
T-425	PLT-760	30/20-10	350/250-250	1	x 3	3.00	1.80
T-430	PLT-7639	30/30/20	350/300/25	1	x 3	3.15	1.89
T-435	PLT-7605	20/40/10	350/300/150	1	x 3½	3.15	1.89
T-440	PLT-764	40/20/10	350/300/200	1⅜	x 2	3.30	1.98
T-445	PLT-7645	30/20/20	350/300/250	1	x 3	3.30	1.98
T-450	PLT-765	10-10/20	350-350/25	1	x 2	2.25	1.35
T-455	PLT-7655	10-15/20	350-350/25	1	x 2	2.50	1.50
T-460	PLT-766	15-15/20	350-350/25	1	x 2½	2.70	1.62
T-465	PLT-7665	20-10/20	350-350/25	1	x 2½	2.55	1.53
T-470	PLT-7671	20-20/20	350-350/25	1	x 2½	2.80	1.68
T-475	PLT-7672	30-10/20	350-350/25	1	x 2½	2.85	1.71
T-480	PLT-767	30-20/20	350-350/25	1	x 3	3.10	1.86
T-485	PLT-7674	30-30/20	350-350/25	1⅜	x 2½	3.40	2.04
T-490	PLT-76745	40-40/50	350-350/25	1⅜	x 2½	3.75	2.25
T-495	PLT-7675	10-5/150	350-350/50	1	x 3	2.70	1.62
T-500	PLT-76755	40-20/10	350-350/100	1⅜	x 2	2.85	1.71
T-505	PLT-7677	20-10/5	350-350/250	1	x 2½	2.55	1.53
T-510	PLT-7679	30-10/20	350-350/250	1	x 3	3.05	1.83
T-515	PLT-768	60/40/20	400/300/25	1⅜	x 3	4.20	2.52
T-520	PLT-7681	10/40/10	400/300/150	1⅜	x 2	2.90	1.74
T-525	PLT-7682	80/20-10	400/300-300	1⅜	x 3½	4.25	2.55
T-530	PLT-7687	10/50/30	400/350/25	1	x 3½	3.10	1.86
T-535	PLT-7688	40/10/100	400/350/50	1⅜	x 3	3.40	2.04
T-540	PLT-7689	60/20-20	400/350-350	1⅜	x 3	$4.30	$2.58
T-545	PLT-769	15-15/40	400-400/25	1	x 2½	2.80	1.68
T-550	PLT-770	20-20/20	400-400/25	1	x 3	2.85	1.71
T-555	PLT-7707	40-40/20	400-400/300	1⅜	x 3½	4.15	2.49
T-560	PLT-771	30/100-25	450/25-25	1⅜	x 2	3.00	1.80
T-565	PLT-7712	40/40/130	450/150/50	1⅜	x 3	3.65	2.19
T-570	PLT-7714	40/100/50	450/150/50	1⅜	x 3	3.95	2.37
T-575	PLT-7715	40/90-50	450/150-150	1⅜	x 3½	4.00	2.40
T-580	PLT-77152	20/80/50	450/200/50	1⅜	x 2½	3.40	2.04
T-585	PLT-7716	20/60/100	450/250/25	1⅜	x 2½	3.65	2.19
T-590	PLT-77165	20/80/10	450/250/200	1⅜	x 3	3.60	2.16
T-595	PLT-77168	10/80-80	450/250-250	1⅜	x 4	4.20	2.52
T-600	PLT-7717	20/40-10	450/250-250	1⅜	x 2	3.15	1.89
T-605	PLT-7719	20/15-10	450/300-300	1	x 3½	2.85	1.71
T-610	PLT-772	10/10/20	450/350/25	1	x 2	2.30	1.38
T-615	PLT-773	10/10/50	450/350/25	1	x 3	2.40	1.44
T-620	PLT-7735	20/80/100	450/350/50	1⅜	x 3½	4.50	2.70
T-625	PLT-774	15/20/20	450/350/250	1⅜	x 2	3.00	1.80
T-630	PLT-7745	20/80/10	450/350/300	1⅜	x 3	4.30	2.58
T-635	PLT-775	10/30/30	450/400/300	1⅜	x 2½	3.35	2.01
T-640	PLT-776	10-10/10	450-450/25	1	x 2½	2.40	1.44
T-645	PLT-777	10-10/20	450-450/25	1	x 2½	2.40	1.44
T-650	PLT-779	15-15/20	450-450/25	1	x 3	2.75	1.65
T-655	PLT-778	20-10/20	450-450/25	1	x 3	2.70	1.62
T-660	PLT-780	20-15/20	450-450/25	1	x 3	2.90	1.74
T-665	PLT-782	20-20/20	450-450/25	1	x 3	3.05	1.83
T-670	PLT-7825	30-20/20	450-450/25	1⅜	x 2½	3.30	1.98
T-675	PLT-783	30-30/20	450-450/25	1⅜	x 2½	3.55	2.13
T-680	PLT-7831	40-40/20	450-450/25	1⅜	x 3	3.95	2.37
T-685	PLT-7832	40-40/40	450-450/25	1⅜	x 3	4.00	2.40
T-690	PLT-7834	80-40/100	450-450/25	1⅜	x 4	5.10	3.06
T-695	PLT-7835	10-10/40	450-450/50	1	x 2½	2.75	1.65
T-700	PLT-7837	20-10/50	450-450/50	1	x 3	2.85	1.71
T-705	PLT-78375	30-30/40	450-450/50	1⅜	x 3	3.65	2.19
T-710	PLT-78377	40-10/40	450-450/50	1⅜	x 2½	3.25	1.95
T-715	PLT-7839	40-40/40	450-450/50	1⅜	x 3	4.00	2.40
T-720	PLT-78395	40-40/100	450-450/50	1⅜	x 3½	4.30	2.58
T-725	PLT-784	40-40/40	450-450/150	1⅜	x 3½	4.15	2.49
T-730	PLT-785	40-10/80	450-450/200	1⅜	x 3	3.90	2.34
T-735	PLT-7855	40-10/100	450-450/200	1⅜	x 3½	4.15	2.49
T-740	PLT-7857	40-40/100	450-450/200	1⅜	x 4	4.95	2.97
T-745	PLT-7859	15-10/120	450-450/300	1⅜	x 3½	4.70	2.82
T-750	PLT-786	15-15/10	450-450/300	1	x 3	2.85	1.71
T-755	PLT-7865	15-5/15	450-450/350	1	x 3	2.85	1.71
T-760	PLT-787	20-20/60	450-450/350	1⅜	x 3½	4.05	2.43
T-765	PLT-789	40-10/10	450-450/350	1⅜	x 3	3.30	1.98
T-770	PLT-7895	10/100/40	475/200/50	1⅜	x 2½	3.35	2.01
T-775	PLT-7897	40/40-10	475/250-250	1⅜	x 3	4.05	2.43
T-780	PLT-790	20/20/40	475/300/25	1⅜	x 2	3.10	1.86
T-785	PLT-792	40/40/25	475/400/50	1⅜	x 3	4.30	2.58
T-790	PLT-793	40/20-20	475/450-450	1⅜	x 3	4.50	2.70
T-795	PLT-794	20-20/60	475-475/400	1⅜	x 3½	4.80	2.88
T-800	PLT-7945	40/40/100	500/250/50	1⅜	x 3	4.30	2.58
T-805	PLT-795	20/20/40	500/300/25	1⅜	x 2	3.10	1.86
T-810	PLT-7955	10-10/100	500-500/50	1	x 3	2.85	1.71
T-815	PLT-796	30-10/20	500-500/50	1⅜	x 2½	3.10	1.86
T-820	PLT-7965	10-10/4	500-500/350	1	x 3	2.50	1.50
Q-005	PLQ-797	40-40-40-30	150	1⅜	x 2	3.35	2.01
Q-010	PLQ-798	40-40-20-10	300	1⅜	x 3½	4.55	2.73
Q-015	PLQ-7981	30-30-20-20	400	1⅜	x 3½	4.85	2.91
Q-020	PLQ-7983	80-10-10-10	400	1⅜	x 3½	4.70	2.82
Q-025	PLQ-7984	80-25-10-10	400	1⅜	x 4	5.25	3.15
Q-030	PLQ-4510	10-10-10-10	450	1⅜	x 2	3.35	2.01
Q-035	PLQ-7986	20-10-10-10	450	1⅜	x 2½	3.70	2.22
Q-040	PLQ-4520	20-20-20-20	450	1⅜	x 3	4.70	2.82
Q-045	PLQ-799	30-15-15-15	450	1⅜	x 3	4.45	2.67
Q-050	PLQ-800	30-30-15-10	450	1⅜	x 3½	4.70	2.82
Q-055	PLQ-8002	40-10-10-10	450	1⅜	x 3	4.15	2.49
Q-060	PLQ-8004	40-20-10-10	450	1⅜	x 3	4.45	2.67
Q-065	PLQ-4540	40-40-40-40	450	1⅜	x 5	6.45	3.87
Q-070	PLQ-4710	10-10-10-10	475	1⅜	x 2	3.50	2.10
Q-075	PLQ-801	40-20-10-10	475	1⅜	x 3	5.10	3.06
Q-080	PLQ-8012	40-40/100-100	150-150/25-25	1⅜	x 2	3.35	2.01
Q-085	PLQ-8013	30-20-20/200	150-150-150/10	1⅜	x 2	3.10	1.86
Q-090	PLQ-8015	60-40-20/200	150-150-150/10	1⅜	x 3	3.50	2.10
Q-095	PLQ-802	30-30-30/40	150-150-150/25	1⅜	x 2	3.10	1.86
Q-100	PLQ-803	40-40-30/20	150-150-150/25	1⅜	x 2	3.10	1.86
Q-105	PLQ-8035	40-40-40/20	150-150-150/25	1⅜	x 2	3.15	1.89
Q-110	PLQ-804	40-40-40/100	150-150-150/25	1⅜	x 2	3.35	2.01
Q-115	PLQ-805	50-50-50/20	150-150-150/25	1⅜	x 2	3.55	2.13
Q-120	PLQ-8050	80-40-40/40	150-150-150/25	1⅜	x 3	3.60	2.16
Q-125	PLQ-80502	80-40-40/100	150-150-150/25	1⅜	x 2½	3.75	2.25
Q-130	PLQ-8011	150-150/20/100	150-150/300/50	1⅜	x 3½	5.30	3.18
Q-135	PLQ-8051	40-20-10/20	200-200-200/25	1⅜	x 2	3.20	1.92
Q-140	PLQ-8052	100-40-10/100	250-250-250/50	1⅜	x 3½	5.15	3.09
Q-145	PLQ-8054	80-60-40/20	250-250-250/150	1⅜	x 3½	5.10	3.06
Q-150	PLQ-8055	100/40/80-20	300/50/25-25	1⅜	x 3½	4.55	2.73
Q-155	PLQ-8057	120/20/20/100	300/250/25/50	1⅜	x 4	5.05	3.03

SANGAMO CAPACITORS

Type PL Electrolytic Capacitors (Cont'd.)

Stock No.	Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
Q-160	PLQ-8059	200/20/20/100	300/250/25/50	1⅜ x 5	$5.45	$3.27
Q-165	PLQ-806	10-10-10/20	300-300-300/25	1⅜ x 2	2.95	1.77
Q-170	PLQ-808	60-40-20/50	300-300-300/25	1⅜ x 3½	4.70	2.82
Q-175	PLQ-8085	40-40-40/20	300-300-300/150	1⅜ x 3	4.90	2.94
Q-180	PLQ-809	15/80-40/200	350/200-200/25	1⅜ x 3	4.50	2.70
Q-185	PLQ-810	40/40-20/20	350/300-300/25	1⅜ x 3	4.50	2.70
Q-190	PLQ-8105	30-30/15/20	350-350/300/25	1⅜ x 3	4.15	2.49
Q-195	PLQ-811	10-10/10-10	350-350/300-300	1⅜ x 2	3.10	1.86
Q-200	PLQ-8113	20-10-5/10	350-350-350/25	1⅜ x 2	3.10	1.86
Q-205	PLQ-8115	20-10-5/20	350-350-350/25	1⅜ x 2	3.10	1.86
Q-210	PLQ-8116	40-20-20/25	350-350-350/25	1⅜ x 2½	4.25	2.55
Q-215	PLQ-8117	40-40-40/40	350-350-350/25	1⅜ x 3½	5.20	3.12
Q-220	PLQ-8119	40-40-40/150	350-350-350/50	1⅜ x 4	5.70	3.42
Q-225	PLQ-81195	80/40-20-10	400/300-300 300	1⅜ x 4	5.55	3.33
Q-230	PLQ-81197	20/40/100-10	400/350/50-50	1⅜ x 3	4.20	2.52
Q-235	PLQ-812	40/10/80-10	400/350/250-250	1⅜ x 3½	4.65	2.79
Q-240	PLQ-8125	10-10/25-25	400-400/25-25	1⅜ x 2	2.80	1.68
Q-245	PLQ-8127	40-10/80-10	400-400/250-250	1⅜ x 3½	4.70	2.82
Q-250	PLQ-814	20-20-20/20	400-400-400/25	1⅜ x 2½	3.85	2.31
Q-255	PLQ-8145	20/80-20/50	450/200-200/50	1⅜ x 3	4.15	2.49
Q-260	PLQ-8147	40/40-40/20	450/250-250/25	1⅜ x 3	4.55	2.73
Q-265	PLQ-8149	10/10/60/100	450/300/200/50	1⅜ x 2½	3.80	2.28
Q-270	PLQ-815	20/15-15/20	450/350-350/25	1⅜ x 2	3.80	2.28
Q-275	PLQ-8152	10/60-40/25	450/350-350/25	1⅜ x 3½	4.60	2.76
Q-280	PLQ-8154	10/100-10/20	450/350-350/25	1⅜ x 3½	5.25	3.15
Q-285	PLQ-8156	30/40-40/10	450/350-350/200	1⅜ x 3½	5.15	3.09
Q-290	PLQ-8158	80/10/30/40	450/400/300/150	1⅜ x 4	5.25	3.15
Q-295	PLQ-8159	10-10/20-20	450-450/25-25	1⅜ x 2	2.95	1.77
Q-300	PLQ-816	20-15/20-20	450-450/25-25	1⅜ x 2	3.45	2.07
Q-305	PLQ-817	20-20/20-20	450-450/25-25	1⅜ x 2	3.60	2.16
Q-310	PLQ-8175	40-40/10/50	450-450/300/50	1⅜ x 3	4.75	2.85
Q-315	PLQ-818	20-20/30-30	450-450/300-300	1⅜ x 3	4.50	2.70
Q-320	PLQ-819	40-10/35-10	450-450/350-350	1⅜ x 3½	4.60	2.76
Q-325	PLQ-8195	40-40/30-30	450-450/350-350	1⅜ x 4	5.90	3.54
Q-330	PLQ-820	10-10-10/20	450-450-450/25	1⅜ x 2	3 15	1.89
Q-335	PLQ-8202	20-10-10/100	450-450-450/25	1⅜ x 2½	3.70	2.22
Q-340	PLQ-8205	20-20-20/20	450-450-450/25	1⅜ x 2½	4.15	2.49
Q-345	PLQ-82055	30-20-20/20	450-450-450/25	1⅜ x 3	4.40	2.64
Q-350	PLQ-82057	30-30-10/20	450-450-450/25	1⅜ x 3	4.35	2.61
Q-355	PLQ-8206	30-30-20/20	450-450-450/25	1⅜ x 3	4.65	2.79
Q-360	PLQ-8207	40-10-10/250	450-450-450/25	1⅜ x 3	4.25	2.55
Q-365	PLQ-82075	40-15-10/20	450-450-450/25	1⅜ x 3	4.10	2.46
Q-370	PLQ-8208	40-20-20/20	450-450-450/25	1⅜ x 3	4.60	2.76
Q-375	PLQ-8209	40-20-20/40	450-450-450/25	1⅜ x 3	4.65	2.79
Q-380	PLQ-821	40-30-10/20	450-450-450/25	1⅜ x 3	4.50	2.70
Q-385	PLQ-8215	40-40-10/20	450-450-450/25	1⅜ x 3	4.70	2.82
Q-390	PLQ-8216	40-40-40/40	450-450-450/25	1⅜ x 4	5.50	3.30
Q-395	PLQ-8217	20-20-20/100	450-450-450/50	1⅜ x 3	4.55	2.73
Q-400	PLQ-822	30-30-15/30	450-450-450/50	1⅜ x 3	4.15	2.49
Q-405	PLQ-8225	40-20-10/100	450-450-450/50	1⅜ x 3½	4.65	2.79
Q-410	PLQ-8226	40-40-10/25	450-450-450/50	1⅜ x 3½	4.70	2.82
Q-415	PLQ-8227	40-40-10/100	450-450-450/100	1⅜ x 4	5.35	3.21
Q-420	PLQ-823	10-10-10/10	450-450-450/150	1⅜ x 2	3.15	1.89
Q-425	PLQ-8235	20-10-10/10	450-450-450/150	1⅜ x 3	3.50	2.10
Q-430	PLQ-824	60-10-10/20	450-450-450/150	1⅜ x 3	4.60	2.76
Q-435	PLQ-8240	40/40/50/80	475-250/150/50	1⅜ x 3½	5.05	3.03
Q-440	PLQ-8241	20/40/100/80	475/300/50/25	1⅜ x 3	4.50	2.70
Q-445	PLQ-8242	10/10/80/50	475/450/200/60	1⅜ x 3	3.85	2.31
Q-450	PLQ-8243	25/20/20/100	475/450/300/50	1⅜ x 3	4.60	2.76
Q-455	PLQ-8244	25/20/40/100	475/450/300/50	1⅜ x 3½	4.95	2.97
Q-460	PLQ-8246	10/60/30/125	475/450/400/50	1⅜ x 4	5.45	3.27
Q-465	PLQ-8247	15-15/80/40	475-475/300/50	1⅜ x 3	4.80	2.88
Q-470	PLQ-8249	10-5/80/40	475-475/450/50	1⅜ x 3½	4.95	2.97
Q-475	PLQ-8250	30-30-10/20	475-475-475/25	1⅜ x 3	4.55	2.73
Q-480	PLQ-825	40-20-10/10	475-475-475/25	1⅜ x 3	4.85	2.91
Q-485	PLQ-826	20-20-10/10	475-475-475/300	1⅜ x 2½	4.30	2.58

NOTE: Maximum operating temperature of 475 and 500 volt units is 65°C.

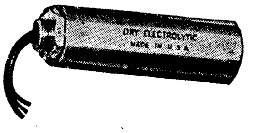
NOTE: Each unit is supplied with a bakelite and a metal mounting plate. Additional hardware available at extra cost.

NOTE: Packaging: Individual display carton.

CARDBOARD INSULATING TUBES

Catalog Number	Description	List Price	Resale Net Price
KCT-1	For 1" x 2" can	$0.06	$0.03
KCT-2	For 1" x 2½" can	.06	.03
KCT-3	For 1" x 3" can	.06	.03
KCT-4	For 1" x 4" can	.06	.03
KCT-5	For 1⅜" x 2" can	.06	.03
KCT-6	For 1⅜" x 2½" can	.06	.03
KCT-7	For 1⅜" x 3" can	.06	.03
KCT-8	For 1⅜" x 3½" can	.06	.03
KCT-9	For 1⅜" x 4" can	.06	.03

TYPE SL



wet electrolytics, the Designed primarily as replacements for Type SL electrolytic capacitors are assembled in round aluminum cans with threaded necks providing easy mounting to a chassis with the aid of a palnut which is supplied. The Type SL is completely insulated from the container, the negative connection being made to one of the insulated leads extending through the threaded neck of the can.

Single Section

Catalog Number	Capacity mfd.	Wkg. Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
SL-2512	12	250	1 x 2½	$1.75	$1.05
SL-2525	25	250	1 x 3½	1.95	1.17
SL-4508	8	450	1⅜ x 2½	2.20	1.32
SL-4512	12	450	1⅜ x 2½	2.40	1.44
SL-4516	16	450	1⅜ x 2½	2.45	1.47
SL-4520	20	450	1⅜ x 2½	2.70	1.62
SL-4530	30	450	1⅜ x 3½	3.00	1.80
SL-4540	40	450	1⅜ x 4¼	3.15	1.89

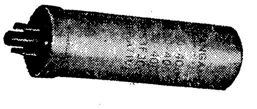
Common Negative Section

Catalog Number	Capacity mfd.	Wkg. Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
SLD-4508	8- 8	450	1⅜ x 3½	$3.00	$1.80
SLD-4516	16-16	450	1⅜ x 3½	3.55	2.13
SLT-4508	8-8-8	450	1⅜ x 3½	5.00	3.00

High Voltage, Series Wound Sections

Catalog Number	Capacity mfd.	Wkg. Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
SL-6004	4	600	1⅜ x 3½	$2.95	$1.77
SL-6008	8	600	1⅜ x 4¼	3.15	1.89
SL-6016	16	600	1⅜ x 4¼	3.75	2.25

TYPE TS



Ideally suited for all applications where quick capacitor changes are required, the SANGAMO Type TS units are equipped with a four-pin octal base mounting for use with standard octal base tube sockets. The special design of the bakelite octal base insures that the aluminum container will not contact the mounting surface and the connections to the brass pin terminals are imbedded in this bakelite base. The base pins are nickel-plated to prevent corrosion and insure good contact with the socket terminals.

Single Section

Catalog Number	Capacity mfd.	Wkg. Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
TS-1520	20	150	1⅜ x 2½	$3.95	$2.37
TS-1540	40	150	1⅜ x 2½	4.10	2.46
TS-4510	10	450	1⅜ x 2½	4.05	2.43
TS-4520	20	450	1⅜ x 2½	4.30	2.58
TS-4540	40	450	1⅜ x 2½	4.55	2.73
TS-4580	80	450	1⅜ x 4¼	5.55	3.33

Dual Sections

Catalog Number	Capacity mfd.	Wkg. Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
TSD-1520	20-20	150	1⅜ x 2½	$4.20	$2.52
TSD-1540	40-40	150	1⅜ x 2½	4.40	2.64
TSD-4510	10-10	450	1⅜ x 2½	4.40	2.64
TSD-4520	20-20	450	1⅜ x 2½	5.05	3.03

Multiple Sections

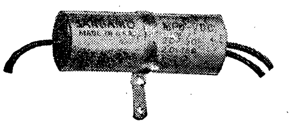
Catalog Number	Capacity mfd.	Wkg. Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
TST-4510	10-10-10	450	1⅜ x 2½	$5.10	$3.06
TST-901	20-20-20	450-450-25	1⅜ x 2½	5.55	3.33

NOTE: Not normally carried in stock. Available on special order only.
NOTE: Packaging: Individual display carton.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE CS *Tomahawk*



The SANGAMO Type CS "Tomahawk" electrolytic capacitors are contained in wax-filled cardboard tubes with insulated leads approximately 8 inches in length extending from both ends of the unit. Capacity, voltage and polarity of each section is clearly indicated by color of the lead wires; coding information necessary to identify the individual sections is clearly stamped on the tube. Each unit is supplied with a mounting strap to facilitate mounting to the chassis.

Dual Common Negative Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CSD-0210	10-10	25	⅝ x 2⅜	$1.40	$0.84
CSD-0510	10-10	50	⅝ x 2⅜	1.40	.84
CSD-1508	8- 8	150	⅝ x 2⅜	1.50	.90
CSD-1516	16-16	150	¾ x 2½	1.80	1.08
CSD-1520	20-20	150	¾ x 2½	1.65	.99
CSD-500	30-20	150	⅞ x 2½	1.70	1.02
CSD-1530	30-30	150	⅞ x 2½	1.80	1.08
CSD-505	40-20	150	1 x 2½	1.75	1.05
CSD-506	40-30	150	1 x 2½	1.80	1.08
CSD-1540	40-40	150	1 x 2½	1.85	1.11
CSD-512	50-30	150	1 x 2½	1.95	1.17
CSD-1550	50-50	150	1 x 3	2.10	1.26
CSD-2516	16-16	250	1 x 2½	1.75	1.05
CSD-4508	8- 8	450	1 x 2½	1.70	1.02
CSD-522	8-16	450	1 x 2⅞	2.00	1.20
CSD-4520	20-20	450	1 x 3⅝	2.50	1.50

Dual Separate Sections

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CSS-1520	20-20	150	1 x 2½	$2.05	$1.23
CSS-4508	8- 8	450	1 x 3⅛	2.15	1.29
CSS-4516	16-16	450	1¼ x 3⅛	2.80	1.68

Triple Common Negative Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CST-1520	20-20-20	150	1 x 2⅞	$2.20	$1.32
CST-523	40-20-20	150	1 x 2⅞	2.25	1.35
CST-524	40-30-20	150	1 x 2⅞	2.35	1.41
CST-1540	40-40-40	150	1 x 3⅛	2.45	1.47
CST-526	20-20-20	150-150-25	1 x 2½	2.05	1.23
CST-527	40-20-20	150-150-25	1 x 2⅞	2.15	1.29
CST-528	40-30-20	150-150-25	1 x 2⅞	2.20	1.32
CST-532	50-30-20	150-150-25	1 x 2⅞	2.35	1.41
CST-533	50-30-100	150-150-25	1 x 3⅛	2.55	1.53
CST-534	80-40-20	150-150-25	1 x 3⅛	2.60	1.56
CST-535	12-12-20	450-450-25	1 x 2⅞	2.30	1.38
CST-537	20-20-20	450-450-25	1¼ x 3⅛	2.90	1.74

NOTE: Packaging: 10, 25, or 50 per display carton.

COLOR CODE OF WIRE LEADS FOR TYPES FM, CS, AND SL CAPACITORS

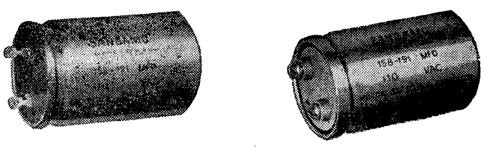
Black	Common negative
Orange	Positive, highest voltage or capacity
Red	Positive, next highest voltage or capacity
Blue	Positive, next highest voltage or capacity
Yellow	Positive, next highest voltage or capacity
Brown	Negative, in separate section unit

NOTE: Lead colors are determined by the rated working voltages. Where there are two or more sections of different voltages and the same capacity, the lead color will designate the voltage; with the same voltages and unequal capacities, the lead color will designate the capacity. If there are two sections with equal capacities and voltages the two lead wires will be in the same color.

NOTE: Based upon proposed R.T.M.A. Color code.

TYPE EM (MOTOR STARTING)

Trailblazer



The SANGAMO Type EM electrolytic capacitor is a standard universal replacement for all motor starter types presently in use, and its dimensions are comparable in every respect. The Type EML is provided with solder lug terminals, the Type EMS being equipped with screw types; otherwise the two units are identical in construction and operational characteristics. Insulating tubes are supplied with both types.

110 Volts A.C.

EML Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EML-1120	20- 24	20	1⅜ x 3⅛	$2.05	$1.43
EML-1126	26- 30	26	1⅜ x 3⅛	2.10	1.47
EML-1132	32- 36	32	1⅜ x 3⅛	2.10	1.47
EML-1138	38- 42	38	1⅜ x 3⅛	2.10	1.47
EML-1143	43- 48	43	1⅜ x 3⅛	2.10	1.47
EML-1153	53- 60	53	1⅜ x 3⅛	2.15	1.50
EML-1164	64- 72	64	1⅜ x 3⅛	2.25	1.57
EML-1170	70- 78	70	1⅜ x 3⅛	2.30	1.61
EML-1175	75- 84	75	1⅜ x 3⅛	2.30	1.61
EML-1186	86- 96	86	1⅜ x 3⅛	2.60	1.82
EML-1197	97-107	97	1⅜ x 3⅛	2.65	1.85
EML-11108	108-120	108	1⅜ x 3⅛	2.85	1.99
EML-11124	124-138	124	1⅜ x 3⅛	2.95	2.06
EML-11145	145-162	145	1⅜ x 3⅛	3.20	2.24
EML-11161	161-180	161	1⅜ x 4⅛	3.25	2.27
EML-11161	161-180	161	2 x 3¼	3.25	2.27
EML-11189	189-216	189	2 x 3⅛	3.75	2.62
EML-11216	216-240	216	2 x 3⅛	4.05	2.83
EML-11243	243-270	243	2 x 3⅛	4.70	3.29
EML-11270	270-300	270	2 x 3⅛	4.75	3.32
EML-11324	324-360	324	2 x 4⅛	5.40	3.78
EML-11378	378-420	378	2 x 4⅛	6.00	4.20
EML-11400	400-480	400	2 x 4⅛	6.05	4.23

220 Volts A.C.

EML Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EML-2220	20-24	20	1⅜ x 3⅛	$2.91	$2.03
EML-2226	26-30	26	1⅜ x 3⅛	3.35	2.34
EML-2232	32-36	32	2 x 4⅛	3.79	2.65
EML-2238	38-42	38	2 x 4⅛	4.30	3.01
EML-2243	43-48	43	2 x 4⅛	4.55	3.18
EML-2253	53-60	53	2 x 4⅛	5.19	3.63

110 Volts A.C.

EMS Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EMS-1120	20- 24	20	1⅜ x 3⅛	$2.05	$1.43
EMS-1126	26- 30	26	1⅜ x 3⅛	2.10	1.47
EMS-1132	32- 36	32	1⅜ x 3⅛	2.10	1.47
EMS-1138	38- 42	38	1⅜ x 3⅛	2.10	1.47
EMS-1143	43- 48	43	1⅜ x 3⅛	2.10	1.47
EMS-1153	53- 60	53	1⅜ x 3⅛	2.15	1.50
EMS-1164	64- 72	64	1⅜ x 3⅛	2.25	1.57
EMS-1170	70- 78	70	1⅜ x 3⅛	2.30	1.61
EMS-1175	75- 84	75	1⅜ x 3⅛	2.30	1.61
EMS-1186	86- 96	86	1⅜ x 3⅛	2.60	1.82
EMS-1197	97-107	97	1⅜ x 3⅛	2.65	1.85
EMS-11108	108-120	108	1⅜ x 3⅛	2.85	1.99
EMS-11124	124-138	124	1⅜ x 3⅛	2.95	2.06
EMS-11145	145-162	145	1⅜ x 3⅛	3.20	2.24
EMS-11161	161-180	161	1⅜ x 4⅛	3.25	2.27
EMS-11161	161-180	161	2 x 3⅛	3.25	2.27
EMS-11189	189-216	189	2 x 3⅛	3.75	2.62
EMS-11216	216-240	216	2 x 3⅛	4.05	2.83
EMS-11243	243-270	243	2 x 3⅛	4.70	3.29
EMS-11270	270-300	270	2 x 3⅛	4.75	3.32
EMS-11324	324-360	324	2 x 4⅛	5.40	3.78
EMS-11378	378-420	378	2 x 4⅛	6.00	4.20
EMS-11400	400-480	400	2 x 4⅛	6.05	4.23

220 Volts A.C.

EMS Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EMS-2220	20-24	20	1⅜ x 3⅛	$2.96	$2.06
EMS-2226	26-30	26	1⅜ x 3⅛	3.40	2.37
EMS-2232	32-36	32	2 x 4⅛	3.84	2.68
EMS-2238	38-42	38	2 x 4⅛	4.35	3.04
EMS-2243	43-48	43	2 x 4⅛	4.60	3.21
EMS-2253	53-60	53	2 x 4⅛	5.24	3.66

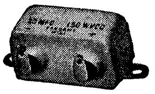
NOTE: For insulating tube dimensions add $\frac{1}{16}$″ to the can diameter and ⅝″ to the can length.

NOTE: Packaging: Individual display carton.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE BTE *Comanche*



The SANGAMO Type BTE electrolytic capacitor is ideally suited for filter and bypass circuits in marine, aircraft, geophysical and many other applications. The Type BTE cartridges are first sealed in aluminum tubes and then encased in sturdy-corrosion-resistant, hot tinned steel cases providing a complete hermetic seal under extremes of weather conditions. All units are equipped with glass-to-metal sealed terminals. Mounting flanges with 3/16" holes are provided at each end.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Width	Length	Height	List Price	Resale Net Price
BTE-0225	25	25	1	1 13/16	15/16	$4.50	$2.70
BTE-0250	50	25	1	1 13/16	15/16	4.60	2.76
BTE-0275	75	25	1	1 13/16	15/16	4.65	2.79
BTE-0525	25	50	1	1 13/16	15/16	4.55	2.73
BTE-0550	50	50	1	1 13/16	15/16	4.70	2.82
BTE-1510	10	150	1	1 13/16	15/16	4.65	2.79
BTE-1520	20	150	1	1 13/16	15/16	4.70	2.82
BTE-2510	10	250	1	1 13/16	15/16	4.50	2.70
BTE-2512	12	250	1	1 13/16	15/16	4.65	2.79
BTE-3508	8	350	1	1 13/16	15/16	4.75	2.85
BTE-4504	4	450	1	1 13/16	15/16	5.50	3.30

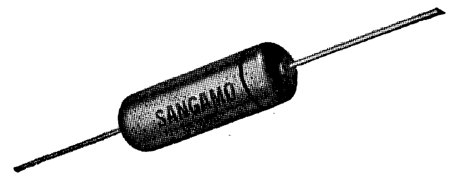
Designed and fabricated to conform to all physical and performance requirements of the CE63 style capacitor of Joint Armed Services Specification JAN-C-62.

Similar designs in case styles CE61, CE62, and CE64 may be furnished upon request.

PAPER CAPACITORS

Telechief

PLASTIC MOLDED TUBULAR



The SANGAMO "Telechief" is molded in Sangamo HUMIDITITE to provide more stable capacity values, unsurpassed moisture resistance, excellent seal characteristics, and operation up to 85°C. temperature. Small in physical size, and rugged in construction, this tubular is especially adaptable to television, auto radio, small AC-DC set, and other uses. The leads are firmly imbedded in the hard plastic case and have been especially designed to resist breakage. The "Telechief" assures operating dependability under extremes of heat, humidity and physical stress.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
330221	.001	200	5/16 x 1	$0.25	$0.15
330225	.005	200	5/16 x 1	.25	.15
330211	.01	200	⅜ x 1⅛	.25	.15
330212	.02	200	⅜ x 1⅛	.25	.15
3302147	.047	200	7/16 x 1¼	.30	.18
330215	.05	200	7/16 x 1¼	.30	.18
330201	.1	200	½ x 1½	.35	.21
3302015	.15	200	9/16 x 1⅝	.35	.21
3302022	.22	200	9/16 x 2	.40	.24
3302025	.25	200	⅝ x 2	.45	.27
3302047	.47	200	¾ x 2	.60	.36
330205	.5	200	¾ x 2	.60	.36
330210	1.0	200	1 x 2⅛	.90	.54
330421	.001	400	5/16 x 1	.25	.15
330425	.005	400	5/16 x 1	.25	.15
330411	.01	400	⅜ x 1⅛	.25	.15
330412	.02	400	7/16 x 1 3/16	.25	15
3304122	.022	400	7/16 x 1 3/16	.25	.15
3304147	.047	400	15/32 x 1½	.30	.18
330415	.05	400	15/32 x 1½	.30	.18
3304168	.068	400	½ x 1½	.35	.21
330401	.1	400	9/16 x 1⅝	.35	.21
3304015	.15	400	9/16 x 2	.35	.21
330402	.2	400	⅝ x 2	.40	.24
3304022	.22	400	⅝ x 2	.40	.24
3304025	.25	400	⅝ x 2	.45	.27
330405	.5	400	⅞ x 2	.60	.36
330410	1.0	400	1 1/16 x 2½	.90	.54

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
330635	.0005	600	5/16 x 1	$0.25	$0.15
330621	.001	600	5/16 x 1	.25	.15
3306215	.0015	600	5/16 x 1	.25	.15
330622	.002	600	5/16 x 1	.25	.15
3306222	.0022	600	5/16 x 1	.25	.15
330623	.003	600	5/16 x 1	.25	.15
330624	.004	606	5/16 x 1	.25	.15
3306247	.0047	600	5/16 x 1	.25	.15
330625	.005	600	5/16 x 1	.25	.15
330626	.006	600	⅜ x 1⅛	.25	.15
3306268	.0068	600	⅜ x 1⅛	.30	.18
330611	.01	600	7/16 x 1 3/16	.30	.18
3306115	.015	600	7/16 x 1 3/16	.30	.18
330612	.02	600	7/16 x 1¼	.30	.18
3306122	.022	600	7/16 x 1¼	.30	.18
330613	.03	600	15/32 x 1½	.35	.21
330614	.04	600	½ x 1½	.35	.21
3306147	.047	600	½ x 1½	.40	.24
330615	.05	600	½ x 1½	.40	.24
330616	.06	600	9/16 x 1⅝	.40	.24
330601	.1	600	9/16 x 2	.45	.27
330602	.2	600	¾ x 2	.55	.33
3306025	.25	600	¾ x 2	.55	.33
330605	.5	600	1 x 2⅛	.80	.48
330610	1.0	600	1⅜ x 2⅝	1.25	.75
331635	.0005	1600	7/16 x 1¼	.60	.36
331621	.001	1600	7/16 x 1¼	.60	.36
3316215	.0015	1600	7/16 x 1¼	.60	.36
331622	.002	1600	7/16 x 1¼	.65	.39
3316222	.0022	1600	7/16 x 1¼	.65	.39
3316225	.0025	1600	7/16 x 1¼	.65	.39
331623	.003	1600	7/16 x 1¼	.65	.39
3316233	.0033	1600	7/16 x 1¼	.65	.39
331624	.004	1600	7/16 x 1¼	.65	.39
3316247	.0047	1600	7/16 x 1¼	.65	.39
331625	.005	1600	7/16 x 1¼	.65	.39
331626	.006	1600	7/16 x 1¼	.65	.39
3316268	.0068	1600	½ x 1½	.65	.39
331627	.007	1600	½ x 1½	.65	.39
3316275	.0075	1600	½ x 1½	65	.39
331628	.008	1600	½ x 1½	.65	.39
331611	.01	1600	½ x 1½	.70	.42
3316115	.015	1600	½ x 1½	.70	.42
331612	.02	1600	9/16 x 1⅝	.70	.42
3316122	.022	1600	9/16 x 1⅝	.70	.42
3316125	.025	1600	9/16 x 1⅝	.70	.42
331613	.03	1600	⅝ x 2	.70	.42
331614	.04	1600	⅝ x 2	.70	.42
331615	.05	1600	⅝ x 2	.80	.48

NOTE: Additional capacity values in the 200 and 400 volt ratings can be supplied on request.

NOTE: Packaging: 20, 50, or 100 per display carton.

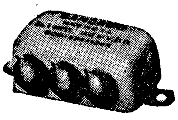
NOTE: Standard capacity tolerance:

.005 mfd......+60% —25
.001 mfd. to .01 mfd......+60% —20
.01 mfd. to .15 mfd......±20%
.15 mfd. and up.....+20% —10

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPE 50 *Pathfinder*



The Type 50 paper capacitors are primarily intended for bypass application. They are non-inductively wound, are supplied in fractional capacity values, and will provided efficient and continuous operation in R.F. and A.F. bypass, audio frequency coupling, and other A.C. circuits. These units are impregnated and filled with mineral oil and may be operated under severe humidity conditions at temperatures up to +85°C.

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions — Inches L	W	H	List Price	Resale Net Price
5006-.05	.05	1 13/16	1	¾	$2.90	$1.74
5006-.1	.1	1 13/16	1	¾	2.95	1.77
5006-.25	.25	1 13/16	1	¾	3.10	1.86
5006-.5	.5	1 13/16	1	1	3.30	1.98
5006-1	1.0	2	1¾	⅞	3.75	2.25
5006-2	2.0*	2	2	1⅛	5.00	3.00
5006-.05x2	.05-.05	1 13/16	1	¾	3.65	2.19
5006-.1x2	.1-.1	1 13/16	1	¾	3.70	2.22
5006-.25x2	.25-.25	1 13/16	1	⅞	3.75	2.25
5006-.5x2	.5-.5	2	1¾	⅞	4.30	2.58
5006-1x2	1.0-1.0*	2	2	1⅛	5.30	3.18
5006-.1x3	.1-.1 .1	1 13/16	1	¾	4.20	2.52
5006-.25x3	.25-.25-.25	2	1¾	⅞	4.75	2.85
5006-.5x3	.5-.5-.5*	2	2	1⅛	5.75	3.45

1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions — Inches L	W	H	List Price	Resale Net Price
5010-.05	.05	1 13/16	1	¾	$3.05	$1.83
5010-.1	.1	1 13/16	1	¾	3.15	1.89
5010-.25	.25	1 13/16	1	⅞	3.25	1.95
5010-.5	.5	2	1¾	⅞	3.55	2.13
5010-1	1.0*	2	2	1⅛	4.40	2.64
5010-.05x2	.05-.05	1 13/16	1	¾	3.85	2.31
5010-.1x2	.1-.1	1 13/16	1	⅞	4.00	2.40
5010-.25x2	.25-.25	2	1¾	⅞	4.20	2.52
5010-.5x2	.5-.5*	2	2	1⅛	5.45	3.27
5010-.1x3	.1-.1-.1	2	1¾	⅞	4 60	2.76
5010-.25x3	.25-.25-.25*	2	2	1⅛	5.50	3.00

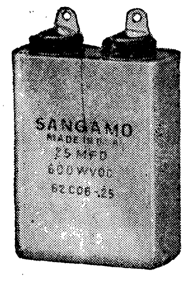
NOTE: *For bottom or top terminal, case size becomes 2" x 2" x 1¼"

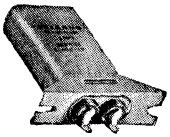
NOTE: Packaging: Individual display carton.

NOTE: The above units built to comply with the electrical requirements of specification JAN-C-25 Style CP-53-54-55.

NOTE: Standard capacity tol. +20% —10%.

TYPE 62-64 *Scout*





The Types 62 and 64 SANGAMO non-inductively wound paper capacitors are impregnated and filled with mineral oil and are hermetically sealed in seamless drawn-steel cases. The mineral oil impregnant assures dependable service betwen the wide temperature limits of —55°C. and +85°C. Standard capacitors are supplied with top terminals and brackets for upright mounting. When bottom terminals and inverted mounting are required, add the letter "B" to the end of the catalog number.

TYPE 62 PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
62B06-.01	.01	1⅜	11/16	1 5/32	$3.65	$2.19
62B06-.05	.05	1⅜	11/16	1 5/32	3.65	2.19
62B06-.1	.1	1⅜	11/16	1 5/32	3.65	2.19
62B06-.25	.25	1⅜	11/16	1 5/32	3.90	2.34
62C06-.5	.5	1⅜	11/16	1 27/32	4.20	2.52
62A06-1.	1.0	1⅜	11/16	2¼	4.65	2.79
62A06-2.	2.0	1⅜	1¼	2 5/16	6.10	3.66

1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
62B10-.05	.05	1⅜	11/16	1 5/32	$3.75	$2.25
62B10-.1	1.	1⅜	11/16	1 5/32	4.00	2.40
62C10-.25	.25	1⅜	11/16	1 27/32	4.20	2.52
62A10-.5	.5	1⅜	11/16	2¼	4.45	2.67
62A10-1.	1.0	1⅜	1¼	2 5/16	5.20	3.12

TYPE 64 PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
64A06-.01	.01	2 5/16	11/16	2 5/16	$3.55	$2.13
64A06-.05	.05	2 5/16	11/16	2 5/16	3.55	2.13
64A06-.1	.1	2 5/16	11/16	2 5/16	3.55	2.13
64A06-.25	.25	2 5/16	11/16	2 5/16	3.85	2.31
64A06-.5	.5	2 5/16	11/16	2 5/16	4.10	2.46
64A06-1.	1.0	2 5/16	11/16	2 5/16	4.70	2.82
64A06-2.	2.0	1⅞	1 5/16	2 11/32	6.05	3.63

1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
64A10.05	.05	2 5/16	11/16	2 5/16	$3.70	$2.22
64A10-.1	.1	2 5/16	11/16	2 5/16	3.95	2.37
64A10-.25	.25	2 5/16	11/16	2 5/16	4.15	2.49
64A10-.5	.5	2 5/16	11/16	2 5/16	4.40	2.64
64A10-1.	1.0	1⅞	1 5/16	2 11/32	5.15	3.09

NOTE: Not normally carried in stock. Available on special order only.

NOTE: Packaging: Individual display carton.

NOTE: The above units built to comply with the electrical requirements of specification JAN-C-25 Style CP-61-63-65-67-69.

TYPE 40-41 *Pueblo*

The SANGAMO Types 40 and 41 diaclor impregnated and filled paper capacitors are ideal for use in high voltage filter applications. Enclosed in aluminum containers, they facilitate convenient mounting to the chassis, an insulating washer and spade lug being provided for this purpose. In the Type 40 one connection is provided by an insulated terminal and the other is provided by the case. In the Type 41 both terminals are completely insulated from the case.

NOTE: These units built to comply with the electrical requirements of specification JAN-C-25 Style CP-40-41.

TYPE 40 PAPER CAPACITORS

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
4006-1	1.	600	1½ x 1⅝	$3.85	$2.31
4006-2	2.	600	1½ x 2⅜	4.60	2.76
4006-4	4.	600	1½ x 3⅝	6.30	3.78
4010-1	1	1000	1½ x 2⅜	4.20	2.52
4010-2	2.	1000	1½ x 3⅝	5.45	3.27
4015-.25	.25	1500	1½ x 1⅝	4.85	2.91
4015-.5	.5	1500	1½ x 2⅜	5.00	3.00
4015-1	1.	1500	1½ x 3⅜	5.45	3.27

TYPE 41 PAPER CAPACITORS

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
4106-1	1.	600	1½ x 1⅝	$4.70	$2.82
4106-2	2.	600	1½ x 2⅜	5.40	3.24
4106-4	4.	600	1½ x 3⅝	7.10	4.26
4110-1	1.	1000	1½ x 2⅜	5.00	3.00
4110-2	2.	1000	1½ x 3⅝	6.30	3.78
4115-.25	.25	1500	1½ x 1⅝	5.65	3.39
4115-.5	.5	1500	1½ x 2⅜	5.85	3.51
4115-1	1.	1500	1½ x 3⅜	6.30	3.78

NOTE: Packaging: Individual display carton.

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPE 71 *Seminole*

SANGAMO Type 71 diaclor impregnated and filled paper capacitors have the advantage of light weight, and are smaller than the case size specified by JAN-C-25. Diaclor* is a specially compounded, chemically purified chlorinated dielectric oil. This synthetic impregnant, whose characteristics can be controlled with great uniformity, possesses a high dielectric constant, high volume resistivity, low power factor, high dielectric strength, and is non-inflammable and non-explosive. Type A mounting brackets are supplied with each capacitor as standard equipment. If Type B or C brackets are required, they must be specified when ordering. Either composition rivet or stand-off porcelain terminals can be supplied, and the type desired should be specified.

600 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7106-.5	.5	1 13/16	1 1/16	1 5/8	7/8	13/16	2 1/4	$4.70	$2.82
7106-1	1.	1 13/16	1 1/16	2	7/8	13/16	2 1/4	5.80	3.48
7106-2	2.	1 13/16	1 1/16	2 3/4	7/8	13/16	2 1/4	7.15	4.29
7106-4	4.	2 1/2	1 3/16	2 7/8	7/8	1 1/8	3	9.10	5.46
7106-6	6.	2 1/2	1 3/16	3 3/4	7/8	1 1/8	3	11.30	6.78
7106-8	8.	3 3/4	1 1/4	3 1/4	7/8	2	4 3/8	13.50	8.10
7106-10	10.	3 3/4	1 1/4	3 7/8	7/8	2	4 3/8	15.15	9.09

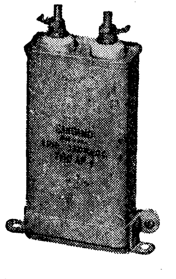
1000 V. D.C. Working

Catalog Number	Capacitv mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7110-.1	.1	1 13/16	1 1/16	1 5/8	7/8	13/16	2 1/4	$4.15	$2.49
7110-.25	.25	1 13/16	1 1/16	1 5/8	7/8	13/16	2 1/4	4.70	2.82
7110-.5	.5	1 13/16	1 1/16	2	7/8	13/16	2 1/4	4.95	2.97
7100-1	1.	1 13/16	1 1/16	2 1/8	7/8	13/16	2 1/4	6.35	3.81
7110-2	2.	1 13/16	1 1/16	3 7/8	7/8	13/16	2 1/4	8.25	4.95
7110-4	4.	2 1/2	1 3/16	4 1/8	7/8	1 1/8	3	10.45	6.27
7110-6	6.	3 3/4	1 1/4	3 7/8	7/8	2	4 3/8	14.05	8.43
7110-8	8.	3 3/4	1 1/4	4 5/8	7/8	2	4 3/8	15.15	9.09
7110-10	10.	3 3/4	1 3/4	4 1/4	7/8	2	4 3/8	16.80	10.08
7110-12	12.	3 3/4	2 1/4	3 7/8	7/8	2	4 3/8	18.15	10.89
7110-15	15.	3 3/4	2 1/2	4 5/8	7/8	2	4 3/8	20.10	12.06

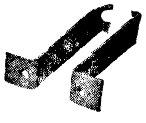
1500 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7115-.5	.5	1 13/16	1 1/16	2 1/4	7/8	13/16	2 1/4	$6.35	$3.81
7115-1	1.	1 13/16	1 1/16	3 1/4	7/8	13/16	2 1/4	7.45	4.47
7115-2	2.	2 1/2	1 3/16	3 5/8	7/8	1 1/8	3	10.45	6.27
7115-4	4.	3 3/4	1 1/4	4 1/4	7/8	2	4 3/8	14.05	8.43
7115-6	6.	3 3/4	1 3/4	4 1/2	7/8	2	4 3/8	17.05	10.23
7115-8	8.	3 3/4	2 1/2	4 5/8	7/8	2	4 3/8	20.90	12.54
7115-10	10.	3 3/4	3 3/16	4 1/8	7/8	2	4 3/8	25.05	15.03
7115-12	12.	3 3/4	3 3/16	4 3/4	7/8	2	4 3/8	27.25	16.35
7115-15	15.	3 3/4	4 9/16	4 1/4	7/8	2	4 3/8	30.00	18.00

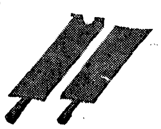
NOTE: Standard tolerance ±10%.
NOTE: Brackets supplied at no extra cost.



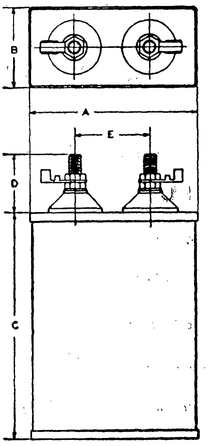
TYPE C BRACKET



TYPE B BRACKET



TYPE A BRACKET



2000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7120-.1	.1	1 13/16	1 1/16	1 5/8	1 3/8	13/16	2 1/4	$6.60	$3.96
7120-.25	.25	1 13/16	1 1/16	2	1 3/8	13/16	2 1/4	7.15	4.29
7120-.5	.5	1 13/16	1 1/16	2 7/8	1 3/8	13/16	2 1/4	7.45	4.47
7120-1	1.	2 1/2	1 3/16	3 1/4	1 3/8	1 1/8	3	9.10	5.46
7120-2	2.	3 3/4	1 1/4	3 3/4	1 3/8	2	4 3/4	10.75	6.45
7120-4	4.	3 3/4	2 1/4	3 3/4	1 3/4	2	4 3/8	15.15	9.09
7120-6	6.	3 3/4	2 1/2	4 3/4	1 3/4	2	4 3/8	20.10	12.06
7120-8	8.	3 3/4	3 3/16	4 3/4	1 3/4	2	4 3/8	25.05	15.03
7120-10	10.	3 3/4	4 9/16	4 3/4	1 3/4	2	4 3/8	30.55	18.33
7120-12	12.	3 3/4	4 9/16	5 1/8	1 3/4	2	4 3/8	33.30	19.98

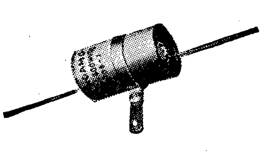
2500 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7125-.5	.5	2 1/2	1 3/16	2 7/8	1 3/4	1 1/8	3	$11.55	$6.93
7125-1	1.	3 3/4	1 1/4	3 1/4	1 3/4	2	4 3/8	13.20	7.92
7125-2	2.	3 3/4	1 3/4	4 3/4	1 3/4	2	4 3/8	21.45	12.87
7125-4	4.	3 3/4	2 1/4	5 1/8	1 3/4	2	4 3/8	30.00	18.00
7125-10	10.	3 3/4	4 9/16	6	1 3/4	2	4 3/8	75.10	45.06

3000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7130-.1	.1	2 1/2	1 3/16	2	1 3/4	1 1/8	3	$14.05	$8.43
7130-.25	.25	2 1/2	1 3/16	2 1/2	1 3/4	1 1/8	3	14.85	8.91
7130-.5	.5	2 1/2	1 3/16	3 3/4	1 3/4	1 1/8	3	16.80	10.08
7130-1	1.	3 3/4	1 1/4	4 1/4	1 3/4	2	4 3/8	20.10	12.06
7130-2	2.	3 3/4	2 1/4	4 1/2	1 3/4	2	4 3/8	25.05	15.03
7130-4	4.	3 3/4	4 9/16	4 1/4	1 3/4	2	4 3/8	36.85	22.11

TYPE 21 *Chippewa*



Hermetically sealed in metal tubes, the SANGAMO Type 21 paper capacitor is primarily designed for bypass and coupling applications. They are non-inductively wound; and, impregnated and filled with mineral oil assuring greatest stability of capacity and low power factor over the wide range of temperatures from —55°C. to +85°C. These units are built to comply with the electrical requirements of Specification JAN-C-25 Style CP 25-26-27-28-29.

TYPE 21 METAL CASES MINERAL OIL PAPER CAPACITORS
600 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2106-.003	.003	1/2 x 1 5/16	$0.95	$0.57
2106-.006	.006	1/2 x 1 5/16	.95	.57
2106-.01	.01	1/2 x 1 5/16	.95	.57
2106-.02	.02	1/2 x 1 9/16	1.05	.63
2106-.03	.03	1/2 x 1 9/16	1.10	.66
2106-.05	.05	3/4 x 1 9/16	1.10	.66
2106-.06	.06	3/4 x 1 9/16	1.10	.66
2106-.1	.1	3/4 x 1 13/16	1.25	.75
2106-.25	.25	13/16 x 2 5/16	1.70	1.02
2106-.5	.5	1 1/16 x 2 5/16	2.20	1.32

1000 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2110-.006	.006	1/2 x 1 5/16	$1.10	$0.66
2110-.01	.01	1/2 x 1 9/16	1.10	.66
2110-.05	.05	3/4 x 1 11/16	1.30	.78
2110-.1	.1	13/16 x 2 1/16	1.50	.90
2110-.25	.25	1 1/16 x 2 5/16	2.30	1.38

1600 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2116-.0005	.0005	3/4 x 1 5/16	$1.10	$0.66
2116-.001	.001	3/4 x 1 5/16	1.10	.66
2116-.002	.002	3/4 x 1 5/16	1.10	.66
2116-.005	.005	3/4 x 1 7/16	1.20	.72
2116-.01	.01	3/4 x 1 7/16	1.20	.72
2116-.02	.02	3/4 x 1 9/16	1.30	.78
2116-.05	.05	13/16 x 2 1/16	1.30	.78
2116-.1	.1	1 1/16 x 2 1/16	2.10	1.26

2000 W.V. D.C.

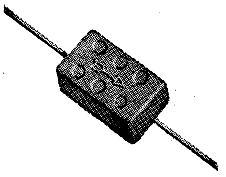
Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2120-.0005	.0005	13/16 x 1 7/16	$1.25	$0.75
2120-.001	.001	13/16 x 1 7/16	1.25	.75
2120-.005	.005	13/16 x 1 9/16	1.25	.75
2120-.01	.01	13/16 x 1 9/16	1.25	.75
2120-.02	.02	13/16 x 1 13/16	1.30	.78
2120-.05	.05	13/16 x 2 5/16	1.45	.87

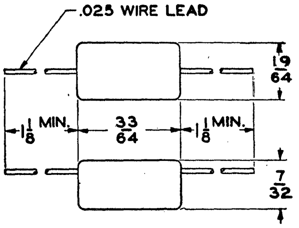
SANGAMO CAPACITORS

NEW MOLDING COMPOUND FOR SANGAMO WIRE LEAD MICAS

All SANGAMO wire-lead micas are molded in HUMIDITITE, a new molding compound developed by Sangamo, that gives them moisture resistance characteristics far superior to any others on the market. The standard moisture resistance test described in MIL-C-5A (proposed) Specification requires mica capacitors to offer at least 100 megohms of insulation resistance after ten 24-hour cycles in a humidity chamber at 90% to 95% relative humidity. The best competitive micas barely meet this requirement . . . but Sangamo HUMIDITITE Micas, *under the same conditions*, all tested in excess of 50,000 megohms! For additional information about HUMIDITITE, write for Engineering Bulletin No. TS-111.

TYPE RR SILVERED MICA CAPACITORS





Catalog Number	Capacity Mfd.	Wkg. Volts D.C.	Catalog Number	Capacity Mfd.	Wkg. Volts D.C.
RR-1550	.000005	500	RR-1475	.000075	500
RR-1410	.00001	500	RR-1482	.000082	500
RR-1412	.000012	500	RR-1491	.000091	500
RR-1415	.000015	500	RR-1310	.0001	500
RR-1418	.000018	500	RR-1312	.00012	500
RR-1420	.00002	500	RR-1315	.00015	500
RR-1422	.000022	500	RR-1318	.00018	500
RR-1424	.000024	500	RR-1320	.0002	500
RR-1427	.000027	500	RR-1322	.00022	500
RR-1430	.00003	500	RR-1324	.00024	500
RR-1433	.000033	500	RR-1325	.00025	500
RR-1436	.000036	500	RR-1327	.00027	500
RR-1439	.000039	500	RR-1330	.0003	500
RR-1443	.000043	500	RR-1333	.00033	500
RR-1447	.000047	500	RR-1336	.00036	500
RR-1450	.00005	500	RR-1339	.00039	500
RR-1456	.000056	500	RR-06343	.00043	300
RR-1462	.000062	500	RR-06347	.00047	300
RR-1468	.000068	500	RR-06351	.00051	300

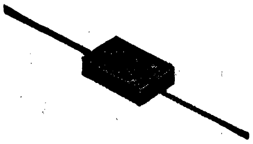
NOTE: Standard tolerance ±5%, but in no instance less than ±1 mmf.

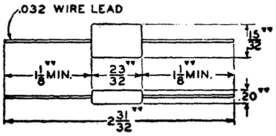
NOTE: Capacitors are identified by color coding. Size of case prohibits stamping of ratings.

NOTE: Packaging: 10, 25, 50 or 100 per display carton.

TYPE K Mica Capacitor

TYPE KR Silvered Mica





Type K Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
K-1550	.000005	$0.25	$0.15
K-1410	.00001	.25	.15
K-1415	.000015	.25	.15
K-1420	.00002	.25	.15
K-1425	.000025	.25	.15
K-1430	.00003	.25	.15
K-1439	.000039	.25	.15
K-1443	.000043	.20	.12
K-1450	.00005	.20	.12
K-1475	.000075	.20	.12
K-1310	.0001	.20	.12
K-1315	.00015	.20	.12
K-1320	.0002	.20	.12
K-1325	.00025	.25	.15
K-1330	.0003	.25	.15
K-1340	.0004	.25	.15
K-1350	.0005	.25	.15
K-1370	.0007	.35	.21
K-1380	.0008	.35	.21
K-1210	.001	.35	.21

Standard tolerance, ±20%, B characteristic.

Type KR Silvered Mica

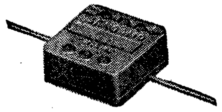
Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
KR-1550	.000005	$0.45	$0.27
KR-1410	.00001	.40	.24
KR-1415	.000015	.40	.24
KR-1420	.00002	.40	.24
KR-1425	.000025	.40	.24
KR-1430	.00003	.40	.24
KR-1439	.000039	.40	.24
KR-1443	.000043	.40	.24
KR-1450	.00005	.40	.24
KR-1475	.000075	.40	.24
KR-1310	.0001	.40	.24
KR-1315	.00015	.45	.27
KR-1320	.0002	.45	.27
KR-1325	.00025	.45	.27
KR-1330	.0003	.55	.33
KR-1340	.0004	.65	.39
KR-1350	.0005	.70	.42
KR-1370	.0007	.75	.45
KR-1380	.0008	.80	.48
KR-1210	.001	.90	.54

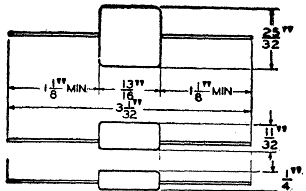
Standard tolerance, ±5%, C characteristic.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

TYPE C Mica Capacitor

TYPE CR Silvered Mica





Type C Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
C-1350	.0005	$0.25	$0.15
C-1362	.00062	.25	.15
C-1375	.00075	.25	.15
C-1380	.0008	.25	.15
C-1390	.0009	.25	.15
C-1210	.001	.30	.18
C-1215	.0015	.30	.18
C-1220	.002	.40	.24
C-1225	.0025	.45	.27
*C-1230	.003	.50	.30
*C-1240	.004	.55	.33
*C-1250	.005	.60	.36
*C-1260	.006	.65	.39
300 V.D.C. Working— 600 V.D.C. Test			
*C-06275	.0075	.90	.54
*C-06280	.008	1.00	.60
*C-06290	.009	1.00	.60
*C-06110	.01	1.20	.72

Standard tolerance, ±20%, B characteristic. *Thickness 11/32"

Type CR Silvered Mica

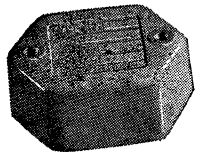
Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
CR-1350	.0005	$0.70	$0.42
CR-1362	.00062	.80	.48
CR-1375	.00075	.85	.51
CR-1380	.0008	.95	.57
CR-1390	.0009	1.00	.60
CR-1210	.001	1.10	.66
CR-1215	.0015	1.35	.81
CR-1220	.002	1.35	.81
CR-1225	.0025	1.80	1.08
*CR-1230	.003	2.05	1.23
*CR-1240	.004	2.15	1.29
*CR-1250	.005	2.25	1.35
*CR-1260	.006	2.40	1.44
300 V.D.C. Working— 600 V.D.C. Test			
*CR-06275	.0075	2.60	1.56
*CR-06280	.008	2.80	1.68
*CR-06290	.009	3.10	1.86
*CR-06110	.01	3.40	2.04

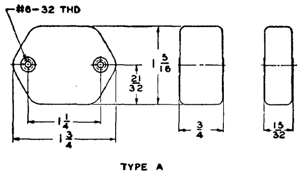
Standard tolerance, ±5%, C characteristic. *Thickness 11/32"

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

SANGAMO CAPACITORS

TYPE A MICA CAPACITORS





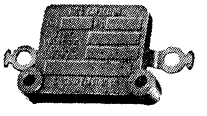
Catalog Number	Capacity Mfd.	List Price	Net Price
600 W.V.D.C.—1200 T.V.D.C.			
A-T1450	.00005	$1.45	$0.87
A-T1310	.0001	1.45	.87
A-T1315	.00015	1.45	.87
A-T1320	.0002	1.45	.87
A-T1325	.00025	1.45	.87
A-T1350	.0005	1.45	.87
A-T1210	.001	1.45	.87
A-T1220	.002	1.65	.99
A-T1225	.0025	1.70	1.02
A-T1230	.003	1.85	1.11
A-T1240	.004	2.00	1.20
A-T1250	.005	2.10	1.26
A-T1260	.006	2.20	1.32
A-T1280	.008	2.45	1.47
A-T1110	.01	2.80	1.68
A-T1115	.015	3.05	1.83
A-T1120	.02	3.55	2.13
A-T1125	.025	4.35	2.61
A-T1130	.03	4.55	2.73
A-K1140*	.04	5.85	3.51
A-K1150*	.05	7.10	4.26
A-K1160*	.06	8.05	4.83
1200 W.V.D.C.—2500 T.V.D.C.			
A-T2450	.00005	$1.60	$0.96
A-T2310	.0001	1.60	.96
A-T2315	.00015	1.60	.96
A-T2320	.0002	1.60	.96
A-T2325	.00025	1.60	.96
A-T2350	.0005	$1.60	$ .96
A-T2210	.001	1.90	1.14
A-T2220	.002	2.50	1.50
A-T2225	.0025	2.80	1.68
A-T2230	.003	2.95	1.77
A-T2240	.004	3.10	1.86
A-T2250	.005	3.30	1.98
A-T2260	.006	3.45	2.07
A-T2280	.008	4.10	2.46
A-T2110	.01	4.70	2.82
A-K2115*	.015	5.80	3.48
A-K2125*	.02	7.05	4.23
A-K2125*	.025	7.90	4.74
A-K2130*	.03	8.10	4.86
2500 W.V.D.C.—5000 T.V.D.C.			
A-T5450	.00005	$1.90	$1.14
A-T5310	.0001	1.90	1.14
A-T5325	.00025	2.15	1.29
A-T5350	.0005	2.55	1.53
A-T5210	.001	2.90	1.74
A-T5220	.002	4.25	2.55
A-T5225	.0025	4.60	2.76
A-T5230	.003	5.10	3.06
A-T5240	.004	5.65	3.39
A-K5250*	.005	6.20	3.72
A-K5260*	.006	6.35	3.81
A-K5280*	.008	6.85	4.11
A-K5110*	.01	7.30	4.38
A-K5115*	.015	8.05	4.83

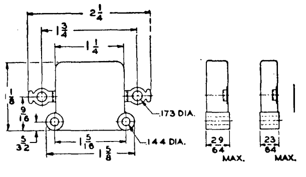
*Thickness ¾" — Standard Insulators are available if desired. If .144" clearance holes are required, designate by adding letter "A" to Type No. (AA)..

Standard tolerance ±10%. B Characteristic, unless otherwise specified.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

TYPE H MICA CAPACITORS





Catalog Number	Capacity Mfd.	List Price	Net Price
600 W.V.D.C.—1200 T.V.D.C.			
H-T1450	.00005	$1.20	$0.72
H-T1310	.0001	1.20	.72
H-T1320	.0002	1.20	.72
H-T1325	.00025	1.20	.72
H-T1330	.0003	1.20	.72
H-T1340	.0004	1.20	.72
H-T1350	.0005	1.20	.72
H-T1210	.001	1.20	.72
H-T1215	.0015	1.20	.72
H-T1220	.002	1.30	.78
H-T1225	.0025	1.30	.78
H-T1230	.003	1.45	.87
H-T1240	.004	1.50	.90
H-T1250	.005	1.55	.93
H-T1260	.006	1.80	1.08
H-T1270	.007	1.85	1.11
H-T1280	.008	1.90	1.14
H-T1110	.01	2.15	1.29
H-K1115*	.015	2.65	1.59
H-K1120*	.02	3.05	1.83
H-K1125*	.025	3.60	2.16
H-K1130*	.03	4.45	2.67
1200 W.V.D.C.—2500 T.V.D.C.			
H-T2450	.00005	$1.60	$0.96
H-T2310	.0001	1.60	.96
H-T2320	.0002	1.60	.96
H-T2325	.00025	1.60	.96
H-T2330	.0003	$1.60	$ .96
H-T2340	.0004	1.60	.96
H-T2350	.0005	1.60	.96
H-T2210	.001	1.80	1.08
H-T2215	.0015	2.30	1.38
H-T2220	.002	2.40	1.44
H-T2225	.0025	2.80	1.68
H-T2230	.003	3.05	1.83
H-K2240*	.004	3.05	1.83
H-K2250*	.005	3.30	1.98
H-K2260*	.006	3.30	1.98
H-K2280*	.008	3.85	2.31
H-K2110*	.01	5.10	3.06
2500 W.V.D.C.—5000 T.V.D.C.			
H-T5450	.00005	$1.90	$1.14
H-T5310	.0001	1.90	1.14
H-T5320	.0002	1.90	1.14
H-T5325	.00025	2.20	1.32
H-T5330	.0003	2.25	1.35
H-T5340	.0004	2.30	1.38
H-T5350	.0005	2.40	1.44
H-T5210	.001	2.80	1.68
H-T5215	.0015	3.55	2.13
H-K5220*	.002	4.15	2.49
H-K5230*	.003	4.90	2.94
H-K5240*	.004	5.65	3.39
H-K5250*	.005	6.40	3.84

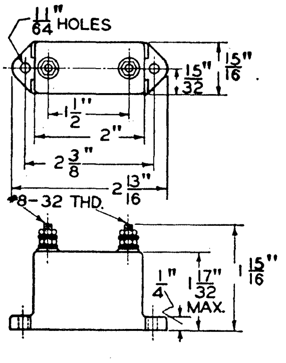
*Thickness 29/64". For meter mounting bracket add letter "E" to Type designation; if assembled add 30 cents to list price; if unassembled add 20 cents and specify case size.

Standard tolerance ±10%. B Characteristic, unless otherwise specified.

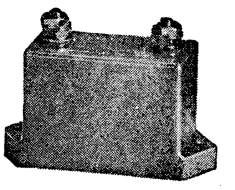
Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

Prices subject to change without notice.

TYPE F1
MICA CAPACITORS



TYPE F1



Types F1 and F2 capacitors, the smallest of the Sangamo line of transmitting types, possess a range of voltage and current ratings suitable for many applications. They are housed in low loss molded bakelite cases. The mica and foil sections are permanently clamped, vacuum impregnated, and installed in the case in such a manner as to provide stable characteristics and adequate moisture proofing.

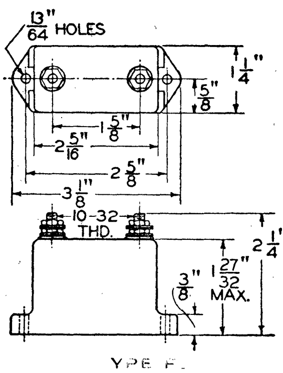
TYPE F1 MICA CAPACITORS

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Net Price
F1-331	.0001	3000	$12.60	$7.56
F1-332	.0002	3000	12.60	7.56
F1-3325	.00025	3000	12.60	7.56
F1-335	.0005	3000	12.60	7.56
F1-321	.001	3000	12.60	7.56
F1-322	.002	3000	12.60	7.56
F1-223	.003	2000	12.60	7.56
F1-224	.004	2000	12.60	7.56
F1-225	.005	2000	12.60	7.56
F1-226	.006	2000	12.60	7.56
F1-1528	.008	1500	12.60	7.56
F1-111	.01	1000	12.60	7.56
F1-112	.02	1000	14.30	8.58
F1-0215	.05	250	14.30	8.58
F1-0201	.1	250	15.10	9.06

Standard tolerance ±5%, B characteristic. Inquiry should be directed to the factory for availability of capacities and voltages other than those listed above. Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE F2
MICA CAPACITORS



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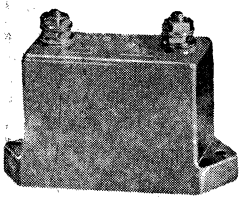
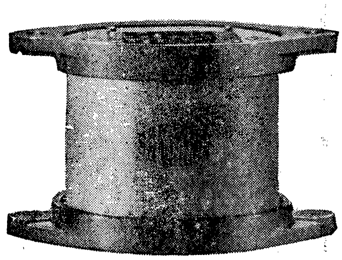


Types F1 and F2 capacitors, the smallest of the Sangamo lines of transmitting types, possess a range of voltage and current ratings suitable for many applications. They are housed in low loss molded bakelite cases. The mica and foil sections are permanently clamped, vacuum impregnated, and installed in the case in such a manner as to provide stable characteristics and adequate moisture proofing.

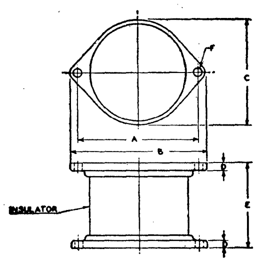
TYPE F2 MICA CAPACITORS

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Net Price
F2-531	.0001	5000	$17.30	$10.38
F2-5325	.00025	5000	17.30	10.38
F2-535	.0005	5000	17.30	10.38
F2-536	.0006	5000	17.30	10.38
F2-521	.001	5000	17.30	10.38
F2-522	.002	5000	17.30	10.38
F2-523	.003	5000	17.30	10.38
F2-325	.005	3000	17.30	10.38
F2-326	.006	3000	17.30	10.38
F2-211	.01	2000	17.30	10.38
F2-212	.02	2000	17.30	10.38
F2-1515	.05	1500	17.30	10.38
F2-0501	.1	500	19.20	11.52
F2-0202	.2	250	25.25	15.15
F2-02025	.25	250	27.90	16.74

Standard tolerance ±5%, B characteristic. Inquiry should be directed to the factory for availability of capacities and voltages other than those listed above. Prices subject to change without notice.



TYPES G1, G2, G3 AND G4 MICA CAPACITORS



TYPE G1, 2, 3 and 4

TYPE G1

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G1-641	.00001	6000	$35.45	$21.27
G1-645	.00005	6000	38.20	22.92
G1-631	.0001	6000	40.60	24.36
G1-632	.0002	6000	40.60	24.36
G1-634	.0004	6000	44.35	26.61
G1-635	.0005	6000	46.65	27.99
G1-621	.001	6000	46.65	27.99
G1-6215	.0015	6000	48.90	29.34
G1-622	.002	6000	48.90	29.34
G1-623	.003	6000	50.60	30.36
G1-624	.004	6000	50.60	30.36
G1-625	.005	6000	50.60	30.36
G1-526	.006	5000	51.45	30.87
G1-511	.01	5000	51.45	30.87
G1-4115	.015	4000	51.45	30.87
G1-312	.02	3000	51.45	30.87

TYPE G2

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G2-1031	.0001	10000	$65.55	$39.33
G2-10315	.00015	10000	65.55	39.33
G2-1032	.0002	10000	65.55	39.33
G2-10325	.00025	10000	65.55	39.33
G2-1035	.0005	10000	65.55	39.33
G2-1021	.001	10000	65.55	39.33
G2-10212	.0012	10000	65.55	39.33
G2-10215	.0015	10000	65.55	39.33
G2-1022	.002	10000	65.55	39.33
G2-823	.003	8000	65.55	39.33
G2-824	.004	8000	65.55	39.33
G2-525	.005	5000	65.55	39.33
G2-526	.006	5000	69.15	41.49
G2-511	.01	5000	69.15	41.49
G2-4115	.015	4000	69.15	41.49
G2-312	.02	3000	69.15	41.49

Type G ceramic cased capacitors are intended for service where highest voltage and R.F. current ratings are required, such as in commercial transmitting or induction heating applications. All possible steps are taken in design and manufacturing operations to insure permanence of quality. Current ratings of these four sizes as well as detailed information on the Type G5 will be supplied upon request. Terminal plates are designed to permit any usual connecting or mounting practices.

TYPE G3

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G3-2045	.00005	20000	$110.90	$66.54
G3-2031	.0001	20000	121.00	72.60
G3-2032	.0002	20000	131.10	78.66
G3-20325	.00025	20000	131.10	78.66
G3-2033	.0003	20000	131.10	78.66
G3-2035	.0005	20000	137.15	82.29
G3-2038	.0008	20000	137.15	82.29
G3-2021	.001	20000	141.15	84.69
G3-15215	.0015	15000	143.20	85.92
G3-1522	.002	15000	143.20	85.92
G3-1523	.003	15000	151.25	90.75
G3-1524	.004	15000	151.25	90.75
G3-1025	.005	10000	151.25	90.75
G3-1026	.006	10000	151.25	90.75
G3-1028	.008	10000	151.25	90.75
G3-1011	,01	10000	151.25	90.75
G3-512	.02	5000	151.25	90.75
G3-313	.03	3000	151.25	90.75

TYPE G4

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G4-3043	.00003	30000	$167.90	$100.74
G4-3045	.00005	30000	167.90	100.74
G4-3031	.0001	30000	210.30	126.18
G4-30315	.00015	30000	210.30	126.18
G4-30325	.00025	30000	221.16	132.69
G4-3035	.0005	30000	221.16	132.69
G4-3038	.0008	30000	221.16	132.69
G4-3021	.001	30000	229.10	137.46
G4-25215	.0015	25000	229.10	137.46
G4-2022	.002	20000	229.10	137.46
G4-2023	.003	20000	229.10	137.46
G4-2024	.004	20000	234.35	140.61
G4-1525	.005	15000	242.00	145.20
G4-1526	.006	15000	252.25	151.35
G4-1228	.008	12000	260.00	156.00
G4-1011	.01	10000	272.44	163.46
G4-612	.02	6000	272.44	163.46
G4-514	.04	5000	272.44	163.46

Standard tolerance ±5%. B characteristic.

TYPE G MICA CAPACITOR DIMENSIONS — INCHES

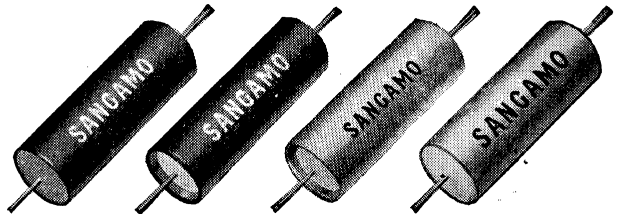
Type	A	B	C	D	E	F
G1	3¼	$3\frac{13}{16}$	$2\frac{13}{16}$	¼	2½	$\frac{17}{64}$
G2	4¼	5	3½	¼	3	.272
G3	5¾	6½	5	⅜	4	.377
G4	5¾	6½	5	⅜	5¾	.377
G5	8	9	6¾	½	10	$\frac{13}{32}$

Inquiry as to the availability of capacities and voltages other than those listed above should be directed to the factory.

Prices subject to change without notice.

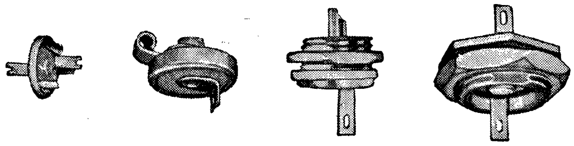
SANGAMO CAPACITORS

SUBMINIATURE PAPER CAPACITORS
HERMETICALLY SEALED IN METAL CANS . . .



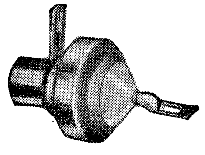
Sangamo Type	Circuit Diagram	Maximum Operating Temperature	Impregnant	Element Construction
SA	Grounded	85°C	Sanowax	Tab.
SB	Insulated	85°C	Sanowax	Tab.
SC	Grounded	85°C	Etherm	Tab.
SD	Insulated	85°C	Etherm	Tab.
SE	Grounded	125°C	Etherm	Tab.
SF	Insulated	125°C	Etherm	Tab.
SG	Grounded	85°C	Sanowax	Extended Foil
SH	Insulated	85°C	Sanowax	Extended Foil
SI	Grounded	85°C	Etherm	Extended Foil
SJ	Insulated	85°C	Etherm	Extended Foil
SK	Grounded	125°C	Etherm	Extended Foil
SM	Insulated	125°C	Etherm	Extended Foil

Types SA thru SM are miniaturized, high quality, hermetically sealed paper tubular capacitors. These units are encased in non-magnetic tubular metal cases. Hermetic sealing is accomplished by the use of glass-to-Kovar solder-seal terminals. Types SA thru SM are available in capacities from .001 to 1.0 mfd. and in WDVC ratings from 100 to 1000 volts. They can be operated at temperatures ranging from —55° C. to +125° C. For design convenience, several choices are available with regard to tolerances, circuit assembly, lead styles, mounting brackets, insulating sleeving, and inductive or non-inductive sections. For more complete information write for Engineering Bulletin No. TS-105.



SILVERED MICA BUTTON CAPACITORS

Small and light in weight, these silvered mica buttons are made particularly for high frequency circuit applications. Their high "Q" is indicative of their low loss. Rigidly constructed and electrically and mechanically stable, they meet all requirements of component capacitors for V.H.F. and U.H.F. applications. Tested for dielectric strength and leakage at 1250 V.D.C. (500 W.V.D.C. or 350 W.V.A.C.) . . . capacitance checked at r.f. . . . sealed against moisture for insulation resistance in excess of 10,000 megohms . . . high "Q" value standards at all capacities. Minimum capacitance tolerance limits of ±2% or ±1 mmf. whichever is greater, can be furnished; also buttons with temperature coefficients and drift characteristics up to "E" of the joint Army-Navy specification JAN-C-5. Operating range from minus 50° C. to plus 85° C. For more complete information, write for Engineering Bulletin TS-110.



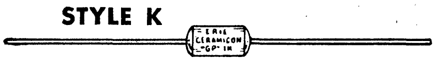
HERMETICALLY SEALED BUTTONS

Most of the silvered mica button capacitors described in Engineering Bulletin TS-110 can be supplied on special order in hermetically sealed construction, utilizing glass-to-Kovar, solder-seal terminals. This process slightly increases overall capacitor length and provides an absolute moisture seal under all operating conditions. These capacitors may be operated over a temperature range from —55°C. to +100° C. Write for engineering information and prices on special hermetically sealed buttons for your particular applications.

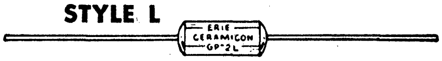
SANGAMO ELECTRIC COMPANY
MARION, ILLINOIS

ERIE CERAMICONS®

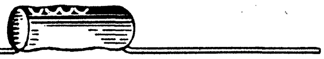
STYLE K



STYLE L

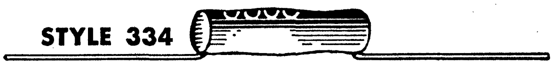


STYLE 338

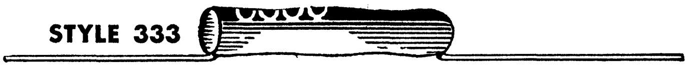


STYLE 337

STYLE 334



STYLE 333



DIMENSION SPECIFICATION CHART

Style	Length	Diameter	Leads	Insulation
K	.562"	250"	Axial 1¼" Min.	Molded
L	.812"	.250"	Axial 1¼" Min.	Molded
338	.550"	312"	Radial 1¼" Min.	Dipped
337	.937"	.312"	Radial 1¼" Min.	Dipped
334	1.213"	.415"	Radial 1¼" Min.	Dipped
333	1.250"	.315"	Radial 1¼" Min.	Dipped

ERIE CERAMICONS are small fixed capacitors consisting essentially of a ceramic dielectric with silver electrodes which are fired on at a very high temperature. Erie Ceramicons are outstanding because of their excellent high frequency characteristics, small size, rugged construction and availability in a wide range of capacity values.

"GP" GENERAL PURPOSE CERAMICONS are ideally suited for such applications as coupling and by-passing, in circuits where temperature coefficient is not important—in other words for all receiver applications *except* in frequency determining circuits. Working voltage—500 volts D. C. Use Erie "GP" Ceramicons as replacements for molded mica and paper tubular capacitors.

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
GP1K-050	5	.25
GP1K-100	10	.25
GP1K-120	12	.25
GP1K-150	15	.25
GP1K-180	18	.25
GP1K-200	20	.25
GP1K-220	22	.25
GP1K-240	24	.25
GP1K-250	25	.25
GP1K-270	27	.25
GP1K-300	30	.25
GP1K-330	33	.25
GP1K-390	39	.25
GP1K-470	47	.25
GP1K-500	50	.25
GP1K-510	51	.25
GP1K-560	56	.25
GP1K-680	68	.25
GP1K-750	75	.25
GP1K-820	82	.25
GP1K-101	100	.25
GP2K-121	120	.25
GP2K-151	150	.25
GP2K-181	180	.25
GP2K-201	200	.25
GP2K-221	220	.25
GP2K-241	240	.25
GP2K-251	250	.25
GP2K-271	270	.25
GP2K-301	300	.25
GP2K-331	330	.25
GP2K-361	360	.25
GP2K-391	390	.25
GP2K-471	470	.25
GP2K-501	500	.25
GP2K-511	510	.25
GP2K-561	560	.25
GP2K-681	680	.25
GP2L-751	750	.25
GP2L-102	1,000	.25
GP2L-122	1,200	.25
GP2L-152	1,500	.25
GP2-333-182	1,800	.25
GP2-333-202	2,000	.25
GP2-333-222	2,200	.25
GP2-333-252	2,500	.25
GP2-333-272	2,700	.25
GP2-333-302	3,000	.25
GP2-333-332	3,300	.25
GP2-333-402	4,000	.25
GP2-333-472	4,700	.25
GP2-333-502	5,000	.25
GP3-333-562	5,600	.25
GP3-333-602	6,000	.25
GP3-333-682	6,800	.25
GP3-333-752	7,500	.25
GP3-333-103	10,000	.25

Note: All GP values supplied in standard ± 20% tolerance.

NPO Zero Temperature Coefficient CERAMICONS®

NPO zero temperature coefficient Ceramicons are highly recommended for frequency determining applications where no capacity change with change in temperature is desired. "Q" for NPO Ceramicons above 30 mmf is 1000 or higher. Below 30 mmf "Q" decreases slightly as capacity decreases. Working voltage—500 volts D.C. Can be used as replacements for silver mica condensers.

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
NPOK-1R5	1.5	.50
NPOK-2R2	2.2	.50
NPOK-030	3	.50
NPOK-3R3	3.3	.50
NPOK-4R7	4.7	.50
NPOK-050	5	.50
NPOK-6R8	6.8	.50
NPOK-8R2	8.2	.50
NPOK-100	10	.50

Part No.	Capacity (MMF)	List
NPOK-200	20	.50
NPOL-250	25	.50
NPOL-330	33	.50
NPO-333-500	50	.55
NPO-333-750	75	.55
NPO-333-101	100	.55
NPO-334-151	150	.60
NPO-334-1750	175	.60

Note: Standard tolerance supplied is ± 10%

Negative Temperature Coefficient CERAMICONS

N080 and N750 units provide temperature compensation o eliminate drift. Positive and Negative Temperature Coefficient Ceramicons P100 through N1400 are available on special order through your distributor.

ORDER BY PART NUMBER FROM TABLE BELOW

ERIE TUBULAR TYPE N750 CERAMICONS

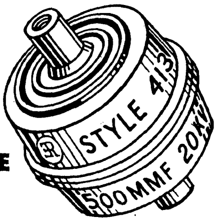
Part No.	Capacity (MMF)	List
N750K-050	5	.50
N750K-100	10	.50
N750K-470	47	.50
N750L-750	75	.50
N750L-101	100	.50

ERIE TUBULAR TYPE N080 CERAMICONS

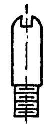
Part No.	Capacity (MMF)	List
N080-331-100	10	.60
N080-331-220	22	.60
N080-338-330	33	.60
N080-338-470	47	.60
N080-338-620	62	.60

Note: Standard tolerance supplied is ± 10%

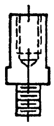
ERIE UNIVERSAL 20 KV CERAMICONS



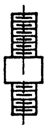
STYLE 413



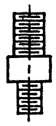
413-203



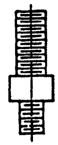
413-204



413-205



413-206-1



413-206-2

ERIE
the symbol of quality
STYLE 413 ERIE UNIVERSAL HIGH VOLTAGE CERAMICONS

KIT OF SIX STYLE 413 PART NO. 413-501-6

A highly universal 20 KV television power supply filter Ceramicon. Five types of terminals are available. By selecting the correct combinations of these, the correct replacement is provided for practically any existing receiver. Approved by leading TV manufacturers for replacement units.

Capacity of 413 is 500 mmf Tol. ± 20%

ORDER BY PART NUMBER FROM TABLES BELOW

Part No.	List Price
*413-501	$ 2.05 ea.
**413-501-6	13.50 ea.

** Does not include terminals, order them from terminal chart at right.*

*** Kit of six bodies and assortment of fourteen terminals.*

TERMINALS

Part No.	List Price
413-203	.10
413-204	.10
413-205	.10
413-206-1	.10
413-206-2	.10

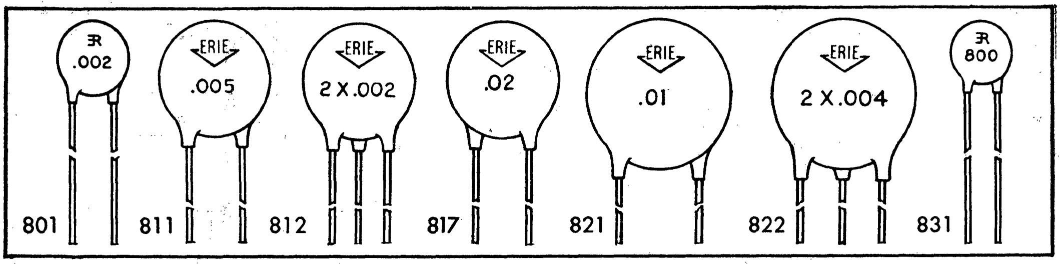
Terminals are packaged 5 of a type per bag.

ERIE RESISTOR CORPORATION — ERIE, PA.

TRADE ERIE MARK RESISTOR CORP.

ERIE DISC CERAMICONS®

Erie Disc Ceramicons consist of a flat Hi-K* ceramic dielectric with silver fired onto the dielectric. Lead wires are firmly soldered to the silver electrodes, and the unit is given a protective coating of phenolic. Very efficient at high frequencies.



ORDER BY PART NUMBER FROM TABLE BELOW

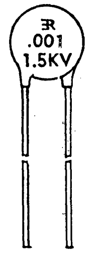
Part No.	Size-Max. Dia.	Capacity	List
831-100	¼"	10 MMF	.25
831-150	¼"	15 "	.25
831-220	¼"	22 "	.25
831-330	¼"	33 "	.25
801-470	⅜"	47 "	.25
811-680	19/32"	68 "	.25
811-101	19/32"	100 "	.25
811-151	19/32"	150 "	.25
811-221	19/32"	220 "	.25
821-331	¾"	330 "	.25
821-471	¾"	470 "	.25
801-681	¼"	680 "	.25
801-.001	⅜"	.001 MFD	.25
801-.0015	⅜"	.0015 "	.25

Part No.	Size-Max. Dia.	Capacity	List
801-.002	⅜"	.002 MFD	.25
811-.0022	19/32"	.0022 "	.25
811-.0033	19/32"	.0033 "	.25
811-.0047	19/32"	.0047 "	.25
811-.005	19/32"	.005 "	.25
811-.0068	19/32"	.0068 "	.30
811-.01	19/32"	.01 "	.25
821-.01	¾"	.01 "	.30
817-.02	19/32"	.02 "	.30
812-.001	19/32"	.001 Dual "	.40
812-.0015	19/32"	.0015 " "	.40
812-.002	19/32"	.002 " "	.40
822-.003	¾"	.003 " "	.45
822-.004	¾"	.004 " "	.45

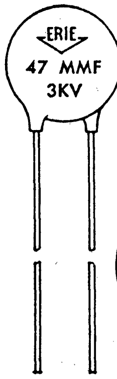
ERIE HIGH VOLTAGE DISC CERAMICONS

Designed to employ the same basic diameters that have been standardized in 500 volt capacitors. Careful and detailed life testing has been accomplished over a long period of time to establish required dielectric thicknesses to assure conservative ratings in the high voltage line.

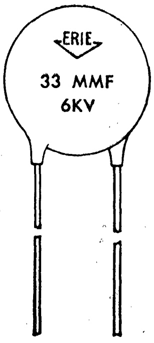
They differ in appearance from lower voltage units in having greater thickness, the degree of difference depending on voltage rating.



1R5KV-102



3KV-470



6KV-330

1500 VOLTS D.C.W. DISC CERAMICONS

Part No.	Size-Max. Dia.	Cap. (MMF)	List
1R5KV 4R7	⅜"	4.7	.30
1R5KV-6R8	⅜"	6.8	.30
1R5KV-100	⅜"	10	.30
1R5KV-150	⅜"	15	.30
1R5KV-220	⅜"	22	.30
1R5KV-330	⅜"	33	.30
1R5KV-470	19/32"	47	.30
1R5KV-680	19/32"	68	.30
1R5KV-101	19/32"	100	.35
1R5KV-151	⅜"	150	.35
1R5KV-181	⅜"	180	.40

Part No.	Size-Max. Dia.	Cap. (MMF)	List
1R5KV-221	⅜"	220	.40
1R5KV-331	⅜"	330	.40
1R5KV-471	⅜"	470	.45
1R5KV-681	⅜"	680	.55
1R5KV-102	⅜"	1000	.55
1R5KV-152	19/32"	1500	.65
1R5KV-222	19/32"	2200	.85
1R5KV-332	19/32"	3300	1.05
1R5KV-472	¾"	4700	1.40
1R5KV-562	¾"	5600	1.60
1R5KV-622	¾"	6200	1.60

3000 VOLTS D.C.W. DISC CERAMICONS

3KV-4R7	⅜"	4.7	.50
3KV-6R8	⅜"	6.8	.50
3KV-100	⅜"	10	.50
3KV-150	⅜"	15	.50
3KV-220	19/32"	22	.50
3KV-330	19/32"	33	.50
3KV-470	19/32"	47	.50
3KV-560	¾"	56	.50
3KV-680	¾"	68	.50

3KV-101	⅜"	100	.55
3KV-221	⅜"	220	.60
3KV-331	⅜"	330	.60
3KV-471	⅜"	470	.65
3KV-681	⅜"	680	.75
3KV-102	19/32"	1000	.75
3KV-152	19/32"	1500	.85
3KV-222	¾"	2200	1.05
3KV-332	¾"	3300	1.25

6000 VOLTS D.C.W. DISC CERAMICONS

6KV-4R7	19/32"	4.7	1.00
6KV-6R8	¾"	6.8	1.00
6KV-100	¾"	10	1.00
6KV-150	19/32"	15	1.00

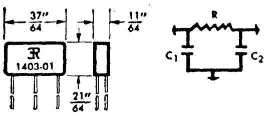
6KV-220	¾"	22	1.00
6KV-181	19/32"	180	1.00
6KV-221	19/32"	220	1.00
6KV-331	¾"	330	1.00

TRADE **ERIE** MARK
RESISTOR CORP.

ERIE RESISTOR CORPORATION—ERIE, PA.

ERIE PRINTED ELECTRONIC CIRCUITS

ERIE DIODE FILTERS



37/64"
11/64"
1403-01
21/64"
R
C_1
C_2

$R = 47K$
$C_1 = 100$ mmf } ± 20%
$C_2 = 100$ mmf
Lead Wire #24

1403-01

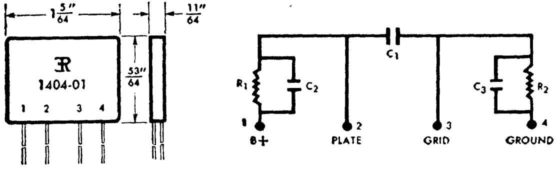
$R = 47K$
$C_1 = 150$ mmf } ± 20%
$C_2 = 150$ mmf
Lead Wire #24

1403-02

$R = 47K$
$C_1 = 50$ mmf } ± 20%
$C_2 = 50$ mmf
Lead Wire #24

1403-03

ERIE TRIODE PLATE COUPLERS



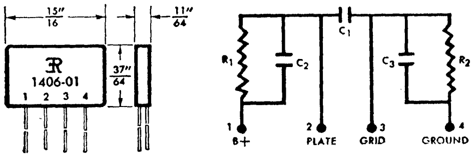
1 5/64"
11/64"
1404-01
1 2 3 4
53/64"
C_1
R_1
C_2
C_3
R_2
1 B+
2 PLATE
3 GRID
4 GROUND

$R_1 = 500K$ } ± 20%
$R_2 = 500K$
$C_1 = .01$ mfd $^{+80\%}_{-20\%}$
$C_2 + C_3 = 250$ mmf ± 40%
Lead Wire #22

1404-01

$R_1 = 250K$ } ± 20%
$R_2 = 500K$
$C_1 = .01$ mfd $^{+80\%}_{-20\%}$
$C_2 + C_3 = 250$ mmf ± 40%
Lead Wire #22

1404-02



15/16"
11/64"
1406-01
1 2 3 4
37/64"
C_1
R_1
C_2
C_3
R_2
1 B+
2 PLATE
3 GRID
4 GROUND

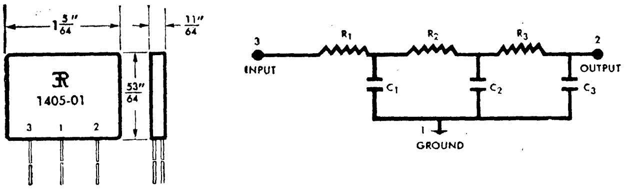
$R_1 = R_2 = 500K$ ± 20%
$C_1 = .005$ mfd $^{+80\%}_{-20\%}$
$C_2 + C_3 = 250$ mmf ± 40%
Lead Wire #24

1406-01

$R_1 = 250K$ ± 20%
$R_2 = 500K$ ± 20%
$C_1 = .005$ mfd $^{+80\%}_{-20\%}$
$C_2 + C_3 = 250$ mmf ± 40%
Lead Wire #24

1406-02

ERIE VERTICAL INTEGRATOR

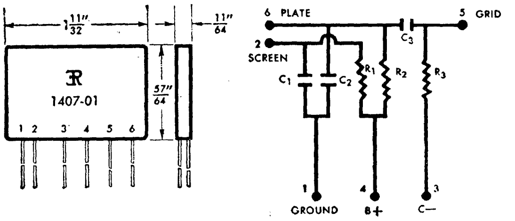


1 5/64"
11/64"
1405-01
3 1 2
53/64"
3 INPUT
R_1
R_2
R_3
2 OUTPUT
C_1
C_2
C_3
1 GROUND

$R_1 = 22K$
$R_2 = 8.2K$ } ± 20%
$R_3 = 8.2K$
$C_1 = 2000$ mmf
$C_2 = 5000$ mmf } $^{+50\%}_{-20\%}$
$C_3 = 5000$ mmf
Lead Wire #22

1405-01

ERIE PENTODE PLATE COUPLERS



1 11/32"
11/64"
1407-01
1 2 3 4 5 6
57/64"
6 PLATE
5 GRID
2 SCREEN
C_1
C_2
C_3
R_1
R_2
R_3
1 GROUND
4 B+
3 C−

$R_1 = 4.7$ megohm
$R_2 = 1$ megohm } ± 20%
$R_3 = 2.2$ megohm
$C_1 = .005$ mfd GMV
$C_2 = 50$ mmf ± 20%
$C_3 = .002$ mfd $^{+50\%}_{-20\%}$
Lead Wire #22

1407-01

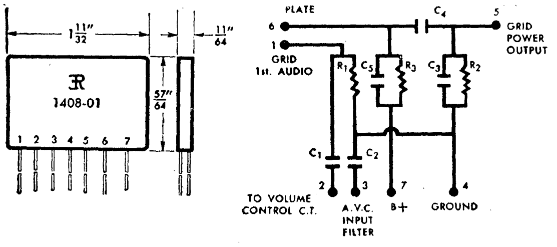
$R_1 = 4.7$ megohm
$R_2 = 1$ megohm } ± 20%
$R_3 = 2.2$ megohm
$C_1 = .005$ mfd GMV
$C_2 = 100$ mmf } $^{+50\%}_{-20\%}$
$C_3 = .002$ mfd
Lead Wire #22

1407-02

$R_1 = 4.7$ megohm
$R_2 = 1$ megohm } ± 20%
$R_3 = 2.2$ megohm
$C_1 = .005$ mfd GMV
$C_2 = 100$ mmf } $^{+50\%}_{-20\%}$
$C_3 = .005$ mfd
Lead Wire #22

1407-03

ERIE AUDIO OUTPUT CIRCUITS



1 11/32"
11/64"
1408-01
1 2 3 4 5 6 7
57/64"
6 PLATE
1 GRID 1st. AUDIO
C_4
5 GRID POWER OUTPUT
R_1
C_5
R_3
C_3
R_2
C_1
C_2
2 TO VOLUME CONTROL C.T.
3 A.V.C. INPUT FILTER
7 B+
4 GROUND

$R_1 = 6.8$ megohm } ± 20%
$R_2 = R_3 = 470K$
$C_1 = .002$ mfd
$C_2 = 220$ mmf } $^{+50\%}_{-20\%}$
$C_3 + C_5 = 250$ mmf
$C_4 = .005$ mfd GMV
Lead Wire #22

1408-01

$R_1 = 6.8$ megohm } ± 20%
$R_2 = R_3 = 470K$
$C_1 = .005$ mfd
$C_2 = 220$ mmf } $^{+50\%}_{-20\%}$
$C_3 + C_5 = 250$ mmf
$C_4 = .005$ mfd GMV
Lead Wire #22

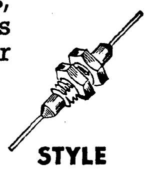
1408-02

ORDER BY PART NUMBER FROM TABLE BELOW

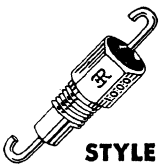
Part No.	Description	List
1403-01	Diode Filter	.60
1403-02	" "	.60
1403-03	" "	.60
1406-01	Triode Plate Coupler	.70
1406-02	" " "	.70
1404-01	" " "	.75
1404-02	" " "	.75
1407-01	Pentode Plate Coupler	.90
1407-02	" " "	1.00
1407-03	" " "	.90
1405-01	Vertical Integrator	1.10
1408-01	Audio Output Coupler	1.00
1408-02	" " "	1.15

ERIE FEED-THRU CERAMICONS®

These very practical feed-thru capacitors are highly recommended for by-passing R. F. to ground in feed-thru applications. Wire terminals of Style 362 and hook type terminals of Style 327 are sufficiently rugged to serve as tie points for several connections, for supporting other circuit elements, and long enough for point to point wiring. Style 327 is hermetically sealed and ruggedized, and is primarily for military and similar commercial usage.



STYLE 362



STYLE 327

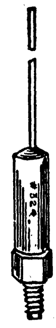
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
362-152	1,500	1.00
327-102	1,000	1.25

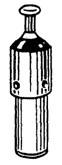
Note: Standard tolerance supplied is ± 20%

ERIE STAND-OFF CERAMICONS

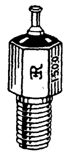
Stand-off Ceramicons, an original Erie development, are now widely used for the dual purposes of by-passing R. F. current to ground, and of mechanically supporting other circuit elements. They are especially suited for V.H.F. and U.H.F. applications, due to their low-inductance electrical paths and resultant high resonant frequency.



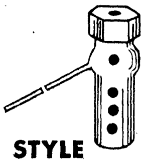
STYLE 324



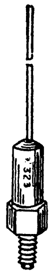
STYLE 325



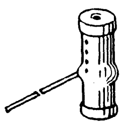
STYLE 326



STYLE 2336



STYLE 323



STYLE 2322

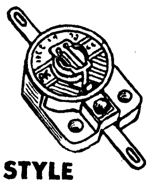
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
323-500	50	.60
323-101	100	.60
323-501	500	.60
324-102	1,000	.60
324-152	1,500	.60
325-102	1,000	.70
325-152	1,500	.70
326-102	1,000	1.10
326-152	1,500	1.10
2322-252	2,500	1.25
2336-252	2,500	1.15
2336-502	5,000	1.15

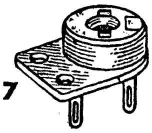
Note: Standard tolerance supplied is ± 20%

ERIE CERAMICON TRIMMERS

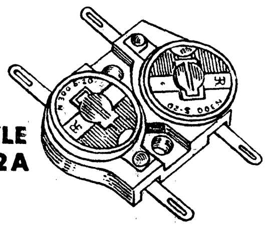
Erie Ceramicon trimmers give maximum stability and ease of adjustment. Capacity change is constant per degree of rotation. Silver electrodes are fired onto ceramic rotor and base. 360 degree rotor completely covers entire track on stator thus preventing dust and other foreign matter from affecting characteristics of the unit.



STYLE TS2A



STYLE 557



STYLE TD2A

ORDER BY PART NUMBER FROM TABLE BELOW

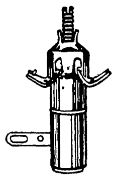
Part No.	Capacity Range (MMF)	Temperature Coefficient	List
TS2A-1.5	1.5-7	NPO	1.50
TS2A-3	3-12	NPO	1.50
TS2A-4	4-30	N500	1.50
TS2A-7	7-45	N500	1.50
TD2A-1.5	1.5-7	NPO	2.50
TD2A-3	3-12	NPO	2.50
TD2A-4	4-30	N500	2.50
TD2A-7	7-45	N500	2.50
557-3	3-12	NPO	1.25
557-5	5-25	NPO	1.25
557-8	8-50	N750	1.25

"Hi-K", "Ceramicon" and "GP" are registered trade names and refer to ceramic dielectric condensers manufactured by Erie Resistor Corp.

ERIE RESISTOR CORP.

ERIE RESISTOR CORPORATION—ERIE, PA.

ERIE TUBULAR TRIMMERS



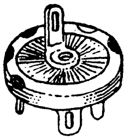
STYLE 532

Here is a compact, economical tubular trimmer that is ideal for applications calling for a low minimum capacity and a high ratio of maximum to minimum capacity. Has molded plastic dielectric. Can be mounted on panels having a thickness of .040" to .065".

ORDER BY PART NUMBER FROM TABLE BELOW

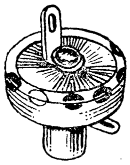
Part No.	Capacity Range (MMF)	List
532-08-OR5	0.5-5	.55
532-10	1-8	.55

ERIE BUTTON® SILVER MICA CAPACITORS



STYLE CB

These are midget silver-mica capacitors, for use where compact size, minimum series inductance, and high leakage resistance are essential. Erie button silver-mica capacitors are unmatched for V.H.F. and U.H.F. work. "Q" at 1 MC is not less than 1000 above 100 mmf; not less than 700 between 50 and 100 mmf; not less than 500 below 50 mmf. Type 370-CB has ring type metal shell with three soldering ears. High potential terminal at either end for feed-thru connection. Type 370-FA is fastened to chassis with 3-48 screw



STYLE FA

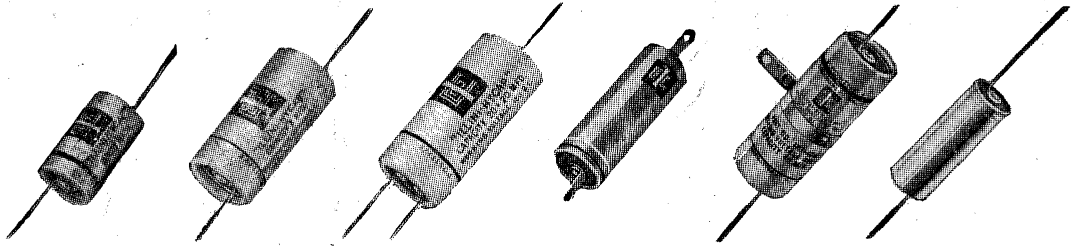
ORDER BY PART NUMBER FROM TABLE BELOW

Part No. FA Styles	Part No. CB Styles	Cap. (MMF)	Tol.	List
370-FA-150M	370-CB-150M	15	20%	1.55
370-FA-150K	370-CB-150K	15	10%	1.55
370-FA-150J	370-CB-150J	15	5%	1.95
370-FA-250M	370-CB-250M	25	20%	1.55
370-FA-250K	370-CB-250K	25	10%	1.55
370-FA-250J	370-CB-250J	25	5%	1.95
370-FA-500M	370-CB-500M	50	20%	1.55
370-FA-500K	370-CB-500K	50	10%	1.55
370-FA-500J	370-CB-500J	50	5%	1.95
370-FA-101M	370-CB-101M	100	20%	1.55
370-FA-101K	370-CB-101K	100	10%	1.55
370-FA-101J	370-CB-101J	100	5%	1.95
370-FA-151M	370-CB-151M	150	20%	1.55
370-FA-151K	370-CB-151K	150	10%	1.55
370-FA-151J	370-CB-151J	150	5%	1.95
370-FA-201M	370-CB-201M	200	20%	1.55
370-FA-201K	370-CB-201K	200	10%	1.55
370-FA-201J	370-CB-201J	200	5%	1.95
370-FA-251M	370-CB-251M	250	20%	1.55
370-FA-251K	370-CB-251K	250	10%	1.55
370-FA-251J	370-CB-251J	250	5%	1.95
370-FA-301M	370-CB-301M	300	20%	1.65
370-FA-301K	370-CB-301K	300	10%	1.65
370-FA-301J	370-CB-301J	300	5%	2.00
370-FA-401M	370-CB-401M	400	20%	1.70
370-FA-401K	370-CB-401K	400	10%	1.70
370-FA-401J	370-CB-401J	400	5%	2.15
370-FA-501M	370-CB-501M	500	20%	1.80
370-FA-501K	370-CB-501K	500	10%	1.80
370-FA-501J	370-CB-501J	500	5%	2.30
370-FA-751M	370-CB-751M	750	20%	2.60
370-FA-751K	370-CB-751K	750	10%	2.60
370-FA-751J	370-CB-751J	750	5%	3.35
370-FA-102M	370-CB-102M	1000	20%	3.15
370-FA-102K	370-CB-102K	1000	10%	3.15
370-FA-102J	370-CB-102J	1000	5%	3.75

"Button" is a registered trade name of Erie Resistor Corp.

ILLINOIS

ELECTROLYTIC CAPACITORS
TIME TESTED QUALITY
1616 N. Throop St. **Chicago 22, Illinois**



TYPE IHT

TUBULAR DRY ELECTROLYTIC CAPACITORS FOR TV AND OTHER ELECTRONIC APPLICATIONS

Unexcelled in quality and compact in size. Specified as original components by radio and TV manufacturers and the choice of thousands of servicemen for all replacements.

ILLINI-HYCAPS are designed to be short-proof, and are hermetically sealed. Low leakage, excellent shelf life, provide quiet and stable operation. "Secured" internal construction makes these capacitors suited for all types of portable and mobile receiving and transmitting equipment.

Available but not listed — special plain foil construction — non-polarized types — and extended temperature range —55° C., to +85° C., units.

For lug terminals use "L" after part number. Example: IHT 8450L

HI-CAPACITY — LOW VOLTAGE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHT 2505	250	5	13/16	2¼	$1.35
IHT 5003	500	3	1 1/16	2¼	1.40
IHT 5005	500	5	13/16	2¼	1.55
IHT 10010	100	10	11/16	1¾	1.20
IHT 20010	200	10	13/16	1¾	1.70
IHT 40010	400	10	13/16	2¼	1.90
IHT 10003	1000	3	1 1/16	2¼	1.55
IHT 10005	1000	5	1 1/16	2¾	1.90
IHT 20006	2000	6	1 1/16	2⅞	2.30
IHT 100012	1000	12	1 1/16	2⅞	2.25
IHT 20015	200	15	13/16	1¼	1.50
IHT 125	1	25	11/16	1¼	.90
IHT 150	1	50	11/16	1¾	.95
IHT 425	4	25	11/16	1¼	1.00
IHT 109	10	90	11/16	1¾	1.00
IHT 5025	50	25	11/16	1¾	1.10
IHT 550	5	50	11/16	1¼	1.00
IHT 1025	10	25	11/16	1¼	1.00
IHT 1050	10	50	11/16	1¼	1.00
IHT 1075	10	75	11/16	1¼	1.05
IHT 2525	25	25	11/16	1¼	1.00
IHT 2550	25	50	11/16	1¼	1.05
IHT 2590	25	90	11/16	1¾	1.20
IHT 5050	50	50	13/16	1¾	1.20
IHT 10025	100	25	13/16	1¾	1.35
IHT 10050	100	50	13/16	1¾	1.40
IHT 415	4	150	11/16	1¾	1.00
IHT 8150	8	150	11/16	1¾	1.05
IHT 1015	10	150	11/16	1¾	1.05
IHT 1215	12	150	11/16	1¾	1.10
IHT 1615	16	150	11/16	1¾	1.15
IHT 2015	20	150	11/16	1¾	1.20
IHT 2415	24	150	11/16	1¾	1.25
IHT 3015	30	150	13/16	1¾	1.30
IHT 4015	40	150	13/16	1¾	1.35
IHT 5015	50	150	13/16	1¾	1.40
IHT 7515	75	150	15/16	2¼	1.55
IHT 10015	100	150	15/16	2¼	1.90

INTERMEDIATE VOLTAGE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHT 40175	40	175	13/16	1¾	1.45
IHT 50175	50	175	13/16	1¾	1.75
IHT 60175	60	175	13/16	2 3/16	1.95
IHT 30200	30	200	13/16	2 3/16	1.45
IHT 8250	8	250	11/16	1¾	1.15
IHT 10250	10	250	11/16	1¾	1.20
IHT 16250	16	250	13/16	1¾	1.30
IHT 20250	20	250	13/16	1¾	1.35
IHT 30250	30	250	15/16	2¼	1.45
IHT 40250	40	250	15/16	2¼	1.55
IHT 80250	80	250	1⅛	2¼	2.30
IHT 8300	8	300	11/16	1¾	1.15
IHT 2035	20	350	1 1/16	2¼	1.45
IHT 3035	30	350	1 1/16	2¼	1.65
IHT 4035	40	350	1 1/16	2⅞	1.75

HIGH VOLTAGE

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHT 2450	2	450	11/16	1¾	1.10
IHT 4450	4	450	11/16	1¾	1.15
IHT 6450	6	450	13/16	1¾	1.15
IHT 8450	8	450	13/16	1¾	1.25
IHT 10450	10	450	13/16	1¾	1.30
IHT 1245	12	450	13/16	2¼	1.35
IHT 1645	16	450	13/16	2¼	1.40
IHT 2045	20	450	1 1/16	2¼	1.55
IHT 3045	30	450	1 1/16	2¼	1.70
IHT 4045	40	450	1 1/16	2¾	1.80
IHT 5045	50	450	1 1/16	2¾	2.10
IHT 8045	80	450	1 1/16	3 11/16	2.80

SPECIAL HIGH VOLTAGE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHT 8500	8	500	15/16	1⅞	$2.30
IHT 16500	16	500	1 1/16	1⅞	2.55
IHT 20500	20	500	1 1/16	2¼	2.45
IHT 30500	30	500	1 1/16	2⅞	2.75
IHT 40500	40	500	1 1/16	2⅞	3.00
IHT 8600	8	600	1 1/16	2⅞	2.75
IHT 10600	10	600	1 1/16	2⅞	2.95
IHT 12600	12	600	1 1/16	3 3/16	3.10
IHT 16600	16	600	1 1/16	3 3/16	3.25
IHT 20600	20	600	1 1/16	3 9/16	3.60
IHT 8700	8	700	1 1/16	2⅞	3.00
IHT 10700	10	700	1 1/16	2⅞	3.50
IHT 12700	12	700	1 1/16	2⅞	3.75
IHT 16700	16	700	1 1/16	2⅞	4.50

DUAL UNITS—ALUMINUM CAN—LOW VOLTAGE

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHT 2215M	20-20	150	15/16	1⅞	1.65
IHT 3315M	30-30	150	15/16	2¼	1.80
IHT 4215M	40-20	150	15/16	2¼	1.75
IHT 4415M	40-40	150	15/16	2¼	1.85
IHT 5315M	50-30	150	15/16	2¼	1.95
IHT 5515M	50-50	150	15/16	2¼	2.10
IHT 8415M	80-40	150	15/16	2¾	2.25

DUAL UNITS—ALUMINUM CAN—HIGH VOLTAGE

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHT 8845M	8-8	450	1 1/16	2¼	1.70
IHT 101045M	10-10	450	1 1/16	2¼	1.85
IHT 121245M	12-12	450	1 1/16	2¼	2.00
IHT 16845M	16-8	450	1 1/16	2¼	2.00
IHT 161645M	16-16	450	1 1/16	2⅞	2.25
IHT 2245M	20-20	450	1 1/16	2⅞	2.50

Note:—Dimensions include outer insulating sleeve.

OUTSTANDING FEATURES OF TYPE IHT CAPACITORS

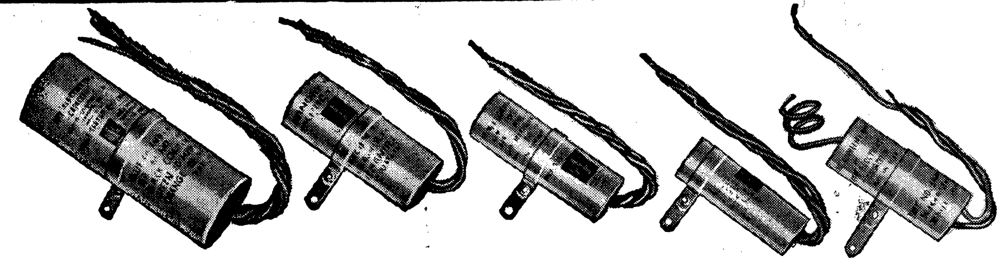
1.—Sturdy, annealed soft drawn tinned copper leads.
2.—Seamless extruded Aluminum shell.
3.—Electrical grade Kraft insulating tube over ends.
4.—Slotted disc Aluminum lock washer at each terminal holds leads securely.
5.—Cathode condenser tab riveted directly to can. High resistance contacts or "open" are nearly impossible.
6.—Condenser pack "secure." Condenser immune to vibration and shock.
7.—Complete hermetic seal achieved at anode with special washer made of pure rubber and bakelite.
8.—Automatic pressure vent.
9.—Wide head rivets of high purity Aluminum for perfect electrical contact.
10.—Condenser constructed from purest chemicals and raw materials. Precision wound.

ILLINOIS

ELECTROLYTIC CAPACITORS

TIME TESTED QUALITY

1616 N. Throop St. Chicago 22, Illinois



TYPE IHC

For television and radio replacement purposes, or for original equipment. Extremely compact, Type IHC Capacitors are normally supplied with strap mounting and in a wide variety of capacity and voltage ratings. As many as six capacitor sections may be incorporated in the construction if necessary. Operating temperature range: —20° C. to +65° C.

All leads out one end or may be supplied leads out each end, on special order.

Features

Hermetically sealed with high temperature compounds.
Underwriters approved 85° C. Insulated leads, minimum 6" length
Color coded leads securely anchored.
Common negative or multiple units for all service applications.
Wide range of capacity and voltage combinations.
Etched foil construction for extra compactness and dependab performance.

LOW VOLTAGE — SINGLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHC 12515	125	150	1 1/16	2 ¾	$2.05
IHC 30200	30	200	¾	2 ¾	1.40
IHC 40200	40	200	⅞	2 ¾	1.70
IHC 60200	60	200	1	2 ¾	1.85

HIGH VOLTAGE — SINGLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHC 1245	12	450	⅞	2 ¾	1.35
IHC 1645	16	450	15/16	2 ¾	1.40
IHC 2045	20	450	1	2 ¾	1.55
IHC 3045	30	450	1 ⅛	2 ¾	1.70
IHC 4045	40	450	1 ⅛	2 ¾	1.80
IHC 5045	50	450	1 ⅛	3 ¼	2.35
IHC 6045	60	450	1 ⅛	3 ¼	2.60
IHC 8045	80	450	1 3/16	3 ¼	2.95

HIGH SURGE — SINGLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHC 12500	12	500	15/16	2 ¾	2.50
IHC 16500	16	500	15/16	2 ¾	2.55
IHC 20500	20	500	1	2 ¾	2.60
IHC 30500	30	500	1	3 ¼	2.75
IHC 40500	40	500	1 ⅛	3 ¼	3.00
IHC 8845	8-8	450CN*	1 ⅛	2 ¾	1.70
IHC-D 8845	8-8	450DN**	1 ⅛	2 ¾	2.15

HIGH VOLTAGE — MULTIPLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHC 101045	10-10	450CN	1 ⅛	2 ¾	1.85
IHC-D 101045	10-10	450DN	1 ⅛	2 ¾	2.20
IHC 16845	16-8	450CN	1 ⅛	3	2.00
IHC 161645	16-16	450CN	1 3/16	3	2.25
IHC-D 161645	16-16	450DN	1 3/16	3 ¼	2.80
IHC 22450	20-20	450CN	1 3/16	3 ¼	2.50
IHC 33450	30-30	450CN	1 ¼	3 ¼	3.00
IHC 41450	40-10	450CN	1 ¼	3 ¼	3.00
IHC 44450	40-40	450CN	1 ⅜	3 7/16	3.35
IHC 53450	50-30	450CN	1 ⅜	3 ¼	3.40
IHC 801045	80-10	450CN	1 ⅜	3 ¼	4.25
IHC 2425	20-25	400/25	1 1/16	2 5/16	3.50
IHC 88845	8-8-8	450CN	1 3/16	3	2.75
IHC 11145	10-10-10	450CN	1 3/16	3	3.00
IHC 66645	16-16-16	450CN	1 ¼	3 ¼	3.10
IHC 22245	20-20-20	450CN	1 ¼	3 ¼	3.95
IHC 222245	20-20-20-20	450CN	1 ⅜	3 ⅜	4.50
IHC 422145	40-20-20-10	450CN	1 ⅜	4 ⅛	4.65
IHC 442245	40-40-20-20	450CN	1 ⅜	4 ⅛	4.85

*CN—Common Negative **DN—Dual Negative

DUAL UNITS — LOW VOLTAGE
Common Negative

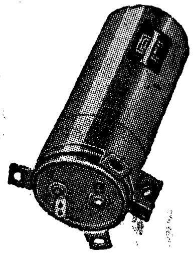
Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHC 1125	10-10	25CN	¾	1 ¾	$1.40
IHC 1150	10-10	50CN	1	1 ¾	1.40
IHC 16815	16-8	150CN	1	2	1.55
IHC 161615	16-16	150CN	¾	2 ⅜	1.55
IHC 2215	20-20	150CN	¾	2 ⅜	1.65
IHC 2215-D	20-20	150DN	15/16	2 ¾	2.05

MULTIPLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
IHC 3215	30-20	150CN	15/16	2 ¾	1.70
IHC 3315	30-30	150CN	15/16	2 ¾	1.80
IHC 4215	40-20	150CN	15/16	2 ¾	1.75
IHC 4415	40-40	150CN	15/16	2 ¾	1.85
IHC 5315	50-30	150CN	15/16	2 ¾	1.95
IHC 5515	50-50	150CN	1	2 ⅞	2.10
IHC 6215	60-20	150CN	1		2.10
IHC 8415	80-40	150CN	1	2 ¾	2.25
IHC 8815	80-80	150CN	1 ⅛	2 ¾	2.50
IHC 10030	100-30	150CN	1 ⅛	2 ¾	2.35
IHC 125100	125-100	150CN	1 ¼	3 ⅛	3.10
IHC 2225	20-20-25	150-25CN	⅞	2 ⅜	2.05
IHC 8225	80-20-25	150-25	1 ⅛	2 ⅞	2.55
IHC 84215	80-40-20	150CN	1 ⅛	2 ⅞	2.75
IHC 43215	40-30-20	150CN	1	2 ⅞	2.35
IHC 44215	40-40-20	150CN	1	2 ⅞	2.50
IHC 53315	50-30-30	150CN	1	2 ¾	2.55
IHC 62217	60-20-20	175CN	1	2 ¾	2.75
IHC 53100	50-30-100	150-25CN			2.50
IHC 5525	50-50-25	150-25CN	1	3	2.55
IHC 9625	90-60-25	150-25CN	1 ¼	2 ¾	3.00
IHC 44425	40-40-25	150-25CN	1	2 ⅞	2.35
IHC 22215	20-20-20	150CN	1	2 ⅜	2.20
IHC 64425	60-40-40-20	150-25CN	1 ¼	2 ¾	3.25
IHC 84442	80-40-40-40	150-25CN	1 ¼	2 ¾	3.45
IHC 12510025	125-100-25	150-25CN	1 ¼	3	3.00

TYPE UMC

HIGH CAPACITY ELECTROLYTIC CAPACITORS



These capacitors are available in a wide voltage range. They are hermetically sealed in extruded Aluminum cans by use of a combination Bakelite and rubber washer. Terminal connections and lugs are over-size to handle the high currents normally encountered in these capacitors.

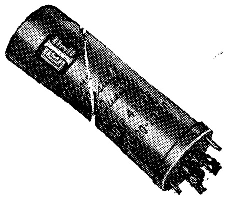
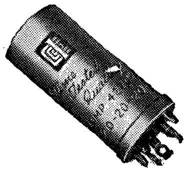
These units are popular for use in electrical circuits having high voltage or ripple currents. Excellent for voltage stabilization and where high current storage capacity is essential.

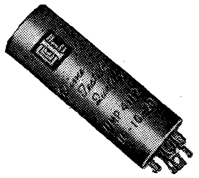
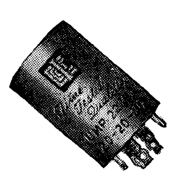
Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
UMC 155	500	15	2 ¾	1 ⅜	$2.95
UMC 151	1000	15	3 ½	1 ⅜	3.45
UMC 152	2000	15	4 ¼	1 ⅜	3.85
UMC 154	4000	15	4 ¼	1 ½	5.00
UMC 156	6000	15	4 ¼	1 ¾	6.75
UMC 251	1000	25	3 ½	1 ⅜	4.30
UMC 252	2000	25	3 ½	1 ½	5.25
UMC 253	3000	25	4 ¼	1 ½	8.00
UMC 254	4000	25	4 ¼	1 ¾	9.50
UMC 501	1000	50	3 ¼	2	6.50
UMC 502	2000	50	4 ¼	2	8.60
UMC 5025	250	150	3 ¼	1 ⅜	3.40
UMC 1551	500	150	4 ¼	1 ½	4.10
UMC 1510	1000	150	4 ¼	2	6.95
UMC 20045	200	450	4 ¼	2	10.00*
UMC 30045	300	450	4 ¼	2	12.50*
UMC 40045	400	450	4 ¼	2	15.00*
UMC 45045	450	450	4 ¼	2	18.00*
UMC 50045	500	450	4 ¼	2	22.50*

* Especially designed for energy storage — discharge — photoflash — strobelight, etc.

- Upright mounting brackets available, order as **extra.**
- Add 1/16" to diameter, ¼" to overall height if insulating sleeve is required.
- Also available — non-polarized types for continuous low voltage A.C. operation.

ILLINOIS ELECTROLYTIC CAPACITORS
TIME TESTED QUALITY
1616 N. Throop St. Chicago 22, Illinois

TYPE UMP

HIGH CAPACITY — LOW VOLTAGE UNITS FOR TELEVISION — RADIO — ELECTRONICS

ILLINOIS CONDENSER'S Type UMP Twist-Prong Electrolytics offer a wider range of voltage and capacity types than have heretofore been possible in units of comparable size.

The electrical characteristics of Type UMP Electrolytic Capacitors are superb. Capacities are always within tolerance. This, coupled with low power factor and low leakage, makes them ideal for use in all electronic circuits.

Units are encased in seamless extruded Aluminum cans. Mounting and soldering lugs are sturdy and heavily tinned. Cathode tabs are electrically welded to mounting ring. Each unit is vibration proof—and they will stand up in any climate.

Type UMP Features

1.—Hermetically sealed with exclusive Bakelite molded terminal cap.
2.—All mounting and soldering lugs hot tin coated.
3.—Capacitors stable over extended temperature range.
4.—Excellent shelf life. Low power factor.
5.—All Aluminum interior construction—corrosion proof.
6.—Meets all Underwriters Laboratories requirements.
7.—Rugged - Dependable - Economical - Used by leading manufacturers of all types of electronic equipment.

Note:—Supplied with outer cardboard insulating sleeve when desired.

SINGLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
UMP 13	3000	10	1⅜	3	$2.90
UMP 15	1000	15	1	3	2.55
UMP 12	2000	15	1⅜	3	3.45
UMP 21	100	25	1	2	1.60
UMP 25	500	25	1	3	2.55
UMP 205	1000	25	1⅜	3	3.55
UMP 505	500	50	1⅜	3	2.65
UMP 150	50	150	1	2	1.80
UMP 165	100	150	1	3	2.00
UMP 254	40	250	1	2½	1.80
UMP 258	80	250	1	3	2.30
UMP 355	50	350	1	3	2.10
UMP 351	125	350	1⅜	3	3.95
UMP 400	10	450	1	3	1.55
UMP 415	15	450	1	2	1.70
UMP 420	20	450	1	2	1.80
UMP 430	30	450	1	2½	1.95
UMP 440	40	450	1	3	2.05
UMP 480	80	450	1⅜	3	3.05
UMP 610	10	525	1	2½	1.75
UMP 620	20	525	1	3	2.65
UMP 630	30	525	1⅜	2½	2.95
UMP 640	40	525	1⅜	3	3.20

DUAL UNITS

UMP 101	1000-1000	15	1⅜	3	4.40
UMP 551	500-50	5-150	1	3	2.30
UMP 555	50-50	50	1	2	1.70
UMP 132	30-20	150	1	2½	1.80
UMP 142	40-20	150	1	2½	1.85
UMP 144	40-40	150	1	2½	1.90
UMP 153	50-30	150	1	2½	2.00
UMP 155	50-50	150	1	2½	2.15
UMP 184	80-40	150	1	3	2.30
UMP 111	100-100	150	1⅜	3	3.40
UMP 125	150-5	150	1⅜	3¼	3.75
UMP 152	200-5	150	1⅜	3	3.10
UMP 222	200-200	150	1⅜	3¼	4.00
UMP 322	20-20	250	1	2	1.90
UMP 340	40-40	250	1	3	2.50
UMP 344	40-40	350	1⅜	3	3.15
UMP 384	80-50	450-50	1⅜	3	3.40
UMP 428	20-80	450-350	1⅜	3	3.75
UMP 411	10-10	450	1	2	1.90
UMP 422	20-20	450	1	3	2.55
UMP 444	40-40	450	1⅜	3	3.45
UMP 464	60-40	450	1⅜	3½	3.95
UMP 481	80-10	450	1⅜	3	3.60

TRIPLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
UMP 2225	20-20-20	25	1	2	$1.95
UMP 1222	20-20-20	150	1	2	2.30
UMP 1444	40-40-40	150	1	3	2.60
UMP 1422	40-20-20	150	1	3	2.40
UMP 1842	80-40-20	150	1	3	2.90
UMP 1332	30-30 20	150 25	1	2	2.30
UMP 1425	40-20 25	150 25	1	2	2.35
UMP 1525	50-30 25	150 25	1	2½	2.70
UMP 1531	50-30 100	150 25	1	2½	2.70
UMP 1532	50-30 200	150 25	1⅜	2	3.10
UMP 1825	80-20 20	150 25	1	3	2.65
UMP 1441	40-40 100	150 10	1	3	2.70
UMP 1552	50-50 20	150 25	1	3	2.65
UMP 1833	80-30 300	150 15	1⅜	2½	3.25
UMP 3311	30-10-10	350	1	3	3.10
UMP 3111	10-10-10	350	1	2	2.55
UMP 3151	15-10 20	350 25	1	2	2.70
UMP 3332	30-30 30	250 25	1	2½	2.80
UMP 3312	30-10 20	350 25	1	2½	3.00
UMP 3234	30-20 40	350 25	1	3	3.10
UMP 4112	10-10-20	450-25	1	2	2.40
UMP 4222	20-20 20	450 25	1	3	3.05
UMP 4442	40-40 20	450 25	1⅜	3	3.95
UMP 4445	40-40 100	450 50	1⅜	3½	4.65
UMP 4111	10-10-10	450	1	2½	2.60
UMP 4220	20-20-20	450	1⅜	2½	3.60
UMP 4313	30-15 30	450 150	1⅜	3	3.85
UMP 4418	40-10 80	450 150	1⅜	3	4.65
UMP 4311	30-10-10	450	1⅜	3	3.25
UMP 4331	30-30-10	450	1⅜	3¼	4.00
UMP 4410	40-40-10	450	1⅜	3¼	4.15
UMP 4330	30-30-30	450	1⅜	3¼	4.35
UMP 4440	40-40-40	450	1⅜	3¼	4.90
UMP 4622	60-20-20	450	1⅜	3 9/16	4.50
UMP 4445	40-40 50	450 200	1⅜	3¼	4.50
UMP 4412	40-40 100	450 200	1⅜	4 5/16	4.95

QUADRUPLE UNITS

UMP 14432	40-40-30 20	150 25	1⅜	2½	3.10
UMP 18431	80-40-30 100	150 25	1⅜	3	3.75
UMP 44312	40-30-10 20	450 25	1⅜	3	4.50
UMP 41111	10-10-10-10	450	1⅜	2	3.35
UMP 42222	20-20-20-20	450	1⅜	3¼	4.70
UMP 43112	30-10-10 20	450 25	1⅜	3	4.15
UMP 42111	20-10-10 100	450 25	1⅜	3	4.00
UMP 42115	20-10-10 10	450 150	1⅜	3	4.25

MOUNTING HARDWARE FOR UMP CAPACITORS

METAL WAFERS ARE .025″ THICK
BAKELITE WAFERS ARE 1/16″ THICK

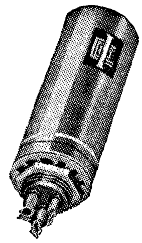
Part No.	Item	Description	List Price
MPB-1	Bakelite Wafer	For 1″ UMP Units	$0.085
MPB-3	Bakelite Wafer	For 1⅜″ UMP Units	0.10
MPS-2	Metal Wafer	For 1″ UMP Units	0.075
MPS-4	Metal Wafer	For 1⅜″ UMP Units	0.10

ILLINOIS

ELECTROLYTIC CAPACITORS

TIME TESTED QUALITY

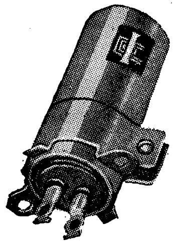
1616 N. Throop St. Chicago 22, Illinois



TYPE UMS

Hermetically sealed screw base mounting with Bakelite molded terminal caps. Extremely rugged construction with high purity Aluminum electrodes molded-in base. Designed for use in quality equipment requiring operation over extended temperature ranges and under conditions where resistance to vibration and mechanical shock are essential. Designed to meet all government specifications where applicable. Other types on special order. Lock washer and nut supplied.

Part Number	Capacity MFD	Working Voltage D.C.	Size in Inches Dia.	Length	+ Lug	List Price
UMS 445	4	450	1⅜	2¾	9/16	$2.15
UMS 845	8	450	1⅜	2¾	9/16	2.30
UMS 1645	16	450	1⅜	2¾	9/16	2.65
UMS 2045	20	450	1⅜	2¾	9/16	2.75
UMS 3045	30	450	1⅜	3¼	9/16	2.95
UMS 4045	40	450	1⅜	3¾	9/16	3.15
UMS 5045	50	450	1⅜	3¾	9/16	3.70
UMS 8045	80	450	1⅜	4¾	9/16	3.80
UMS 11045	10-10	450	1⅜	2¾	9/16	3.35
UMS 22045	20-20	450	1⅜	3¼	9/16	4.05
UMS 33045	30-30	450	1⅜	4¼	9/16	4.25
UMS 44045	40-40	450	1⅜	4¾	9/16	4.65

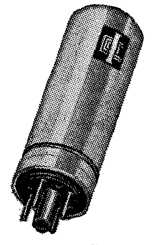


TYPE UMT

Similar to Type UMS Capacitors except that they are of the ring clamp mounting type. All of the features of Type UMS Capacitors are present in the UMT's including hermetic sealing with Bakelite molded terminal caps, rugged construction utilizing high purity Aluminum electrodes molded-in base, operation over extended temperature ranges in shock and vibration conditions.
Designed to comply with all government specifications where applicable.
Other types on special order.
The mounting clamp is supplied.

TYPE UMT ELECTROLYTIC CAPACITORS

Part Number	Capacity MFD	Working Voltage D.C.	Size in Inches Dia.	Length	+ Lug	List Price
UMT 845	8	450	1	2¼	⅝	$2.30
UMT 1045	10	450	1	2¼	⅝	2.35
UMT 1245	12	450	1	2¼	⅝	2.40
UMT 1645	16	450	1	2¼	⅝	2.65
UMT 2045	20	450	1	2¾	⅝	2.85
UMT 3045	30	450	1⅜	2¾	⅝	3.00
UMT 4045	40	450	1⅜	2¾	⅝	3.15
UMT 8045	80	450	1⅜	3¼	⅝	3.80
UMT 8845	8-8	450	1⅜	2¾	⅝	3.25
UMT 1145	10-10	450	1⅜	2¾	⅝	3.35
UMT 121245	12-12	450	1⅜	2¾	⅝	3.45
UMT 161645	16-16	450	1⅜	2¾	⅝	3.80
UMT 2245	20-20	450	1⅜	3¼	⅝	4.05
UMT 3345	30-30	450	1⅜	3¼	⅝	4.25
UMT 11145	10-10-10	450	1⅜	3¼	⅝	5.30
UMT 22245	20-20-20	450	1⅜	3¼	⅝	5.80



TYPE PE

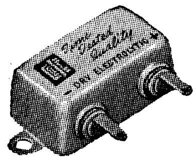
"PLUG-IN" OCTAL BASE

Especially designed for use in communications equipment where rapid testing or replacement is essential. Ideally suited for military equipment and all types of civilian emergency use.
Hermetically sealed in extruded seamless Aluminum cans. Bakelite base with nickel plated brass pins. Internal construction is all Aluminum, and the capacitor is rigidly supported within its container. The molded base is extended to prevent the outer container from touching the mounting surface.

Type PE Capacitor not listed are also available in a complete line to meet all JAN specifications.

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
PE 4415	40-40	150	1⅜	2½	$4.35
PE 5315	50-30	150	1⅜	2½	4.85
PE 5520	50-50	150			
	20	25	1⅜	2½	5.20
PE 53100	50-30	150			
	100	25	1⅜	2½	5.50
PE 2045	20	450	1⅜	2½	4.45
PE 3045	30	450	1⅜	3	4.55
PE 4045	40	450	1⅜	3	5.55
PE 8045	80	450	1⅜	3	4.40
PE 2104	10-10	450	1⅜	3	4.95
PE-D 1145	10-10	450*	1⅜	3	5.10
PE 31045	10-10-10	450	1⅜	3	5.05
PE 2245	20-20	450	1⅜	3	6.10
PE 22245	20-20-20	450			

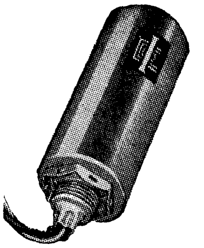
* Dual Negative



TYPE BT

Manufactured to meet all quality requirements. Type BT "Bath Tub" Capacitors are hermetically sealed. Bottom seams are soldered. Terminals are high temperature Silicon bushings, which also act as terminal lug supports. Solder lugs and can hot tin coated. Designed to withstand excessive shock and vibration.
Available in a wide voltage, capacity and temperature ranges. Other types, not listed, are manufactured in a complete line in all JAN types.

Part Number	Capacity MFD	Working Voltage D.C.	Case Size Inches H	L	W	List Price
BT 1025	10	25	15/16	1 13/16	1	$2.60
BT 2525	25	25	15/16	1 13/16	1	2.70
BT 2550	25	50	15/16	1 13/16	1	2.75
BT 5050	50	50	15/16	1 13/16	1	3.00
BT 10050	100	50	15/16	1 13/16	1	3.50
BT 845	8	450	15/16	1 13/16	1	4.25
BT 1645	16	450	1⅛	2	1⅛	5.00
BT 2045	20	450	1¼	2	1¾	5.50
BT 3045	30	450	1⅛	2	2	6.00
BT 4045	40	450	1⅛	2	2	6.50
BT 8500	8	500	1¼	2	2	5.00
BT 1250	12	500	1¼	2	2	5.50
BT 1650	16	500	1⅛	2	2	6.00
BT 8600	8	600	1⅛	2	2	6.50



TYPE LN

For Radio - Television - Electronics

Ideal replacement units for wet electrolytics but will serve in any application where top quality and compactness is desired.

Assembled in a round extruded Aluminum can with threaded neck and supplied with a palnut for easy single hole mounting. Completely insulated from the can. Long insulated leads have striped and tinned ends. Neck diameter ¾" by 16 thread.

INVERTED SCREW MOUNTING ALUMINUM CAN SINGLE UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
LN 80	8	450	1⅜	3⅜	$2.20
LN 120	12	450	1⅜	3⅜	2.40
LN 16	16	450	1⅜	3⅜	2.45
LN 20	20	450	1⅜	3⅜	2.75
LN 25	25	450	1⅜	3⅜	2.85
LN 30	30	450	1⅜	3⅜	3.00
LN 40	40	450	1½	3½	3.15
LN 50	50	450	1½	3½	3.65
LN 60	60	450	1½	3½	3.95
LN 8045	80	450	1½	3½	4.90

DUAL SECTION UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
LN 88	8-8	450	1⅜	3⅜	3.00
*LN-D 88	8-8	450	1⅜	3⅜	3.75
LN 1010	10-10	450	1⅜	3½	3.10
LN 168	16-8	450	1⅜	3⅜	3.30
LN 1212	12-12	450	1⅜	3⅜	3.20
*LN-D 1212	12-12	450	1½	3⅜	3.95
*LN-D 216	16-16	450	1⅜	3⅜	3.55
LN 216	16-16	450	1½	3½	4.10
LN 22	20-20	450	1½	3½	3.80
LN 33	30-30	450	1½	3½	4.50
LN 44	40-40	450	1½	3½	4.95

TRIPLE SECTION UNITS

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
LN 388	8-8-8	450	1½	3½	5.00
LN 311	10-10-10	450	1½	3½	5.30
LN 316	16-16-16	450	1½	3½	5.50
LN 320	20-20-20	450	1½	3½	5.80

QUAD SECTION

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
LN 48	8-8-8-8	450	1½	3½	4.85
LN 410	10-10-10-10	450	1½	3½	5.20

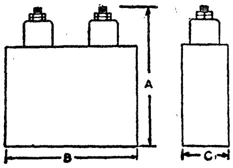
SINGLE AND DUAL UNITS — 500 VDC

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
LN 850	8	500	1⅜	3⅜	2.25
LN 1650	16	500	1⅜	3⅜	2.95
LN 16850	16-8	450	1½	3⅜	3.35
LN 16850	16-8	500	1⅜	3⅜	3.85

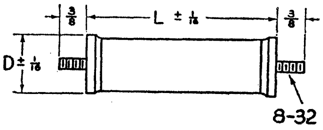
SINGLE UNITS — 600 VDC

Part Number	Capacity MFD	Working Voltage D.C.	Diameter Inches	Length Inches	List Price
LN 600	4	600	1⅜	3⅜	2.95
LN 8600	8	600	1⅜	3⅜	3.15
LN 12600	12	600	1⅜	3⅜	4.50
LN 16600	16	600	1½	3½	3.75
LN 20600	20	600	1½	3½	4.00

Plastic Capacitors, Inc.
CHICAGO 47, ILL



GLASSCAPS
DC FILTER TYPES



TYPE OF
65° C. Full Rating
Derated to 70% Nameplate Voltage for 85° C. Operation

Part Number	Capacity MFD	Volts DC	Dimensions Lgth.	Dimensions Dia.	List Price
OF20-502	.005	2000	1 3/16	19/32	$ 2.05
OF20-103	.01	2000	1 3/16	19/32	2.25
OF20-203	.02	2000	1 9/16	19/32	2.40
OF20-503	.05	2000	1 3/4	3/4	2.70
OF20-104	0.1	2000	2 1/4	3/4	3.05
OF20-254	0.25	2000	2 3/4	29/32	3.50
OF30-502	.005	3000	1 3/16	19/32	5.10
OF30-103	.01	3000	1 9/16	19/32	5.30
OF30-203	.02	3000	1 3/4	3/4	5.50
OF30-503	.05	3000	2 1/4	29/32	5.70
OF30-104	0.1	3000	1 3/4	1 1/8	6.00
OF30-254	0.25	3000	2	1 3/8	6.60
OF40-502	.005	4000	1 3/16	19/32	5.90
OF40-103	.01	4000	1 3/16	3/4	6.10
OF40-203	.02	4000	1 3/4	3/4	6.40
OF40-503	.05	4000	2	13/16	6.50
OF40-104	0.1	4000	2	1 1/8	7.40
OF40-254	0.25	4000	2 1/4	1 5/8	8.10
OF50-502	.005	5000	1 5/8	19/32	6.50
OF50-103	.01	5000	1 3/4	3/4	6.80
OF50-203	.02	5000	2 1/4	3/4	7.20
OF50-503	.05	5000	2 1/4	29/32	7.60
OF50-104	0.1	5000	2 1/4	1 3/8	8.50
OF50-254	0.25	5000	3	1 5/8	9.40
OF80-202	.002	8000	1 3/4	19/32	6.80
OF80-502	.005	8000	1 3/4	3/4	7.00
OF80-103	.01	8000	2 1/4	29/32	7.50
OF80-203	.02	8000	2 3/4	29/32	8.60
OF80-503	.05	8000	2 3/4	1 3/8	11.10
OF80-104	0.1	8000	3 5/8	1 5/8	12.50
OF100-102	.001	10 KV	1 5/8	19/32	7.20
OF100-202	.002	10 KV	1 5/8	19/32	7.40
OF100-502	.005	10 KV	1 3/4	13/16	8.50
OF100-103	.01	10 KV	2 1/4	29/32	9.20
OF100-203	.02	10 KV	2 3/4	1 1/8	11.40
OF100-503	.05	10 KV	2 3/4	1 5/8	14.60
OF100-603	.06	10 KV	3	1 5/8	15.50
OF150-102	.001	15 KV	2 1/4	3/4	13.80
OF150-202	.002	15 KV	2 1/4	3/4	14.60
OF150-502	.005	15 KV	2 3/4	1 1/8	17.00
OF150-103	.01	15 KV	3 3/4	1 1/8	20.00
OF150-203	.02	15 KV	4 1/4	1 3/8	22.00
OF150-503	.05	15 KV	7	1 5/8	26.00
OF200-501	.0005	20 KV	3 1/2	19/32	18.00
OF200-102	.001	20 KV	3 1/2	3/4	19.00
OF200-202	.002	20 KV	3 1/2	13/16	21.00
OF200-502	.005	20 KV	3 1/2	1 1/8	22.50
OF200-103	.01	20 KV	4 1/2	1 3/8	24.00
OF200-203	.02	20 KV	4 1/2	1 5/8	27.00
OF300-201	.0002	30 KV	4 9/16	19/32	21.00
OF300-501	.0005	30 KV	4 9/16	19/32	21.00
OF300-102	.001	30 KV	5	3/4	23.50
OF300-202	.002	30 KV	5	29/32	26.00
OF300-502	.005	30 KV	5	1 3/8	28.00
OF300-103	.01	30 KV	6 1/2	1 5/8	35.00
OF400-101	.0001	40 KV	5 3/4	3/4	22.50
OF400-201	.0002	40 KV	5 3/4	3/4	22.50
OF400-501	.0005	40 KV	5 3/4	3/4	22.50
OF400-102	.001	40 KV	6 1/2	13/16	26.00
OF400-202	.002	40 KV	6 1/2	1 1/8	28.00
OF400-502	.005	40 KV	6 1/2	1 5/8	33.00
OF500-101	.0001	50 KV	8 1/4	3/4	23.50
OF500-201	.0002	50 KV	8 1/4	3/4	23.50
OF500-501	.0005	50 KV	8 1/4	3/4	24.50
OF500-102	.001	50 KV	8 1/4	13/16	28.00
OF500-202	.002	50 KV	8 1/4	1 1/8	31.50
OF500-502	.005	50 KV	10 3/4	1 3/8	36.00
OF600-101	.0001	60 KV	10	3/4	24.50
OF600-201	.0002	60 KV	10	3/4	24.50
OF600-501	.0005	60 KV	10	3/4	28.00
OF600-102	.001	60 KV	10	29/32	34.00
OF600-202	.002	60 KV	10	1 3/8	36.50
OF600-502	.005	60 KV	11 1/2	1 5/8	41.50

TYPE LF
85° C. Full Rating
Derated to 80% Nameplate Voltage for 105° C. Operation

Part Number	Capacity MFD	Volts DC	Dimensions Lgth.	Dimensions Dia.	List Price
LF4-503	.05	400	1 1/4	19/32	$ 3.40
LF4-104	0.1	400	1 1/4	3/4	3.60
LF4-254	0.25	400	1 1/4	29/32	3.80
LF4-504	0.5	400	2	29/32	4.40
LF10-203	.02	1000	1 1/4	19/32	3.40
LF10-503	.05	1000	1 1/4	13/16	3.60
LF10-104	0.1	1000	2	13/16	3.80
LF10-254	0.25	1000	2	1 1/8	4.10
LF20-103	.01	2000	1 1/4	3/4	5.30
LF20-203	.02	2000	1 1/4	13/16	5.50
LF20-503	.05	2000	2	13/16	5.80
LF20-104	0.1	2000	2	1 3/8	6.30
LF20-254	0.25	2000	2	1 5/8	6.90
LF30-103	.01	3000	1 1/4	3/4	6.20
LF30-203	.02	3000	1 1/4	29/32	6.50
LF30-503	.05	3000	2	1 1/8	6.90
LF30-104	0.1	3000	2	1 3/8	7.30
LF30-254	0.25	3000	3	1 5/8	8.10
LF40-502	.005	4000	1 1/4	13/16	6.60
LF40-103	.01	4000	2	13/16	6.80
LF40-203	.02	4000	2	1 1/8	7.50
LF40-503	.05	4000	2	1 5/8	8.20
LF40-104	0.1	4000	3	1 5/8	8.90
LF60-502	.005	6000	2	3/4	7.70
LF60-103	.01	6000	2	29/32	7.90
LF60-203	.02	6000	2	1 3/8	8.70
LF80-502	.005	8000	2 3/8	13/16	8.80
LF80-103	.01	8000	2 3/8	1 3/8	9.60
LF80-203	.02	8000	3 7/8	1 3/8	11.80
LF80-503	.05	8000	5 7/8	1 5/8	15.20
LF120-202	.002	12 KV	2 3/8	29/32	15.80
LF120-502	.005	12 KV	3 7/8	29/32	18.40
LF120-103	.01	12 KV	3 7/8	1 3/8	19.60
LF120-203	.02	12 KV	5 7/8	1 3/8	22.50

TYPE LG
125° C. Full Rating
Derated to 50% Nameplate Voltage for 140° C. Operation

Part Number	Capacity MFD	Volts DC	Dimensions Lgth.	Dimensions Dia.	List Price
LG3-503	.05	300	1 1/4	19/32	$ 4.40
LG3-104	0.1	300	1 1/4	3/4	4.40
LG3-254	0.25	300	1 1/4	29/32	4.80
LG7-503	.05	700	1 1/4	13/16	4.60
LG7-104	0.1	700	2	13/16	4.80
LG7-254	0.25	700	2	1 1/8	5.20
LG10-503	.05	1000	2	13/16	6.80
LG10-104	0.1	1000	2	1 3/8	7.40
LG10-254	0.25	1000	2	1 5/8	8.20
LG15-203	.02	1500	1 1/4	29/32	8.10
LG15-503	.05	1500	2	1 1/8	8.70
LG15-104	0.1	1500	2	1 3/8	9.10
LG15-254	0.25	1500	3	1 5/8	9.60
LG20-103	.01	2000	2	13/16	8.10
LG20-203	.02	2000	2	1 1/8	8.70
LG20-503	.05	2000	2	1 5/8	9.40
LG30-103	.01	3000	2	29/32	9.10
LG30-203	.02	3000	2	1 3/8	9.70
LG30-503	.05	3000	3	2 3/8	12.50
LG40-103	.01	4000	2 3/8	1 3/8	10.90
LG40-203	.02	4000	3 7/8	1 3/8	13.60
LG40-503	.05	4000	5 7/8	1 5/8	18.10
LG60-502	.005	6000	3 7/8	29/32	20.00
LG60-103	.01	6000	3 7/8	1 3/8	22.40
LG60-203	.02	6000	5 7/8	1 3/8	24.00

Plastic Capacitors, Inc.
CHICAGO 47, ILL

TYPE TG — 150° C. Full Rating
Special Types Available up to 200° C.

Part Number	Capacity MFD	Volts DC	Dimensions Lgth.	Dimensions Dia.	List Price
TG75-102	.001	7500	1⅝	¾	$13.60
TG75-202	.002	7500	1⅝	13/16	14.70
TG75-502	.005	7500	1⅝	1⅛	16.00
TG75-103	.01	7500	2⅛	1⅛	22.00
TG75-203	.02	7500	2⅛	1⅝	25.60
TG100-501	.0005	10 KV	2⅛	¾	15.60
TG100-102	.001	10 KV	2⅛	¾	15.60
TG100-202	.002	10 KV	2⅛	13/16	17.30
TG100-502	.005	10 KV	2⅛	1⅜	19.40
TG100-103	.01	10 KV	2⅝	1⅜	25.60
TG150-501	.0005	15 KV	2⅞	¾	17.00
TG150-102	.001	15 KV	2⅞	13/16	22.10
TG150-202	.002	15 KV	2⅞	1⅛	23.60
TG150-502	.005	15 KV	2⅞	1⅝	30.60
TG150-103	.01	15 KV	3⅞	1⅛	38.40
TG200-201	.0002	20 KV	2¼	¾	18.10
TG200-501	.0005	20 KV	2¼	13/16	18.10
TG200-102	.001	20 KV	2¼	29/32	24.00
TG200-202	.002	20 KV	3⅞	1⅛	31.20
TG200-502	.005	20 KV	4⅞	1⅜	42.00
TG300-101	.0001	30 KV	4¼	¾	19.20
TG300-201	.0002	30 KV	4¼	¾	19.20
TG300-501	.0005	30 KV	4¼	1⅛	26.50
TG300-102	.001	30 KV	5¾	1⅛	35.80
TG300-202	.002	30 KV	5¾	1⅜	46.00

DC FILTERS (CP-70)
TYPE OE — 65° C. Full Rating
Derated to 70% Nameplate Voltage for 85° C. Operation

Part Number	Volts DC	Capacity MFD	Dimensions A	Dimensions B	Dimensions C	List Price
OE20-504	2000	0.5	3 3/16	2½	1 3/16	$ 5.80
OE20-105	2000	1.0	3 11/16	2½	1 3/16	7.00
OE20-205	2000	2.0	4 15/16	2½	1 3/16	8.10
OE20-405	2000	4.0	4 9/16	3¾	1¼	11.00
OE20-605	2000	6.0	5 13/16	3¾	1¼	15.50
OE20-805	2000	8.0	5 13/16	3¾	2¼	19.20
OE30-254	3000	0.25	3 5/16	2½	1 3/16	12.50
OE30-504	3000	0.5	4 1/16	2½	1 3/16	13.20
OE30-105	3000	1.0	4 13/16	2½	1 3/16	14.50
OE30-205	3000	2.0	5 7/16	3¾	1¼	18.40
OE30-405	3000	4.0	5 11/16	3¾	2¼	25.50
OE30-605	3000	6.0	4 7/16	4 9/16	3¾	45.00
OE40-254	4000	0.25	3 7/16	2½	1 3/16	25.30
OE40-504	4000	0.5	4 3/16	2½	1 3/16	28.60
OE40-105	4000	1.0	4 13/16	3¾	1¼	33.00
OE40-205	4000	2.0	5 7/16	3¾	1¾	39.60
OE40-405	4000	4.0	4 13/16	2½	1 3/16	61.50
OE50-104	5000	0.1	3 3/16	2½	1 3/16	24.00
OE50-254	5000	0.25	3 9/16	2½	1 3/16	28.40
OE50-504	5000	0.5	4 15/16	2½	2 3/16	31.90
OE50-105	5000	1.0	5 3/16	3¾	1¾	39.60
OE50-205	5000	2.0	5 11/16	2½	1 3/16	49.50
OE50-405	5000	4.0	6 3/16	4 9/16	3¾	77.90
OE50-605	5000	6.0	8 5/16	4 9/16	3¾	100.00
OE60-104	6000	0.1	4 11/16	3¾	1¾	30.20
OE60-254	6000	0.25	4 11/16	3¾	1¾	35.50
OE60-504	6000	0.5	5 13/16	3¾	1¾	41.90
OE60-105	6000	1.0	7 3/16	3¾	2¼	53.00
OE60-205	6000	2.0	7 3/16	4 9/16	3¾	68.00
OE60-405	6000	4.0	10 11/16	4 9/16	3¾	97.00
OE75-104	7500	0.1	4 15/16	3¾	1¾	26.70
OE75-254	7500	0.25	4 15/16	3¾	1¾	32.10
OE75-504	7500	0.5	6 5/16	3¾	2¼	35.00
OE75-105	7500	1.0	7 3/16	3¾	3 3/16	59.40
OE75-205	7500	2.0	9 3/16	4 9/16	3¾	86.00
OE100-104	10 KV	0.1	5 9/16	3¾	1¾	35.20
OE100-254	10 KV	0.25	7 1/16	3¾	1¾	42.20
OE100-504	10 KV	0.5	7 1/16	3¾	2¼	64.00
OE100-105	10 KV	1.0	7 5/16	4 9/16	3¾	105.00
OE100-205	10 KV	2.0	11 3/16	4 9/16	3¾	121.00
OE150-104	15 KV	0.1	7 1/16	3¾	1¾	61.00
OE150-254	15 KV	0.25	7 5/16	3¾	3 3/16	72.00
OE150-504	15 KV	0.5	10 3/16	4 9/16	3¾	116.00
OE150-105	15 KV	1.0	9 7/16	8	4	158.00
OE150-205	15 KV	2.0	15 9/16	13½	4¼	189.00
OE200-503	20 KV	.05	6 11/16	3¾	1¾	64.00
OE200-104	20 KV	0.1	7 11/16	3¾	2¼	86.00
OE200-254	20 KV	0.25	7 15/16	4 9/16	3¾	102.00
OE200-504	20 KV	0.5	12 9/16	4 9/16	3¾	159.00
OE250-103	25 KV	.01	6¾	3¾	2¼	51.00
OE250-203	25 KV	.02	7½	3¾	2¼	55.00
OE250-503	25 KV	.05	8½	3¾	2¼	64.00
OE250-104	25 KV	0.1	8¾	3¾	3 3/16	86.00
OE250-254	25 KV	0.25	13⅜	4 9/16	3¾	102.00
OE300-103	30 KV	.01	7⅜	3¾	2¼	63.50
OE300-203	30 KV	.02	8⅜	3¾	2¼	72.00
OE300-503	30 KV	.05	8⅞	3¾	3 3/16	95.00
OE300-104	30 KV	0.1	9⅝	4 9/16	3¾	121.00

GLASSCAPS (RF and Pulse Types)
TYPE HG
65° C. Full Rating

Part Number	Capacity MFD	Volts DC	Volts Pulse	Dimensions Lgth.	Dimensions Dia.	List Price
HG25-103	.01	2500	1500	1	1⅛	$ 6.50
HG25-203	.02	2500	1500	1½	1⅛	7.10
HG25-503	.05	2500	1500	2	1⅜	8.60
HG25-104	0.1	2500	1500	2½	1⅝	11.40
HG35-502	.005	3500	2500	1	1⅛	7.50
HG35-103	.01	3500	2500	1	1⅝	8.10
HG35-203	.02	3500	2500	1½	1⅝	8.50
HG35-503	.05	3500	2500	2½	1⅝	11.60
HG50-502	.005	5000	3000	2	1⅛	10.50
HG50-103	.01	5000	3000	2	1⅜	11.50
HG50-203	.02	5000	3000	3	1⅜	12.50
HG50-503	.05	5000	3000	6	1⅜	18.50
HG70-202	.002	7000	5000	2	29/32	11.00
HG70-502	.005	7000	5000	2	1⅝	14.20
HG70-103	.01	7000	5000	4	1⅛	17.00
HG70-203	.02	7000	5000	4	1⅝	18.60
HG100-102	.001	10 KV	7000	3	29/32	12.00
HG100-202	.002	10 KV	7000	3	1⅛	13.50
HG100-502	.005	10 KV	7000	6	1⅛	22.00
HG100-103	.01	10 KV	7000	6	1⅜	24.00
HG140-102	.001	14 KV	10 KV	4	29/32	15.30
HG140-202	.002	14 KV	10 KV	4	1⅜	20.00
HG140-502	.005	14 KV	10 KV	8	1⅛	24.00
HG140-103	.01	14 KV	10 KV	8	1⅝	27.00
HG200-201	.0002	20 KV	15 KV	5¾	¾	17.00
HG200-501	.0005	20 KV	15 KV	5¾	29/32	20.00
HG200-102	.001	20 KV	15 KV	5¾	1⅛	22.50
HG200-202	.002	20 KV	15 KV	5¾	1⅝	24.50
HG250-201	.0002	25 KV	20 KV	7¼	¾	20.00
HG250-501	.0005	25 KV	20 KV	7¼	29/32	25.00
HG250-102	.001	25 KV	20 KV	7¼	1⅜	31.00
HG250-202	.002	25 KV	20 KV	7¼	1⅝	35.00

TYPE TF
150° Full Rating

Part Number	Capacity MFD	Volts DC	Peak Pulse Volts	Dimensions Lgth	Dimensions Dia.	List Price
TF40-501	.0005	4000	3500	1⅝	19/32	$13.10
TF40-102	.001	4000	3500	1⅝	¾	13.10
TF40-202	.002	4000	3500	1⅝	13/16	14.20
TF40-502	.005	4000	3500	1⅝	1⅛	15.40
TF40-103	.01	4000	3500	2⅛	1⅛	21.10
TF40-203	.02	4000	3500	2⅛	1⅝	24.20
TF60-501	.0005	6000	5000	2⅛	¾	15.20
TF60-102	.001	6000	5000	2⅛	¾	15.20
TF60-202	.002	6000	5000	2⅛	13/16	16.80
TF60-502	.005	6000	5000	2⅛	1⅜	18.60
TF60-103	.01	6000	5000	2⅝	1⅜	24.10
TF80-501	.0005	8000	7000	2⅞	¾	16.10
TF80-102	.001	8000	7000	2⅞	1 13/16	21.20
TF80-202	.002	8000	7000	2⅞	1⅛	22.40
TF80-502	.005	8000	7000	2⅞	1⅝	29.00
TF80-103	.01	8000	7000	3⅞	1⅛	36.90
TF120-201	.0002	12 KV	10 KV	2¼	¾	16.90
TF120-501	.0005	12 KV	10 KV	2¼	13/16	16.90
TF120-102	.001	12 KV	10 KV	2¼	29/32	22.50
TF120-202	.002	12 KV	10 KV	3⅞	1⅛	29.70
TF120-502	.005	12 KV	10 KV	4⅞	1⅜	40.20
TF180-101	.0001	18 KV	15 KV	4¼	¾	18.00
TF180-201	.0002	18 KV	15 KV	4¼	¾	18.00
TF180-501	.0005	18 KV	15 KV	4¼	1⅛	25.20
TF180-102	.001	18 KV	15 KV	5¾	1⅛	35.20
TF180-202	.002	18 KV	15 KV	5¾	1⅜	44.10

POWER SUPPLIES

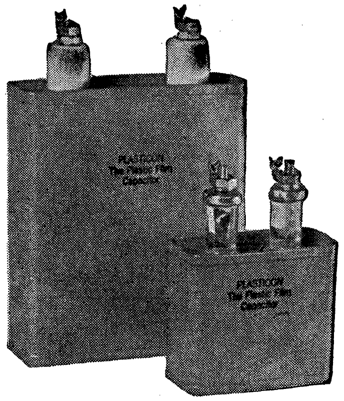
Model	Output KV	Output ma	Case Size Width	Case Size Lgth.	Case Size Ht.	*Net Price
HV20-502	2.0	5.0	2¾	5⅜	5⅜	$ 75.00
HV50-502	0 to 5.0	5.0	4½	6⅜	5⅝	89.00
HV100-102	0 to 10	1.0	4½	7¼	5	100.00
HV100-502	0 to 10	5.0	6	8¼	6½	109.00
HV150-102	0 to 15	1.0	4½	7¼	5	108.00
HV150-502	0 to 15	5.0	6	8¼	6½	118.00
HV200-102	0 to 20	1.0	4½	7¾	5½	126.00
HV200-502	0 to 20	5.0	6⅝	9	8¾	171.00
HV300-102	0 to 30	1.0	6¾	8¾	6	180.00
HV300-502	0 to 30	5.0	6⅝	9	8¾	210.00
HV500-502	0 to 50	5.0	12½	12½	12½	425.00

* Net

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

PLASTICON DC RECTANGULARS

Mineral oil impregnated and filled. Hermetically sealed. Can be operated in any position, continuously at 10% over rated voltage. Tolerance 10%. Ambient temperature range -40° C. to +85° C. Insulators: Two ceramic type bushings for standard temperature range. Two soldered-in metallized glass insulators for extended temperature range. All DC rectangulars have 8-32 screw and hex nut terminals with removable hot-tinned solder lugs. Case: Rectangular base, lead coated steel with heavy finish of grey organic lacquer.

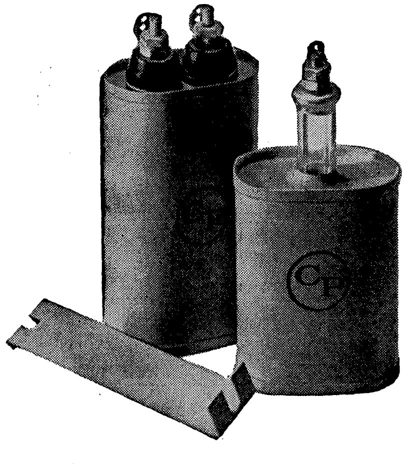


Mfr's. No.	Cap. Mfd.	Volts DC	Dimensions - Inches Height	Width	Depth	Term. Height	Dist. Bet. Ter.	List
AOC6C1	1.0	600	2⅛	1¾	1	¾	13/16	$ 4.49
AOC6C2	2.0	600	2¾	1¾	1	¾	13/16	5.41
AOC6C4	4.0	600	3½	2½	1 3/16	¾	1⅛	6.73
AOC6C8	8.0	600	4	3¾	1¼	¾	2	10.16
AOC6C10	10.0	600	4	3¾	1¾	¾	2	11.42
AOC1M1	1.0	1000	2⅜	1¾	1	¾	13/16	4.82
AOC1M2	2.0	1000	4	1¾	1	¾	13/16	6.47
AOC1M4	4.0	1000	4	2½	1 3/16	¾	1⅛	7.85
AOC1M8	8.0	1000	4⅝	3¾	1¾	¾	2	11.09
AOC1M10	10.0	1000	4⅝	3¾	2¼	¾	2	12.80
AOC2M05	0.5	2000	2⅜	1¾	1	¾	13/16	5.81
AOC2M1	1.0	2000	3½	1¾	1	¾	13/16	7.06
AOC2M2	2.0	2000	3½	2½	1 3/16	¾	1⅛	8.18
AOC2M4	4.0	2000	3½	3¾	1¾	¾	2	11.09
AOC3M1	1.0	3000	4	2½	1 3/16	1 1/16	1⅛	14.52
AOC3M2	2.0	3000	4	3¾	1¼	1 1/16	2	18.48
AOC3M4	4.0	3000	4⅝	3¾	2¼	1 1/16	2	25.54
AOC4M1	1.0	4000	4	3¾	1¼	1 1/16	2	33.00
AOC4M2	2.0	4000	4	3¾	1¾	1 1/16	2	39.60
AOC4M4	4.0	4000	4	3¾	4 9/16	1 1/16	2	60.53
AOC5M1	1.0	5000	4	3¾	1¾	2	2	49.60
AOC5M2	2.0	5000	3½	3¾	4 9/16	2	2	49.50
AOC75C1	1.0	7500	3½	3¾	4 9/16	2	2	59.40
AOC10M1	1.0	10000	4⅝	3¾	4 9/16	2	2	105.60

PLASTICON DC OVALS

Mfr's. No.	Cap. Mfd.	Volts DC	Dimensions - Inches Height	Width	Depth	Term. Height	Dist. Bet. Ter.	List Price
AOCO6C2	2.0	600	2⅜	2	1¼	¾	13/16	$5.28
AOCO6C4	4.0	600	4	2	1¼	¾	13/16	6.34
AOCO1M1	1.0	1000	2⅜	2	1¼	¾	13/16	4.62
AOCO1M2	2.0	1000	3½	2	1¼	¾	13/16	6.20
AOCO3M01	0.1	3000	2⅜	2	1¼	1 1/16	—	9.11
AOCO5M01	0.1	5000	2¾	2	1¼	2	—	16.90
AOCO5M025	0.25	5000	3½	2	1¼	2	—	18.48
AOCO5M05	0.5	5000	4⅝	2	1¼	2	—	21.78
AOCO8M005	0.05	8000	2¾	2	1¼	2	—	18.22
AOCO8M01	0.1	8000	3½	2	1¼	2	—	20.06
AOCO10M005	0.05	10000	3½	2	1¼	2	—	23.10

Same specifications as DC Rectangulars. Insulators: Two wet-process porcelain bushings on Types AOCO6C, AOCO1M & AOCO2M. One ceramic bushing can grounded on Types AOCO3M, AOCO5M, AOCO8M and AOCO10M. Case: Obround (flattened oval) cross section. Drawn or lock-seam lead coated steel with heavy finish of gray organic lacquer. Two right angle mounting foot brackets are provided as standard on all AOCO capacitors. Add ½" to depth to get mounting centers.

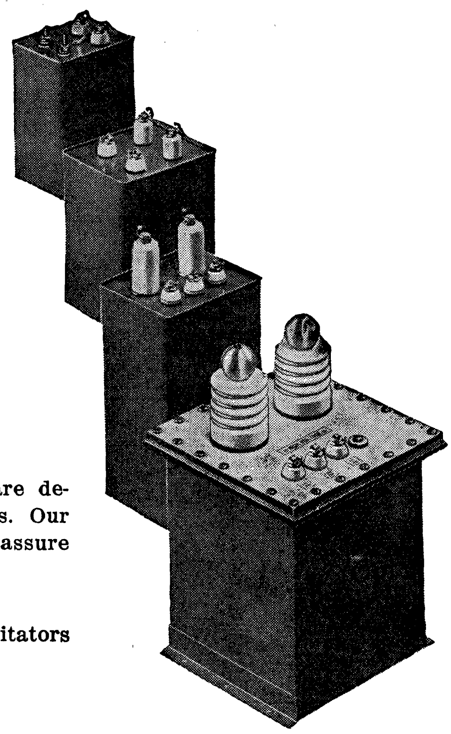


Condenser Products Company

7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

HiVolt POWER SUPPLIES



Where size and weight must be kept to a minimum —

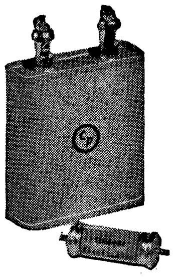
These hermetically-sealed, self-contained power supplies are designed for Hi Voltage low current DC for many applications. Our exclusive engineering techniques and oil-filled construction assure smaller, lighter, more flexible units.

APPLICATIONS:

- radiation counters
- spectrographic analyzers
- projection television sets
- dust and electrostatic precipitators
- oscilloscopes
- display tubes, etc.

Model No.	Output Voltage	Rated Output Current	Max. Output Current	% Ripple at Rated Current	Case Size	Circuit	List Price
PS 2	2 KV DC	2.0 ma	5.0 ma	1.0	3¾ x 3 3/16 x 5½	Half Wave	$ 31.00
PS 5	5 KV DC	3.0 ma	5.0 ma	2.0	3¾ x 4 9/16 x 6	Half Wave	85.00
PS10	0-12 KV DC	1.5 ma	1.75 ma	2.0	3¾ x 4 9/16 x 8	Full Wave Doubler	115.00
PS15	0-15 KV DC	1.0 ma	1.75 ma	3.0	3¾ x 4 9/16 x 9	Full Wave Doubler	200.00
PS30	0-30 KV DC	1.0 ma	1.75 ma	3.0	7 x 7 x 8¼	Full Wave Doubler	285.00
*PS50	0-50 KV DC	2.0 ma	4.0 ma	3.0	12½ x 12½ x 12½	Full Wave Tripler	850.00
		Others by Quotation					

NOTES: *The PS 50 supply has a separate accessible compartment for the rectifier tubes.
1. Hivolt Supplies are rated at 118 V AC input, 60 cycles.
2. Hivolt Supplies for 400 cycle operation are also available for aircraft use, built to military specifications.
3. Hivolt Supplies are engineered for various applications. Send us your requirements.



LABORATORY GRADE PLASTICON CAPACITORS

Low dielectric absorption, .01-.02% residual. Low dissipation factor, .0002-.0003 at 1 MC. Constant Q and capacitance, from DC to 100 KC. High insulation resistance, 10^{12} ohms/mfd. average. Negative temp. coefficient, minus 400-500 ppm/°C. Rated voltage 500 V DC. Resistance and absorption readings taken at 200 V DC. 2% and 5% standard tolerances, 1% to order. Type LAG Glassmike style. Type LAC rectangular metal can.

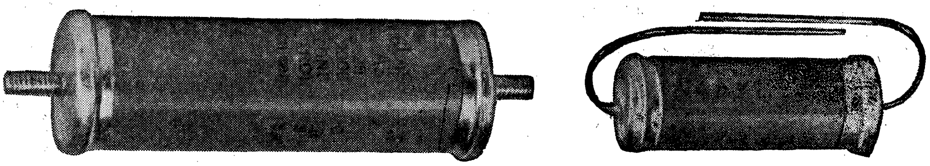
No.	Mfd.	Dimensions	List Price 5% Tolerance
LAG101	.0001	19/32 x 1″	$ 6.25
LAG201	.0002	19/32 x 1″	6.33
LAG501	.0005	19/32 x 1″	6.50
LAG102	.001	¾ x 1″	6.67
LAG202	.002	¾ x 1″	6.83
LAG502	.005	¾ x 1″	7.25
LAG103	.01	29/32 x 1″	7.75
LAG203	.02	29/32 x 1″	8.50
LAG503	.05	1⅜ x 1″	9.33
LAC104	.1	2¼ x 1¾ x 1″	12.83
LAC204	.2	2¼ x 2½ x 1 3/16″	13.83
LAC504	.5	4 x 2½ x 1 3/16″	15.83
LAC105	1.	4⅝ x 3¾ x 1¼″	27.50
LAC205	2.	4⅝ x 3¾ x 2¼″	40.83
LAC505	5.	6 x 3¾ x 4 9/16″	88.33

Condenser Products Company

7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

"*Glassmike*" PLASTICON CAPACITORS



Type ASG

Type ASG are Plasticon A dielectric-silicone fluid impregnated capacitor elements in hermetically sealed glass tubes. Standard range —60°C to +85°C, extended range —60°C to +125°C with proper derating. The smallest and lightest high voltage capacitors made. Type ASG are ideal for DC and low frequency AC applications. All 19/32 diameter Glassmikes are supplied with pigtail leads.

Plasticon dielectric is superior to the finest linen or kraft condenser paper hitherto used. Plasticon is a thin plastic film, free from metallic particles or other foreign matter. Much higher tensile strength than paper and does not become brittle with age and heat. Not porous as paper and has higher breakdown voltage.

Cat. No.	New Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions Dia. & Length	List Price
ASG1	ASG103-6C*	.01	600	19/32 x1 3/16	$1.50
ASG2	ASG203-6C*	.02	600	19/32 x1 3/16	1.60
	ASG303-6C	.03	600	19/32 x1 3/16	1.60
	ASG403-6C	.04	600	19/32 x1 3/16	1.60
ASG3	ASG503-6C*	.05	600	19/32 x1 9/16	1.75
	ASG603-6C	.06	600	19/32 x1 9/16	1.75
	ASG753-6C	.075	600	19/32 x1 9/16	1.75
ASG4	ASG104-6C*	.1	600	¾ x1 ¾	1.95
	ASG204-6C	.2	600	13/16 x1 ¾	2.15
ASG5	ASG254-6C*	.25	600	29/32 x2 ¼	2.25
	ASG304-6C	.3	600	29/32 x1 ¾	2.35
ASG6	ASG504-6C*	.5	600	29/32 x2 ¾	2.60
	ASG105-6C	1.0	600	1 ⅜ x2	3.90
ASG7	ASG502-1M	.005	1000	19/32 x1 3/16	1.50
ASG8	ASG108-1M*	.01	1000	19/32 x1 3/16	1.60
ASG9	ASG203-1M*	.02	1000	19/32 x1 3/16	1.70
ASG10	ASG503-1M*	.05	1000	¾ x1 ¾	1.85
ASG11	ASG104-1M*	.1	1000	¾ x2 ¼	2.15
ASG12	ASG254-1M*	.25	1000	29/32 x2 ¾	2.50
	ASG504-1M	.5	1000	1 ⅛ x2 ¼	2.90
ASG13	ASG202-2M*	.002	2000	19/32 x1 3/16	1.90
ASG14	ASG502-2M*	.005	2000	19/32 x1 3/16	2.05
ASG15	ASG103-2M*	.01	2000	19/32 x1 3/16	2.25
ASG16	ASG203-2M*	.02	2000	19/32 x1 9/16	2.50
ASG17	ASG503-2M*	.05	2000	¾ x1 ¾	2.80
ASG18	ASG104-2M*	.1	2000	¾ x2 ¼	3.20
ASG19	ASG254-2M*	.25	2000	29/32 x2 ¾	3.70
	ASG504-2M	.5	2000	1 ⅜ x2	4.40
ASG20	ASG102-3M*	.001	3000	19/32 x1 3/16	5.15
ASG21	ASG202-3M*	.002	3000	19/32 x1 3/16	5.25
ASG22	ASG502-3M*	.005	3000	19/32 x1 3/16	5.40
ASG23	ASG103-3M*	.01	3000	19/32 x1 9/16	5.60
ASG24	ASG203-3M*	.02	3000	¾ x1 ¾	5.85
ASG25	ASG503-3M*	.05	3000	29/32 x2 ¼	6.15
ASG26	ASG104-3M*	.1	3000	1 ⅛ x2 ¼	6.50
	ASG254-3M	.25	3000	1 ⅜ x2	7.20
	ASG102-4M	.001	4000	19/32 x1 3/16	5.95
	ASG202-4M	.002	4000	19/32 x1 3/16	6.05
	ASG502-4M	.005	4000	19/32 x1 ⅝	6.20
	ASG103-4M	.01	4000	¾ x1 3/16	6.40
	ASG203-4M	.02	4000	¾ x1 ¾	6.75
	ASG503-4M	.05	4000	13/16 x2	7.00
	ASG104-4M	.1	4000	1 ⅛ x2	7.80
ASG27	ASG102-5M*	.001	5000	19/32 x1 3/16	6.50
ASG28	ASG202-5M*	.002	5000	19/32 x1 3/16	6.70
ASG29	ASG502-5M*	.005	5000	19/32 x1 ⅝	6.95
ASG30	ASG103-5M*	.01	5000	¾ x1 ¾	7.25
ASG31	ASG203-5M*	.02	5000	¾ x2 ¼	7.65
ASG32	ASG503-5M*	.05	5000	29/32 x2 ¼	8.15
ASG33	ASG104-5M*	.1	5000	1 ⅜ x3 ½	9.10

Cat. No.	New Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions Dia. & Length	List Price
	ASG501-75C	.0005	7500	19/32 x1 9/16	$7.00
ASG34	ASG102-75C*	.001	7500	19/32 x1 9/16	7.00
ASG35	ASG202-75C*	.002	7500	19/32 x1 ¾	7.25
ASG36	ASG502-75C*	.005	7500	¾ x1 ¾	7.55
ASG37	ASG103-75C*	.01	7500	¾ x2 ¼	8.15
ASG38	ASG203-75C*	.02	7500	29/32 x2 ¾	9.25
ASG39	ASG503-75C*	.05	7500	1 ⅜ x4 ¼	11.50
ASG40	ASG501-10M*	.0005	10,000	19/32 x1 ⅝	7.30
ASG41	ASG102-10M*	.001	10,000	19/32 x1 ⅝	7.50
ASG42	ASG202-10M*	.002	10,000	19/32 x1 ⅝	7.80
ASG43	ASG502-10M*	.005	10,000	13/16 x1 ¾	9.00
ASG44	ASG103-10M*	.01	10,000	29/32 x2 ¼	10.50
ASG45	ASG203-10M*	.02	10,000	1 ⅛ x2 ¾	12.50
ASG46	ASG303-10M	.03	10,000	1 ⅜ x2 ¾	15.00
ASG60	ASG603-10M*	.06	10,000	1 ⅜ x4 ¼	17.50
ASG47	ASG501-15M*	.0005	15,000	19/32 x2 ¼	14.50
ASG48	ASG102-15M*	.001	15,000	¾ x2 ¼	14.80
ASG49	ASG202-15M*	.002	15,000	¾ x2 ¼	15.50
	ASG502-15M	.005	15,000	1 ⅛ x2 ¾	18.00
	ASG103-15M	.01	15,000	1 ⅛ x3 ¾	21.00
	ASG203-15M	.02	15,000	1 ⅜ x4 ½	25.00
ASG50	ASG501-20M*	.0005	20,000	19/32 x3 ½	19.50
ASG51	ASG102-20M*	.001	20,000	¾ x3 ½	20.50
	ASG202-20M	.002	20,000	13/16 x3 ½	22.00
	ASG502-20M	.005	20,000	1 ⅛ x3 ½	24.00
	ASG103-20M	.01	20,000	1 ⅜ x4 ½	26.00
ASG52	ASG501-30M*	.0005	30,000	19/32 x4 9/16	22.50
	ASG102-30M	.001	30,000	¾ x5	25.00
	ASG202-30M	.002	30,000	29/32 x5	28.00
	ASG502-30M	.005	30,000	1 ⅜ x5	30.00
	ASG501-40M	.0005	40,000	19/32 x5 ¾	25.00
	ASG102-40M	.001	40,000	13/16 x6 ½	29.00
	ASG202-40M	.002	40,000	1 ⅛ x6 ½	30.00
	ASG501-50M	.0005	50,000	¾ x8 ¼	28.00
	ASG102-50M	.001	50,000	13/16 x8 ¼	34.00
	ASG202-50M	.002	50,000	1 ⅛ x8 ¼	36.00
	ASG502-50M	.005	50,000	1 ⅜ x10 ¾	44.00
	ASG501-60M	.0005	60,000	¾ x11	32.00
	ASG102-60M	.001	60,000	29/32 x11	39.00

Other prices and values by quotation.

*These units are duplicated in the ASG line now in use, i.e. ASG1 thru 52.

Condenser Products Company

7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

"Glassmike" PLASTICON CAPACITORS
Type LSG

LSG type capacitors have Plasticon L film-silicone fluid impregnant in Glassmike style case. Designed to compete with mica capacitors, the LSG capacitors are more applicable for Radio Frequency. Special beneficial features include greater safety factor, lower RF losses, more conveniently mounted, utilize less chassis space, impervious to moisture and smaller in overall volume.

Part #	Size	Cap	Volts D.C.	List Price
752-6C	19/32x1	.0075	600	$4.17
103-6C	¾x1	.01	600	4.50
203-6C	29/32x1	.02	600	5.50
253-6C	29/32x1½	.025	600	5.50
303-6C	29/32x1½	.03	600	5.50
403-6C	29/32x1½	.04	600	5.50
503-6C	29/32x1½	.05	600	5.50
603-6C	29/32x1½	.06	600	5.50
753-6C	1⅛x1½	.075	600	6.17
104-6C	1⅛x1½	0.1	600	6.17
154-6C	1⅜x1½	0.15	600	7.00
204-6C	1⅜x2	0.2	600	7.00
254-6C	1⅜x2½	0.25	600	7.33
304-6C	1⅝x2½	0.3	600	8.86
404-6C	1⅝x2½	0.4	600	8.86
504-6C	1⅝x3	0.5	600	10.80
502-1M	19/32x1	.005	1000	5.00
602-1M	¾x1	.006	1000	5.50
752-1M	¾x1	.0075	1000	5.50
103-1M	¾x1	.01	1000	5.50
203-1M	¾x1½	.02	1000	5.85
253-1M	¾x1½	.025	1000	5.85
303-1M	13/16x1½	.03	1000	6.17
403-1M	29/32x1½	.04	1000	6.85
503-1M	1⅛x1½	.05	1000	7.33
603-1M	1⅛x1½	.06	1000	7.33
753-1M	1⅛x1½	.075	1000	7.33
104-1M	1⅛x2	0.1	1000	8.00
154-1M	1⅜x2	0.15	1000	9.50
204-1M	1⅜x2½	0.2	1000	10.80
254-1M	1⅝x2½	0.25	1000	11.00
304-1M	1⅝x3	0.3	1000	11.70
404-1M	1⅝x3½	0.4	1000	12.70
202-25C	19/32x1	.002	2500	5.15
252-25C	¾x1	.0025	2500	5.50
302-25C	¾x1	.003	2500	5.50
402-25C	¾x1	.004	2500	5.50
502-25C	13/16x1	.005	2500	5.85
602-25C	13/16x1	.006	2500	5.85
752-25C	29/32x1	.0075	2500	6.17
103-25C	1⅛x1	.01	2500	6.50
203-25C	1⅛x1½	.02	2500	7.18
253-25C	1⅛x1½	.025	2500	7.18
303-25C	1⅛x1½	.03	2500	7.18
403-25C	1⅛x2	.04	2500	8.00
503-25C	1⅜x2	.05	2500	8.68
603-25C	1⅜x2	.06	2500	8.68
753-25C	1⅝x2	.075	2500	10.40
104-25C	1⅝x2½	0.1	2500	11.70
154-25C	1⅝x3½	0.15	2500	12.70
601-35C	19/32x1	.0006	3500	5.50
751-35C	¾x1	.00075	3500	5.85
102-35C	¾x1	.001	3500	5.85
202-35C	¾x1	.002	3500	5.85
252-35C	13/16x1	.0025	3500	6.20
302-35C	29/32x1	.003	3500	7.00
402-35C	29/32x1	.004	3500	7.00
502-35C	1⅛x1	.005	3500	7.50
602-35C	1⅛x1	.006	3500	7.50
752-35C	1⅜x1	.0075	3500	7.85
103-35C	1⅝x1	.01	3500	8.18
203-35C	1⅝x1½	.02	3500	8.50
253-35C	1⅝x1½	.025	3500	8.67
303-35C	1⅝x2	.03	3500	10.80
403-35C	1⅝x2	.04	3500	10.80
503-35C	1⅝x2½	.05	3500	11.65
603-35C	1⅝x3	.06	3500	12.35
753-35C	1⅝x3	.075	3500	$12.35
104-35C	1⅝x4	0.1	3500	13.65
401-5M	19/32x2	.0004	5000	8.00
501-5M	19/32x2	.0005	5000	8.00
601-5M	¾x2	.0006	5000	8.85
751-5M	¾x2	.00075	5000	8.85
102-5M	¾x2	.001	5000	8.85
202-5M	13/16x2	.002	5000	9.65
252-5M	13/16x2	.0025	5000	9.65
302-5M	13/16x2	.003	5000	9.65
402-5M	1⅛x2	.004	5000	10.50
502-5M	1⅛x2	.005	5000	10.50
602-5M	1⅛x2	.006	5000	10.50
752-5M	1⅜x2	.0075	5000	11.50
103-5M	1⅜x2	.01	5000	11.50
203-5M	1⅜x3	.02	5000	12.50
253-5M	1⅜x3	.025	5000	12.50
303-5M	1⅜x4	.03	5000	15.00
403-5M	1⅝x4	.04	5000	16.70
503-5M	1⅜x6	.05	5000	18.70
603-5M	1⅝x6	.06	5000	20.70
753-5M	1⅜x8	.075	5000	22.70
104-5M	1⅝x8	0.1	5000	24.70
301-7M	19/32x2	.0003	7000	8.15
401-7M	¾x2	.0004	7000	9.00
501-7M	¾x2	.0005	7000	9.00
601-7M	¾x2	.0006	7000	9.00
751-7M	¾x2	.00075	7000	9.00
102-7M	¾x2	.001	7000	9.00
202-7M	29/32x2	.002	7000	11.00
252-7M	1⅛x2	.0025	7000	11.85
302-7M	1⅛x2	.003	7000	11.85
402-7M	1⅜x2	.004	7000	12.35
502-7M	1⅝x2	.005	7000	14.35
602-7M	1⅝x2	.006	7000	14.35
752-7M	1⅛x4	.0075	7000	17.00
103-7M	1⅛x4	.01	7000	17.00
203-7M	1⅝x4	.02	7000	18.65
253-7M	1⅜x6	.025	7000	21.30
303-7M	1⅝x6	.03	7000	21.30
403-7M	1⅜x8	.04	7000	23.00
503-7M	1⅝x8	.05	7000	23.00

Part #	Size	Cap	Kilovolts D.C.	List Price
201-10M	19/32x3	.0002	10	$10.80
301-10M	¾x3	.0003	10	11.00
401-10M	¾x3	.0004	10	11.00
501-10M	¾x3	.0005	10	11.00
601-10M	13/16x3	.0006	10	11.65
751-10M	29/32x3	.00075	10	12.35
102-10M	29/32x3	.001	10	12.35
202-10M	1⅛x3	.002	10	13.65
252-10M	1⅜x3	.0025	10	15.35
302-10M	1⅜x3	.003	10	15.35
402-10M	1⅝x3	.004	10	17.65
502-10M	1⅛x6	.005	10	21.30
602-10M	1⅛x6	.006	10	21.30
752-10M	1⅜x6	.0075	10	24.00
103-10M	1⅜x6	.01	10	24.00
203-10M	1⅝x9	.02	10	27.70
253-10M	1⅝x9	.025	10	27.70
101-14M	19/32x4	.0001	14	12.00
201-14M	¾x4	.0002	14	12.85
251-14M	¾x4	.00025	14	12.85
301-14M	¾x4	.0003	14	$12.85
401-14M	¾x4	.0004	14	12.85
501-14M	¾x4	.0005	14	12.85
601-14M	13/16x4	.0006	14	13.65
751-14M	29/32x4	.00075	14	15.35
102-14M	29/32x4	.001	14	15.35
202-14M	1⅜x4	.002	14	20.00
252-14M	1⅝x4	.0025	14	22.70
302-14M	1⅝x4	.003	14	22.70
402-14M	1⅛x8	.004	14	24.00
502-14M	1⅛x8	.005	14	24.00
602-14M	1⅜x8	.006	14	25.40
752-14M	1⅝x8	.0075	14	27.50
103-14M	1⅝x8	.01	14	27.70
101-17M	19/32x4¾	.0001	17	14.00
201-17M	¾x4¾	.0002	17	14.70
251-17M	¾x4¾	.00025	17	14.70
301-17M	¾x4¾	.0003	17	14.70
401-17M	¾x4¾	.0004	17	14.70
501-17M	13/16x4¾	.0005	17	16.00
601-17M	29/32x4¾	.0006	17	17.35
751-17M	1⅛x4¾	.00075	17	19.00
102-17M	1⅛x4¾	.001	17	19.00
202-17M	1⅝x4¾	.002	17	21.85
252-17M	1⅝x4¾	.0025	17	21.85
302-17M	1⅜x5¾	.0030	17	23.00
402-17M	1⅝x5¾	.004	17	25.90
502-17M	1⅝x6¾	.005	17	29.00
101-20M	19/32x5¾	.0001	20	16.00
201-20M	¾x5¾	.0002	20	17.00
251-20M	¾x5¾	.00025	20	17.00
301-20M	¾x5¾	.0003	20	17.00
401-20M	13/16x5¾	.0004	20	18.35
501-20M	29/32x5¾	.0005	20	20.15
601-20M	29/32x5¾	.0006	20	20.15
751-20M	1⅛x5¾	.00075	20	22.65
102-20M	1⅛x5¾	.001	20	22.65
202-20M	1⅝x5¾	.002	20	24.50
252-20M	1⅜x7	.0025	20	26.70
302-20M	1⅝x7	.003	20	28.70
402-20M	1⅝x8½	.004	20	30.20
750-25M	19/32x7¼	.000075	25	20.15
101-25M	¾x7¼	.0001	25	21.70
201-25M	¾x7¼	.0002	25	21.70
251-25M	¾x7¼	.00025	25	21.70
301-25M	13/16x7¼	.0003	25	22.20
401-25M	29/32x7¼	.0004	25	25.00
501-25M	29/32x7¼	.0005	25	25.00
601-25M	1⅛x7¼	.0006	25	27.50
751-25M	1⅜x7¼	.00075	25	31.20
102-25M	1⅜x7¼	.001	25	31.20
202-25M	1⅝x7¼	.002	25	35.40
252-25M	1⅝x9½	.0025	25	45.00
302-25M	1⅝x9½	.003	25	45.00
500-30M	19/32x9	.00005	30	23.70
600-30M	¾x9	.00006	30	25.00
750-30M	¾x9	.000075	30	25.00
101-30M	¾x9	.0001	30	25.00
201-30M	¾x9	.0002	30	25.00
251-30M	13/16x9	.00025	30	30.70
301-30M	29/32x9	.0003	30	37.00
401-30M	29/32x9	.0004	30	37.00
501-30M	1⅛x9	.0005	30	44.00
601-30M	1⅛x9	.0006	30	44.00
751-30M	1⅜x9	.00075	30	46.00
102-30M	1⅝x9	.001	30	50.00

Condenser Products Company

7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

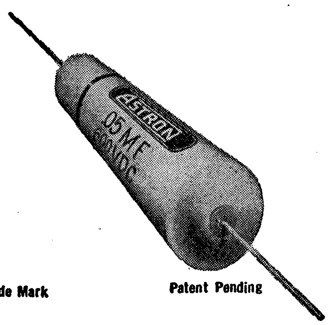
ASTRON QUALITY CAPACITORS

ASTRON CORPORATION 255 Grant Ave., E. Newark, N. J.

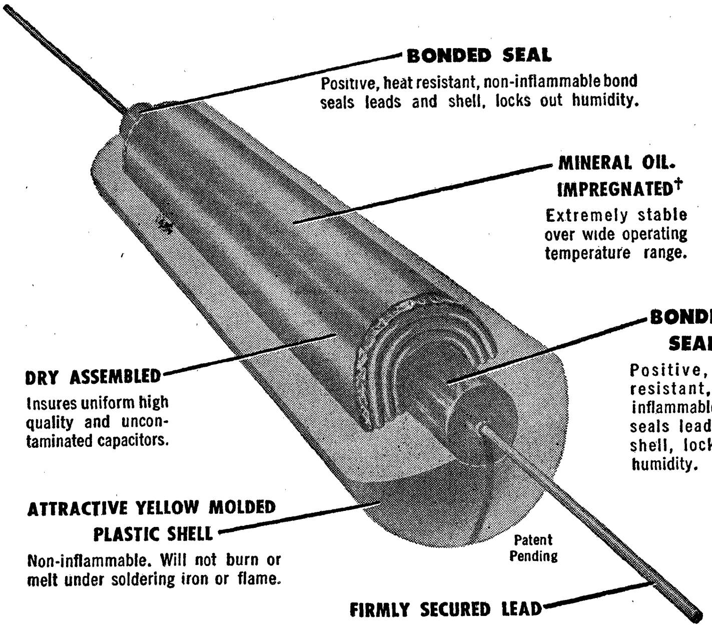
ASTRON

BLUE·POINT*

Type BP Molded Plastic Paper Tubulars



*Trade Mark Patent Pending



BONDED SEAL
Positive, heat resistant, non-inflammable bond seals leads and shell, locks out humidity.

MINERAL OIL IMPREGNATED†
Extremely stable over wide operating temperature range.

BONDED SEAL
Positive, heat resistant, non-inflammable bond seals leads and shell, locks out humidity.

DRY ASSEMBLED
Insures uniform high quality and uncontaminated capacitors.

ATTRACTIVE YELLOW MOLDED PLASTIC SHELL
Non-inflammable. Will not burn or melt under soldering iron or flame.

Patent Pending

FIRMLY SECURED LEAD
Can't be pulled out, even under soldering iron heat.

Here at last is a capacitor that affords ABSOLUTE PROTECTION under every condition — a capacitor you can rely on completely — ASTRON BLUE-POINT, the BONDED capacitor.

This capacitor is produced by an exclusive new design and manufacturing process (patent pending) developed by Astron engineers.

The all-important BLUE POINT which distinguishes this new capacitor actually BONDS itself to the tough, heat-resistant outer shell and leads—forming the TIGHTEST SEAL AGAINST MOISTURE ever produced!

The Blue-Point DRY-ASSEMBLY process — as used in hermetically sealed metal encased capacitors — prevents contamination, provides still further protection against moisture, and assures uniform QUALITY and DEPENDABILITY for every Blue-Point.

The Blue-Point is mineral oil impregnated† for continuous operation at 85°C. The blue point seal itself makes ingenious use of a special thermo-setting, heat-resistant, non-inflammable BONDING AGENT as a positive protection against moisture.

With the Astron Blue-Point, you may solder leads as close to the capacitor as you like. Leads will not pull out, nor will the heat of the soldering iron damage the lead or the connection.

Further, every Blue-Point is clearly marked with rated voltage and capacitance, and is imprinted with outside foil identification.

The Astron Blue-Point Capacitor gives you greater protection against heat and moisture at every stage — assuring long life and dependable performance from EVERY unit — to a degree never before possible with molded plastic capacitors.

From now on, look for the Blue-Point — ask for exclusive Astron Blue-Point Capacitors by name . . . more than ever before, DEPEND ON, INSIST ON . . . ASTRON!

*Trade Mark

†The catalog numbers indicated by ‡ are wax impregnated capacitors.

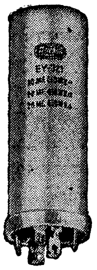
CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
200 VOLTS DC WORKING			
BP-2-01‡	.01	3/8 x 1	$ .25
BP-2-02	.02	3/8 x 1	.25
BP-2-05‡	.05	3/8 x 1 1/4	.25
BP-2-1‡	.1	7/16 x 1 1/4	.35
BP-2-2	.2	5/8 x 1 7/8	.45
BP-2-25	.25	5/8 x 1 7/8	.45
BP-2-5‡	.5	5/8 x 1 7/8	.60
400 VOLTS DC WORKING			
BP-4-01	.01	3/8 x 1	.25
BP-4-02	.02	3/8 x 1 1/4	.25
BP-4-05‡	.05	7/16 x 1 1/4	.30
BP-4-1‡	.1	1/2 x 1 5/8	.35
BP-4-2	.2	5/8 x 1 7/8	.40
BP-4-25	.25	5/8 x 1 7/8	.45
600 VOLTS DC WORKING			
BP-6-001	.001	3/8 x 1	.25
BP-6-002	.002	3/8 x 1	.25
BP-6-003	.003	3/8 x 1	.25
BP-6-004	.004	3/8 x 1	$ .25
BP-6-005	.005	3/8 x 1	.25
BP-6-006	.006	3/8 x 1	.25
BP-6-01	.01	3/8 x 1 1/4	.30
BP-6-02	.02	7/16 x 1 1/4	.30
BP-6-03	.03	1/2 x 1 5/8	.35
BP-6-05	.05	1/2 x 1 5/8	.40
BP-6-08	.08	5/8 x 1 7/8	.40
BP-6-1	.1	5/8 x 1 7/8	.45
1600 VOLTS DC WORKING			
BP-16-001	.001	3/8 x 1 1/4	.55
BP-16-002	.002	3/8 x 1 1/4	.55
BP-16-003	.003	3/8 x 1 1/4	.55
BP-16-005	.005	7/16 x 1 1/4	.55
BP-16-006	.006	7/16 x 1 1/4	.55
BP-16-008	.008	1/2 x 1 5/8	.60
BP-16-01	.01	1/2 x 1 5/8	.60
BP-16-015	.015	1/2 x 1 5/8	.60
BP-16-02	.02	5/8 x 1 7/8	.60
BP-16-03	.03	5/8 x 1 7/8	.60

ASTRON CORPORATION • 255 GRANT AVENUE • EAST NEWARK • NEW JERSEY

ASTRON QUALITY CAPACITORS

ASTRON CORPORATION 255 Grant Ave., E. Newark, N. J.

TYPE EY SAFETY MARGIN*
TWIST PRONG DRY ELECTROLYTICS



Manufactured under rigid quality control specifications, Astron Type EY twist-prong dry electrolytic capacitors have earned their wide acceptance by radio and TV manufacturers and service technicians. Astron offers a complete line of replacement twist prong dry electrolytic capacitors for all popular television chassis. They are simple to mount by means of twist prong tabs on a mounting plate, or directly on the chassis, in filter and by-pass circuits. The mounting tab ring is electrically welded to the cathode of the capacitor, and serves as the negative terminal. Multiple section units are concentrically wound and have common cathode. Terminal tabs are securely fastened to the terminal lugs, insuring permanent low resistance connections. Compact and hermetically sealed in a seamless aluminum drawn can. Operates at ambient temperatures up to 85°C. Smallest practical sizes. Coding clearly etched on container.

*Trade Mark

SINGLE SECTION

CATALOG NUMBER	CAP. MF. WVDC	SIZE DIAM. LENGTH	LIST PRICE
EYS-100	1000/15	1 x 3	$2.55
EYS-105	2000/15	1⅜ x 3	3.45
EYS-115	100/25	1 x 2	1.60
EYS-120	500/25	1 x 3	2.55
EYS-125	1000/25	1⅜ x 3	3.55
EYS-130	500/50	1⅜ x 3	2.65
EYS-135	50/150	1 x 2	1.65
EYS-140	80/150	1 x 2	1.85
EYS-145	100/150	1 x 3	2.00
EYS-150	120/150	1 x 3	2.10
EYS-160	150/150	1 x 3	2.15
EYS-165	15/250	1 x 2	1.55
EYS-170	30/250	1 x 2	1.70
EYS-175	40/250	1 x 2	1.80
EYS-180	60/250	1 x 2½	2.05
EYS-185	80/250	1 x 3	2.15
EYS-190	150/250	1⅜ x 3	3.10
EYS-195	30/350	1 x 2	1.90
EYS-200	40/350	1 x 2½	2.00
EYS-205	50/350	1 x 3	2.10
EYS-215	80/350	1⅜ x 2½	2.85
EYS-220	125/350	1⅜ x 3	3.65
EYS-225	80/400	1⅜ x 2½	2.95
EYS-230	10/450	1 x 2	1.55
EYS-2350	20/450	1 x 2	1.75
EYS-240	30/450	1 x 2½	1.95
EYS-245	40/450	1 x 3	2.05
EYS-250	80/450	1⅜ x 3	3.05
EYS-255	30/475	1 x 3	2.00
EYS-260	40/475	1⅜ x 2	2.50
EYS-265	90/475	1⅜ x 2½	3.50

DUAL SECTIONS

CATALOG NUMBER	CAP. MF. WVDC	SIZE DIAM. LENGTH	LIST PRICE
EYD-500	1000-1000/15	1⅜ x 2½	$4.40
EYD-505	150-50/25	1 x 2	1.75
EYD-510	30-30/150	1 x 2	1.75
EYD-515	50-50/150	1 x 2½	1.95
EYD-520	200-200/150	1⅜ x 4	4.00
EYD-525	20-20/250	1 x 2	1.90
EYD-530	40-40/250	1 x 2½	2.50
EYD-540	80-80/300	1⅜ x 3½	4.05
EYD-545	120-20/300	1⅜ x 3½	3.80
EYD-550	15-15/350	1 x 2	2.25
EYD-555	20-20/350	1 x 2½	2.35
EYD-560	80-80/350	1⅜ x 4	4.70
EYD-565	10-10/450	1 x 2	1.90
EYD-575	20-20/450	1 x 3	2.55

CATALOG NUMBER	CAPACITY & VOLTAGE		SIZE	LIST PRICE
EYD-580	30-30/450		1⅜ x 2½	$3.05
EYD-585	40-40/450		1⅜ x 3	3.45
EYD-590	80-10/450		1⅜ x 4	3.60
EYD-600	80-40/450		1⅜ x 4	4.35
EYD-605	40-40/475		1⅜ x 3	4.30
EYD-610	20-20/500		1⅜ x 2½	2.85
EYD-615	40-40/500		1⅜ x 3½	4.40
EYD-620	250/10	1000/6	1⅜ x 2	2.85
EYD-625	20/350	30/250	1 x 3	2.30
EYD-630	60/350	80/250	1⅜ x 3½	3.45
EYD-635	20/450	20/25	1 x 2	2.00
EYD-640	20/450	100/100	1⅜ x 2	2.65
EYD-645	20/450	80/350	1⅜ x 3	3.65
EYD-650	30/450	40/150	1⅜ x 2	2.50
EYD-655	40/450	20/25	1 x 3	2.40
EYD-660	40/450	10/350	1⅜ x 2½	2.10
EYD-665	80/450	50/50	1⅜ x 3	3.50
EYD-670	20/475	100/300	1⅜ x 3½	3.95
EYD-675	40/500	50/200	1⅜ x 3½	3.35

TRIPLE SECTIONS

CATALOG NUMBER	CAPACITY & VOLTAGE		SIZE	LIST PRICE
EYT-1000	40-40-40/25		1 x 2	$2.15
EYT-1005	40-20-20/150		1 x 2	2.40
EYT-1010	40-40-40/150		1 x 3	2.60
EYT-1015	50-50-50/150		1 x 3	3.00
EYT-1020	40-20-10/250		1⅜ x 2	2.85
EYT-1025	60-40-20/350		1⅜ x 3	4.25
EYT-1030	10-10-10/450		1 x 2½	2.60
EYT-1035	20-10-10/450		1 x 3	2.95
EYT-1040	20-20-20/450		1⅜ x 3	3.60
EYT-1045	30-30-30/450		1⅜ x 3	4.35
EYT-1046	40-10-10/450		1⅜ x 2½	3.60
EYT-1050	40-40-10/450		1⅜ x 3½	4.15
EYT-1055	40-40-40/450		1⅜ x 4	$4.90
EYT-1060	60-30-10/450		1⅜ x 3	4.50
EYT-1065	80-40-20/450		1⅜ x 4	5.40
EYT-1070	10-10-10/475		1 x 3	2.70
EYT-1075	30-30-20/475		1⅜ x 3	4.40
EYT-1080	10-10-10/500		1 x 3	2.70
EYT-1085	40-20/150	20/25	1 x 2	2.30
EYT-1087	40-20/150	100/25	1 x 2½	2.50
EYT-1089	50-30/150	30/25	1 x 2½	2.60
EYT-1090	50-50/150	20/25	1 x 2½	2.70
EYT-1095	120-60/150	20/25	1⅜ x 2½	3.30
EYT-1100	100-10/200	40/50	1⅜ x 2½	3.10
EYT-1105	40-20/250	10/150	1⅜ x 2	2.75
EYT-1110	70-70/250	20/50	1⅜ x 3	3.90
EYT-1115	10-10/300	15/250	1 x 2	2.45
EYT-1120	10-5/350	150/50	1 x 3	2.70
EYT-1125	15-15/350	20/25	1 x 2½	2.50
EYT-1130	30-20/350	20/25	1 x 3	3.10
EYT-1135	30-30/350	20/25	1⅜ x 2½	3.40
EYT-1140	30-30/350	50/50	1⅜ x 2½	3.50
EYT-1145	40-20/350	10/100	1⅜ x 2	2.80
EYT-1150	40-40/350	50/25	1⅜ x 2½	3.70
EYT-1155	10-10/450	20/25	1 x 2½	2.40
EYT-1160	10-10/450	40/50	1 x 2½	2.75
EYT-1165	20-10/450	50/50	1 x 3	2.85
EYT-1170	20-20/450	20/25	1 x 3	3.10
EYT-1175	20-20/450	60/350	1⅜ x 3½	4.00
EYT-1180	30-30/450	20/25	1⅜ x 2½	3.50
EYT-1185	30-30/450	40/50	1⅜ x 3	3.65
EYT-1190	40-10/450	80/200	1⅜ x 3	3.90
EYT-1195	40-10/450	100/200	1⅜ x 3½	4.10
EYT-1200	40-10/450	10/350	1⅜ x 3	3.30
EYT-1205	40-20/450	25/50	1⅜ x 3	3.40
EYT-1210	40-40/450	20/25	1⅜ x 3	3.95
EYT-1215	40-40/450	40/25	1⅜ x 3	4.00
EYT-1220	40-40/450	40/150	1⅜ x 3½	4.15
EYT-1225	40-40/450	100/200	1⅜ x 4	4.95
EYT-1240	80-40/450	100/25	1⅜ x 4	5.10
EYT-1245	20-20/475	60/400	1⅜ x 3½	4.80
EYT-1250	10-10/500	4/350	1 x 3	2.50
EYT-1255	10-10/500	100/50	1 x 3	2.85
EYT-1260	30-10/500	20/50	1⅜ x 2½	3.10
EYT-1265	40-40/500	100/50	1⅜ x 3	4.30
EYT-1270	80/400	20-10/300	1⅜ x 3½	4.25
EYT-1275	20/450	40-10/250	1⅜ x 2	3.15

QUALITY CAPACITORS

ASTRON CORPORATION 255 Grant Ave., E. Newark, N. J.

TYPE EY TWIST PRONG DRY ELECTROLYTICS

Triple Sections (Cont.)

CATALOG NUMBER	CAPACITY & VOLTAGE	SIZE	LIST PRICE
EYT-1280	30/450 100-25/25	1⅜ x 2	$3.00
EYT-1290	40/450 90-50/150	1⅜ x 3½	4.00
EYT-1295	20/250 30/250 20/25	1 x 3	2.80
EYT-1300	100/300 60/150 20/25	1 x 2½	2.85
EYT-1310	10/350 50/150 100/50	1 x 3½	2.85
EYT-1315	20/350 40/300 10/150	1 x 3½	3.15
EYT-1320	30/350 30/300 20/25	1 x 3	3.15
EYT-1325	40/350 20/300 10/200	1⅜ x 2	3.30
EYT-1327	60/400 40/300 20/25	1⅜ x 3	4.20
EYT-1330	10/450 30/400 30/300	1⅜ x 2½	3.35
EYT-1335	20/450 60/250 100/25	1⅜ x 2½	3.65
EYT-1340	20/450 80/350 100/50	1⅜ x 3½	4.50
EYT-1345	40/450 40/150 130/50	1⅜ x 3	3.65
EYT-1350	10/475 100/200 40/50	1⅜ x 2½	3.35
EYT-1360	20/500 20/300 40/25	1⅜ x 2	3.10

QUADRUPLE SECTIONS

CATALOG NUMBER	CAPACITY & VOLTAGE	SIZE	LIST PRICE
EYQ-2000	40-40-20-10/300	1⅜ x 3½	$4.55
EYQ-2005	30-30-20-20/400	1⅜ x 3½	4.85
EYQ-2010	80-10-10-10/400	1⅜ x 3½	4.70
EYQ-2015	10-10-10-10/450	1⅜ x 2	3.35
EYQ-2020	20-10-10-10/450	1⅜ x 2½	3.70
EYQ-2025	20-20-20-20/450	1⅜ x 3	4.70
EYQ-2030	30-15-15-15/450	1⅜ x 3	4.45
EYQ-2035	30-30-15-10/450	1⅜ x 3½	4.70
EYQ-2040	40-20-10-10/450	1⅜ x 3	4.45
EYQ-2045	10-10-10-10/475	1⅜ x 2	3.50
EYQ-2050	40-20-10-10/475	1⅜ x 3	5.10
EYQ-2055	40-40-40/150 20/25	1⅜ x 2	3.15
EYQ-2060	80-60-40/250 20/150	1⅜ x 3½	5.10
EYQ-2065	100-40-10/250 100/50	1⅜ x 3½	5.15
EYQ-2070	60-40-20/300 50/25	1⅜ x 3½	4.70
EYQ-2075	40-40-40/300 20/150	1⅜ x 3	4.90
EYQ-2080	40-20-20/350 25/25	1⅜ x 2½	4.25
EYQ-2085	40-40-40/350 40/25	1⅜ x 3½	5.20
EYQ-2090	40-40-40/350 150/50	1⅜ x 4	5.70
EYQ-2095	20-20-20/400 20/25	1⅜ x 2½	3.85
EYQ-2105	10-10-10/450 20/25	1⅜ x 2	3.15
EYQ-2110	10-10-10/450 10/150	1⅜ x 2	3.15
EYQ-2115	20-10-10/450 100/25	1⅜ x 2	3.70
EYQ-2120	20-20-20/450 20/25	1⅜ x 2½	4.15
EYQ-2125	20-20-20/450 100/50	1⅜ x 3	4.55
EYQ-2130	30-30-15/450 30/50	1⅜ x 3	4.15
EYQ-2135	30-30-20/450 20/25	1⅜ x 3	4.65
EYQ-2140	40-10-10/450 250/25	1⅜ x 3	4.25
EYQ-2145	40-10-10/450 10/350	1⅜ x 3	3.90
EYQ-2150	40-15-10/450 20/25	1⅜ x 3	4.10
EYQ-2153	40-20-20/450 20/25	1⅜ x 3	4.60
EYQ-2155	40-20-20/450 40/25	1⅜ x 3	4.65
EYQ-2160	40-30-10/450 20/25	1⅜ x 3	4.60
EYQ-2163	40-40-10/450 100/100	1⅜ x 4	5.35
EYQ-2165	40-40-40/450 25/50	1⅜ x 3½	$4.70
EYQ-2170	60-10-10/450 20/150	1⅜ x 3	4.60
EYQ-2175	20-20-10/475 10/300	1⅜ x 2½	4.30
EYQ-2180	40-20-10/475 10/25	1⅜ x 3	4.85
EYQ-2185	40-10/400 80-10/250	1⅜ x 3½	4.70
EYQ-2190	10-10/450 20-20/25	1⅜ x 2	2.95
EYQ-2195	20-20/450 20-20/25	1⅜ x 2	3.60
EYQ-2200	40-40/450 30-30/350	1⅜ x 4	5.90
EYQ-2205	10-5/475 80/450 40/50	1⅜ x 3½	4.95
EYQ-2210	15-15/475 80/300 40/50	1⅜ x 3	4.80
EYQ-2215	40-40/450 10/300 50/40	1⅜ x 3	4.75
EYQ-2220	10/450 60-40/350 25/25	1⅜ x 3½	4.60
EYQ-2222	10/450 100-10/350 20/25	1⅜ x 3½	5.25
EYQ-2225	20/450 80-20/200 50/50	1⅜ x 3	4.15
EYQ-2235	100/300 40/50 80-20/25	1⅜ x 3½	4.50
EYQ-2240	120/300 20/250 20/25 100/50	1⅜ x 4	5.05
EYQ-2245	200/300 20/250 20/25 100/50	1⅜ x 5	5.45
EYQ-2250	10/450 10/300 60/200 100/50	1⅜ x 2½	3.80
EYQ-2255	20/450 20/400 20/350 20/25	1⅜ x 3	3.80
EYQ-2260	80/450 10/400 30/300 40/150	1⅜ x 4	5.25
EYQ-2265	10/475 10/450 80/200 50/60	1⅜ x 3	3.85
EYQ-2270	10/475 60/450 30/400 125/50	1⅜ x 4	5.45
EYQ-2275	20/475 40/300 100/50 80/25	1⅜ x 3	4.50
EYQ-2280	25/475 20/450 40/300 100/50	1⅜ x 3½	4.95

"MINIMITE*" TYPE MM METAL TUBULAR DRY ELECTROLYTICS

ASTRON
MINIMITE
DRY ELECTROLYTIC
CAPACITOR

Astron MINIMITE* Type MM high quality compact electrolytic capacitors are ideally suited for under chassis mounting in filter and audio by-pass circuits, where long life and limited space are essential factors. Hermetically sealed in seamless extruded aluminum shells and covered with kraft tube insulating sleeves. They have bare tinned 20 ga. wire leads, a minimum of three inches in length. Exceptionally low leakage. Withstand high surge voltage. Adequate voltage breakdown characteristics. Permanent low resistance contact. Dual units are negative common with 3 bare wire leads and neutral strap.

CATALOG NUMBER	CAP. MF.	WVDC	SIZE† DIAM. LENGTH	LIST PRICE
MM-500-15	500	15	⅞ x 2 1/16	$1.75
MM-1000-15	1000	15	1 x 2 11/16	2.30
MM-10-25	10	25	½ x 1 1/16	.75
MM-25-25	25	25	½ x 1 1/16	.85
MM-50-25	50	25	⅝ x 1 1/16	1.00
MM-100-25	100	25	⅝ x 1⅝	1.20
MM-250-25	250	25	⅞ x 1⅝	1.70
MM-500-25	500	25	1 x 2⅜	2.30
MM-10-50	10	50	½ x 1 1/16	.80
MM-25-50	25	50	⅝ x 1 1/16	.90
MM-50-50	50	50	⅝ x 1⅝	1.05
MM-8-150	8	150	½ x 1⅝	.80
MM-16-150	16	150	⅝ x 1⅝	.90
MM-20-150	20	150	⅝ x 1⅝	.95
MM-30-150	30	150	¾ x 1⅝	1.00
MM-40-150	40	150	¾ x 1⅝	1.10
MM-50-150	50	150	⅞ x 1⅝	1.20
MM-80-150	80	150	⅞ x 2 1/16	1.60
MM-100-150	100	150	⅞ x 2⅜	1.75
MM-150-150	150	150	1 x 2⅜	1.90
MM-8-250	8	250	⅝ x 1⅝	.80
MM-16-250	16	250	¾ x 1⅝	1.10
MM-20-250	20	250	¾ x 1⅝	1.35
MM-40-250	40	250	⅞ x 1¾	1.55
MM-10-350	10	350	¾ x 1⅝	1.00
MM-20-350	20	350	⅞ x 1⅝	1.30
MM-4-450	4	450	⅝ x 1⅜	.90
MM-8-450	8	450	¾ x 1⅜	.95
MM-10-450	10	450	¾ x 1⅝	1.05
MM-12-450	12	450	⅞ x 1¾	1.30
MM-16-450	16	450	⅞ x 1¾	1.35
MM-20-450	20	450	⅞ x 2 1/16	1.50
MM-30-450	30	450	1 x 2⅜	1.65
MM-40-450	40	450	1 x 2 11/16	1.80
MM-80-450	80	450	1⅜ x 3⅛	2.60
MM-8-500	8	500	⅞ x 2 1/16	1.30
MM-16-500	16	500	1 x 2⅜	1.50

DUAL CAPACITANCE UNITS

CATALOG NUMBER	CAP. MF.	WVDC	SIZE† DIAM. LENGTH	LIST PRICE
MM-2x20-150	20+20	150	¾ x 1⅝**	$1.30
MM-2x30-150	30+30	150	⅞ x 1⅝**	1.50
MM-2x40-150	40+40	150	⅞ x 2 1/16**	1.70
MM-5030-150	50+30	150	⅞ x 2 1/16**	1.95
MM-2x50-150	50+50	150	⅞ x 2⅜**	2.10
MM-2x8-450	8+8	450	⅞ x 2 1/16**	1.70
MM-2x10-450	10+10	450	⅞ x 2 1/16**	1.85
MM-2x16-450	16+16	450	1 x 2 11/16**	2.25
MM-2x20-450	20+20	450	1 x 2 11/16**	2.50

*Trade Mark.

**Furnished with radial mounting strap.

†Dimensions are for metal tubes. Add 1/16" to diameter and ⅛" to length for over-all dimensions for cardboard insulating sleeve.

QUALITY CAPACITORS

ASTRON CORPORATION *255 Grant Ave., E. Newark, N. J.*

TYPE ES SAFETY MARGIN*
CARDBOARD TUBE DRY ELECTROLYTICS

Sturdily constructed, Astron Type ES capacitors are ideal for use in television and other electronic filter and audio by-pass circuits. They are internally wrapped in plastic film for protection in humid operating conditions and contained in a strong wax impregnated kraft tube. Filled with high melting point wax. Capacity, voltage and polarity clearly identified on the container. Insulated lead wires approximately 6 inches long. Supplied with centrally located mounting strap.

CATALOG NUMBER	CAP. MF.	WVDC	SIZE DIAM. LENGTH	LIST PRICE
DUAL UNITS — COMMON NEGATIVE				
ES-2x20-150	20+20	150	¾ x 2½	$1.30
ES-2x30-150	30+30	150	⅞ x 2½	1.50
ES-2x40-150	40+40	150	1 x 2½	1.70
ES-5030-150	50+30	150	1 x 2½	1.70
ES-2x50-150	50+50	150	1 x 3	1.85
ES-8040-150	80+40	150	1⅛ x 3	2.00
ES-2x20-250	20+20	250	⅞ x 2½	1.85
ES-2x20-450	20+20	450	1⅛ x 3¼	2.50
TRIPLE UNITS — COMMON NEGATIVE				
ES-3x20-150	20+20+20	150	1 x 2½	2.00
ES-310	40+30+20	150	1 x 3	2.15
ES-311	80+40+20	150	1⅛ x 3¼	2.50
ES-312	40+10/20	150/25	1 x 2½	1.95
ES-313	40+30/20	150/25	1 x 3	2.05
ES-314	40+40/40	150/25	1 x 3¼	2.20
ES-315	50+30/100	150/25	1 x 3¼	2.55

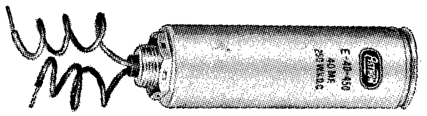
TYPE AM
MOLDED PAPER TUBULARS

Type AM paper tubulars are molded in a high temperature, heat resistant, plastic compound. These units are perfectly sealed against the most severe conditions of humidity. Smaller than most conventional paper tubulars and well within RMA size requirements. Type AM molded paper tubulars are clearly labeled with capacity and voltage ratings.

CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
200 VOLTS DC			
AM-2-01	.01	⅜ x 1	$0.25
AM-2-02	.02	⅜ x 1	.25
AM-2-05	.05	⅜ x 1 3/16	.25
AM-2-1	.1	7/16 x 1 3/16	.35
AM-2-2	.2	⅝ x 1⅞	.45
AM-2-25	.25	⅝ x 1⅞	.45
AM-2-5	.5	⅝ x 1⅞	.60
400 VOLTS DC			
AM-4-01	.01	⅜ x 1	.25
AM-4-02	.02	⅜ x 1 3/16	.25
AM-4-05	.05	7/16 x 1 3/16	.30
AM-4-1	.1	½ x 1⅝	.35
AM-4-2	.2	⅝ x 1⅞	.40
AM-4-25	.25	⅝ x 1⅞	.45
600 VOLTS DC			
AM-6-001	.001	⅜ x 1	.25
AM-6-002	.002	⅜ x 1	.25
AM-6-003	.003	⅜ x 1	.25
AM-6-004	.004	⅜ x 1	.25
AM-6-005	.005	⅜ x 1	.25
AM-6-006	.006	⅜ x 1	.25
AM-6-01	.01	⅜ x 1 3/16	.30
AM-6-02	.02	7/16 x 1 3/16	.35
AM-6-03	.03	½ x 1⅝	.35
AM-6-05	.05	½ x 1⅝	.40
AM-6-08	.08	⅝ x 1⅞	.40
AM-6-1	.1	⅝ x 1⅞	.45
1600 VOLTS DC			
AM-16-001	.001	⅜ x 1 3/16	.55
AM-16-002	.002	⅜ x 1 3/16	.55
AM-16-003	.003	⅜ x 1 3/16	.55
AM-16-005	.005	7/16 x 1 3/16	.55
AM-16-006	.006	7/16 x 1 3/16	.55
AM-16-008	.008	½ x 1⅝	.60
AM-16-01	.01	½ x 1⅝	.60
AM-16-015	.015	½ x 1⅝	.60
AM-16-02	.02	⅝ x 1⅞	.60
AM-16-03	.03	⅝ x 1⅞	.60

*Trade Mark

TYPE E SAFETY MARGIN*
SCREW BASE DRY ELECTROLYTICS

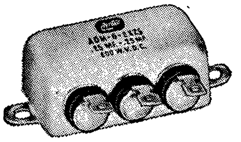


ASTRON Type E are designed for replacement of wet or dry electrolytic threaded neck type capacitors originally employed in any type of electronic filter or by-pass circuit. Type E has all of the high quality characteristics found in ASTRON hermetically sealed electrolytic capacitors. They are completely insulated from the extruded aluminum can.

CATALOG NUMBER	CAP. MF.	WVDC	SIZE DIAM. LENGTH	LIST PRICE
E-8-450	8	450	1⅜ x 3½	$1.75
E-12-450	12	450	1⅜ x 3½	2.15
E-16-450	16	450	1⅜ x 3½	2.40
E-20-450	20	450	1⅜ x 3½	2.65
E-30-450	30	450	1⅜ x 3½	3.00
E-40-450	40	450	1⅜ x 3½	3.40
SEPARATE SECTION UNITS				
E-2x8-450	8+8	450	1⅜ x 3½	2.75
E-2x16-450	16+16	450	1⅜ x 3½	3.50
E-3x8-450	8+8+8	450	1⅜ x 3½	4.25
HIGH-VOLTAGE SERIES WOUND UNITS				
E-4-600	4	600	1⅜ x 3½	3.00
E-8-600	8	600	1⅜ x 3½	3.15
E-16-600	16	600	1⅜ x 3½	3.75

Many of the above ratings are available in 1" diameter cans.

TYPE ADM
OIL-FILLED BATHTUB CAPACITORS



Astron Type ADM bathtub type capacitors are non-inductively wound, mineral oil impregnated and filled. They are hermetically sealed and supplied as standard with compression-seal terminals on side. Type ADM are also available with top, bottom or end terminals. They will operate effectively over a wide temperature range up to 85°C., and under extremely humid conditions. Built to meet strict military specifications.

CATALOG NUMBER	CAP. MF.	SIZE L. W. H.	MTG. CTR.	LIST PRICE
600 WVDC				
ADM-6-05	.05	1 13/16 x 1 x ¾	2⅛	$2.60
ADM-6-1	,1	1 13/16 x 1 x ¾	2⅛	2.65
ADM-6-25	.25	1 13/16 x 1 x ¾	2⅛	2.80
ADM-6-5	.5	1 13/16 x 1 x ⅞	2⅛	3.00
ADM-6-1M	1.0	2 x 1¾ x ⅞	2⅜	3.40
ADM-6-2M	2.0	2 x 2 x 1⅛	2⅜	4.55
ADM-6-2x05	.05—.05	1 13/16 x 1 x ¾	2⅛	3.30
ADM-6-2x1	.1 —.1	1 13/16 x 1 x ¾	2⅛	3.35
ADM-6-2x25	.25—.25	1 13/16 x 1 x ⅞	2⅛	3.40
ADM-6-2x5	.5 —.5	2 x 1¾ x ⅞	2⅜	3.90
ADM-6-2x1M	1.0 —1.0	2 x 2 x 1⅛	2⅜	4.80
ADM-6-3x1	.1 —.1 —.1	1 13/16 x.1 x ¾	2⅛	3.80
ADM-6-3x25	.25—.25—.25	2 x 1¾ x ⅞	2⅜	4.30
ADM-6-3x5	.5 —.5 —.5	2 x 2 x 1⅛	2⅜	5.20
1000 WVDC				
ADM-10-05	.05	1 13/16 x 1 x ¾	2⅛	2.75
ADM-10-1	.1	1 13/16 x 1 x ¾	2⅛	2.85
ADM-10-25	.25	1 13/16 x 1 x ⅞	2⅛	2.95
ADM-10-5	.5	2 x 1¾ x ⅞	2⅜	3.20
ADM-10-1M	1.0	2 x 2 x 1⅛	2⅜	4.00
ADM-10-2x05	.05—.05	1 13/16 x 1 x ¾	2⅛	3.50
ADM-10-2x1	.1 —.1	1 13/16 x 1 x ⅞	2⅛	3.60
ADM-10-2x25	.25—.25	2 x 1¾ x ⅞	2⅜	3.80
ADM-10-2x5	.5 —.5	2 x 2 x 1⅛	2⅜	4.95
ADM-10-3x1	.1 —.1 —.1	2 x 1¾ x ⅞	2⅜	4.15
ADM-10-3x25	.25—.25—.25	2 x 2 x 1⅛	2⅜	5.00

ASTRON QUALITY CAPACITORS

ASTRON CORPORATION 255 Grant Ave., E. Newark, N. J.

"METALITE"® Metallized Paper Capacitors

TYPE MQC

Glass Terminal Hermetically Sealed Tubulars

Smallest type available, Type MQC METALITE® capacitors are encased in tinned, non-ferrous cases with glass-to-metal hermetic terminal seals, non-inductively wound, with one foil grounded to outer case. Lead length: 1¾" minimum. Standard Tolerance: —15 +25 percent.

For glass terminals at each end (internally insulated construction), specify Type MQCF and add 1/16" to length. For MQCF add 50c to list price. For plastic outer sleeve specify Type MQCP and add 15c to list price.

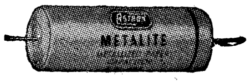
Type MQCS Screw Neck Mounting. Internal construction identical with Type MQC. Supplied with lockwasher and nut for each unit. Case size same as type MQC, with minimum diameter of .400".

Type MQCFS Screw Neck Mounting. Identical in internal construction with Type MQCF.

CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
150 VOLTS DC WORKING			
MQC-1.5-4M	4.0	1 x 1¾	$5.00
MQC-1.5-6M	6.0	1 x 1¾	5.85
MQC-1.5-8M	8.0	1 x 2¼	6.65
200 VOLTS DC WORKING			
MQC-2-01	.01	.235 x ¾	2.05
MQC-2-02	.02	.235 x ¾	2.10
MQC-2-05	.05	.235 x ¾	2.10
MQC-2-1	.1	.312 x ¾	2.15
MQC-2-25	.25	.400 x ¾	2.35
MQC-2-5	.5	.400 x 1 1/16	2.40
MQC-2-1M	1.0	.562 x 1¼	2.65
MQC-2-1.5M	1.5	.562 x 1¾	2.85
MQC-2-M	2.0	.670 x 1¾	3.95
400 VOLTS DC WORKING			
MQC-4-01	.01	.235 x ¾	2.10
MQC-4-02	.02	.235 x ¾	2.15
MQC-4-03	.03	.312 x ¾	2.15
MQC-4-05	.05	.312 x 1 1/16	2.20
MQC-4-1	.1	.400 x 1 1/16	2.25
MQC-4-25	.25	.562 x 1 1/16	2.45
MQC-4-5	.5	.562 x 1¾	2.75
MQC-4-1M	1.0	.670 x 2¼	3.05
MQC-4-1.5M	1.5	1 x 2¼	4.10
MQC-4-2M	2.0	1 x 2¼	4.65
MQC-4-4M	4.0	1⅛ x 2¼	6.85
600 VOLTS DC WORKING			
MQC-6-01	.01	.235 x ¾	2.15
MQC-6-03	.03	.312 x ¾	2.20
MQC-6-05	.05	.312 x 1 1/16	2.25
MQC-6-1	.1	.400 x 1 1/16	2.30
MQC-6-25	.25	.562 x 1¼	2.70
MQC-6-5	.5	.670 x 1¾	3.00
MQC-6-1M	1.0	.750 x 2¼	3.65
MQC-6-2M	2.0	1 x 2¼	5.15

TYPE ML

Cardboard Tubulars

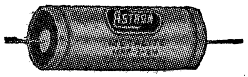


Type ML METALITE® capacitors are suitable for operation to 65°C. Furnished in kraft tubes with soldered metal end-caps and double overall mineral wax coating. Lead length: 1½" minimum. Standard Tolerance: —20 +30 percent.

CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
200 VOLTS DC WORKING			
ML-2-01	.01	⅜ x ⅝	$ .65
ML-2-02	.02	⅜ x ⅝	.65
ML-2-05	.05	⅜ x ⅝	.65
ML-2-1	.1	⅜ x ⅝	.70
ML-2-25	.25	15/32 x ⅝	.90
ML-2-5	.5	15/32 x 1⅛	1.05
ML-2-1M	1.0	7/16 x 1⅛	1.30
ML-2-2M	2.0	⅝ x 1⅝	1.80
400 VOLTS DC WORKING			
ML-4-01	.01	⅜ x ⅝	.70
ML-4-02	.02	⅜ x ⅝	.70
ML-4-03	.03	⅜ x ⅝	.70
ML-4-05	.05	15/32 x ⅝	.70
ML-4-1	.1	15/32 x 1⅛	.80
ML-4-25	.25	7/16 x 1⅛	1.00
ML-4-5	.5	⅝ x 1⅝	1.15
ML-4-1M	1.0	23/32 x 2⅛	1.60
600 VOLTS DC WORKING			
ML-6-01	.01	⅜ x ⅝	.70
ML-6-02	.02	⅜ x ⅝	.70
ML-6-03	.03	15/32 x ⅝	.80
ML-6-05	.05	15/32 x ⅝	.80
ML-6-1	.1	15/32 x 1⅛	.90
ML-6-25	.25	⅝ x 1⅛	1.10
ML-6-5	.5	23/32 x 1⅝	1.45
ML-6-1M	1.0	23/32 x 2⅛	1.80

TYPE MRF

Metal Encased Tubulars



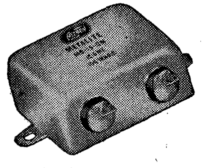
METALITE® Types Are:
MRF — insulated from outer case.
MRG — grounded to outer case (deduct 3/32" from length)

Hermetically sealed, mineral wax filled and impregnated, for operation up to 85°C. Standard Tolerance: —20 +30 percent. Lead length: 1¾" minimum.

If plastic outer sleeving is required, add "p" to type, i.e., MRFP-6-25, and add 15c to list price. For mounting bracket, add "Y" to type designated, i.e., MRFY-2-1, and add 20c to list price.

CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
150 VOLTS DC WORKING			
MRF-1.5-4M	4.0	1 x 1 15/16	$4.35
MRF-1.5-6M	6.0	1 x 1 15/16	5.30
MRF-1.5-8M	8.0	1⅛ x 1 15/16	6.10
MRF-1.5-10M	10.0	1¼ x 1 15/16	7.20
200 VOLTS DC WORKING			
MRF-2-05	.05	⅜ x ⅞	1.40
MRF-2-1	.1	7/16 x ⅞	1.45
MRF-2-25	.25	½ x ⅞	1.60
MRF-2-5	.5	½ x 1⅜	1.70
MRF-2-1M	1.0	.670 x 1⅜	2.10
MRF-2-2M	2.0	.670 x 1⅞	2.60
400 VOLTS DC WORKING			
MRF-4-05	.05	½ x ⅞	1.45
MRF-4-1	.1	½ x 1⅜	1.60
MRF-4-25	.25	.670 x 1⅜	1.80
MRF-4-5	.5	.670 x 1⅞	2.00
MRF-4-1M	1.0	¾ x 2⅜	2.50
MRF-4-2M	2.0	1 x 2 7/16	3.60
MRF-4-3M	3.0	1⅛ x 2 7/16	4.80
MRF-4-4M	4.0	1¼ x 2 7/16	5.90
600 VOLTS DC WORKING			
MRF-6-02	.02	7/16 x ⅞	1.45
MRF-6-03	.03	7/16 x ⅞	1.50
MRF-6-05	.05	½ x ⅞	1.55
MRF-6-1	.1	½ x 1⅜	1.70
MRF-6-2	.2	.670 x 1⅜	1.90
MRF-6-25	.25	.670 x 1⅜	2.00
MRF-6-5	.5	.670 x 1⅞	2.40
MRF-6-1M	1.0	¾ x 2⅜	3.00
MRF-6-2M	2.0	1⅛ x 2 7/16	4.00
MRF-6-3M	3.0	1¼ x 2 7/16	5.30

TYPE MD



Type MD offers capacities much high than ever before available in this case style. Multiple section construction is made possible in this type with various terminal positions.

Standard types are supplied with side terminals. For other terminal positions: specify type MDT for top terminals, MDB for bottom terminals, and MDE for end terminals. If required for special applications, stud and nut terminals can be furnished as well as glass-to-metal hermetic seal terminal ends. Standard Tolerance: ±20%.

CATALOG NUMBER	CAP. MF.	WVDC	SIZE L. W. H.	LIST PRICE
MD-2-5	.5	200	1¾ x 1 x ¾	$3.30
MD-2-1M	1.0	200	1¾ x 1 x ¾	3.55
MD-2-2M	2.0	200	1¾ x 1 x ¾	4.45
MD-1.5-4M	4.0	150	1¾ x 1 x ⅞	5.75
MD-1.5-6M	6.0	150	2 x 1¾ x ⅞	6.10
MD-1.5-8M	8.0	150	2 x 2 x ⅞	8.40
MD-1.5-10M	10.0	150	2 x 2 x ⅞	9.70
MD-1.5-12M	12.0	150	2 x 2 x 1	11.00
MD-1.5-16M	16.0	150	2 x 2 x 1⅜	13.50
MD-1.5-18M	18.0	150	2 x 2 x 1½	15.00
MD-4-25	.25	400	1¾ x 1 x ¾	3.35
MD-4-5	.5	400	1¾ x 1 x ¾	3.55
MD-4-1M	1.0	400	1¾ x 1 x ⅞	3.95
MD-4-2M	2.0	400	2 x 1¾ x ⅞	4.90
MD-4-4M	4.0	400	2 x 2 x 1⅛	7.85
MD-6-1	.1	600	1¾ x 1 x ¾	3.50
MD-6-25	.25	600	1¾ x 1 x ¾	3.55
MD-6-5	.5	600	1¾ x 1 x ¾	4.25
MD-6-1M	1.0	600	1¾ x 1¼ x ⅞	4.90
MD-6-2M	2.0	600	2 x 2 x 1	6.25
MD-6-3M	3.0	600	2 x 2 x 1⅜	7 75
MD-6-4M	4.0	600	2 x 2 x 1½	9.75
DUAL UNITS				
MD-2-2x1M	1 0—1.0	200	1¾ x 1 x ¾	5.00
MD-2-2x2M	2.0—2.0	200	1¾ x 1 x ⅞	6.30
MD-1.5-2x4M	4.0—4.0	150	2 x 2 x ⅞	9.00
MD-1.5-2x6M	6.0—6.0	150	2 x 2 x 1	11.50
MD-4-2x5	.5—.5	400	1¾ x 1 x ⅞	4.35
MD-4-2x1M	1.0—1.0	400	2 x 1¾ x ⅞	5.50
MD-4-2x2M	2.0—2.0	400	2 x 2 x 1⅛	8.10
MD-6-2x25	.25—.25	600	1¾ x 1 x ¾	4.95
MD-6-2x5	.5—.5	600	1¾ x 1 x ⅞	5.70
MD-6-2x1M	1.0—1.0	600	2 x 2 x 1	6.60

QUALITY CAPACITORS

ASTRON CORPORATION 255 Grant Ave., E. Newark, N. J.

HY-METS* HIGH TEMPERATURE METALITE® METALLIZED PAPER CAPACITORS

Astron Hy-Mets METALITE® metallized paper capacitors are engineered and constructed for operation over a wide temperature range to 125°C., with exceedingly dependable performance characteristics.

Aside from their extremely small size and unique self healing properties, other outstanding features of Astron Hy-Mets capacitors are exceptionally low power factor and long-life. Excellent RF characteristics are the result of Hy-Mets' extended foil, non-inductively wound construction and amazingly small size. Available in a variety of popular case styles and sizes. All case styles feature glass-to-metal hermetically sealed terminals except the plastic impregnated cardboard tubular MLL. This construction assures high quality performance over the entire temperature range of —55°C. to +125° C., not only under ordinary environmental conditions but also at extreme altitudes and wide variations in atmospheric pressures.

TYPE MLL

These sturdy plastic impregnated cardboard-covered METALITE® capacitors utilize the solid thermosetting impregnant which permits operation up to 125°C. Standard Tolerance: —20% +30%. Lead length 1½" minimum.

CATALOG NUMBER	CAP. MFD.	SIZE DIA.	LENGTH	LIST PRICE
200 VOLTS DC WORKING				
MLL-2-01	.01	¼ x	27/32	$1.00
MLL-2-02	.02	¼ x	27/32	1.00
MLL-2-03	.03	¼ x	27/32	1.00
MLL-2-05	.05	¼ x	27/32	1.00
MLL-2-1	.1	9/32 x	27/32	1.05
MLL-2-25	.25	⅜ x	27/32	1.35
MLL-2-5	.5	13/32 x	1-5/32	1.60
MLL-2-1M	1.0	9/16 x	1-5/32	1.95
MLL-2-2M	2.0	⅝ x	1½	2.70
400 VOLTS DC WORKING				
MLL-4-01	.01	¼ x	27/32	1.05
MLL-4-02	.02	9/32 x	27/32	1.05
MLL-4-03	.03	11/32 x	27/32	1.05
MLL-4-05	.05	⅜ x	27/32	1.05
MLL-4-1	.1	⅜ x	1-5/32	1.20
MLL-4-25	.25	9/16 x	1-5/32	1.50
MLL-4-5	.5	⅝ x	1⅜	1.75
MLL-4-1M	1.0	11/16 x	1⅞	2.40
MLL-4-2M	2.0	13/16 x	2⅜	3.25
600 VOLTS DC WORKING				
MLL-6-01	.01	¼ x	27/32	1.05
MLL-6-02	.02	11/32 x	27/32	1.05
MLL-6-03	.03	⅜ x	27/32	1.20
MLL-6-05	.05	13/32 x	27/32	1.20
MLL-6-1	.1	13/32 x	1-5/32	1.35
MLL-6-25	.25	⅝ x	1-5/32	1.65
MLL-6-5	.5	11/16 x	1½	2.20
MLL-6-1M	1.0	13/16 x	1⅞	2.70
MLL-6-2M	2.0	15/16 x	2⅜	3.55

*Trade Mark

TYPE MTL

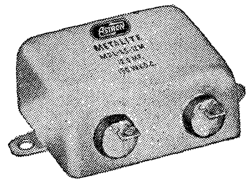
New Miniature Bathtub

The Hy-Met METALITE® high temperature capacitors include this new line of miniature bathtub styles and feature the solid thermosetting impregnant for 125°C operation. The units are ideally suited for firm mounting in limited circuit areas.

CATALOG NUMBER	CAP. MFD.	SIZE L.	W.	H.	LIST PRICE
200 VOLTS DC WORKING					
MTL-2-1	.1	1⅛ x	1 x	½	$4.35
MTL-2-25	.25	1⅛ x	1 x	½	4.65
MTL-2-5	.5	1⅛ x	1 x	½	5.45
MTL-2-1M	1.0	1⅛ x	1 x	½	5.85
MTL-2-2M	2.0	1⅛ x	1 x	11/16	7.40
400 VOLTS DC WORKING					
MTL-4-1	.1	1⅛ x	1 x	½	5.35
MTL-4-25	.25	1⅛ x	1 x	½	5.55
MTL-4-5	.5	1⅛ x	1 x	11/16	5.90
600 VOLTS DC WORKING					
MTL-6-1	.1	1⅛ x	1 x	½	5.80
MTL-6-25	.25	1⅛ x	1 x	½	5.90
MTL-6-5	.5	1⅛ x	1 x	11/16	7.05

Standard Tolerance: ±20%

TYPE MDL



The popular bathtub type is included in the standard line of Hy-Met METALITE® metallized paper capacitors featuring solid thermosetting impregnant. This unit will operate at temperatures up to +125°C. It is hermetically sealed and features solder-sealed glass terminals.

CATALOG NUMBER	CAP. MFD.	SIZE L.	W.	H.	LIST PRICE
150 VOLTS DC WORKING					
MDL-1.5-3M	3.0	1¾ x	1 x	⅞	$ 8.10
MDL-1.5-4M	4.0	1¾ x	1 x	⅞	8.65
MDL-1.5-5M	5.0	1¾ x	1 x	⅞	8.95
MDL-1.5-6M	6.0	1¾ x	1¼ x	⅞	9.15
MDL-1.5-8M	8.0	2 x	1¾ x	¾	12.60
MDL-1.5-10M	10.0	2 x	1¾ x	¾	14.55
MDL-1.5-12M	12.0	2 x	2 x	⅞	16.50
MDL-1.5-15M	15.0	2 x	2 x	1	19.85
MDL-1.5-18M	18.0	2 x	2 x	1¼	22.50
MDL-1.5-20M	20.0	2 x	2 x	1½	25.10
200 VOLTS DC WORKING					
MDL-2-1	.1	1¾ x	1 x	¾	3.95
MDL-2-25	.25	1¾ x	1 x	¾	4.25
MDL-2-5	.5	1¾ x	1 x	¾	4.95
MDL-2-1M	1.0	1¾ x	1 x	¾	5.35
MDL-2-2M	2.0	1¾ x	1 x	¾	6.70
400 VOLTS DC WORKING					
MDL-4-1	.1	1¾ x	1 x	¾	4.85
MDL-4-25	.25	1¾ x	1 x	¾	5.05
MDL-4-5	.5	1¾ x	1 x	¾	5.35
MDL-4-1M	1.0	1¾ x	1 x	⅞	5.95
MDL-4-2M	2.0	2 x	1¾ x	13/16	7.35
MDL-4-3M	3.0	2 x	1¾ x	15/16	9.75
MDL-4-4M	4.0	2 x	2 x	1	11.78
MDL-4-5M	5.0	2 x	2 x	1¼	13.20
MDL-4-6M	6.0	2 x	2 x	1½	14.00
600 VOLTS DC WORKING					
MDL-6-1	.1	1¾ x	1 x	¾	$5.25
MDL-6-25	.25	1¾ x	1 x	¾	5.35
MDL-6-5	.5	1¾ x	1 x	¾	6.40
MDL-6-1M	1.0	1¾ x	1¼ x	⅞	7.35
MDL-6-2M	2.0	2 x	2 x	⅞	9.40
MDL-6-3M	3.0	2 x	2 x	1⅛	11.65
MDL-6-4M	4.0	2 x	2 x	1⅜	14.63

Standard Tolerance: ±20%

MOUNTING CENTERS

For can size 1¾" x 1"	is 2⅛"
For can size 2" x 1¾"	is 2¾"
For can size 2" x 2"	is 2⅜"
For can size 1¾" x 1¼"	is 2⅛"

TYPE MQL

Astron type MQL Hy-Met METALITE® capacitors featuring solid thermosetting impregnant are encased in tinned, non-ferrous cases with glass-to-metal hermetic terminal sealing. For circuits requiring insulated sections, specify type MQLF, which are supplied with glass-to-metal hermetic seals at each end of the capacitor. For type MQLF, add 1/16" to length of type MQL sizes listed.

For plastic sleeving to insulate case, specify type MQLP or MQLFP. All Hy-Mets supplied in a tubular case can be furnished with brackets if required. Various bracket mounting styles are available.

Screw base type MQLS are internally constructed identical to type MQL. Ideally suited for compact, vertical mounting. Available in all values furnished for type MQL and supplied with lock washer and nut. Case sizes are the same as MQL, with minimum diameter .400". For circuits requiring completely insulated sections specify type MQLFS which are supplied with glass-to-metal hermetic seals at both ends. Add 1/16" to length of MQLS for insulated case.

Lead Length: 1¾ minimum

Lead Wire Sizes as Follows:

CASE DIAMETER	AWG SIZE
.235"	#24
.312"	#22
.400"	#20

CATALOG NUMBER	CAP. MFD.	SIZE DIAM.	LENGTH	LIST PRICE
200 VOLTS DC WORKING				
MQL-2-01	.01	.235 x	¾	$3.10
MQL-2-02	.02	.235 x	¾	3.15
MQL-2-03	.03	.235 x	¾	3.15
MQL-2-05	.05	.235 x	¾	3.15
MQL-2-1	.1	.312 x	¾	3.25
MQL-2-25	.25	.312 x	1 1/16	3.55
MQL-2-5	.5	.400 x	1 1/16	3.60
MQL-2-1M	1.0	.562 x	1 1/16	4.00
MQL-2-2M	2.0	.562 x	1¾	5.95
400 VOLTS DC WORKING				
MQL-4-01	.01	.235 x	¾	3.15
MQL-4-02	.02	.235 x	¾	3.25
MQL-4-03	.03	.312 x	¾	3.25
MQL-4-05	.05	.312 x	1 1/16	3.30
MQL-4-1	.1	.400 x	1 1/16	3.40
MQL-4-25	.25	.500 x	1 1/16	3.70
MQL-4-5	.5	.562 x	1¾	4.13
MQL-4-1M	1.0	.670 x	2¼	4.60
MQL-4-2M	2.0	1. x	2¼	7.00
600 VOLTS DC WORKING				
MQL-6-01	.01	.235 x	¾	3.25
MQL-6-02	.02	.312 x	¾	3.30
MQL-6-03	.03	.312 x	¾	3.30
MQL-6-05	.05	.400 x	¾	3.40
MQL-6-1	.1	.400 x	1 1/16	3.45
MQL-6-25	.25	.562 x	1¼	4.05
MQL-6-5	.5	.670 x	1¾	4.50
MQL-6-1M	1.0	.750 x	2¼	5.48
MQL-6-2M	2.0	1. x	2¼	7.75

Standard Tolerance: —15 +25%

QUALITY CAPACITORS

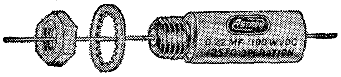
ASTRON CORPORATION *255 Grant Ave., E. Newark, N. J.*

METEOR* SUBMINIATURE PAPER CAPACITORS FOR 125°C. OPERATION WITHOUT DERATING

Astron METEOR SUBMINIATURE PAPER CAPACITORS are designed for dependable operation at temperatures up to 125°C. without derating, thanks to Astron's newly developed impregnant X-250*. They also provide exceptional capacitance stability over the wide range of —65°C. to +125°C.

High insulation resistance, low power factor, unusually low resonance loss, and high test voltage are achieved in an amazingly compact and rugged unit meeting all Armed Forces requirements. All METEOR Capacitors are non-inductively wound in an extended foil construction. Glass-to-metal seal terminals assure positive hermetic sealing. And Astron METEORS are supplied in a variety of construction styles to meet your specific needs.

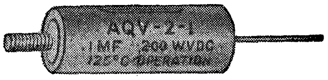
METEOR TYPE AQS



Astron METEOR Type AQS Screw Neck Mounting. Internal construction identical with Type AQ. These screw neck mounting units are ideally suited for compact vertical mounting. Available in all values furnished for Type AQ. Supplied with lockwasher and nut for each unit. Case size same as Type AQ, with minimum diameter of .400". Screw base 5/16"—24 thread. Screw length 5/16" ±1/32"

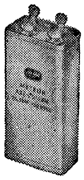
Astron METEOR Type AQFS Screw Neck Mounting. Identical in internal construction with Type AQF.

METEOR TYPE AQV



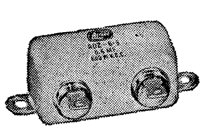
Astron METEOR Type AQV Stud Base Mounting. Supplied with identical internal construction, and in all values as Type AQ. Provides compact vertical mounting by stud base. Stud 6-32 thread: Stud length 3/8" ±1/32".

METEOR TYPE AXZ



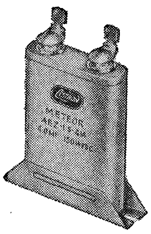
Astron METEOR Type AXZ paper capacitor is available in JAN-C-25 case style CP-70, assuring operation to 125°C. without derating. "J" type spade bolt mounting brackets are furnished.

METEOR TYPE ADZ



Astron METEOR Type ADZ paper capacitor is available in single and multiple capacitor sections. Type ADZ capacitor provides operation to 125°C., without derating, in the popular JAN-C-25 bathtub style cases CP-53 to CP-55.

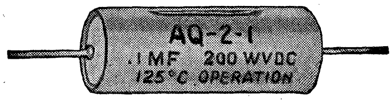
METEOR TYPE AEZ



Astron METEOR Type AEZ paper capacitor provides operation to 125°C., without derating, in JAN-C-25 case styles CP-67 to CP-69. Single and multiple capacitor sections are available. Channel mounting brackets and required terminal positions are furnished as specified.

*Trade Mark

TYPE AQ



Astron METEOR TYPE AQ paper capacitor with glass-to-metal terminal and one lead grounded to case.

Astron METEOR TYPE AQF paper capacitor for internally insulated construction, with glass terminals at each end. Add 1/16" to length.

Astron METEOR TYPE AQP for plastic insulating outer sleeve.

Astron METEOR TYPE AQFP for "floating" construction with plastic sleeve.

Standard Tolerance: —15 +25 percent. Lead Length: 1¾" Minimum.

CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
100 VOLTS DC WORKING			
AQ-1-0047	.0047	.235 x 11/16	$2.80
AQ-1-01	.01	.235 x 11/16	2.95
AQ-1-022	.022	.312 x 13/16	3.00
AQ-1-033	.033	.312 x 13/16	3.05
AQ-1-047	.047	.312 x 13/16	3.15
AQ-1-1	.1	.400 x 13/16	3.20
AQ-1-22	.22	.400 x 1 5/16	3.50
AQ-1-27	.27	.562 x 1 1/16	3.60
AQ-1-47	.47	.562 x 1 5/16	4.15
AQ-1-1M	1.0	.670 x 1 9/16	4.85
200 VOLTS DC WORKING			
AQ-2-0047	.0047	.235 x 11/16	2.95
AQ-2-01	.01	.312 x 13/16	3.10
AQ-2-022	.022	.312 x 13/16	3.15
AQ-2-033	.033	.312 x 13/16	3.20
AQ-2-047	.047	.400 x 13/16	3.25
AQ-2-1	.1	.400 x 1 1/16	3.35
AQ-2-22	.22	.562 x 1 1/16	3.65
AQ-2-27	.27	.562 x 1 5/16	3.75
AQ-2-47	.47	.562 x 1 9/16	4.25
AQ-2-1M	1.0	.750 x 2 1/16	5.25
400 VOLTS DC WORKING			
AQ-4-0047	.0047	.312 x 13/16	3.15
AQ-4-01	.01	.312 x 13/16	3.30
AQ-4-022	.022	.400 x 13/16	3.35
AQ-4-033	.033	.400 x 13/16	3.40
AQ-4-047	.047	.400 x 1 1/16	3.45
AQ-4-1	.1	.562 x 1 1/16	3.55
AQ-4-22	.22	.562 x 1 9/16	3.85
AQ-4-27	.27	.670 x 1 9/16	4.55
AQ-4-47	.47	.750 x 2 1/16	4.75
600 VOLTS DC WORKING			
AQ-6-0047	.0047	.312 x 13/16	3.20
AQ-6-01	.01	.312 x 13/16	3.35
AQ-6-022	.022	.400 x 13/16	3.40
AQ-6-033	.033	.400 x 1 1/16	3.45
AQ-6-047	.047	.400 x 1 5/16	3.50
AQ-6-1	.1	.562 x 1 5/16	3.75
AQ-6-22	.22	.670 x 1 9/16	4.35
AQ-6-27	.27	.750 x 2 1/16	4.50
AQ-6-47	.47	.750 x 2 1/16	5.25

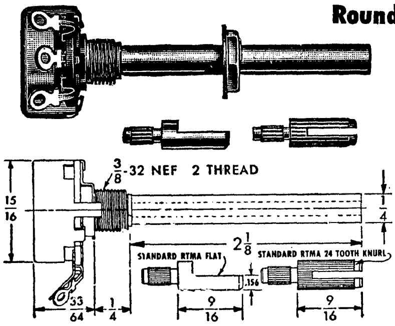
BRACKETS

All Astron METEOR paper capacitors supplied in a tubular case can be furnished with brackets if required. Various bracket mounting styles are available to meet your specifications.

MIDGETROL® VOLUME AND TONE CONTROLS

P.R. MALLORY & CO. Inc.
MALLORY
P. R. MALLORY & CO., INC. · INDIANAPOLIS

Round Shaft Midgetrols



Compact, 15/16″ diameter carbon element control. Used in industrial electronic equipment; also, in control circuits of television sets, home radios, auto radios and audio amplifiers. AC-DC power switches are available which may be attached quickly and permanently. Has 2⅛″ long, ¼″ round brass shaft. 2 shaft-end knob adaptors for knurled, push-on knobs, and one hex nut furnished. List Price **$1.25** each.

Cat. No.	Ohms	Taper†	Cat. No.	Ohms	Taper†
U4	1M	4	**U41**	100M	4
U6	2M	4	**U415**	125M	4
U8	3M	4	**U42**	150M	1
U12	5M	1	**U43**	200M	4
U14	5M	4	**U44**	250M	1
U18	10M	1	**U45**	250M	2
U19	10M	2	**U46**	250M	4
U20	10M	4	**U48**	500M	1
U21	15M	1	**U50**	500M	4
U22	15M	2	**U51**	750M	1
U24	20M	1	**U53**	1 Meg.	1
U26	20M	4	**U54**	1 Meg.	4
U28	25M	2	**U155**	1.5 Meg.	4
U29	25M	4	**U55**	2 Meg.	1
U33	50M	1	**U56**	2 Meg.	4
U34	50M	2	**U255**	2.5 Meg.	4
U35	50M	4	**U57**	3 Meg.	1
U36	75M	1	**U59**	3 Meg.	4
U39	100M	1	**U65**	5 Meg.	1
U40	100M	2	**U67**	5 Meg.	4
			U82	10 Meg.	4

†See Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog.

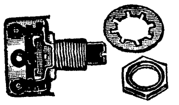
Single Tapped Midgetrols—List Price $1.85 Each

Cat. No.	Ohms	Tap At	Cat. No.	Ohms	Tap At
UT-420	250M	50M	**UT-443**	1 Meg.	450M
UT-425	350M	70M	**UT-450**	2 Meg.	125M
UT-429	500M	50M	**UT-448**	2 Meg.	250M
UT-427	500M	100M	**UT-454**	2 Meg.	400M
UT-430	500M	150M	**UT-449**	2 Meg.	600M
UT-431	500M	225M	**UT-451**	2 Meg.	900M
UT-440	1 Meg.	200M	**UT-457**	3 Meg.	900M
UT-438	1 Meg.	300M			

Double Tapped Midgetrols—List Price $1.85 Each

Catalog Number	Overall Resistance	Tap Resistance	
		Tap 1	Tap 2
UDT-283	500M	100M	200M
UDT-289	1 Meg.	250M	500M
UDT-291	1.5 Meg.	225M	500M
UDT-295	2.25 Meg.	250M	500M
UDT-296	2.25 Meg.	500M	1 Meg.

Television and Special Application Midgetrols

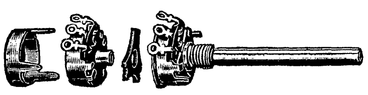


For use as exact replacement. Meet physical and electrical requirements for special applications. Equipped with fixed, knurled and screw driver-slotted phenolic shafts, ¼″ in diameter and ¼″ long. List Price **$1.50** each

Cat. No.	Ohms	Cat. No.	Ohms
SU-14	5M	**SU-50**	500M
SU-20	10M	**SU-54**	1 Meg.
SU-29	25M	**SU-56**	2 Meg.
SU-35	50M	**SU-565**	2.5 Meg.
SU-41	100M	**SU-59**	3 Meg.
SU-46	250M	**SU-67**	5 Meg.

All SU-No. 4—Linear Taper. (see Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog).

Dual Midgetrol Volume Controls and Accessories



Mallory Midgetrol Volume Control Parts and Accessories enable the serviceman to duplicate the physical and electrical characteristics of hundreds of Concentric Shaft Dual Carbon Controls, Single Shaft Dual Carbon Controls and Concentric Shaft Dual Wire-Wound Carbon control combinations for fast replacement in TV, home and auto radio sets. Supplied as separate front and rear control sections, these parts are easy to assemble, practical and economical, and eliminate delays while waiting delivery of manufacturer's original controls. UF is 15/16″ diameter carbon front section; UR is 15/16″ carbon rear section; WF is wire-wound front section. A kit of standard assembly parts is supplied with each front section. For accessory fittings and switches, see page 2, Mallory Resistors and Controls Section, this catalog. Average mounting depth behind panel for a carbon dual is 1⅛″; with switch, is 1⅝″.

Front Section List Price—$2.00 Catalog Number	Rear Section List Price—$1.00 Catalog Number	Resistance Ohms	Taper†
UF13L	**UR13L**	1000	4
UF152L	**UR152L**	1500	4
UF23L	**UR23L**	2000	4
UF252L		2500	4
UF33L		3000	4
	UR352L	3500	4
UF53R	**UR53R**	5000	2
UF53L	**UR53L**	5000	4
UF73R		7000	2
	UR14R	10M	2
UF14L	**UR14L**	10M	4
UF253R		25M	2
UF253L	**UR253L**	25M	4
UF34A		30M	1
UF54A		50M	1
UF54L	**UR54L**	50M	4
UF753L		75M	4
UF15A		100M	1
UF15R	**UR15R**	100M	2
UF15L	**UR15L**	100M	4
UF254A	**UR254A**	250M	1
UF254L	**UR254L**	250M	4
	UR354A	350M	1
UF55A	**UR55A**	500M	1
UF55R		500M	2
UF55L	**UR55L**	500M	4
UF16A	**UR16A**	1 Meg.	1
UF16L	**UR16L**	1 Meg.	4
UF155A		1.5 Meg.	1
UF26A	**UR26A**	2 Meg.	1
UF26L	**UR26L**	2 Meg.	4
UF255L		2.5 Meg.	4
	UR36A	3 Meg.	1
	UR36L	5 Meg.	4
UF46A		4 Meg.	1
UF106L		10 Meg.	1

† See Explanation of Mallory Tapers, page 2.

Tapped Sections

Front Section List Price—$2.25 Catalog Number	Rear Section List Price—$1.25 Catalog Number	Resistance Ohms	Tapped at
UF254-T753	**UR254-T753**	250M	75M
	UR354-T74	350M	70M
UF55-T54	**UR55-T54**	500M	50M
UF55-T254	**UR55-T254**	500M	250M
	UR16-T1253	1 Meg.	125M
UF16-T25	**UR16-T25**	1 Meg.	200M
UF16-T154		1 Meg.	150M
	UR16-T254	1 Meg.	250M
UF16-T35	**UR16-T35**	1 Meg.	300M
	UR26-T25	2 Meg.	200M
UF26-T55		2 Meg.	500M
	UR26-T95	2 Meg.	900M

Two Watt Wire-Wound Front Sections

Catalog Number	Res. Ohms	List Price	Catalog Number	Res. Ohms	List Price
WF32	300	**$2.10**	**WF23**	2000	**$2.10**
WF751	750	**2.10**	**WF252**	2500	**2.10**
WF751-T251	750*	**2.50**	**WF252-T23**	2500	**2.50**
WF13	1000	**2.10**	**WF33**	3000	**2.10**
WF13-T251	1000*	**2.50**	**WF53**	5000	**2.10**
WF152	1500	**2.10**	**WF73**	7000	**2.10**

* Tapped at 250 Ohms.

For Midgetrol accessory parts, see Page 2, Mallory Resistors and Controls Section, this catalog.

Midgetrol Accessory Parts

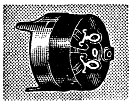
DS-35—Flatted split knurl shaft end. Special for Zenith.
List Price **$0.45**

DS-36—Special 3″ extension shaft for tubular shaft Midgetrols and 2-watt, wire-wound controls. Also used for coupling a front and rear section together to make a single-shaft, dual control for oscilloscope and other push-pull amplifier service.
List Price **$0.45**

DS-37—3/16″ diameter shafts for use with round-shaft Midgetrols to accommodate knobs requiring 3/16″ shaft. List Price **$0.45**

EB-158—Special bushing. 7/16″-28 thread, 1 1/16″ long with 3/8″ milled double flat. List Price **$0.60**

EB-214—Special bushing: 1/2″-28 thread, 2 3/16″ long with .403 milled flat. List Price **$0.60**



Attachable Midgetrol Switches

Cat. No.	Description	List Price
US-26	Single Pole—Single Throw............	**$0.60**
US-26T	Single Pole—Single Throw (with dummy terminal)..................	.75
US-27	Double Pole—Single Throw...........	.75
US-28	Single Pole—Double Throw...........	.75

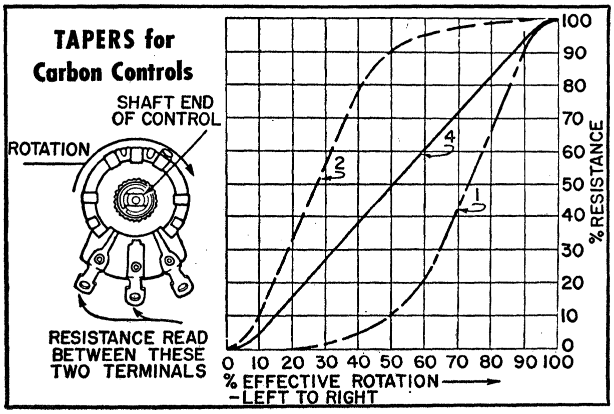
Explanation of Mallory Tapers

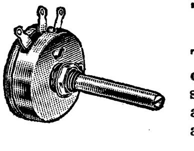
Taper Number 1 is a modified logarithmic left hand taper in the carbon type of control and an approximation to this logarithmic taper in the wire-wound type. This taper should always be used in shunt circuits, as in usual antenna and audio circuits, or where only the center and left hand terminals are used.

Taper Number 2 is a right hand logarithmic taper in the carbon and an approximation in the wire-wound type. Used in series circuits, as in cathode voltage controls, or where only the center and right hand terminals are used.

Taper Number 4 is a linear taper. Strictly speaking it is not a "taper" although commonly referred to as such. A linear "taper" is used wherever a control should be such that voltage change is proportional to the degree of rotation.

Taper Number 7 is made only in the wire-wound type of control and is a form of left hand taper. This taper is desirable for the antenna shunt plus bias control, wherein greater attenuation is obtained by increasing the bias voltage. The slight left taper then suffices to gradually reduce the signal to zero volume by the shunting action in the antenna circuit.



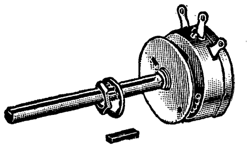


TV Focus Controls

These 1⅝″ diameter units are designed especially for focus control replacement in TV sets. They are 4 watt, wire-wound, and have a special taper. One control, plus accessories and complete instructions per display carton.

Catalog Number	Ohms Resistance (Maximum)	Type Element	Shaft Length	List Price
TVF140	1500	WW	2″	**$1.85**
TVF143	2500	WW	2″	**1.85**

1⅝″ Dia. Fixed Shaft Wire-Wound Controls



For bias control and voltage divider circuits. Provided with stop plate for bias feature. Has 3″ channel shaft. Case diameter is 1⅝″. Will carry 4 watts power.

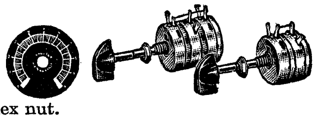
List Price **$1.50** each

Catalog Number	Ohms Resistance	Taper†	Catalog Number	Ohms Resistance	Taper†
Q	2	4	**D12**§	3000	1
R	6	4	**D**§	3000	2
S	10	4	**A3MP**§	3000	4
T	20	4	**D7**§	3000	7
U	30	4	**A4MP**§	4000	4
V	60	4	**E**§	5000	2
W	100	4	**A5MP**§	5000	4
X	200	4	**E7**§	5000	7
A400P	400	4	**F**§	7500	2
A	500	1	**F7**§	7500	7
A550P	550	4	**G**§	10000	2
B	1000	1	**A10MP**§	10000	4
UC500	1000	2	**G7**§	10000	7
A1MP	1000	4	**H**§	15000	2
C12§	2000	1	**H7**§	15000	7
C§	2000	2	**A20MP**§	20000	4
A2MP§	2000	4			

§ Have exclusive Mallory adjustable bias feature, providing 500 ohms in 100 ohm steps in all values over 1000 ohms.

† See Explanation of Mallory Tapers, this page.

T and L Pad Attenuators



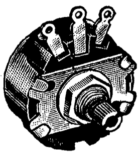
High quality attenuators having a peak audio rating of 15 watts and a continuous DC dissipation rating of 4 watts. Packaged with instructions, 366 knob, 395 dial plate and hex nut.

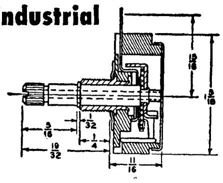
"T" Pad Attenuators List Price $4.25 each Catalog Number	"L" Pad Attenuators List Price **$3.75** each Catalog Number	Ohms Impedance
T2	**L2**	2
T4	**L4**	4
T6	**L6**	6
T8	**L8**	8
T15	**L15**	15
T50	**L50**	50
T100	**L100**	100
T200	**L200**	200
T250	**L250**	250
T500	**L500**	500
T600	**L600**	600
T1000	**L1000**	1000
T2000	**L2000**	2000
T3000	**L3000**	3000

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Variable Wire-Wound Potentiometers and Rheostats

Two Watt Wire-Wound TV and Industrial Potentiometers





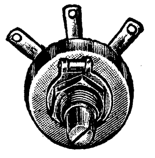
For replacement of positioning, hold and focus controls in TV. Also ideal for industrial circuits up to 1500 volts AC. Completely enclosed in 1⁵⁄₁₆″ diameter phenolic case. Thumb-knurled ¼″ diameter, ⁵⁄₁₆″ long, screw driver, slotted, insulated shaft. All have linear resistance change.

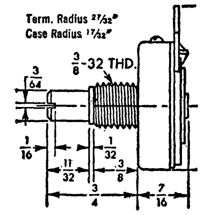
For special 3″ extension shaft, DS-36, see page 2, Mallory Resistors and Controls Section, this catalog.

Catalog Number	Total Ohms	List Price
R20L	20	**$1.25**
R20CT	20	**1.85**
R25L	25	**1.25**
R30L	30	**1.25**
R30CT	30	**1.85**
R50L	50	**1.25**
R100L	100	**1.25**
R250L	250	**1.25**
R500L	500	**1.25**
R1000L	1000	**1.40**
R1500L	1500	**1.40**
R2500L	2500	**1.40**
R3000L	3000	**1.40**
R5000L	5000	**1.40**

All R type are linear No. 4 taper (see Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog).

Two Watt Wire-Wound Potentiometers and Rheostats



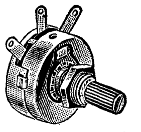


1¹⁄₁₆″ diameter. ¼″ diameter by ⅜″ long shaft with screw driver slot. For use in test and special instruments, bias control and bridge circuits. Has grounded contact arm. Rheostat has "open" or "off" position—all have linear No. 4 taper (see Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog)

For Dial plate 393, see page 4, Mallory Resistors and Controls Section, this catalog.

Potentiometer		Rheostat			
Catalog Number	List Price	Catalog Number	List Price	Ohms	Cap. in Amperes
C6P	**$1.50**	**C6R**	**$1.25**	6	.58
C10P	**1.50**	**C10R**	**1.25**	10	.45
C15P	**1.50**	**C15R**	**1.25**	15	.37
C20P	**1.50**	**C20R**	**1.25**	20	.32
C30P	**1.50**	**C30R**	**1.25**	30	.26
C40P	**1.50**	**C40R**	**1.25**	40	.22
C50P	**1.50**	**C50R**	**1.25**	50	.2
C100P	**1.50**	**C100R**	**1.25**	100	.14
C200P	**1.50**			200	.1
C400P	**1.50**			400	.07
C1MP	**1.75**			1M	.045
C3MP	**1.75**			3M	.025
C5MP	**2.00**			5M	.02
C6MP	**2.00**			6M	.018
C10MP	**2.00**			10M	.014
C15MP	**2.00**			15M	.011

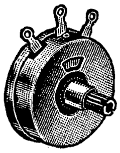
Theater Speaker Controls

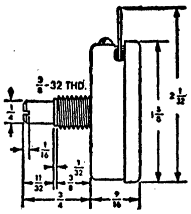


Designed for use with Motiograph, Simplex, International and other outdoor theater motion picture equipment. Quality constructed with pig-tail rotor connections and corrosion-resistant finish to assure long, noise-free life. Housed in 1¹⁄₁₆″ diameter metal case. Mounting nut supplied.

Cat. No.	Description	List Price
TSA-10	4-Ohm T Pad	**$2.00**
TSA-35	35-ohm Potentiometer	**1.50**
TSA-6	6-ohm Potentiometer	**1.50**

Four Watt Wire-Wound Potentiometers and Rheostats





Four-watt, wire-wound controls designed especially for low voltage TV, test equipment, industrial and electronic applications. These controls are supplied with a ⅜″ long bushing and have ¼″ round screw driver slotted shafts ⅜″ long. Overall case diameter is 1⅝″. Mounting radius, including solder lugs, is 1¼″ and mounting depth is ⅝″. Rheostat styles have "off" position. All have linear resistance change and insulated shaft. For Dial Plate No. 395, see page 4, Mallory Resistors and Controls Section, this catalog.

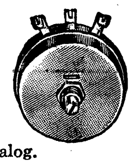
Potentiometer		Rheostat*			
Catalog Number	List Price	Catalog Number	List Price	Ohms	Cap. in Amperes
		M05R	**$1.25**	½	2.80
M1P	**$1.50**	**M1R**	**1.25**	1	2.00
		M2R	**1.25**	2	1.4
M3P	**1.50**	**M3R**	**1.25**	3	1.15
		M4R	**1.25**	4	1.0
M6P	**1.50**	**M6R**	**1.25**	6	.82
M10P	**1.50**	**M10R**	**1.25**	10	.63
M15P	**1.50**	**M15R**	**1.25**	15	.52
M20P	**1.50**	**M20R**	**1.25**	20	.45
M25P	**1.50**	**M25R**	**1.25**	25	.40
M30P	**1.50**	**M30R**	**1.25**	30	.37
M40P	**1.50**	**M40R**	**1.25**	40	.32
M50P	**1.50**	**M50R**	**1.25**	50	.28
M60P	**1.50**	**M60R**	**1.25**	60	.26
M75P	**1.50**	**M75R**	**1.25**	75	.23
M100P	**1.50**	**M100R**	**1.25**	100	.20
M200P	**1.50**			200	.14
M400P	**1.50**			400	.10
M500P	**1.50**			500	.09
M600P	**1.50**			600	.082
M1MP	**1.75**			1M	.063
M2MP	**1.75**			2M	.045
M3MP	**1.75**			3M	.037
M4MP	**1.75**			4M	.032
M5MP	**1.75**			5M	.028
M10MP	**2.00**			10M	.020
M15MP	**2.00**			15M	.016
M20MP	**2.00**			20M	.014
M25MP	**2.00**			25M	.013
M50MP	**2.40**			50M	.009
M70MP	**2.40**			70M	.0075

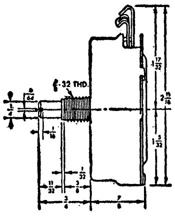
* "Open" or "Off" position counter-clockwise.

Center Tapped Potentiometer

MT10P	**$2.25**			10	.63
MT20P	**2.25**			20	.45
MT30P	**2.25**			30	.37

Seven Watt Wire-Wound Potentiometers





Has 7-watt dissipation, grounded contact arm and linear resistance change. Metal case is 2⅝″ diameter, ⅞″ deep. Shaft is ¼″ diameter and ⅜″ long with screw driver slot. For Dial plate No. 399, see page 4, Mallory Resistors and Controls Section, this catalog.

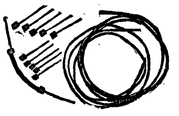
Catalog Number	Ohms	Capacity in Amperes	List Price
E5MP	5M	.042	**$3.50**
E10MP	10M	.03	**3.50**
E20MP	20M	.021	**3.50**
E25MP	25M	.019	**3.90**
E50MP	50M	.0135	**3.90**
E75MP	75M	.011	**3.90**
E100MP	100M	.0095	**3.90**
E125MP	125M	.0085	**3.90**
E150MP	150M	.0078	**3.90**

RESISTANCE KITS • CONTROL HARDWARE

P. R. MALLORY & CO., INC. • INDIANAPOLIS

P. R. MALLORY & CO. Inc. MALLORY

Yard-Ohm Resistance Kits



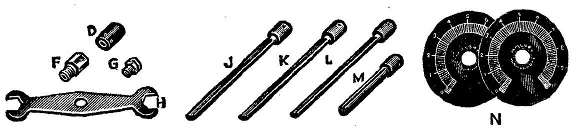
Each Yard-Ohm Kit consists of the following: 1 yard spiral wound resistance wire; 1 yard insulated braid; 24 spiral wire leads. The kit is available in eight resistance values.

Dissipation—all types: ½ watt per inch.

List Price **$0.75** each

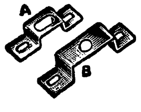
Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes	Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes
YO-1	1	.707	**YO-50**	50	.100
YO-5	5	.315	**YO-100**	100	.071
YO-10	10	.223	**YO-250**	250	.044
YO-25	25	.141	**YO-500**	500	.031

Shafts—Couplers—Bushings—Dial Plates



Cat. No.	Description	List Price
EC240	For coupling two ¼″ shafts or ¼″ and 3/16″ (D)	**$0.30**
EB247	⅝″ Extension Bushing (F)	**.25**
UB241	Panel Bushing for ¼″ shaft (G)....per 10	**.95**
178	½″ and 9/16″ Wrench (H)	**.25**
RS242	4″ long x ¼″ diameter x 1/32″ flat (K)	**.40**
RS243	4″ long x ¼″ diameter x 3/32″ flat (J)	**.40**
RS244	4″ long x 3/16″ diameter x 1/64″ flat (L)	**.40**
RS245	2″ long x ¼″ diameter x slotted 3/32″ (M)	**.45**
369	0-100 All Rheostats and Potentiometers (compromise scale) 2¼″ (N)	**.25**
391	Increase Volume—All Rheostats and Potentiometers—1½″ (N)	**.15**
393	0-10 For "C" Type Rheostats and Potentiometers—2¼″ (N)	**.25**
395	0-10 For Standard Wire-Wound Controls with Plain cover; also "M" Type Rheostats and Potentiometers—2¼″ (N)	**.25**
396	0-10 For Standard Wire-Wound Controls with switch type cover—2¼″ (N)	**.25**
397	0-10 For Standard Carbon Controls with Plain cover—2¼″ (N)	**.25**
398	0-10 For Standard Carbon Controls with switch type cover—2¼″ (N)	**.25**
399	0-10 For "E" Type Potentiometers—2¼″ (N)	**.25**

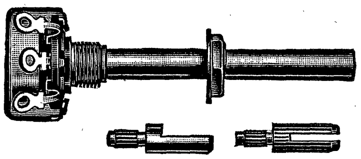
Adjustable Mounting Brackets



Cat. No.	Description	List Price
RB248	1¾″ Mounting Centers (A)	**$0.25**
RB249	2½″ Mounting Centers (B)	**.25**
RB254	Universal	**.25**

MALLORY MIDGETROL

SINGLE SECTION

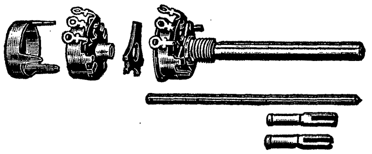


Now the *time-proved* Mallory Midgetrol offers two important new time-saving features.

This sturdy 15/16″ control is supplied with a *permanently fixed, tubular brass shaft* that can be adapted for split-knurl or flatted type knobs in a few seconds by inserting one of the two steel shaft-ends packaged with every Mallory Midgetrol. It gives you utmost convenience—without sacrificing a stable, permanently secured shaft.

Also, switch attachment is made simple and sure by positive indexing. Switch locks securely in position without removing the control housing.

DUAL SECTION



This revolutionary new control can be assembled in five easy steps, in less than five minutes—permits you to match a wide range of combinations immediately from convenient distributor stocks, and without high "time" costs.

The "exploded" view above illustrates the parts and assembled control sections supplied. Extremely simple instructions show you how to assemble them quickly and surely—without soldering—with only the simplest of tools.

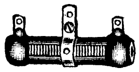
Both front and rear sections are *factory-assembled and carefully inspected.* You can be sure that your final dual assembly will give the performance you want!

The Mallory Midgetrol gives you fast, sure, simple installation—with precision-controlled carbon element, smooth taper, quiet operation, accurate resistance value and less drift in TV sets.

For Complete Listing and Description see Page 1, Mallory Resistors and Controls Section, This Catalog

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

Mallory Fixed and Adjustable Vitreous Enamel Resistors



Wire-wound, covered with a special, vitreous, non-alkaline, non-hygroscopic enamel coating which assures exceptional sealing and permanence of electrical characteristics. Adjustable types equipped with slider. 5 and 10 watt sizes have tinned-copper leads. All others supplied with mounting feet.

Fixed Types

Type HHJ-5 Watt Rating
Tube Size 5/16″ x 1″

Resistance Ohms

1	10	40	250	700	1250	3500
1.5	12	50	300	750	1500	4000
2	15	75	350	800	1750	4500
3	20	100	400	900	2000	5000
4	25	125	450	1000	2250	
5	30	150	500	1100	2500	
7.5	35	200	600	1200	3000	

Ohms	List Price
1 Thru 1000	**$0.67**
1100 Thru 5000	**.75**

Type 1HJ-10 Watt Rating
Tube Size 5/16″ x 1¾″

Resistance Ohms

1	25	225	800	2500	8500	18000
2	30	250	900	3000	10000	20000
3	35	300	1000	3500	11000	22500
4	40	350	1100	4000	12000	25000
5	50	400	1200	4500	12500	30000
7.5	75	450	1250	5000	13500	35000
10	100	500	1500	6000	14300	40000
12	125	600	1750	7000	15000	45000
15	150	700	2000	7500	16000	50000
20	200	750	2250	8000	17500	

Ohms	List Price
1 Thru 1000	**$0.75**
1100 Thru 5000	**.80**
6000 Thru 10000	**.92**
11000 Thru 20000	**1.03**
22500 Thru 50000	**1.11**

Type 2HJ-20 Watt Rating
Tube Size 7/16″ x 2″

Resistance Ohms

5	100	500	2000	4000	12500	40000
10	150	750	2250	4500	15000	50000
15	200	1000	2500	5000	20000	75000
25	250	1250	2750	6000	25000	100000
50	300	1500	3000	7500	30000	
75	400	1750	3500	10000	35000	

Ohms	List Price
5 Thru 1000	**$0.95**
1250 Thru 5000	**.97**
6000 Thru 10000	**1.12**
12500 Thru 20000	**1.20**
25000 Thru 40000	**1.37**
50000	**1.50**
75000 Thru 100000	**1.75**

Type 5HJ—50 Watt Rating
Tube Size 9/16″ x 4″

Resistance Ohms

10	250	1500	7500	20000	50000
25	500	2000	10000	25000	75000
50	750	2500	12500	30000	100000
100	1000	5000	15000	40000	

Ohms	List Price
10 Thru 5000	**$1.75**
7500 Thru 10000	**1.92**
12500 Thru 20000	**2.12**
25000 Thru 40000	**2.33**
50000	**2.58**
75000	**2.92**
100000	**3.20**

Type 10HJ—100 Watt Rating
Tube Size ¾″ x 6½″

Resistance Ohms

25	500	2000	10000	25000	50000
50	750	2500	15000	30000	75000
100	1000	5000	20000	40000	100000
250	1500	7500			

Ohms	List Price
25 Thru 1000	**$2.48**
1500 Thru 5000	**2.53**
7500 Thru 10000	**2.70**
15000 Thru 20000	**2.97**
25000 Thru 40000	**3.26**
50000	**3.37**
75000	**3.58**
100000	**3.80**

Type 20HJ—200 Watt Rating
Tube Size 1⅛″ x 10½″

Resistance Ohms

25	100	750	2000	5000	20000	50000
50	250	1000	2500	7500	30000	75000
75	500	1500	3000	10000	40000	100000

Ohms	List Price
25 Thru 1000	**$3.29**
1500 Thru 5000	**3.34**
7500 Thru 10000	**3.54**
20000	**3.75**
30000 Thru 40000	**3.90**
50000	**4.03**
75000	**4.25**
100000	**4.53**

Adjustable Types

Type 1AV—10 Watt Rating
Tube Size 5/16″ x 1¾″

Resistance Ohms

1	15	150	500	1500	4000	8000
2	20	200	600	2000	4500	8500
3	25	250	750	2250	5000	9000
5	50	300	800	2500	6000	10000
7.5	75	350	1000	3000	7000	
10	100	400	1250	3500	7500	

Ohms	List Price
1 Thru 1000	**$1.47**
1100 Thru 5000	**1.53**
6000 Thru 10000	**1.63**

Type 2AV—25 Watt Rating
Tube Size 9/16″ x 2″

Resistance Ohms

1	25	200	750	2500	6000	20000
3	50	250	1000	3000	7500	25000
5	75	300	1250	3500	10000	
10	100	400	1500	4000	12000	
15	150	500	2000	5000	15000	

Ohms	List Price
1 Thru 1000	**$1.84**
1250 Thru 5000	**1.88**
6000 Thru 10000	**2.03**
12000 Thru 20000	**2.08**
25000	**2.28**

Type 5AV—50 Watt Rating
Tube Size 9/16″ x 4″

Resistance Ohms

5	75	250	1500	4000	15000	40000
10	100	500	2000	5000	20000	50000
25	150	750	2500	7500	25000	
50	200	1000	3000	10000	30000	

Ohms	List Price
5 Thru 1000	**$2.37**
1500 Thru 5000	**2.47**
7500 Thru 10000	**2.63**
15000 Thru 20000	**2.83**
25000 Thru 40000	**3.08**
50000	**3.31**

Type 10AV—100 Watt Rating
Tube Size ¾″ x 6½″

Resistance Ohms

50	2000	5000	15000	30000	50000
100	2500	7500	20000	35000	75000
500	3000	10000	25000	40000	
1000	4000				

Ohms	List Price
50 Thru 1000	**$3.55**
2000 Thru 5000	**3.67**
7500 Thru 10000	**3.87**
15000 Thru 20000	**4.12**
25000 Thru 40000	**4.37**
50000	**4.57**
75000	**4.75**

Type 20AV—200 Watt Rating
Tube Size 1⅛″ x 10½″

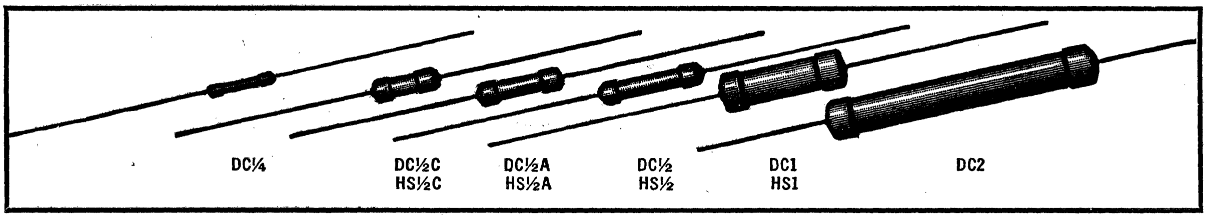
Resistance Ohms

50	1000	2500	20000	50000
100	1500	5000	25000	75000
500	2000	10000	30000	

Ohms	List Price
50 Thru 1000	**$4.37**
1500 Thru 5000	**4.45**
10000	**4.70**
20000	**4.92**
25000 Thru 30000	**5.03**
50000	**5.17**
75000	**5.42**

DEPOSITED CARBON RESISTORS

Types HS and DC Deposited Carbon Resistors



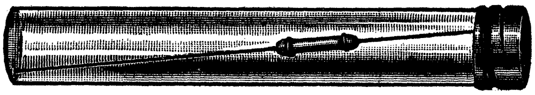
(*Resistors illustrated are approximately ⅔ actual size*)

Type DC ± 1% Deposited Carbon Precision Resistors

Mallory Deposited Carbon Precision Resistors are designed primarily as low-cost replacements for expensive wire-wound resistors in high-quality laboratory instruments. Their unique operating characteristics also make them ideal for replacement or substitution in all radio, television, electronic, or electric circuitry where stability, close tolerance, low-noise, and low inductance are desired. Average shelf life change will not exceed ¼% per year. One thousand hour load life test indicates a maximum change not exceeding ± 1%.

These resistors are formed of pure, crystalline-carbon particles deposited on specially compounded ceramic. Each Mallory Deposited Carbon Resistor is equipped with 1½" tinned copper, axially-placed leads rigidly attached to silver plated brass end-caps. Baked moisture-resistant insulation is incorporated in construction for protection against humidity. Each resistor is calibrated at a nominal temperature of 25°C. and each has a negative temperature coefficient range of approximately .03% for low resistant values, through .08% for resistances exceeding 1 megohm.

Each unit is inspected according to requirements of accepted government specifications, and each is marked with resistance value, type and tolerance, except the smaller types which have a separate label.



All DC Types are packaged in this dust-free plastic tube, assuring adequate physical protection.

Cat No.	Wattage	Working Volts	Size (in inches) Dia. Length	Standard Value Resistance Range	List Price
DC¼	.25	300	3/32 x 17/32	50 ohms—1 Meg.	**$1.50**
DC½	.50	500	11/64 x 13/16	70 ohms—5 Meg.	**1.00**
DC½A	.50	350	11/64 x 19/32	41 ohms—2.2 Meg.	**1.00**
DC½C	.50	350	11/64 x 15/32	20 ohms—1.1 Meg.	**1.25**
DC1	1.00	500	9/32 x 15/16	41 ohms—4.5 Meg.	**1.25**
				5.0 Meg.	**1.50**
DC2	2.00	750	9/32 x 2 1/16	120 ohms—10 Meg.	**1.50**

Each of the six DC types is available in the following resistance values, within resistance ranges shown in the table above:

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
50	1000	7.5 K	40.0 K	225.0 K	1.0 Meg.
100	1500	10.0 K	50.0 K	250.0 K	1.5 Meg.
200	2000	12.5 K	60.0 K	300.0 K	2.0 Meg.
250	2200	15.0 K	75.0 K	400.0 K	2.5 Meg.
300	2500	20.0 K	100.0 K	500.0 K	5.0 Meg.
400	3.0 K	22.5 K	125.0 K	600.0 K	10.0 Meg.
500	3.5 K	25.0 K	150.0 K	750.0 K	
600	4.0 K	30.0 K	175.0 K	900.0 K	
700	5.0 K	35.0 K	200.0 K		

When ordering specify type and resistance value desired.

Type HS Hi-Stability Deposited Carbon Resistors

For the first time the well-known advantages of high-stability, low inductance, and small size of Mallory Deposited Carbon Resistors are available at moderate cost for use in many commercial applications where accuracy of resistance is of less importance than the consistency of operation over long periods of time and through many changes of temperature. Average shelf life change will not exceed ¼% per year. One thousand hour load life test indicates a maximum change not exceeding ± 1%.

Television servicemen, laboratory technicians, and model shop engineers, in particular, will find these resistors ideal for critical television and other oscillator circuits where constancy of resistance is of utmost importance. The electrical and mechanical characteristics of HS types are exactly the same as similar DC types, with exception of the resistance tolerance which has been increased to ± 10% of the nominal value. The same quality and temperature coefficient, as featured in the DC types, is maintained throughout.

Cat. No.	Wattage	Working Volts	Size (in inches) Dia. Length	Standard Value Resistance Range	List Price
HS½	.50	500	11/64 x 13/16	47 ohms—8.2 Meg.	**$0.35**
HS½A	.50	350	11/64 x 19/32	10 ohms—3.3 Meg.	**.40**
HS½C	.50	350	11/64 x 15/32	10 ohms—1.2 Meg.	**.45**
HS1	1.00	500	9/32 x 15/16	100 ohms—10 Meg.	**.50**

Each of the four HS types is available in the following RTMA resistance values, within resistance ranges shown in the chart above:

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10	100	1 K	10 K	100 K	1 Meg.
12	120	1.2 K	12 K	120 K	1.2 Meg.
15	150	1.5 K	15 K	150 K	1.5 Meg.
18	180	1.8 K	18 K	180 K	1.8 Meg.
22	220	2.2 K	22 K	220 K	2.2 Meg.
27	270	2.7 K	27 K	270 K	2.7 Meg.
33	330	3.3 K	33 K	330 K	3.3 Meg.
39	390	3.9 K	39 K	390 K	3.9 Meg.
47	470	4.7 K	47 K	470 K	4.7 Meg.
56	560	5.6 K	56 K	560 K	5.6 Meg.
68	680	6.8 K	68 K	680 K	6.8 Meg.
82	820	8.2 K	82 K	820 K	8.2 Meg.
					10 Meg.

When ordering specify type and resistance value desired.

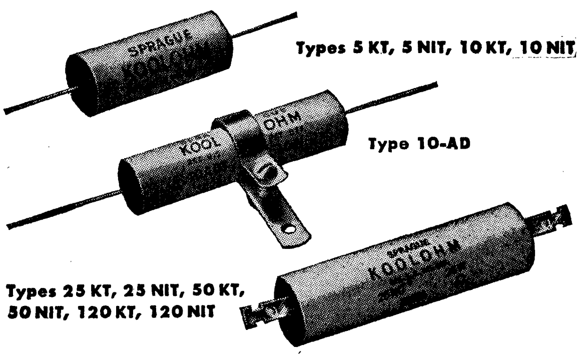
SPECIAL ORDERS

—*Made to Your Specifications*

Mallory Deposited Carbon Precision Resistors are also available in DC types made to exact customer specifications requiring a wider range of resistance values from 2 ohms to 50 megohms. DC type resistors are also available in hermetically sealed types and with special coatings or sleeves.

SPRAGUE RESISTORS

KOOLOHM® WIRE-WOUND RESISTORS


Types 5 KT, 5 NIT, 10 KT, 10 NIT
Type 10-AD
Types 25 KT, 25 NIT, 50 KT, 50 NIT, 120 KT, 120 NIT

- Wound with wire which is insulated **before winding** with a flexible ceramic coating. This coating is impervious to heat as high as 1000°C.
- Each resistor is "tropicalized" by a glazed ceramic outer coating and new type end seals which offer complete protection against moisture or any other climatic conditions
- May be mounted anywhere—even flat against chassis or grounded parts
- Extremely high insulation resistance—10,000 volts from surface of ceramic jacket to inner resistance elements
- Insulated wire permits winding higher values in layers, which means much smaller physical sizes for each wattage rating
- Insulated wire permits true "non-inductive" wound designs

NOTE: ALL NIT TYPES ARE NON-INDUCTIVE

5 WATTS

TYPES 5 KT & 5 NIT

15/32" dia. x 1 7/32" long

5 KT List	Ohms	Max. Ma.	Max. Volts	5 NIT List
$.65	5	1000	5.00	$1.00
.65	10	707	7.07	1.00
.65	15	587	8.67	1.00
.65	20	500	10	1.00
.65	25	446	11	1.00
.65	30	406	12	1.00
.65	40	354	14	1.00
.65	50	316	15	1.00
.65	75	258	19	1.00
.65	100	224	22	1.00
.65	150	183	27	1.00
.65	200	158	31	1.00
.65	250	141	35	1.00
.65	300	129	38	1.00
.65	400	112	44	1.00
.65	500	100	50	1.00
.65	600	91	54	1.00
.65	700	84	59	1.00
.65	800	79	63	1.00
.65	900	74	67	1.00
.65	1000	70	70	1.00
.70	1250	63	79	1.15
.70	1500	57	86	1.15
.70	1750	53	93	1.15
.70	2000	50	100	1.15
.70	2500	44	112	1.25
.70	3000	40	123	1.25
.70	4000	35	141	1.25
.70	5000	31	158	1.30
.80	6000	28	173	*
.80	7000	26	187	*
.80	7500	25	194	*
.80	8000	25	200	*
.80	9000	23	212	*
.80	10000	22	224	*
.90	12500	20	250	*
.90	14000	18	265	*
.95	15000	18	274	*
.95	20000	15	333	*
1.10	25000	14	354	*
1.20	30000	13	387	*
1.40	35000	12	418	*
1.50	40000	11	447	*

10 WATTS

TYPES 10 KT & 10 NIT

15/32" dia. x 1 27/32" long

10 KT List	Ohms	Max. Ma.	Max. Volts	10 NIT List
$.75	5	1414	7.07	$1.00
.75	10	1000	10	1.00
.75	15	830	12.3	1.00
.75	20	707	14.1	1.00
$.75	25	630	15.8	$1.00
.75	30	575	17.4	1.00
.75	40	500	20	1.00
.75	50	447	22.4	1.00
.75	75	365	27.4	1.00
.75	100	316	31.6	1.00
.75	150	259	38.7	1.00
.75	200	223	44.6	1.00
.75	250	200	50	1.00
.75	300	182	54.7	1.00
.75	400	158	63.3	1.00
.75	500	141	70.7	1.00
.75	600	129	77.6	1.00
.75	700	119	84	1.00
.75	750	115	86.9	1.00
.75	800	112	89.5	1.00
.75	900	105	95	1.00
.75	1000	100	100	1.00
.80	1250	89	112	1.15
.80	1500	81	123	1.15
.80	1750	75	133	1.15
.80	2000	70	143	1.15
.80	2500	63	158	1.25
.80	3000	57	174	1.25
.80	4000	50	200	1.25
.80	5000	44	227	1.30
.90	6000	41	245	1.30
.90	7500	36	275	1.45
.90	8000	35	283	1.45
.90	9000	33	300	1.45
.90	10000	32	316	1.90
1.00	12000	29	346	*
1.00	14000	26	384	*
1.00	15000	25	400	*
1.00	17500	24	419	*
1.10	20000	21	475	*
1.20	25000	20	500	*
1.30	30000	18	555	*
1.50	35000	17	591	*
1.65	40000	16	632	*
1.80	50000	14	700	*
2.00	60000	13	780	*
2.20	70000	12	840	*

10 WATTS ADJUSTABLE†

TYPE 10-AD

15/32" dia. x 1 29/32" long

Ohms	Max. Ma.	Max. Volts	List
10	1000	10	$1.45
25	630	15.8	1.45
50	447	22.4	1.45
100	316	31.6	1.45
150	259	38.7	1.45
200	223	44.6	1.45
250	200	50	1.45
300	182	54.7	1.45
400	158	63.3	1.45
500	141	70.7	$1.45
750	115	86.9	1.45
1000	100	100	1.45
1500	81	123	1.55
2000	70	143	1.55
2500	63	158	1.55
3000	57	174	1.55
4000	50	200	1.55
5000	44	227	1.55
7500	36	275	1.65
10000	32	316	1.65

Extra Bands, $ .10

25 WATTS

TYPES 25 KT & 25 NIT

23/32" dia. x 2 7/8" long

25 KT List	Ohms	Max. Amps.	Max. Volts	25 NIT List
$1.45	5	2.23	11	$ 1.85
1.30	10	1.58	15	1.85
1.30	25	1.0	25	1.85
1.30	50	.707	35	1.85
1.30	75	.577	43	1.85
1.30	100	.500	50	1.85
1.30	150	.408	61	1.85
1.30	200	.353	70	1.85
1.30	250	.316	79	1.85
1.30	500	.223	111	1.85
1.35	600	.204	122	1.85
1.35	750	.182	137	1.85
1.35	1000	.158	158	1.85
1.35	1500	.129	193	2.00
1.35	2000	.111	223	2.00
1.35	2500	.100	250	2.00
1.45	3000	.091	273	2.40
1.45	4000	.079	316	2.40
1.45	5000	.070	353	2.40
1.45	7500	.057	432	2.40
1.50	10000	.050	500	2.75
1.55	12000	.046	548	2.75
1.55	15000	.041	612	2.75
1.65	20000	.035	707	3.10
1.80	25000	.032	790	3.40
2.00	40000	.025	1000	*
2.20	50000	.022	1118	*
2.85	75000	.018	1370	*
3.55	100000	.016	1580	*

50 WATTS

TYPES 50 KT & 50 NIT

7/8" dia. x 4" long

50 KT List	Ohms	Max. Amps.	Max. Volts	50 NIT List
$1.95	5	3.16	15	$ 3.10
1.95	10	2.23	22	3.10
1.95	25	1.41	35	3.10
$1.95	50	1.000	50	$3.10
1.95	75	.816	61	3.10
1.95	100	.707	70	3.10
1.95	150	.577	86	3.10
1.95	200	.500	100	3.10
1.95	250	.477	111	3.10
1.95	500	.316	158	3.10
1.95	600	.289	173	3.10
1.95	750	.258	193	3.10
1.95	1000	.223	223	3.10
2.10	1500	.182	274	3.10
2.10	2000	.158	316	3.10
2.10	2500	.141	353	3.10
2.30	3000	.129	387	3.10
2.30	4000	.111	447	3.10
2.30	5000	.100	500	3.10
2.40	7500	.081	612	3.10
2.85	10000	.070	707	3.10
2.85	12000	.064	775	3.10
2.85	15000	.057	870	3.10
2.90	20000	.050	1000	3.30
2.90	25000	.044	1120	3.30
3.00	50000	.032	1580	5.75
3.10	75000	.026	1936	*
3.50	100000	.022	2238	*

120 WATTS

TYPES 120 KT & 120 NIT

1 1/16" Dia. x 8 15/16" long

120 KT List	Ohms	Max. Amps.	Max. Volts	120 NIT List
$7.75	5	4.9	24.5	$9.40
7.75	10	3.46	34.6	9.40
7.75	25	2.18	54.6	9.40
7.75	50	1.54	77.4	9.40
7.75	75	1.26	94.8	9.40
7.75	100	1.09	109.5	9.40
7.75	150	.884	134	9.40
7.75	200	.775	155	9.40
7.75	250	.692	173	9.40
	★390	.574	211	9.40
7.75	500	.490	245	9.40
7.75	600	.446	268	9.40
7.75	750	.400	300	9.40
7.75	1000	.346	346	9.40
7.75	1500	.282	424	9.40
7.75	2000	.245	490	9.40
7.75	2500	.219	548	9.40
7.75	3000	.200	600	9.40
7.75	5000	.154	774	9.40
8.00	7500	.126	948	10.00
8.00	10000	.109	1095	10.00
8.00	15000	.089	1340	10.00
8.00	20000	.077	1550	10.00
8.00	25000	.069	1733	10.00
8.00	50000	.049	2450	10.00
8.00	75000	.040	3000	*
8.00	100000	.034	3460	*

*KT Types only

†Adjustable Resistors are not tropicalized

★New addition to line.

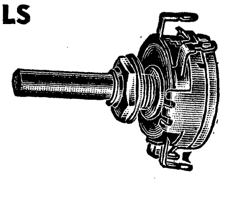
COMPOSITION ELEMENT CONTROLS

Elements are designed and manufactured to achieve the greatest degree of smooth, quiet operation. Clarostat Composition Element Controls are used by all leading manufacturers as original equipment, therefore, units listed represent the majority of values common to original controls. Composition Element Controls are available with either linear or tapered values.

CURVE DATA

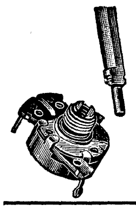
Taper S—Straight or uniform resistance change with rotation.
Taper T—Right-hand 30% resistance at 50% of C.C.W. rotation.
Taper U—Left-hand 1% resistance at 33⅓% of C.W. rotation.
Taper V—Right-hand 20% resistance at 50% of C.C.W. rotation.
Taper W—Left-hand 20% resistance at 50% of C.W. rotation.
Taper Z—Left-hand (Log. audio) 10% resistance at 50% of C.W. rotation.
Taper Y—Left-hand 5% resistance at 50% of C.W. rotation.

SERIES AT AND T CONTROLS

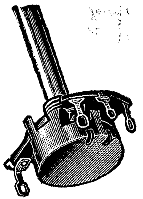


Rated ½ watt. 1⅛″ dia. by 9/16″ deep. With switch ⅞″ deep. Lug protrusion 19/64″. Uses Series SWA switches. ⅜″-32 by ⅜″ long brass bushing. Series AT furnished with any one of the 12 "Pick-A-Shaft"* shafts listed. Series T has factory assembled 3″ milled shaft. Taps located at 37½%, 50% and 62½% of rotation. Tolerances in accordance with RTMA ±20% to 100KΩ; ±30% above.

SERIES AK AND K CONTROLS



Rated ¼ watt. 15/16″ dia. by 29/64″ deep. With switch 49/64″ deep. Lug protrusion 9/32″. Uses Series SWB switches. ⅜-32 by ¼″ long brass bushing. Series AK furnished with any one of the 12 "Pick-A-Shaft"* shafts listed. Series K has factory assembled 3″ milled shaft. Taps located at 30% and 70% of rotation. Tolerances the same as in Series AT and T controls.



Ohms	Tap No. 1	Tap No. 2	Tap No. 3	Cat. No.	Cat. No.	Cat. No.	Cat. No.
50K		25K		AT-25		T-25	
200K			100K	AT-38	AK-38	T-38	K-38
250K		25K		AT-39		T-39	
250K		125K		AT-42		T-42	
250K			50K	AT-43	AK-43	T-43	K-43
250K	60K		125K	AT-44		T-44	
250K	30K	60K		AT-45		T-45	
350K		25K		AT-60		T-60	
350K	75K			AT-69	AK-69	T-69	K-69
350K		75K		AT-70		T-70	
500K		100K		AT-78		T-78	
500K			100K	AT-80	AK-80	T-80	K-80
500K	25K			AT-81	AK-81	T-81	K-81
500K			200K	AT-82	AK-82	T-82	K-82
500K		50K		AT-88		T-88	
500K		250K		AT-90		T-90	
500K	100K		300K	AT-92		T-92	
1 Meg.	250K			AT-98	AK-98	T-98	K-98
1 Meg.		50K		AT-101		T-101	
1 Meg.	100K		500K	AT-102		T-102	
1 Meg.		100K		AT-103		T-103	
1 Meg.		225K		AT-109		T-109	
1 Meg.		170K		AT-110		T-110	
1 Meg.			200K	AT-111	AK-111	T-111	K-111
1 Meg.		500K		AT-112		T-112	
1.5 Meg.	250K		500K	AT-95		T-95	
1.5 Meg.		350K		AT-125		T-125	
2 Meg.		100K		AT-114		T-114	
2 Meg.		500K		AT-115		T-115	
2 Meg.		1 Meg.		AT-116		T-116	
2 Meg.	20K			AT-118	AK-118	T-118	K-118
2 Meg.		200K		AT-119		T-119	
2 Meg.		400K		AT-120		T-120	
2 Meg.	250K		500K	AT-121		T-121	
2 Meg.	5,000			AT-124	AK-124	T-124	K-124
2 Meg.	200K		400K	AT-126		T-126	
2 Meg.	15K			AT-129	AK-129	T-129	K-129
2.5 Meg.	250K		500K	AT-123		T-123	
4 Meg.		500K		AT-128		T-128	

LIST PRICE $1.85 (Without Switch)
Standard Packing—10 (ten) per Carton

DUAL SERIES DC CONTROLS

Two controls driven by a common shaft in corresponding rotation. 1⅛″ dia. ⅜″-32 by ⅜″ long bushing 2½″ milled shaft. Tolerances in accordance with RTMA standards. ±20% all values up to and including 100K Ω. ±30% all values above 100K Ω. Available in following resistance combinations. Other combinations available. Prices and information available on request.

Panel Unit	Rear Unit	Cat. No.	Panel Unit	Rear Unit	Cat. No.
10K—S	25K—S	DC-34-S	500K—Z	500K—Z	DC-10-Z
10K—S	50K—S	DC-23-S	1 Meg.—Z	1 Meg.—Z	DC-11-Z
50K—S	50K—S	DC-5-S	1 Meg.—S	1 Meg.—S	DC-35-S
100K—Z	100K—Z	DC-6-Z	2 Meg.—S	2 Meg.—S	DC-36-S
250K—S	250K—S	DC-29-S	5 Meg.—S	5 Meg.—S	DC-37-S
250K—Z	250K—Z	DC-8-Z			

LIST PRICE $3.10

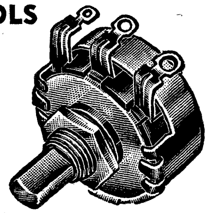
Series SWB "AD-A-SWITCH"*

For use with AG, G, AK and K controls.

Cat. No.	Wiring (5 amp. 125 V. A.C. U/L Approved)	List Price
SWB	Single-Pole Single-Throw	$0.60
SWB-1	Three Way No "Off" Position S.P.D.T.	.75
SWB-2	Double-Pole Single Throw	.75

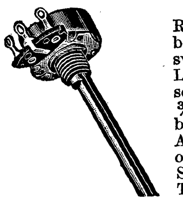
Standard Packing—10 (ten) per Carton

SERIES AM AND M CONTROLS

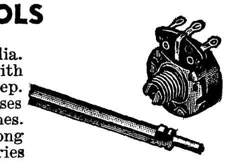


Rated ½ watt. 1⅛″ dia. by 9/16″ deep. With switch ⅞″ deep. Lug protrusion 19/64″. Uses Series SWA switches. ⅜″-32 by ⅜″ long brass bushing. Series AM furnished with any one of the 12 "Pick-A-Shaft"* shafts listed. Series M has factory assembled 3″ milled shaft. Tolerances in accordance with RTMA standards. ±20% up to 100K Ω; ±30% above.

SERIES AG AND G CONTROLS



Rated ¼ watt. 15/16″ dia. by 29/64″ deep. With switch 49/64″ deep. Lug protrusion 9/32″. Uses series SWB switches. ⅜″-32 by ¼″ long brass bushing. Series AG furnished with any one of the 12 "Pick-A-Shaft"* shafts listed. Series G has factory assembled 3″ milled shaft. Tolerance the same as in series AM and M.



Ohms	Curve	Cat. No.	Cat. No.	Cat. No.	Cat. No.
500	S	AM-5-S	AG-5-S	M-5-S	G-5-S
1,000	S	AM-8-S	AG-8-S	M-8-S	G-8-S
2,000	S	AM-11-S	AG-11-S	M-11-S	G-11-S
3,000	S	AM-15-S	AG-15-S	M-15-S	G-15-S
4,000	S	AM-80-S	AG-80-S	M-80-S	G-80-S
5,000	S	AM-19-S	AG-19-S	M-19-S	G-19-S
5,000	U	AM-20-U		M-20-U	
7,500	S	AM-23-S	AG-23-S	M-23-S	G-23-S
10K	S	AM-27-S	AG-27-S	M-27-S	G-27-S
10K	U	AM-29-U		M-29-U	
10K	V	AM-30-V	AG-30-V	M-30-V	G-30-V
10K	W	AM-31-W	AG-31-W	M-31-W	G-31-W
10K	Z	AM-81-Z	AG-81-Z	M-81-Z	G-81-Z
15K	S	AM-32-S	AG-32-S	M-32-S	G-32-S
15K	U	AM-33-U		M-33-U	
15K	V	AM-34-V	AG-34-V	M-34-V	G-34-V
15K	W	AM-35-W	AG-35-W	M-35-W	G-35-W
20K	S	AM-36-S	AG-36-S	M-36-S	G-36-S
20K	U	AM-37-U		M-37-U	
25K	S	AM-40-S	AG-40-S	M-40-S	G-40-S
25K	W	AM-41-W	AG-41-W	M-41-W	G-41-W
25K	V	AM-72-V	AG-72-V	M-72-V	G-72-V
30K	S	AM-42-S	AG-42-S	M-42-S	G-42-S
40K	S	AM-43-S	AG-43-S	M-43-S	G-43-S
50K	S	AM-44-S	AG-44-S	M-44-S	G-44-S
50K	W	AM-45-W	AG-45-W	M-45-W	G-45-W
50K	Z	AM-46-Z	AG-46-Z	M-46-Z	G-46-Z
75K	S	AM-47-S	AG-47-S	M-47-S	G-47-S
75K	V	AM-48-V	AG-48-V	M-47-V	G-48-V
100K	S	AM-49-S	AG-49-S	M-49-S	G-49-S
100K	Z	AM-51-Z	AG-51-Z	M-51-Z	G-51-Z
200K	S	AM-52-S	AG-52-S	M-52-S	G-52-S
250K	S	AM-55-S	AG-55-S	M-55-S	G-55-S
250K	Z	AM-64-Z	AG-64-Z	M-64-Z	G-64-Z
300K	S	AM-57-S	AG-57-S	M-57-S	G-57-S
500K	S	AM-58-S	AG-58-S	M-58-S	G-58-S
500K	Y	AM-59-Y		M-59-Y	
500K	Z	AM-60-Z	AG-60-Z	M-60-Z	G-60-Z
750K	Z	AM-79-Z	AG-79-Z	M-79-Z	G-79-Z
1 Meg.	S	AM-61-S	AG-61-S	M-61-S	G-61-S
1 Meg.	Z	AM-63-Z	AG-63-Z	M-63-Z	G-63-Z
2 Meg.	S	AM-83-S	AG-83-S	M-83-S	G-83-S
2 Meg.	Z	AM-66-Z	AG-66-Z	M-66-Z	G-66-Z
2.5 Meg.	S	AM-84-S	AG-84-S	M-84-S	G-84-S
3 Meg.	Z	AM-67-Z	AG-67-Z	M-67-Z	G-67-Z
4 Meg.	Z	AM-68-Z	AG-68-Z	M-68-Z	G-68-Z
5 Meg.	Z	AM-69-Z	AG-69-Z	M-69-Z	G-69-Z
5 Meg.	S	AM-85-S	AG-85-S	M-85-S	G-85-S
10 Meg.	Z	AM-99-Z		M-99-Z	
10 Meg.	S	AM-86-S		M-86-S	

LIST PRICE $1.25
Standard Packing—10 (ten) per Carton

"AD-A-SWITCH"* for Series "M," "AM," "T," "AT" Controls

Cat. No.	Wiring (3 amp. 125 V. A.C. U/L Approved)	List Price
SW-A	Single-Pole Single-Throw	$0.60
SW-A1	Three-Way, No "Off" Position S.P.D.T.	.75
SW-A2	Double-Pole Single-Throw	.75
SW-A4	Four-Wire (to control A, B and C voltages)	.75
SW-A5	S.P.S.T. (reverse action)	.75
SW-A6	S.P.S.T. with dummy lug	.75

*Trade-Mark

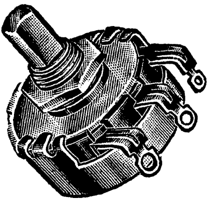
Reg.
U. S. Pat. Off.

CLAROSTAT

CLAROSTAT MFG. CO.,
Inc.
DOVER, N. H.

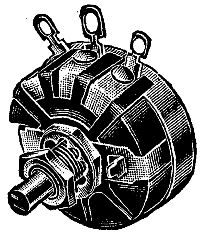
WIRE WOUND CONTROLS

SERIES 43—2 WATT



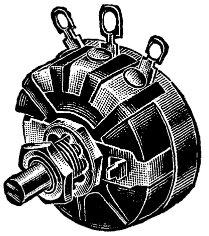
1⅛″ dia. by $\frac{9}{16}$″ deep, with switch ⅞″ deep. Lug protrusion 19/64″. ⅜″-32 by ⅜″ long brass bushing. Factory assembled switch (SPST) types A43S- and 43S-. If other than SPST switch is required, designate type and add 15 cents to list price. A43- and A43S- are "Pick-A-Shaft"* controls taking any of the 12 shafts listed. 43- and 43S- have factory assembled 2″ round shafts. Tolerance in accordance with RTMA standards ±10% for all values. All units linear.

SERIES 58—3 WATT



$1\frac{21}{32}$″ dia. by $\frac{25}{32}$″ deep, with switch $1\frac{3}{32}$″ deep. Lug protrusion 19/64″. ⅜″-32 by ⅜″ brass bushing. Factory assembled switch (SPST) types A58S- and 58S-. If other than SPST switch required, designate type and add 15 cents to list price. A58- and A58S- are "Pick-A-Shaft"* and will take any of the 12 shafts listed. 58- and 58S- have factory assembled 2″ round shafts. Tolerances in accordance with RTMA standards ±10% for all values. All units linear.

SERIES 10—4 WATT



$1\frac{21}{32}$″ dia. by $\frac{31}{32}$″ deep, with switch $1\frac{11}{32}$″ deep. Lug protrusion 19/64″. ⅜″-32 by ⅜″ brass bushing. Factory assembled switch (SPST) types A10S- and 10S-. If other than SPST switch required, designate type and add 15 cents to list price. A10- and A10S- are "Pick-A-Shaft"* controls taking any of the 12 shafts listed. 10- and 10S- have factory assembled 2″ round shafts. Tolerances in accordance with RTMA standards ±10% for all values. All units linear.

"PICK-A-SHAFT"* Without Switch

Resist. Ohms	Series A43 Cat. No.	List Price	Series A58 Cat. No.	List Price	Series A10 Cat. No.	List Price
1			A58-1	$1.25	A10-1	$1.85
2			A58-2	1.25	A10-2	1.85
4			A58-4	1.25	A10-4	1.85
5	A43-5	$1.25				
6			A58-6	1.25	A10-6	1.85
10	A43-10	1.25	A58-10	1.25	A10-10	1.85
15			A58-15	1.25	A10-15	1.85
20	A43-20	1.25	A58-20	1.25	A10-20	1.85
25	A43-25	1.25	A58-25	1.25	A10-25	1.85
30	A43-30	1.25	A58-30	1.25	A10 30	1.85
40	A43-40	1.25	A58-40	1.25	A10-40	1.85
50	A43-50	1.25	A58-50	1.25	A10-50	1.85
60			A58-60	1.25	A10-60	1.85
75	A43-75	1.25	A58-75	1.25	A10-75	1.85
100	A43-100	1.25	A58-100	1.25	A10-100	1.85
150	A43-150	1.25				
200	A43-200	1.25	A58-200	1.25	A10-200	1.85
300	A43-300	1.25	A58-300	1.25	A10-300	1.85
400	A43-400	1.25	A58-400	1.25	A10-400	1.85
500	A43-500	1.25	A58-500	1.25	A10-500	1.85
750	A43-750	1.25	A58-750	1.25	A10-750	1.85
1000	A43-1000	1.25	A58-1000	1.25	A10-1000	1.85
1500	A43-1500	1.25	A58-1500	1.25	A10-1500	1.85
2000	A43-2000	1.25	A58-2000	1.25	A10-2000	1.85
2500	A43-2500	1.25	A58-2500	1.25	A10-2500	1.85
3000	A43-3000	1.25	A58-3000	1.25	A10-3000	1.85
4000	A43-4000	1.25				
5000	A43-5000	1.25	A58-5000	1.25	A10-5000	1.85
7500	A43-7500	1.25	A58-7500	1.25	A10-7500	1.85
10K	A43-10K	1.25	A58-10K	1.25	A10-10K	1.85
15K			A58-15K	1.60	A10-15K	2.20
20K			A58-20K	1.60	A10-20K	2.20
25K			A58-25K	1.60	A10-25K	2.20
30K			A58-30K	2.25	A10-30K	2.85
40K			A58-40K	2.25	A10-40K	2.85
50K			A58-50K	2.25	A10-50K	2.85
75K					A10-75K	3.50
100K					A10-100K	3.50

Standard Packing—10 (ten) per Carton

"PICK-A-SHAFT"* With Switch

Resist. Ohms	Series A43S Cat. No.	List Price	Series A58S Cat. No.	List Price	Series A10S Cat. No.	List Price
1			A58S-1	$1.85	A10S-1	$2.45
2			A58S-2	1.85	A10S-2	2.45
4			A58S-4	1.85	A10S-4	2.45
5	A43S-5	$1.85				
6			A58S-6	1.85	A10S-6	2.45
10	A43S-10	1.85	A58S-10	1.85	A10S-10	2.45
15			A58S-15	1.85	A10S-15	2.45
20	A43S-20	1.85	A58S-20	1.85	A10S-20	2.45
25	A43S-25	1.85	A58S-25	1.85	A10S-25	2.45
30	A43S-30	1.85	A58S-30	1.85	A10S-30	2.45
40	A43S-40	1.85	A58S-40	1.85	A10S-40	2.45
50	A43S-50	1.85	A58S-50	1.85	A10S-50	2.45
60			A58S-60	1.85	A10S-60	2.45
75	A43S-75	1.85	A58S-75	1.85	A10S-75	2.45
100	A43S-100	1.85	A58S-100	1.85	A10S-100	2.45
150	A43S-150	1.85				
200	A43S-200	1.85	A58S-200	1.85	A10S-200	2.45
300	A43S-300	1.85	A58S-300	1.85	A10S-300	2.45
400	A43S-400	1.85	A58S-400	1.85	A10S-400	2.45
500	A43S-500	1.85	A58S-500	1.85	A10S-500	2.45
750	A43S-750	1.85	A58S-750	1.85	A10S-750	2.45
1000	A43S-1000	1.85	A58S-1000	1.85	A10S-1000	2.45
1500	A43S-1500	1.85	A58S-1500	1.85	A10S-1500	2.45
2000	A43S-2000	1.85	A58S-2000	1.85	A10S-2000	2.45
2500	A43S-2500	1.85	A58S-2500	1.85	A10S-2500	2.45
3000	A43S-3000	1.85	A58S-3000	1.85	A10S-3000	2.45
4000	A43S-4000	1.85				
5000	A43S-5000	1.85	A58S-5000	1.85	A10S-5000	2.45
7500	A43S-7500	1.85	A58S-7500	1.85	A10S-7500	2.45
10K	A43S-10K	1.85	A58S-10K	1.85	A10S-10K	2.45
15K			A58S-15K	2.20	A10S-15K	2.80
20K			A58S-20K	2.20	A10S-20K	2.80
25K			A58S-25K	2.20	A10S-25K	2.80
30K			A58S-30K	2.85	A10S-30K	3.45
40K			A58S-40K	2.85	A10S-40K	3.45
50K			A58S-50K	2.85	A10S-50K	3.45
75K					A10S-75K	4.10
100K					A10S-100K	4.10

Standard Packing—10 (ten) per Carton

With Factory Assembled 2" Round Shaft

Resist. Ohms	Series 43 Cat. No.	List Price	Series 58 Cat. No.	List Price	Series 10 Cat. No.	List Price
1			58-1	$1.25	10-1	$1.85
2			58-2	1.25	10-2	1.85
4			58-4	1.25	10-4	1.85
5	43-5	$1.25				
6			58-6	1.25	10-6	1.85
10	43-10	1.25	58-10	1.25	10-10	1.85
15			58-15	1.25	10-15	1.85
20	43-20	1.25	58-20	1.25	10-20	1.85
25	43-25	1.25	58-25	1.25	10-25	1.85
30	43-30	1.25	58-30	1.25	10-30	1.85
40	43-40	1.25	58-40	1.25	10-40	1.85
50	43-50	1.25	58-50	1.25	10-50	1.85
60			58-60	1.25	10-60	1.85
75	43-75	1.25	58-75	1.25	10-75	1.85
100	43-100	1.25	58-100	1.25	10-100	1.85
150	43-150	1.25				
200	43-200	1.25	58-200	1.25	10-200	1.85
300	43-300	1.25	58-300	1.25	10-300	1.85
400	43-400	1.25	58-400	1.25	10-400	1.85
500	43-500	1.25	58-500	1.25	10-500	1.85
750	43-750	1.25	58-750	1.25	10-750	1.85
1000	43-1000	1.25	58-1000	1.25	10-1000	1.85
1500	43-1500	1.25	58-1500	1.25	10-1500	1.85
2000	43-2000	1.25	58-2000	1.25	10-2000	1.85
2500	43-2500	1.25	58-2500	1.25	10-2500	1.85
3000	43-3000	1.25	58-3000	1.25	10-3000	1.85
4000	43-4000	1.25				
5000	43-5000	1.25	58-5000	1.25	10-5000	1.85
7500	43-7500	1.25	58-7500	1.25	10-7500	1.85
10K	43-10K	1.25	58-10K	1.25	10-10K	1.85
15K			58-15K	1.60	10-15K	2.20
20K			58-20K	1.60	10-20K	2.20
25K			58-25K	1.60	10-25K	2.20
30K			58-30K	2.25	10-30K	2.85
40K			58-40K	2.25	10-40K	2.85
50K			58-50K	2.25	10-50K	2.85
75K					10-75K	3.50
100K					10-100K	3.50

Standard Packing—10 (ten) per Carton

With Factory Assembled 2" Round Shaft and Switch

Resist. Ohms	Series 43S Cat. No.	List Price	Series 58S Cat. No.	List Price	Series 10S Cat. No.	List Price
1			58S-1	$1.85	10S-1	$2.45
2			58S-2	1.85	10S-2	2.45
4			58S-4	1.85	10S-4	2.45
5	43S-5	$1.85				
6			58S-6	1.85	10S-6	2.45
10	43S-10	1.85	58S-10	1.85	10S-10	2.45
15			58S-15	1.85	10S-15	2.45
20	43S-20	1.85	58S-20	1.85	10S-20	2.45
25	43S-25	1.85	58S-25	1.85	10S-25	2.45
30	43S-30	1.85	58S-30	1.85	10S-30	2.45
40	43S-40	1.85	58S-40	1.85	10S-40	2.45
50	43S-50	1.85	58S-50	1.85	10S-50	2.45
60			58S-60	1.85	10S-60	2.45
75	43S-75	1.85	58S-75	1.85	10S-75	2.45
100	43S-100	1.85	58S-100	1.85	10S-100	2.45
150	43S-150	1.85				
200	43S-200	1.85	58S-200	1.85	10S-200	2.45
300	43S-300	1.85	58S-300	1.85	10S-300	2.45
400	43S-400	1.85	58S-400	1.85	10S-400	2.45
500	43S-500	1.85	58S-500	1.85	10S-500	2.45
750	43S-750	1.85	58S-750	1.85	10S-750	2.45
1000	43S-1000	1.85	58S-1000	1.85	10S-1000	2.45
1500	43S-1500	1.85	58S-1500	1.85	10S-1500	2.45
2000	43S-2000	1.85	58S-2000	1.85	10S-2000	2.45
2500	43S-2500	1.85	58S-2500	1.85	10S-2500	2.45
3000	43S-3000	1.85	58S-3000	1.85	10S-3000	2.45
4000	43S-4000	1.85				
5000	43S-5000	1.85	58S-5000	1.85	10S-5000	2.45
7500	43S-7500	1.85	58S-7500	1.85	10S-7500	2.45
10K	43S-10K	1.85	58S-10K	1.85	10S-10K	2.45
15K			58S-15K	2.20	10S-15K	2.80
20K			58S-20K	2.20	10S-20K	2.80
25K			58S-25K	2.20	10S-25K	2.80
30K			58S-30K	2.85	10S-30K	3.45
40K			58S-40K	2.85	10S-40K	3.45
50K			58S-50K	2.85	10S-50K	3.45
75K					10S-75K	4.10
100K					10S-100K	4.10

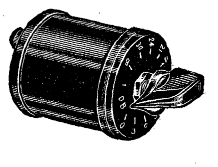
Standard Packing—10 (ten) per Carton

*Trade-Mark

CONSTANT IMPEDANCE CONTROLS

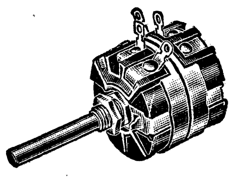
SERIES CIB OUTPUT ATTENUATOR

Rated at 10 watts, will handle up to 30 watts in audio circuit. Linear attenuation in 3 decibel stops up to 30. Black enameled metal case, 2″ dia. by 2¾″ deep. Equipped with dial plate and bar knob. One-hole mounting, ⅜″-32 by ⅜″ bushing. Shaft 1″ long. This control has been developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss. Recommended as an output level control for power amplifiers, or as an input attenuator for individual or for a group of speakers in a public address system.



SERIES CIL AND CIT L-PADS AND T-PADS

Self-compensating volume controls known as L-pads or T-pads for use in sound systems. Rated at 2½ watts DC, but may be used to handle up to 10 watts audio. Continuous range from 0.5 to 30 decibels attenuation in 90% rotation. Last 10% affords infinite attenuation. With Clarostat constant-impedance L-pads and T-pads the input and output impedances of associated circuits can be kept within the limits of a constant required value.



Resistance Ohms	Series CIB Cat. No.	List Price	Series CIL Cat. No.	List Price	Series CIT Cat. No.	List Price
4			CIL-4	$3.75	CIT-4	$4.25
6	CIB-6	$6.50	CIL-6	3.75	CIT-6	4.25
8	CIB-8	6.50	CIL-8	3.75	CIT-8	4.25
15	CIB-15	6.50	CIL-15	3.75	CIT-15	4.25
50	CIB-50	6.50	CIL-50	3.75	CIT-50	4.25
100			CIL-100	3.75	CIT-100	4.25
200	CIB-200	6.50	CIL-200	3.75	CIT-200	4.25
250	CIB-250	6.50	CIL-250	3.75	CIT-250	4.25
500	CIB-500	6.50	CIL-500	3.75	CIT-500	4.25
600	CIB-600	6.50	CIL-600	3.75	CIT-600	4.25
1000			CIL-1000	3.75	CIT-1000	4.25
2000			CIL-2000	3.75	CIT-2000	4.25

Standard Packing—Individual Carton

SPECIAL DRIVE-IN THEATRE L-PAD

To meet the needs of the drive-in theatres where individual control of the speakers is required, a special 8 ohm L-Pad is now being offered. A single unit contains two separate windings. ⅜″-32 by ⅜″ long bushing. 1½″ round shaft.

Cat. No. CM8727 List Price $2.75

POWER RHEOSTATS

These power rheostats are built for extra-heavy duty. Simplicity of design, plus finest materials and workmanship, result in a unit that provides long, trouble-free service. These Clarostat Power Rheostats maintain their full power rating at settings as low as one-third rotation, without excessive temperature rise. Standard overall resistance and taper tolerance ±10%. Closer tolerances are available upon special order.

The metal cored winding is embedded in a cold-setting, inorganic cement and is thereby bonded to the ceramic body. This results in the exceptional power dissipation in any portion of the resistance element. These units will withstand elevated temperatures due to severe overloads without smoking, burning, or charring.

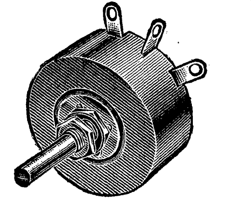
A graphited-copper contact shoe in the cradle arm, contacting both winding and collector ring, provides short-path conduction, and at the same time a smooth, consistent mechanical rotation.

Units mount through a single hole. A locking pin is provided for rear panel mounting.

SERIES 25 POWER RHEOSTAT

U. S. Pat. No. 2,346,598

Rated 25 watts.
1⅝″ dia. by 1⅛″ deep.
⅜″-32 by ⅜″ long bushing.
½″ long shaft milled $\frac{7}{16}$″.
Standard Packing—Individual Carton.



SERIES 50 POWER RHEOSTAT

U. S. Pat. No. 2,346,598

Rated 50 watts.
2¼″ dia. by 1⅜″ deep.
⅜″-32 by ⅜″ long bushing.
½″ long shaft milled $\frac{7}{16}$″.
Standard Packing—Individual Carton.

Res. Ohms	Series 25 Cat. No.	List Price	Aircraft AN-3155-25	List Price
1	25-1	$5.85	....	...
2	25-2	5.20	....	...
3	25-3	5.20	....	...
6	25-6	5.20	....	...
8	25-8	5.20	....	...
10	25-10	5.20	AN-3155-25-10	$7.25
11	....	...	AN-3155-25-11	7.25
15	25-15	5.20	AN-3155-25-15	7.25
25	25-25	5.20	AN-3155-25-25	7.25
35	25-35	5.20	....	...
50	25-50	5.20	AN-3155-25-50	7.25
75	25-75	5.20	AN-3155-25-75	7.25
100	25-100	5.20	AN-3155-25-100	7.25
125	25-125	5.20	....	...
175	25-175	5.20	....	...
200	....	...	AN-3155-25-200	8.50
250	25-250	5.20	....	...
350	25-350	5.20	....	...
500	25-500	5.20	....	...
750	25-750	5.20	....	...
1000	25-1000	5.85	....	...
1500	25-1500	5.85	....	...
2500	25-2500	5.85	....	...
3500	25-3500	6.20	....	...
5000	25-5000	6.50	....	...

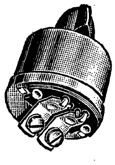
Res. Ohms	Series 50 Cat. No.	List Price	Aircraft AN-3155-50	List Price
0.5	50-0.5	$6.50	....	...
1	50-1	6.50	....	...
2	50-2	6.50	....	...
4	50-4	5.85	....	...
5	....	...	AN-3155-50-5	$8.50
6	50-6	5.85	....	...
8	50-8	5.85	AN-3155-50-8	8.50
10	....	...	AN-3155-50-10	8.50
12	50-12	5.85	....	...
16	50-16	5.85	....	...
22	50-22	5.85	....	...
25	....	...	AN-3155-50-25	8.25
30	....	...	AN-3155-50-30	8.25
35	50-35	5.85	....	...
50	50-50	5.85	AN-3155-50-50	8.25
75	....	...	AN-3155-50-75	8.25
80	50-80	5.85	....	...
100	....	...	AN-3155-50-100	8.25
125	50-125	5.85	....	...
150	50-150	5.85	AN-3155-50-150	8.25
200	....	...	AN-3155-50-200	8.25
225	50-225	5.85	....	...
300	50-300	5.85	....	...
500	50-500	5.85	....	...
800	50-800	6.20	....	...
1000	50-1000	6.20	....	...
2500	50-2500	6.20	....	...
3500	50-3500	6.50	....	...
5000	50-5000	6.50	....	...
10K	50-10K	8.00	....	...

AIRCRAFT-TYPE POWER RHEOSTATS

Basically the same as the 25 and 50 watt Power Rheostats, mechanically and electrically. Unit is encased in metal housing rendering it explosion-proof and moisture resistant. Used in aircraft.

Terminals are screw-type lugs plated to prevent corrosion.

See Listings above for List Prices.



AN-3155-25 Aircraft Type

Rated 25 watts.
$1\frac{13}{16}$″ dia. by 1½″ deep.
Supplied with AN-3220-2 knob.
Standard Packing—Individual Carton.

AN-3155-50 Aircraft Type

Rated 35 watts.
$2\frac{7}{16}$″ dia. by $1\frac{23}{32}$″ deep.
Supplied with AN-3220-2 knob.
Standard Packing—Individual Carton.

Reg.
U. S. Pat. Off.

CLAROSTAT

CLAROSTAT MFG. CO.,
Inc.
DOVER, N. H.

"GREENOHM"® FIXED WIRE-WOUND RESISTORS

Wire-wound resistors for most rugged applications. Will withstand tremendous overloads and temperature changes without changes in resistance values or appearance. Wire windings on high-grade ceramic and coated with special inorganic cement. In accordance with RTMA standards, overall tolerances are ±5% for resistors of 50 Ω and higher. For resistors of 49.9 Ω and lower, overall tolerances are ±10%.

SERIES PR-5-F—Rated 5 watts. 5/16″ dia. by 1″ long. Lead wires and tinned lugs. Standard Packing—10 (ten) per carton.

SERIES AC-10-F—Rated 10 watts. 5/16″ dia. by 1 ¾″ long. Lead wires and tinned lugs. Standard Packing—10 (ten) per carton.

SERIES AC-20-K—Rated 20 watts. 9/16″ dia. by 2″ long. Lead wires and tinned lugs. Standard Packing—5 (five) per carton.

SERIES A-25-K—Rated 25 watts. 9/16″ dia. by 2 ½″ long. Supplied with mounting brackets. Standard Packing—Individually Boxed.

SERIES K-40-N—Rated 40 watts. ¾″ dia. by 3 ½″ long. Supplied with mounting brackets. Standard Packing—Individually Boxed.

SERIES K-50-N—Rated 50 watts. ¾″ dia. by 4 ½″ long. Supplied with mounting brackets. Standard Packing—Individually Boxed.

SERIES K-80-N—Rated 80 watts. ¾″ dia. by 6 ½″ long. Supplied with mounting brackets. Standard Packing—Individually Boxed.

"GREENOHM JR."® SERIES C4GJ—Inexpansive ceramic-case resistors. Wire-wound on spun glass fiber core. Cement-filled ceramic case. Rated 5 watts. 5/16″ dia. by 1″ long. 1 ½″ axial pigtail leads. Standard Pack.—10 (ten) per carton.

"GREENOHM JR." SERIES C7GJ—Same construction as Series C4GJ. Rated 10 watts. 5/16″ dia. by 1 ¾″ long. Standard Packing—10 (ten) per carton.

SERIES K-100-W—Rated 100 watts. 1 ⅛″ dia. by 6 ½″ long. Supplied with mounting brackets. Standard Packing—Individually Boxed.

SERIES K-160-W—Rated 160 watts. 1 ⅛″ dia. by 8 ½ long. Supplied with mounting brackets. Standard Packing—Individually Boxed.

SERIES K-200-W—Rated 200 watts. 1 ⅛″ dia. by 10 ½″ long. Supplied with mounting brackets. Standard Packing—Individually Boxed.

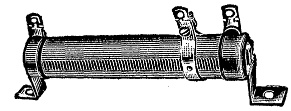
"GREENOHM"® AND "GREENOHM JR."® FIXED WIRE-WOUND RESISTORS

Res. Ohms	List Price PR-5-F	List Price C4GJ	List Price C7GJ	List Price AC-10-F	List Price AC-20-K	List Price A-25-K	List Price K-40-N	List Price K-50-N	List Price K-80-N	List Price K-100-W	List Price K-160-W	List Price K-200-W
1	$0.50	$0.55	$0.55	$0.55	....	$0.75	....	....	....	....	....	....
2	.50	.55	.55	.55	....	.75	....	....	....	....	....	....
3	.50	.55	.55	.55	....	.75	....	....	....	....	....	....
4	.50	.55	.55	.55	....	....	....	....	....	....	....	....
5	.50	.55	.55	.55	$0.65	.75	$0.90	$1.10	$1.25	$1.75	$2.25	$2.50
7.5	.50	.55	.55	.55	....	.75	....	....	....	....	....	....
10	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
12	.50	.55	.55	.55	....	....	....	....	....	....	....	....
15	.50	.55	.55	.55	....	.75	.90	....	....	....	....	....
20	.50	.55	.55	.55	....	.75	.90	....	....	....	....	....
25	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
30	.50	.55	.55	.55	....	....	....	....	....	....	....	....
35	.50	.55	.55	.55	....	....	....	....	....	....	....	....
40	.50	.55	.55	.55	....	....	....	....	....	....	....	....
50	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
75	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
100	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
125	.50	.55	.55	.55	....	....	.90	....	....	....	....	....
150	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
200	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
225	.50	.55	.55	.55	....	....	....	....	....	....	....	....
250	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
300	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
350	.50	.55	.55	.55	.65	....	....	....	....	....	....	....
400	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
450	.50	.55	.55	.55	....	....	....	....	....	....	....	....
500	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
600	.50	.55	.55	.55	....	....	....	....	....	....	....	....
650	....	....	....	....	.65	....	....	....	....	....	....	....
700	.50	.55	.55	.55	.65	....	....	....	....	....	....	....
750	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
800	.50	.55	.55	.55	.65	.75	....	....	....	....	....	....
850	....	....	....	....	.65	....	....	....	....	....	....	....
900	.50	.55	.55	.55	....	....	....	....	....	....	....	....
1000	.50	.55	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
1100	.50	....	.55	.55	....	....	....	....	....	....	....	....
1200	.50	....	.55	.55	.65	....	....	....	....	....	....	....
1250	.50	....	.55	.55	.65	.75	....	1.10	1.25	1.75	2.25	2.50
1500	.50	....	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
1750	.50	....	.55	.55	.65	....	....	....	....	....	....	....
1850	....	....	....	....	.65	....	....	....	....	....	....	....
2000	.50	....	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
2250	.50	....	.55	.55	.65	.75	....	1.10	1.25	1.75	2.25	2.50
2500	.50	....	.55	.55	.65	.75	.90	1.10	1.25	1.75	2.25	2.50
2750	....	....	....	....	.65	....	....	....	....	....	....	....
3000	.50	....	.55	.55	.65	.75	.90	1.10	1.25	1.85	2.25	2.50
3500	.50	....	.55	.55	.65	.75	....	1.10	1.25	1.85	2.25	2.50
4000	.50	....	.55	.55	.65	.75	.90	1.10	1.25	1.85	2.25	2.50
4500	.50	....	.55	.55	.65	.75	....	1.10	1.25	1.95	2.25	2.50
5000	.50	....	.55	.55	.65	.75	.90	1.10	1.25	1.95	2.25	2.50
6000	.50	....	....	.55	.65	.85	1.00	1.35	1.50	1.95	2.25	2.50
7000	.50	....	....	.55	.65	.85	....	....	....	....	....	....
7500	.50	....	....	.55	.65	.85	1.00	1.35	1.50	1.95	2.25	2.50
8000	.50	....	....	.55	.65	.85	....	1.35	1.50	1.95	2.25	2.50
8500	.50	....	....	.55	....	....	1.00	....	....	....	....	....
9000	.50	....	....	.55	.65	.85	....	1.35	1.50	1.95	2.25	2.50
10K	.50	....	....	.55	.65	.85	1.00	1.35	1.50	1.95	2.25	2.50
11K	....	....	....	.55	....	....	....	....	....	....	....	....
12K	....	....	....	.55	....	.85	....	1.35	1.50	1.95	2.30	2.75
12.5K	....	....	....	.55	.65	....	1.00	1.35	1.50	1.95	2.35	2.85
13.5K	....	....	....	.55	....	....	....	....	....	....	....	....
14.5K	....	....	....	.55	....	....	....	....	....	....	....	....
15K	....	....	....	.55	.65	.85	1.00	1.35	1.50	1.95	2.65	3.00
16K	....	....	....	.55	....	....	....	....	....	....	....	....
17.5K	....	....	....	.55	....	....	....	....	....	....	....	....

(CONT'D FROM PREVIOUS PAGE)

Res. Ohms	List Price PR-5-F	List Price C4GJ	List Price C7GJ	List Price AC-10-F	List Price AC-20-K	List Price A-25-K	List Price K-40-N	List Price K-50-N	List Price K-80-N	List Price K-100-W	List Price K-160-W	List Price K-200-W
18K	....	....	....	.55	....	....	....	....	....	....	....	....
20K	....	....	....	.55	.85	1.00	$1.00	$1.35	$1.50	$1.95	$2.65	$3.00
22.5K	....	....	....	.55	....	....	....	....	....	....	....	....
25K	....	....	....	.55	.85	1.00	1.00	1.35	1.50	1.95	2.65	3.00
30K	....	....	....	.55	.85	1.00	1.20	1.70	1.75	2.50	2.65	3.00
35K	....	....	....	.55	.85	1.00	1.20	1.70	1.75	2.50	2.65	3.00
40K	....	....	....	.55	.85	1.00	1.20	1.70	1.75	2.50	2.65	3.00
45K	....	....	....	....	.85	1.00	....	....	....	....	....	....
50K	....	....	....	.55	.85	1.00	1.20	1.70	1.75	2.50	2.65	3.00
55K	....	....	....	....	1.10	....	....	....	....	....	....	....
60K	....	....	....	....	1.10	1.15	1.20	1.70	2.00	2.75	3.00	3.00
65K	....	....	....	....	1.10	....	....	....	....	....	....	....
70K	....	....	....	....	1.10	1.25	1.20	1.70	2.00	2.75	3.00	3.00
75K	....	....	....	....	1.10	1.30	....	1.70	2.00	2.75	3.00	3.00
80K	....	....	....	....	1.10	1.35	1.20	1.70	2.10	2.85	3.00	3.00
85K	....	....	....	....	1.10	1.50	....	....	....	....	....	....
90K	....	....	....	....	1.10	1.60	1.20	....	....	....	....	....
95K	....	....	....	....	1.10	....	....	....	....	....	....	....
100K	....	....	....	....	1.10	1.75	1.20	1.70	2.25	3.00	3.00	3.00
125K	....	....	....	....	....	....	1.40	2.00	....	3.10	3.20	3.75
150K	....	....	....	....	....	....	1.40	2.25	....	3.25	3.50	3.75
175K	....	....	....	....	....	....	1.50	2.25	....	3.35	....	....
200K	....	....	....	....	....	....	1.60	3.00	....	3.75	....	....

"GREENOHM"® ADJUSTABLE WIRE-WOUND RESISTORS



Same electrical and mechanical construction as "Greenohm" fixed resistors. Incorporates sliding band for tapping any desired resistance. Slide tightened by means of screw at desired setting. In accordance with RTMA standards, overall tolerances are ±10%.

SERIES AC-10-FA—Rated 10 watts. 5/16" dia. by 1¾" long. Lead wires and tinned lugs. Standard Packing—10 (ten) per carton. Extra Slider Band: $0.10 each.

SERIES A-25-KA—Rated 25 watts. 9/16" dia. by 2½" long. Tinned lugs. Supplied with mounting brackets. Standard Packing—Individually Boxed. Extra Slider Band: $0.10 each.

SERIES K-50-NA—Rated 50 watts. ¾" dia. by 4½" long. Supplied with mounting brackets. Standard Packing—Individually Boxed. Extra Slider Band: $0.10 each.

SERIES K-80-NA—Rated 80 watts. ¾" dia. by 6½" long. Supplied with mounting brackets. Standard Packing—Individually Boxed. Extra Slider Band: $0.10 each.

SERIES K-100-WA—Rated 100 watts. 1⅛" dia. by 6½" long. Supplied with mounting brackets. Standard Packing—Individually Boxed. Extra Slider Band: $0.10 each.

SERIES K-160-WA—Rated 160 watts. 1⅛" dia. by 8½" long. Supplied with mounting brackets. Standard Packing—Individually Boxed. Extra Slider Band: $0.10 each.

SERIES K-200-WA—Rated 200 watts. 1⅛" dia. by 10½" long. Supplied with mounting brackets. Standard Packing—Individually Boxed. Extra Slider Band: $0.10 each.

Res. Ohms	Series AC-10-FA List Price	Series A-25-KA List Price	Series K-50-NA List Price	Series K-80-NA List Price	Series K-100-WA List Price	Series K-160-WA List Price	Series K-200-WA List Price
1	$0.85	$0.95	......	......	......	......	......
2	.85	.95	......	......	......	......	......
3	.85	.95	......	......	......	......	......
5	.85	.95	$1.50	$1.75	$2.00	$2.00	$3.00
7.5	.85	.95	......	......	......	......	......
10	.85	.95	1.50	1.75	2.00	2.00	3.00
15	.85	.95	1.50	1.75	2.00	2.00	3.00
20	.85	.95	1.50	1.75	2.00	2.00	3.00
25	.85	.95	1.50	1.75	2.00	2.00	3.00
50	.85	.95	1.50	1.75	2.00	2.00	3.00
75	.85	.95	1.50	1.75	2.00	2.00	3.00
100	.85	.95	1.50	1.75	2.00	2.00	3.00
150	.85	.95	1.50	1.75	2.00	2.00	3.00
200	.85	.95	1.50	1.75	2.00	2.00	3.00
250	.85	.95	1.50	1.75	2.00	2.00	3.00
300	.85	.95	1.50	1.75	2.00	2.00	3.00
350	.85	......	......	......	......	......	......
400	.85	.95	1.50	1.75	2.00	2.00	3.00
500	.85	.95	1.50	1.75	2.00	2.00	3.00
600	.85	......	......	......	......	......	......
750	.85	.95	1.50	1.75	2.00	2.00	3.00
800	.85	.95	......	......	......	......	......
1000	.85	.95	1.50	1.75	2.00	2.00	3.00
1250	.85	.95	1.50	1.75	2.00	2.00	3.00
1500	.85	.95	1.50	1.75	2.00	2.00	3.00
2000	.85	.95	1.50	1.75	2.00	2.00	3.00
2250	.85	.95	......	......	......	......	......
2500	.85	.95	1.50	1.75	2.00	2.00	3.00
3000	.85	.95	......	......	......	......	......
3500	.85	.95	1.50	1.75	2.25	2.25	3.00
4000	.85	.95	1.50	1.75	2.25	2.25	3.00
4500	.85	.95	1.50	1.75	2.25	2.25	3.00
5000	.85	.95	1.50	1.75	2.25	2.25	3.25
6000	.85	1.10	1.75	2.00	2.25	2.25	3.25
7000	.85	1.10	1.75	2.00	2.25	2.25	3.25
7500	.85	1.10	1.75	2.00	2.25	2.25	3.25
8000	.85	1.10	1.75	2.00	2.25	2.25	3.25
8500	.85	......	......	......	......	......	......
9000	.85	1.10	1.75	2.00	2.25	2.25	3.25
10K	.85	1.10	1.75	2.00	2.25	2.25	3.25
12K	......	1.10	1.75	2.00	2.25	2.25	3.50
15K	......	1.10	1.75	2.00	2.25	2.25	3.75
20K	......	1.25	1.75	2.00	2.25	2.25	3.75
25K	......	1.25	1.75	2.00	2.25	2.25	3.75
30K	......	......	2.00	2.25	2.75	2.75	3.75
35K	......	......	2.00	2.25	2.75	2.75	3.75
40K	......	......	2.00	2.25	2.75	2.75	3.75
45K	......	......	2.00	2.25	2.75	2.75	3.75
50K	1.50	......	2.00	2.25	2.75	2.75	3.75
60K	......	......	2.50	2.50	3.00	3.00	3.75
75K	......	......	2.50	2.50	3.00	3.00	3.75
80K	......	......	2.50	2.50	3.50	3.50	4.25
100K	......	......	2.50	2.50	3.50	3.50	4.25
125K	......	......	......	......	3.50	3.50	......
150K	......	......	......	......	3.75	3.75	......

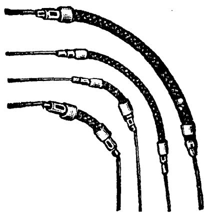
Reg.
U. S. Pat. Off.

CLAROSTAT

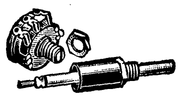
CLAROSTAT MFG. CO., Inc.
DOVER, N. H.

"GLASOHM"® FLEXIBLE RESISTORS

Fixed wire-wound resistors on spun glass fiber core with woven glass fiber casing. Ideal for tight spots. Made up to any length on special order. A substitute for carbon resistors. Standard types 1″ long with 2″ pigtail leads. ⅛″ dia. RTMA color coded. In accordance with RTMA standards, overall tolerances are ±10%.



Ohms	Cat. No.	List Price
5	FYG5	$0.30
10	FYG10	.30
15	FYG15	.30
25	FYG25	.30
35	FYG35	.30
40	FYG40	.30
50	FYG50	.30
60	FYG60	.30
75	FYG75	.30
100	FYG100	.30
125	FYG125	.30
150	FYG150	.30
200	FYG200	.30
225	FYG225	.30
250	FYG250	.30
300	FYG300	.30
350	FYG350	.30
375	FYG375	.30
400	FYG400	.30
500	FYG500	.30
600	FYG600	.30
700	FYG700	.30
750	FYG750	.30
800	FYG800	.30
850	FYG850	.30
900	FYG900	.30
1000	FYG1000	.30
1250	FYG1250	.30
1500	FYG1500	.30
1600	FYG1600	.30
1750	FYG1750	.30
2000	FYG2000	.30



"Pick-A-Shaft"* High-Voltage Coupler

May be used with Clarostat "Pick - A - Shaft" Controls Types AT & AM, AG & AK.

Cat. No.		List Price
59-186	Spacer and Bushing Assembly	$1.00
RN-3″	Non-Metallic Shaft, (Round)	$0.85

"GREENOHM"® KIT

★ Wall Card holding 20 most popular size "Greenohm" 10-watt resistors. As units are removed, value appears on card for reordering. Metal clips afford easy mounting of units replaced. Dimensions: 10½″ x 12″.

Wall card contains Wire-Wound Fixed Power Resistors as follows:

Cat. No. GK-1 — List Price $11.00

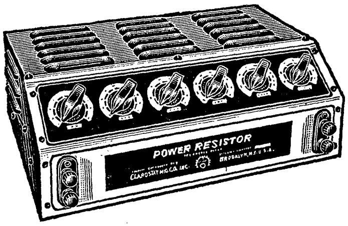
1 each	25 ohms	1 each	2,000 ohms
1 each	250 ohms	1 each	2,500 ohms
2 each	500 ohms	2 each	5,000 ohms
1 each	750 ohms	1 each	7,500 ohms
2 each	1,000 ohms	2 each	10,000 ohms
1 each	1,250 ohms	1 each	12,500 ohms
1 each	1,500 ohms	2 each	15,000 ohms
1 each	25,000 ohms		

POWER RESISTOR DECADE BOX

★ For power resistance measurements under actual load. Any value from 1 ohm to 999,999 ohms in steps of 1 ohm. No resistance breakdown between steps. Power rating of 225 watts and maximum voltage of 1000 volts DC and 660 volts AC. Heavy gauge metal case in frosted gray wrinkle, and etched panel.

Dimensions: 13 in. long; 8½ in. deep; 5¾ in. high. Weight, 11 lbs. Suggested Uses: Resistance determination. Load Resistance. Meter Multiplier. Calibrating Meters. Providing any desired ohmage as a universal power resistor.

Net Price $90.00

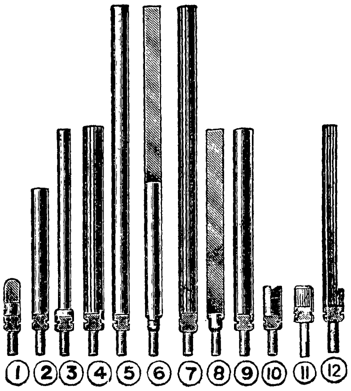


"PICK-A-SHAFT"* SHAFTS

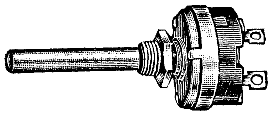
Attachable to all Clarostat "Pick - A - Shaft"* controls, either carbon or wire-wound. Your choice of shaft furnished with each control. Shafts fit AM, AT, AG, AK, A43, A43S, A58, A58S, A10 and A10S controls.

(1) SS-⅜″ length—(Male) to take female fitting.
(2) RS-2—Round shaft, 2″ long.
(3) RS-$\frac{3}{16}$—Round shaft $\frac{3}{16}$″ dia., 3″ long.
(4) KSS-3—Knurled, split shaft, 3″ long.
(5) RS-5—Round shaft, 5″ long.
(6) FS-5—Flatted shaft, 5″ long.
(7) KSS-5—Knurled, split shaft, 5″ long.
(8) FS-3—Flatted shaft, 3″ long.
(9) RS-3—Round shaft, 3″ long.
(10) DFS-½—Double flatted Philco Type, ½″ long.
(11) FKS-¼—Fine knurled slotted shaft, ¼″ long.
(12) KFS-3—Knurled flatted shaft, 3″ long.

List Price, Each Shaft $0.30



ROTARY SWITCHES



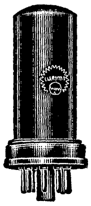
★ Molded phenolic case. Underwriters approved. Rated 1 amp. 250 volt; 3 amp. 125 volt. The physical dimensions of the switch are as follows:

Diameter 1$\frac{5}{32}$″, body depth $\frac{9}{16}$″, lug protrusion ¼″, locking projection on a $\frac{15}{32}$″ radius, rotation for actuation 30 degrees. All standard stock numbers have ⅜″ bushing, 1½″ shaft, and 1 locking projection.

Cat. No.	Switch Description	List Price
8590	Single Pole Single-Throw	$0.60
8591	Single Pole Bussing Lug	.75
8592	Double Pole Single Throw	.75
8593	Single Pole Double Throw	.75
8594	Single Pole Reversed Action	.75
8595	Four Wire Single Throw	.75

Standard packing 10 (ten) per carton.

TUBE-TYPE WIRE-WOUND RESISTORS UNIVERSAL BALLASTS



Universal replacements for most standard tube types. Replace AC-DC tubes beginning with letters BK, BL, K, L, M.

Universal Tube No.	Having Numbers From	Ending in Letter
10-23-A	10 to 23	A, B, C, D
10-23-E	10 to 23	E
10-23-F	10 to 23	F, G, H
23-55-A	23 to 55	A, B, C, D
23-55-E	23 to 55	E
23-55-F	23 to 55	F, G, H
60-92-A	60 to 92	A, B, C, D
60-92-E	60 to 92	E
60-92-F	60 to 92	F, G, H
92-105-A	92 to 105	A, B, C, D

LIST PRICE $1.50
Standard Packing—Individual Carton

LINE-VOLTAGE REGULATORS

A protective unit designed to prevent line voltage surges from reaching radio or TV receivers. Will reduce surges up to 140 volts down to approximately 110 volts. Plugs in outlet and provides outlet for receiver. Available as follows:

FOR TELEVISION RECEIVERS

Type No.	Rat. Watts	For Use with Sets Consuming	Dia.	Lgth.	List Price
TVA	300	200 to 300 watts	1¾″	1¾″	$2.00
TVB	375	300 to 375 watts	1$\frac{13}{16}$″	3¾″	2.50

Standard Packing—10 (ten) per carton

FOR RADIO RECEIVERS

Type No.	Rat. Watts	For Use with Receivers Consuming	No. of Tubes Used
O	50	Up to 60 watts	4
A	100	60 to 100 watts	5, 6, 7
B	150	100 to 150 watts	8, 9, 10
C	200	150 to 200 watts	11, 12
D	250	200 to 250 watts	2 Type 50
E*	100	60 to 100 watts	

*Note: For use with 220-volt receivers

LIST PRICE $1.75
Standard Packing—10 (ten) per carton

TELEVISION BALLASTS

	List Price
B9M16067 for Belmont Television	$3.00
B9M16534 for Belmont Television	3.00
B9M15822 for Belmont Television	3.00
B9M17571 for Belmont Television	3.00
B9M18941 for Belmont Television	3.00
17A470303 for Motorola Television	3.00
17A485459 for Motorola Television	3.00
TBR 102D for Teletone Television	3.00
TBR 103D for Teletone Television	3.00
TBR 104D for Teletone Television	3.00

	List Price
*397021 for Emerson Television	$3.00
*397022 for Emerson Television	3.00
*397023 for Emerson Television	3.00
*397036 for Emerson Television	1.25
ST507300 for Stewart-Warner Television	3.00
35-37 for Pilot Television	3.00

* These Emerson ballast tubes are used as protective resistors and any internal failure in the circuit may burn them out. Therefore, this unit is expendable.

*Trade-Mark

INSULATED RESISTORS

Preferred for Performance

IRC

ADVANCED TYPE BT

INSULATED COMPOSITION RESISTORS

IRC Advanced Type BT Resistors are supplied in 4 miniature units from ⅓ to 2 watts. They are particularly suited to television requirements. Extremely low operating temperature and excellent power dissipation are assured. All types, except BTR, are clearly stamped with value and wattage, plus color code.

BTR ⅓ WATT

13/32″ x 3/32″—82 ohms to 22 meg.—250 volts max.

10% Tolerance — LIST 17¢ 5% Tolerance — LIST 33¢

BTS ½ WATT

13/32″ x ⅛″—10 ohms to 22 meg.—350 volts max.

10% Tolerance — LIST 17¢ 5% Tolerance — LIST 33¢

BTA 1 WATT

23/32″ x ¼″—100 ohms to 22 meg.—500 volts max.

10% Tolerance — LIST 25¢ 5% Tolerance — LIST 50¢

BTB 2 WATTS

1¼″ x ¼″—330 ohms to 22 meg.—500 volts max.

10% Tolerance — LIST 33¢ 5% Tolerance — LIST 66¢

RTMA RANGES—Advanced Type BT Resistors and Type BW Insulated Wire Wounds are supplied in RTMA Ranges SUBJECT TO THE MINIMUM AND MAXIMUM VALUES FOR EACH TYPE. These stock values are listed below.

VALUES AVAILABLE AT ±10% TOLERANCE

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Meg	Megs	Megs
—	1.0	10	100	1,000	10,000	0.1	1.0	10
—	1.2	12	120	1,200	12,000	0.12	1.2	12
—	1.5	15	150	1,500	15,000	0.15	1.5	15
—	1.8	18	180	1,800	18,000	0.18	1.8	18
—	2.2	22	220	2,200	22,000	0.22	2.2	22
0.27	2.7	27	270	2,700	27,000	0.27	2.7	—
0.33	3.3	33	330	3,300	33,000	0.33	3.3	—
0.39	3.9	39	390	3,900	39,000	0.39	3.9	—
0.47	4.7	47	470	4,700	47,000	0.47	4.7	—
0.56	5.6	56	560	5,600	56,000	0.56	5.6	—
0.68	6.8	68	680	6,800	68,000	0.68	6.8	—
0.82	8.2	82	820	8,200	82,000	0.82	8.2	—

VALUES AVAILABLE AT ±5% TOLERANCE

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Meg	Megs	Megs
—	1.0	10	100	1,000	10,000	0.1	1.0	10
—	1.1	11	110	1,100	11,000	0.11	1.1	11
—	1.2	12	120	1,200	12,000	0.12	1.2	12
—	1.3	13	130	1,300	13,000	0.13	1.3	13
—	1.5	15	150	1,500	15,000	0.15	1.5	15
—	1.6	16	160	1,600	16,000	0.16	1.6	16
—	1.8	18	180	1,800	18,000	0.18	1.8	18
—	2.0	20	200	2,000	20,000	0.20	2.0	20
—	2.2	22	220	2,200	22,000	0.22	2.2	22
0.24	2.4	24	240	2,400	24,000	0.24	2.4	—
0.27	2.7	27	270	2,700	27,000	0.27	2.7	—
0.30	3.0	30	300	3,000	30,000	0.30	3.0	—
0.33	3.3	33	330	3,300	33,000	0.33	3.3	—
0.36	3.6	36	360	3,600	36,000	0.36	3.6	—
0.39	3.9	39	390	3,900	39,000	0.39	3.9	—
0.43	4.3	43	430	4,300	43,000	0.43	4.3	—
0.47	4.7	47	470	4,700	47,000	0.47	4.7	—
0.51	5.1	51	510	5,100	51,000	0.51	5.1	—
0.56	5.6	56	560	5,600	56,000	0.56	5.6	—
0.62	6.2	62	620	6,200	62,000	0.62	6.2	—
0.68	6.8	68	680	6,800	68,000	0.68	6.8	—
0.75	7.5	75	750	7,500	75,000	0.75	7.5	—
0.82	8.2	82	820	8,200	82,000	0.82	8.2	—
0.91	9.1	91	910	9,100	91,000	0.91	9.1	—

TYPE BW

INSULATED WIRE WOUND RESISTORS

Exceptionally stable, inexpensive wire wound resistors for low range requirements. Small and completely insulated. Double width color code band distinguishes Type BW from Type BT. Wire resistance element is tightly wound on an insulated core.

BW-½ ½ WATT

⅝″ x 3/16″—0.24 to 820 ohms

10% Tolerance ....LIST 17¢
5% Tolerance ....LIST 33¢

BW-1 1 WATT

1¼″ x ¼″—0.47 to 5100 ohms

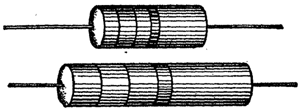
10% Tolerance ....LIST 25¢
5% Tolerance ....LIST 50¢

BW-2 2 WATTS

1¾″ x 21/64″—1.0 to 8,200 ohms

10% Tolerance ....LIST 33¢
5% Tolerance ....LIST 66¢

INSULATED CHOKES



IRC Insulated Chokes are available in two sizes designated as types CLA and CL-1. Both types are fully insulated in molded phenolic housings for full protection against high humidity. The insulated housing also guards the winding from abrasion and physical damage, and prevents any possibility of shorting to chassis. Color coded for easy identification.

The wide range of size and characteristic combinations available permits accurate replacement with respect to space and electrical requirements.

TYPE CLA ....LIST 35c each
TYPE CL-1 ....LIST 35c each

Inductance (Microhenrys)	Approx. "Q" at 12 Megacyles (higher at higher frequencies)	D.C. Resistance (Ohms)	Approx. Self Resonant Frequency (Megacycles)	Current Rating Milliamperes (1)*	(2)*
TYPE CLA					
0.47 ± 15%	26	0.22 ± 30%	300	890	1510
0.56 ± 15%	25	0.31 ± 30%	280	750	1270
0.68 ± 15%	25	0.44 ± 30%	260	630	1070
0.82 ± 15%	24	0.59 ± 30%	240	540	920
1.0 ± 10%	24	0.80 ± 30%	210	470	790
1.2 ± 10%	23	0.85 ± 20%	190	450	770
1.5 ± 10%	23	1.2 ± 20%	160	380	650
1.8 ± 10%	22	1.6 ± 20%	150	330	560
2.2 ± 10%	22	1.8 ± 20%	130	310	530
2.7 ± 10%	22	2.2 ± 10%	120	280	480
3.3 ± 10%	21	3.0 ± 10%	110	240	390
TYPE CL-1					
0.47 ± 15%	30	0.14 ± 30%	220	1460	2310
0.56 ± 15%	30	0.20 ± 30%	210	1220	1940
0.68 ± 15%	30	0.22 ± 30%	200	1170	1850
0.82 ± 15%	30	0.27 ± 30%	190	1050	1670
1.0 ± 10%	30	0.41 ± 30%	180	850	1350
1.2 ± 10%	30	0.51 ± 20%	170	770	1210
1.5 ± 10%	29	0.72 ± 20%	160	650	1020
1.8 ± 10%	29	0.77 ± 20%	150	620	990
2.2 ± 10%	29	1.1 ± 20%	140	520	820
2.7 ± 10%	28	1.5 ± 20%	130	450	710
3.3 ± 10%	28	2.0 ± 20%	120	390	610
3.9 ± 10%	27	2.6 ± 10%	110	340	540
4.7 ± 10%	26	2.8 ± 10%	95	330	520
5.6 ± 10%	24	4.0 ± 10%	85	270	430
6.8 ± 10%	22	5.6 ± 10%	75	230	370
8.2 ± 10%	21	6.1 ± 10%	70	220	350
10.0 ± 10%	20	8.2 ± 10%	65	190	300

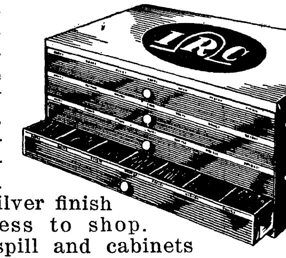
(1) *Current which will cause resistance to increase approximately 10% due to temperature coefficient of copper wire.

(2) *Current which will cause resistance to increase approximately 25% due to temperature coefficient of copper wire.

RESISTOR AND CHOKE KITS

IRC *Preferred for Performance*

ALL-METAL RESIST-O-CABINETS



In large steel cabinets, 3 IRC RESIST-O-CABINETS provide the perfect way to buy and stock resistors. Four drawer cabinets have 28 identified compartments. Blue, yellow and silver finish adds attractiveness to shop. Drawers are non-spill and cabinets can be stacked. Measures 5⅜″ x 5$\frac{15}{16}$″ x 10⅞″. No extra charge for cabinet.

ASSORTMENT #4—½ WATT

100 ½ watt BW and BTS Resistors including values most widely found in television. **List $17.00**

QUANTITY	RANGE	QUANTITY	RANGE	QUANTITY	RANGE
2	47 ohms	5	4,700 ohms*	5	0.22 meg*
3	100 ohms	5	10,000 ohms*	6	0.27 meg*
2	220 ohms	3	22,000 ohms*	3	0.33 meg*
2	270 ohms	3	27,000 ohms*	6	0.47 meg*
3	470 ohms*	3	33,000 ohms*	6	1.0 meg*
6	1,000 ohms*	6	47,000 ohms*	5	2.2 meg*
2	1,500 ohms	2	56,000 ohms*	2	3.3 meg
2	2,200 ohms*	2	68,000 ohms*	3	4.7 meg*
2	2,700 ohms*	6	0.1 meg*	2	10.0 meg
3	3,300 ohms*				

ASSORTMENT #5—1 WATT

83 1 watt BW and BTA Resistors including values most widely found in television. **List $20.75**

QUANTITY	RANGE	QUANTITY	RANGE	QUANTITY	RANGE
2	47 ohms	2	3,300 ohms*	5	0.1 meg*
2	100 ohms	3	4,700 ohms*	2	0.15 meg
2	150 ohms	5	10,000 ohms*	2	0.22 meg
2	220 ohms	2	15,000 ohms*	5	0.27 meg
2	270 ohms	3	22,000 ohms*	5	0.47 meg
2	470 ohms	5	27,000 ohms*	5	1.0 meg*
5	1,000 ohms*	2	33,000 ohms*	2	2.2 meg
2	1,500 ohms	2	39,000 ohms*	2	4.7 meg
3	2,200 ohms	5	47,000 ohms*		
2	2,700 ohms	2	68,000 ohms*		

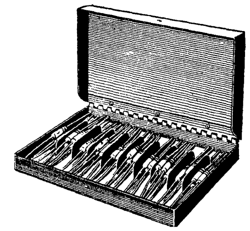
ASSORTMENT #6—COMBINATION

91 Insulated Resistors and Type DCF Close-Tolerance Precistors, including popular television ranges **List $25.04**

RANGE	½ WATT	1 WATT	2 WATT	DCF
47 ohms	1	1	1	—
100 ohms	1	1	1	—
150 ohms	1	1	—	—
220 ohms	1	1	—	—
270 ohms	1	1	—	—
470 ohms	1*	1	1	—
1,000 ohms	3*	2*	—	1
1,500 ohms	1	1	—	—
2,200 ohms	1*	1	—	—
2,700 ohms	1*	1	—	—
3,300 ohms	1*	1*	—	—
4,700 ohms	2*	1*	1	—
10,000 ohms	2*	2*	1*	1
15,000 ohms	1	1*	—	—
22,000 ohms	1*	1*	1*	—
27,000 ohms	1*	2*	—	—
33,000 ohms	1*	1*	—	—
39,000 ohms	1	1*	—	—
47,000 ohms	3*	2*	1*	—
68,000 ohms	1*	1*	—	—
0.1 meg	3*	2*	—	1
0.15 meg	1	1	—	—
0.22 meg	2*	1	—	—
0.27 meg	3*	1	—	—
0.47 meg	3*	2	—	—
1.0 meg	3*	2*	—	1
2.2 meg	2*	1	—	—
4.7 meg	1*	1	—	—
5.0 meg	—	—	—	1

*—Popular television ranges.

RESIST-O-KITS



Flat, pocket-size metal kit of ½ or 1 watt BT Insulated Composition Resistors is ideal for service calls or small bench stocks. All-steel and attractively lithographed in blue and yellow. Measures $\frac{11}{16}$″ x 3⅞″ x 6⅝″. Ten compartments prevent ranges from mixing, and lid snaps securely shut. Ranges are clearly marked on each resistor in kit. This handy kit is furnished at no extra charge.

ASSORTMENT #7—½ WATT

45 BTS ½ watt Resistors including ranges widely found in television. **List $7.65**

Quantity	Resistance Range	Quantity	Resistance Range
4	1,000 ohms*	3	0.22 meg*
3	4,700 ohms*	5	0.27 meg*
4	10,000 ohms*	6	0.47 meg*
5	47,000 ohms*	5	1.0 meg*
6	0.1 meg*	4	2.2 meg*

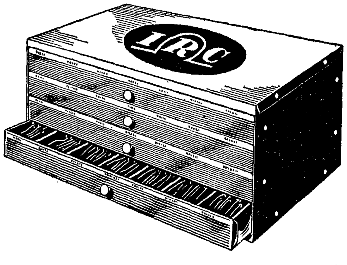
ASSORTMENT #8—1 WATT

30 BTA 1 watt Resistors including ranges widely found in television. **List $7.50**

Quantity	Resistance Range	Quantity	Resistance Range
4	1,000 ohms*	4	47,000 ohms*
2	2,200 ohms*	4	0.1 meg*
2	4,700 ohms*	2	0.27 meg
3	10,000 ohms*	4	0.47 meg
2	27,000 ohms*	3	1.0 meg

*—Popular television ranges.

CHOKE CABINETS



For efficient stocking, the handy bench supply of IRC Insulated Chokes is available in a 4-drawer all-metal cabinet. Same size as Resist-O-Cabinets and can be stacked with them. Each value is contained in an individual identified compartment. Cabinet contains 5 of each value — totaling 140 chokes in a full range of values and 2 sizes. No extra charge for the Choke Cabinet.

List $49.00

Quantity	Inductance (Microhenrys)	D.C. Resistance (Ohms)	Current Rating Milliamperes (1)*	Current Rating Milliamperes (2)*
		TYPE CLA		
5	0.47 ± 15%	0.22 ± 30%	890	1510
5	0.56 ± 15%	0.31 ± 30%	750	1270
5	0.68 ± 15%	0.44 ± 30%	630	1070
5	0.82 ± 15%	0.59 ± 30%	540	920
5	1.0 ± 10%	0.80 ± 30%	470	790
5	1.2 ± 10%	0.85 ± 20%	450	770
5	1.5 ± 10%	1.2 ± 20%	380	650
5	1.8 ± 10%	1.6 ± 20%	330	560
5	2.2 ± 10%	1.8 ± 20%	310	530
5	2.7 ± 10%	2.2 ± 10%	280	480
5	3.3 ± 10%	3.0 ± 10%	240	390
		TYPE CL-1		
5	0.47 ± 15%	0.14 ± 30%	1460	2310
5	0.56 ± 15%	0.20 ± 30%	1220	1940
5	0.68 ± 15%	0.22 ± 30%	1170	1850
5	0.82 ± 15%	0.27 ± 30%	1050	1670
5	1.0 ± 10%	0.41 ± 30%	850	1350
5	1.2 ± 10%	0.51 ± 20%	770	1210
5	1.5 ± 10%	0.72 ± 20%	650	1020
5	1.8 ± 10%	0.77 ± 20%	620	990
5	2.2 ± 10%	1.1 ± 20%	520	820
5	2.7 ± 10%	1.5 ± 20%	450	710
5	3.3 ± 10%	2.0 ± 20%	390	610
5	3.9 ± 10%	2.6 ± 10%	340	540
5	4.7 ± 10%	2.8 ± 10%	330	520
5	5.6 ± 10%	4.0 ± 10%	270	430
5	6.8 ± 10%	5.6 ± 10%	230	370
5	8.2 ± 10%	6.1 ± 10%	220	350
5	10.0 ± 10%	8.2 ± 10%	190	300

*(1) Current which will cause resistance to increase approx 10%
*(2) Current which will cause resistance to increase approx 25%

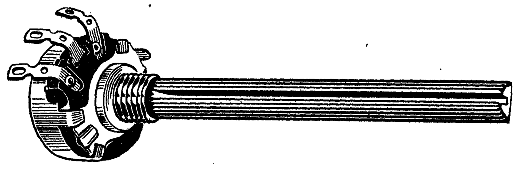
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

VOLUME CONTROLS

Preferred for Performance

IRC

TYPE Q



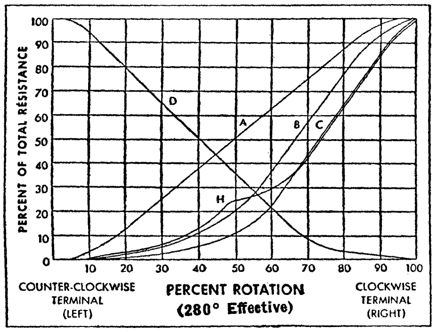
RADIO TECHNICIAN'S VOLUME CONTROL

A volume control engineered to meet the needs of modern radio and TV replacement. Compact $\frac{15}{16}$" design is augmented with shorter bushing, only $\frac{1}{4}$" in length. This tiny control will meet all small set requirements, and yet is capable of handling large receiver replacements. "Cushioned turn" rotation and quiet element combine to provide a modern control of the highest quality.

KNOB MASTER FIXED SHAFT. This is the standard Q shaft. It is a FIXED shaft, and handles most knob requirements. Knurled, flatted and slotted, it fits knurled and spring-type push-on knobs or set-screw knobs. 3" long with ample cross-section to prevent bending.

INTERCHANGEABLE FIXED SHAFTS. Quick replacement of standard fixed shaft to fit any of 13 Interchangeable Fixed Shafts provides ready conversion to "specials." This revolutionary feature is made easy by the IRC Resilient Retainer Ring. These special FIXED Shafts offer all of the advantages of Tap-in Shafts with the added security of fixed shafts. Widest replacement coverage is made possible with a minimum stock. These special shafts are illustrated and explained on the following page.

7 STANDARD TAPERS



A—Used as potentiometer or rheostat in any circuit where uniform resistance change is required.

B—A semi-logarithmic curve used as tone control or audio circuit control.

B—Reverse — not shown on graph.

C—A logarithmic curve. Used as audio circuit control or antenna shunt control.

C—Reverse — not shown on graph.

D—Tapered at both ends to provide control of grid bias and antenna circuit. Used where control of grid bias is of prime importance in controlling volume.

H—A tapped logarithmic curve used as audio level control of automatic bass compensation.

79 VALUES FOR COMPLETE COVERAGE

RESISTANCE OHMS	TAP	IRC STOCK No.	TAPER
500	—	Q11-103	A
750	—	Q11-105	A
750	250	Q17-105X	Spec
1K	—	Q11-108	A
1K	—	Q17-108	B (Rev)
1.5K	—	Q17-109	C (Rev)
2K	—	Q11-110	A
2.5K	—	Q13-111	C
2.5K	—	Q17-111	C (Rev)
3K	—	Q11-112	A
3K	—	Q17-112	C (Rev)
5K	—	Q11-114	A
5K	—	Q13-114	C
5K	—	Q17-114	C (Rev)
7.5K	—	Q11-115	A
10K	—	Q11-116	A
10K	—	Q13-116	C
10K	—	Q14-116	D
10K	—	Q17-116	C (Rev)
15K	5K-10K	Q13-118XX	Spec
20K	—	Q11-119	A
20K	—	Q16-119	Spec
25K	—	Q11-120	A
25K	—	Q14-120	D
30K	—	Q11-121	A
35K	—	Q11 122	A
50K	—	Q11-123	A
50K	—	Q13-123	C
50K	—	Q14-123	D
75K	—	Q11-125	A
.1 Meg	—	Q11-128	A
.1 Meg	—	Q13-128	C
.125 Meg	—	Q11-228	A
.15 Meg	19K-38K	Q17-328XX	Spec
.2 Meg	—	Q11-129	A
.25 Meg	—	Q11-130	A
.25 Meg	—	Q13-130	C
.25 Meg	.125 Meg	Q13-130X	Spec
.25 Meg	60K	Q18-130X	H
.25 Meg	60K-.12 Meg	Q18-130XX	Spec
.35 Meg	—	Q13-132	C
.35 Meg	35K	Q17-132X	Spec
.35 Meg	75K	Q18-132X	H
.5 Meg	—	Q11-133	A
.5 Meg	—	Q13-133	C
.5 Meg	.125 Meg	Q13-133X	H
.5 Meg	—	Q14-133	D
.5 Meg	25K	Q17-133X	Spec
.5 Meg	50K	Q18-133X	Spec
.5 Meg	.25 Meg	Q19-133X	Spec
.5 Meg	.1-.2 Meg	Q18-133XX	Spec
0.6 Meg	—	Q11-134	A
.75 Meg	—	Q11-136	A
1.0 Meg	—	Q11-137	A
1.0 Meg	—	Q13-137	C
1.0 Meg	.25 Meg	Q13-137X	H
1.0 Meg	—	Q14-137	D
1.0 Meg	35K	Q17-137X	Spec
1.0 Meg	50K-.1 Meg	Q17-137XX	Spec
1.0 Meg	.1 Meg	Q18-137X	Spec
1.0 Meg	.25-.5 Meg	Q18-137XX	Spec
1.0 Meg	.5 Meg	Q19-137X	Spec
1.0 Meg	.5 Meg	QVC-539X	Spec
1.5 Meg	—	Q11-138	A
1.5 Meg	.25 Meg	Q13-138X	Spec
2.0 Meg	—	Q11-139	A
2.0 Meg	—	Q13-139	C
2.0 Meg	.5 Meg	Q13-139X	H
2.0 Meg	1.0-.5 Meg	Q13-139XX	Spec
2.0 Meg	—	Q17-139	C (Rev)
2.0 Meg	.15 Meg	Q17-139X	Spec
2.0 Meg	1.0 Meg	Q18-139X	Spec
2.0 Meg	.25-.5 Meg	Q18-139XX	Spec
2.0 Meg	50K	Q19-139X	Spec
2.5 Meg	—	Q11-239	A
3.0 Meg	—	Q11-140	A
3.0 Meg	—	Q13-140	C
5.0 Meg	—	Q11-141	A
5.0 Meg	—	Q13-141	C
5.0 Meg	—	Q17-141	C (Rev)
7.5 Meg	—	Q11-142	A
10.0 Meg	—	Q11-143	A

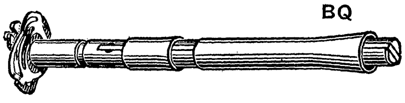
	List
Plain Controls	$1.25
Tapped Controls	1.85

VOLUME CONTROLS

Preferred for Performance

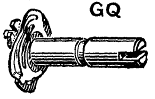
13 INTERCHANGEABLE FIXED SHAFTS

BQ



Slotted or tongued. For remote control cables. 3½" long. ¼" dia. **LIST 45¢**

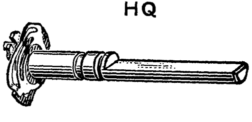
GQ



Slotted with hole in bottom. For Philco sets. 1 1/16" long. ¼" dia.

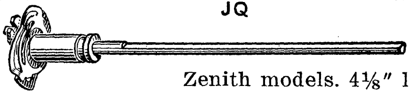
LIST 30¢

HQ



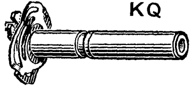
Flatted, with groove for dial plate. For Delco, RCA, Sears-Roebuck and Westinghouse. 3/32" deep flat. 1/64" deep groove. 1 11/16" long. ¼" dia. **LIST 30¢**

JQ



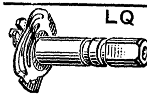
⅛" dia. with .105" flat. For certain Zenith models. 4⅛" long. **LIST 45¢**

KQ



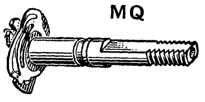
¼" round with 2 concentric holes in end. For Motorola sets. 1⅜" long. **LIST 30¢**

LQ



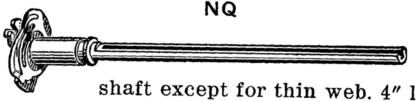
For certain Belmont and Montgomery-Ward sets. 1/32" deep flat. 1/32" deep groove. 1" long. ¼" dia. **LIST 35¢**

MQ



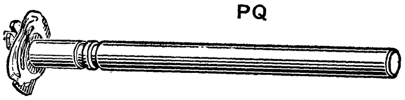
Double-flat, threaded for ⅜" on end. For Belmont, Montgomery-Ward and Wells-Gardner sets. 2 concentric holes in end. 1½" long. **LIST 45¢**

NQ



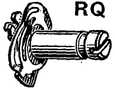
3/16" flatted and slotted. Slot milled length of shaft except for thin web. 4" long. **LIST 45¢**

PQ



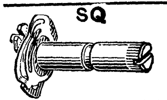
¼" full-round. 3" long. For ¼" or ⅜" bushings. ⅜" bushing incl. **LIST 35¢**

RQ



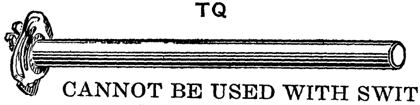
Very short screw-driver slot shaft. Slot, 3/64" x 1/16". ½" long. ¼" dia. ⅜" bushing included. **LIST 35¢**

SQ



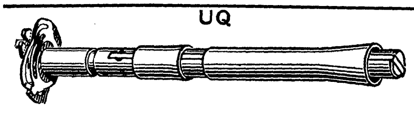
Finger knurl and screw-driver slot. Knurled at end for ⅛". Screw-driver slot in end, 3/64" x 1/16" deep. ¼" dia. ¾" long. , **LIST 30¢**

TQ



Insulated shaft for television. 3" long. ¼" dia. CANNOT BE USED WITH SWITCH. **LIST 60¢**

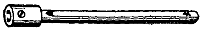
UQ



Identical to BQ with addition of friction-clutch-drive arm. For remote control auto radios. **LIST 60¢**

IRC Interchangeable Fixed Shafts are individually packaged with instructions and extra Resilient Retainer Ring.

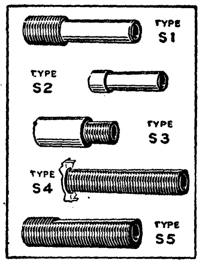
EXTENSION SHAFTS



These attach to regular shafts, extending length to any needed size. Frequently make possible use of standard controls for "special" job.

TYPE	DIMENSION	LIST
441	4" x ¼" dia. x 1/32" flat	40¢
442	4" x ¼" dia. x 3/32" flat	40¢
443	4" x 3/16" dia. x 1/64" flat	40¢
444	8" x ¼" dia. x 3/32" flat for 4" length	40¢

SLEEVE BUSHINGS



Type S1—For use with standard controls.

Type S2—To provide bearing for switching mechanism.

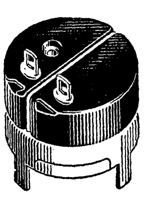
Type S3—For use with standard controls to set control back from chassis or mounting bracket. 1½" — ½" dia. for 1" unthd. — ⅜" dia. for ½", ⅜" — 32 thd. — .344 flat.

Type S4—For use with standard controls to provide 7/16" dia. bushing. 1⅝"—thd. 7/16"—28 full length—.375 dbl flat.

Type S5—For use with standard controls to provide ½" dia. bushing. 2¼"—½"—28 thread full length—.437 flat.

Type	List	Type	List
S1	45¢	S3, S4, S5	60¢
S2	30¢		

NEW IRC SWITCHES



Designed and made by IRC, Type 76 Switch is available in 2 types: 76-1 is Single Pole Single Throw, and 76-2 is Double Pole Single Throw. Quickly attached to Q Control.

TYPE		LIST
76-1	S.P.S.T.	60¢
76-2	D.P.S.T.	60¢

PLAIN AND INSULATED SHAFT COUPLERS

Type	List
C2—Insulated coupler for use with square type Motorola shaft	30¢
C3—Plain coupler for ¼" shafts; insert allows coupling of ¼" shaft to 3/16" shaft	30¢

VOLUME CONTROL CABINET

IRC Volume Control Cabinet — stocked with 18 Type Q Controls, plus switches and special shafts — handles over 90% of all AM, FM and TV control replacements.

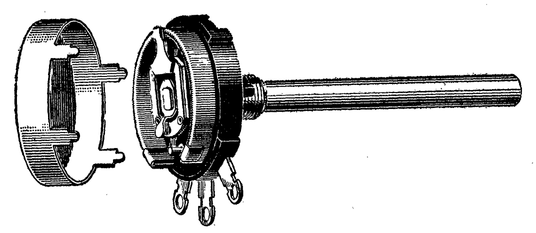
Full Description, Parts Listing and Price on Page R-21.

WIRE WOUND CONTROLS

Preferred for Performance

IRC

TYPES W & WK WIRE WOUND CONTROLS



TYPE W—A dependable wire wound control of uniform resistance change for power requirements up to 2 watts. Tight, uniform windings assure utmost accuracy. Diameter 1¼″; depth behind panel $\frac{9}{16}$″; shaft length 3″ from control face; ¼″ full round shaft. Illustration shows cover removed, although covers are supplied on controls.

TYPE WK—Type WK Control is identical to Type W Control except that it is equipped with IRC Knob Master Shaft for fitting to both knurled and flatted knobs used in Television Sets. Type W Switches may be used on Type WK Controls. Bushing is ¼″ long. Shaft is 3″ long from mounting face.

Type W and WK Control—Plain.....................**List $1.25**

IRC Stock No.	Resistance Ohms	Max. Current (Amps.)	IRC Stock No.	Resistance Ohms	Max. Current (Amps.)
W-2	2	1.000	W-500	500	.063
W-3	3	.815	W-750	750	.052
W-5	5	.630	WK-750L	750	.052
W-6	6	.560	WK-750R	750	.052
W-8	8	.500	W-1000	1000	.045
W-10	10	.450	WK-1000	1000	.045
W-15	15	.370	WK-1500	1500	.036
W-20	20	.320	W-2000	2000	.032
W-25	25	.285	WK-2000	2000	.032
W-30	30	.260	WK-2500	2500	.028
W-40	40	.225	W-3000	3000	.026
W-50	50	.200	WK-3000	3000	.026
W-60	60	.183	W-4000	4000	.022
W-75	75	.164	W-5000	5000	.020
W-100	100	.142	WK-5000	5000	.020
W-200	200	.100	W-7500	7500	.016
WK-250	250	.089	WK-7500	7500	.016
W-300	300	.083	W-10000	10000	.014
W-400	400	.071	WK-10000	10000	.014

NOTE: Suffix letter "R" indicates Right Hand Log Taper. Suffix letter "L" indicates Left Hand Log Taper.

List $1.25

TELEVISION CENTERING CONTROLS

Type W Wire Wound controls with Center Tap are widely used as Television Centering Controls.

W10X5 10 ohms—center tapped at 5 ohms
W20X10 20 ohms—center tapped at 10 ohms
W30X15 30 ohms—center tapped at 15 ohms
W50X25 50 ohms—center tapped at 25 ohms

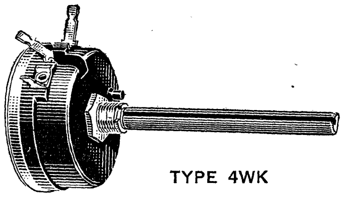
Type W Control Center Tapped for TV..........**List $1.85**

TYPE W SWITCHES

For Type W Controls

	LIST
No. 51—S.P.S.T.	$0.60
No. 52—D.P.S.T.	.75
No. 53—S.P.D.T.	.75
No. 54—Three Point	.75
No. 55—Four Point	.75
No. 56—S.P.D.T. at clockwise position	.75
No. 57—S.P.S.T., with dummy lug	.75

4-WATT WIRE WOUND CONTROLS



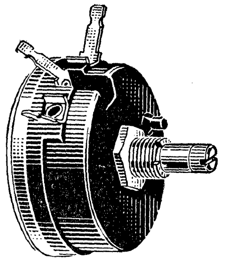
TYPE 4WK

TYPE 4WK is a husky, universal 4-watt wire-wound control especially designed for TV replacement service. Equipped with IRC Knob Master Shaft — knurled, flatted and grooved to fit most knob requirements without modification except for cutting to required length. **TYPE 4WS** is identical to Type 4WK except that it is equipped with short, knurled and slotted shaft. Designed for replacement of TV controls mounted at chassis rear or under front panel concealment without shaft alteration. Dimensions: Diameter—1¾″. Depth behind panel—$\frac{11}{16}$″. Bushing: ¼″. Shaft Length—3″.

	List
Up to 7500 Ohms	**$2.00**
Above 7500 Ohms	**$2.35**

TYPE 4WK

IRC Stock No.	Resistance Ohms	Taper	IRC Stock No.	Resistance Ohms	Taper
4WK-10	10	Linear	4WK-1350	1350	Linear
4WK-20	20	Linear	4WK-1500	1500	Linear
4WK-30	30	Linear	4WK-1500L	1500	L.H. Log
4WK-50	50	Linear	4WK-2000	2000	Linear
4WK-100	100	Linear	4WK-2500	2500	Linear
4WK-200	200	Linear	4WK-3000	3000	Linear
4WK-300	300	Linear	4WK-5000	5000	Linear
4WK-400	400	Linear	4WK-6000	6000	Linear
4WK-500	500	Linear	4WK-7500	7500	Linear
4WK-600	600	Linear	4WK-10000	10000	Linear
4WK-650	650	Linear	4WK-15000	15000	Linear
4WK-750	750	Linear	4WK-20000	20000	Linear
4WK-750R	750	R.H. Log	4WK-25000	25000	Linear
4WK-1000	1000	Linear			

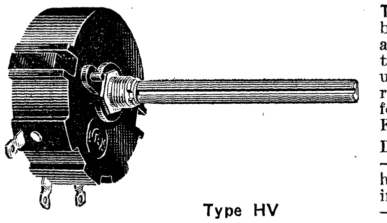


TYPE 4WS

Diameter—1¾″.
Depth behind panel—$\frac{11}{16}$″.
Bushing—¼″.
Shaft length—⅝″.

IRC Stock No.	Resistance Ohms	Taper	IRC Stock No.	Resistance Ohms	Taper
4WS-25	25	Linear	4WS-2250	2250	Linear
4WS-250	250	Linear	4WS-2500	2500	Linear
4WS-500	500	Linear	4WS-3000	3000	Linear
4WS-1000	1000	Linear	4WS-4000	4000	Linear
4WS-1500	1500	Linear	4WS-5000	5000	Linear
4WS-2000	2000	Linear			

TYPE HV
2-WATT HIGH VOLTAGE WIRE WOUND CONTROL



Type HV

TYPE HV—2-watt carbon element high voltage control for use in television receivers using picture tubes requiring electrostatic focus. Equipped with Knob Master Shaft

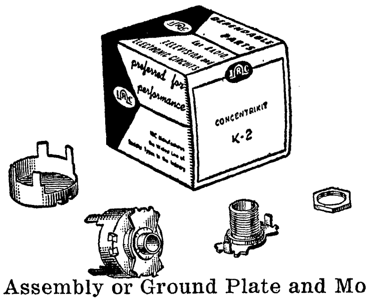
Dimensions: Diameter—2-11/64″ Depth behind panel—$\frac{25}{32}$″. Bushing—¼″. Shaft length—3″. **List $3.00**

IRC Stock No.	Resistance Ohms	Taper
HV-15	15 Meg.	Linear
HV-25	25 Meg.	Linear

CONCENTRIC DUAL CONTROLS for TV and Auto Radio

IRC

Preferred for Performance



4-PIECE CONCENTRIKITS

IRC CONCENTRIKITS are sets of mechanical parts needed to assemble various IRC Concentric Dual Controls. Kits contain: Panel Cover, Rear Cover, Bushing Assembly or Ground Plate and Mounting Nut. Instruction sheet is included with each CONCENTRIKIT. In addition to proper CONCENTRIKIT, the following parts are needed for assembly of concentric dual controls: 1—Panel Base-Element; 1—Rear Base-Element; 1—Exact Duplicate Outer Shaft; 1—Exact Duplicate Inner Shaft; 1—Switch—when needed (76-1 or 76-2).

K-2 CONCENTRIKIT. For concentric duals having two carbon sections. Requires Type B Base-Elements. Includes standard bushing, ⅜″ long. **List $.80**

K-3 CONCENTRIKIT. For concentric duals having 2-watt wire-wound panel section (Type W Base-Elements) and carbon rear section (Type B Base-Elements). Includes standard bushing, ⅜″ long. **List $.80**

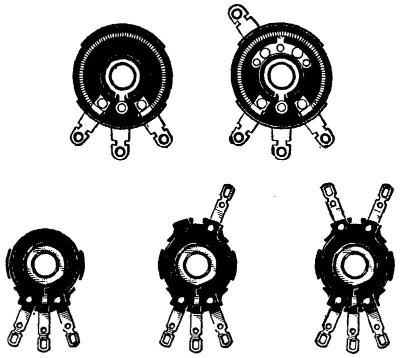
K-4 CONCENTRIKIT. For certain Motorola concentric duals. Bushing ¾″ long with turned down portion for use as bearing. **List $.90**

K-5 CONCENTRIKIT. For certain Hallicrafter concentric duals. Bushing is ¼″ long. **List $.80**

Switches for Concentrikit

Type 76-1 S.P.S.T. — Type 76-2 D.P.S.T. **List $.60**

BASE ELEMENTS FOR CONCENTRIKITS



New Base Elements for CONCENTRIKITS are a revolutionary advance in concentric dual replacement. A relatively small stock at low investment provides wide coverage of electrical requirements in many concentric duals. Each unit is a complete molded control base with element, terminals and collector ring installed. There are no loose parts. Two Base Elements are required for each concentric dual.

Two types of Base Elements are available: Type B for panel or rear carbon sections and Type W for wire-wound panel sections.

BASE-ELEMENT STOCK VALUES

Resistance Ohms	Tap	IRC Stock No.	Taper
500		B11-103	A
750		B11-105	A
750	250	B17-105X	Spec
1K		B11-108	A
1K		B17-108	B (Rev)
1.2K		B17-208	C (Rev)
1.5K		B11-109	A
1.5K		B17-109	C (Rev)
2K		B11-110	A
2K		B17-110	C (Rev)
2K	550	B17-110X	Spec
2K	250 & 500	B17-110XX	Spec
2.5K		B17-111	C (Rev)
2.5K	500	B17-111X	Spec
2.5K	625	B27-111X	Spec
3K		B11-112	A
3K		B17-112	C (Rev)
5K		B11-114	A
5K		B17-114	C (Rev)
5K	1K	B17-114X	Spec
7.5K		B11-115	A
10K		B11-116	A
10K		B17-116	C (Rev)
11.5K		B17-117	C (Rev)
20K		B11-119	A
25K		B11-120	A
25K		B13-120	C
30K		B11-121	A
35K		B11-122	A
50K		B11-123	A
75K		B11-125	A
.1 Meg.		B11-128	A
.1 Meg.		B17-128	C (Rev)
.125 Meg.		B11-228	A
.2 Meg.		B11-129	A
.25 Meg.		B11-130	A
.25 Meg.		B13-130	C
.25 Meg.	.125 Meg.	B13-130X	Spec
.25 Meg.	60K	B18-130X	H
.3 Meg.		B11-131	A
.35 Meg.		B13-132	C
.35 Meg.	35K	B17-132X	Spec
.35 Meg.	75K	B18-132X	H
.5 Meg.		B11-133	A
.5 Meg.		B13-133	C
.5 Meg.	.125 Meg.	B13-133X	C
.5 Meg.	75K	B15-133X	Spec
.5 Meg.	50K	B18-133X	Spec
.5 Meg.	.25 Meg.	B19-133X	Spec
1.0 Meg.		B11-137	A
1.0 Meg.		B13-137	C
1.0 Meg.	.25 Meg.	B13-137X	H
1.0 Meg.		B17-137	C (Rev)
1.0 Meg.	.1 Meg.	B18-137X	Spec
1.0 Meg.	.25-.5 Meg.	B18-137XX	Spec
1.0 Meg.	.5 Meg.	B19-137X	Spec
1.5 Meg.		B11-138	A
2.0 Meg.		B11-139	A
2.0 Meg.		B13-139	C
2.0 Meg.	.5 Meg.	B13-139X	H
2.0 Meg.		B17-139	C (Rev)
2.0 Meg.	1.0 Meg.	B18-139X	Spec
2.0 Meg.	.25-.5 Meg.	B18-139XX	Spec
2.5 Meg.		B11-239	A
3.0 Meg.		B11-140	A
3.0 Meg.		B13-140	C
3.0 Meg.	900K	B13-140X	Spec
3.0 Meg.	1.5 Meg.	B18-140X	Spec
5.0 Meg.		B12-141	Spec
5.0 Meg.		B17-141	C (Rev)
250		W11-201	Linear
300		W11-102	Linear
750		W11-105	Linear
750		W13-105	LH Log
750		W17-105	RH Log
750	250	W17-105X	Spec
1K		W11-108	Linear
1.5K		W11-109	Linear
1.5K	500	W17-109X	Spec
2K		W11-110	Linear
2.5K		W11-111	Linear
2.5K		W17-111	RH Log
3K		W11-112	Linear
3K		W17-112	RH Log
5K		W11-114	Linear
5K		W17-114	RH Log
10K		W11-116	Linear
10K		WR11-116	Linear

WR-11-116 .... List $1.30
Other Plain Base-Elements .... List .50
Tapped Base-Elements .... List 1.10

CONCENTRIC DUAL CONTROLS for TV and Auto Radio

Preferred for Performance

IRC

EXACT DUPLICATE SHAFTS FIT WITHOUT ALTERATION

IRC Exact Duplicate Shafts are ready for assembly into completed concentric duals. No filing, slotting, soldering or cutting required. No special tools needed. Shafts are supplied in proper lengths and with factory-tooled ends for satisfactory fit. Accurate specifications are assured. Both inner and outer shafts are of one-piece construction with contactors attached.

TYPE P1 OUTER SHAFTS. 1/8″ wide slot and 17/32″ long flat for Q base-element. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
P1-017	17/32″	P1-121	1 21/32″	P1-220	2 5/8″
P1-020	5/8″	P1-123	1 23/32″	P1-224	2 3/4″
P1-024	3/4″	P1-126	1 13/16″	P1-229	2 29/32″
P1-028	7/8″	P1-128	1 7/8″	P1-302	3 1/16″
P1-102	1 1/16″	P1-200	2″	P1-304	3 1/8″
P1-106	1 3/16″	P1-204	2 1/8″	P1-306	3 3/16″
P1-109	1 9/32″	P1-206	2 3/16″	P1-310	3 5/16″
P1-112	1 3/8″	P1-210	2 5/16″	P1-400	4″
P1-114	1 7/16″	P1-212	2 3/8″	P1-405	4 5/32″
P1-118	1 9/16″	P1-216	2 1/2″		

TYPE P2 OUTER SHAFTS. 1/16″ wide slot and flat 17/32″ long for Q base-element. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
P2-031	31/32″	P2-200	2″	P2-218	2 9/16″
P2-116	1 1/2″	P2-209	2 9/32″	P2-222	2 11/16″
P2-118	1 9/16″	P2-214	2 7/16″	P2-226	2 13/16″
P2-128	1 7/8″				

TYPE P3 OUTER SHAFTS. 1/8″ wide slot and flat 17/32″ long for W base-element. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
P3-100	1″	P3-118	1 9/16″	P3-203	2 3/32″
P3-104	1 1/8″	P3-121	1 21/32″	P3-208	2 1/4″
P3-106	1 3/16″	P3-123	1 23/32″	P3-210	2 5/16″
P3-111	1 11/32″	P3-127	1 27/32″	P3-223	2 23/32″
P3-114	1 7/16″	P3-129	1 29/32″	P3-226	2 13/16″
P3-116	1 1/2″	P3-131	1 31/32″	P3-400	4″

TYPE P4 OUTER SHAFTS. 1/8″ wide slot and flat 3/4″ long for W base-element. **List $.60**

IRC Stock No.	Shaft Length
P4-124	1 3/4″

TYPE P5 OUTER SHAFTS. 1/16″ wide slot and flat 17/32″ long for W base-element. **List $.60**

IRC Stock No.	Shaft Length
P5-206	1 3/16″

TYPE P6 OUTER SHAFTS. 1/8″ wide slot and flat 11/16″ long for Q base-element. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
P6-112	1 3/8″	P6-202	2 1/16″	P6-218	2 9/16″

TYPE P7 OUTER SHAFTS. .120″ wide slot and flat 17/32″ long for Q base-element. **List $.60**

IRC Stock No.	Shaft Length
P7-206	2 3/16″

TYPE P8 OUTER SHAFTS. Full round 1/8″ knurled band on end for W base-element. **List $.60**

IRC Stock No.	Shaft Length
P8-020	5/8″

TYPE P9 OUTER SHAFTS. Full round 1/8″ knurled band on end for Q base-element. **List $.60**

IRC Stock No.	Shaft Length
P9-112	1 3/8″

TYPE R1 INNER SHAFTS. .187″ diameter slotted with 1/2″ long flat. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
R1-024	3/4″	R1-205	2 5/32″	R1-228	2 7/8″
R1-028	7/8″	R1-207	2 7/32″	R1-300	3″
R1-111	1 11/32″	R1-209	2 9/32″	R1-304	3 1/8″
R1-115	1 15/32″	R1-210	2 5/16″	R1-308	3 1/4″
R1-118	1 9/16″	R1-212	2 3/8″	R1-312	3 3/8″
R1-122	1 11/16″	R1-216	2 1/2″	R1-316	3 1/2″
R1-126	1 13/16″	R1-220	2 5/8″	R1-326	3 13/16″
R1-130	1 15/16″	R1-223	2 23/32″	R1-417	4 17/32″
R1-202	2 1/16″	R1-226	2 13/16″	R1-420	4 5/8″

TYPE R2 INNER SHAFTS. .202″ diameter slotted with 1/2″ long flat. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
R2-103	1 3/32″	R2-200	2″	R2-230	2 15/16″
R2-105	1 5/32″	R2-204	2 1/8″	R2-300	3″
R2-110	1 5/16″	R2-206	2 3/16″	R2-306	3 3/16″
R2-115	1 15/32″	R2-209	2 9/32″	R2-310	3 5/16″
R2-117	1 17/32″	R2-212	2 3/8″	R2-314	3 7/16″
R2-119	1 19/32″	R2-216	2 1/2″	R2-322	3 11/16″
R2-124	1 3/4″	R2-218	2 9/16″	R2-420	4 5/8″
R2-127	1 27/32″	R2-220	2 5/8″	R2-426	4 13/16″
R2-131	1 31/32″	R2-226	2 13/16″		

TYPE R3 INNER SHAFTS. .190″ diameter 20 tooth split knurl (Zenith). **List $.60**

IRC Stock No.	Shaft Length
R3-223	2 23/32″

TYPE R4 INNER SHAFTS. .180″ diameter round and slotted (Motorola). **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
R4-106	1 3/16″	R4-226	2 13/16″	R4-306	3 3/16″
R4-210	2 5/16″	R4-228	2 7/8″	R4-322	3 11/16″
R4-212	2 3/8″				

TYPE R5 INNER SHAFTS. .187″ diameter — rear extension type (RCA). **List $.60**

IRC Stock No.	Shaft Length
R5-215	2 15/32″

TYPE R6 INNER SHAFTS. .202″ diameter — rear extension type (Dumont). **List $.60**

IRC Stock No.	Shaft Length
R6-208	2 1/4″

TYPE R7 INNER SHAFT. .189″ diameter 18 tooth split knurl (Zenith). **List $.60**

IRC Stock No.	Shaft Length
R7-212	2 3/8″

TYPE R8 INNER SHAFT. .187″ slotted and flatted 1/2″ long for W rear element. **List $.60**

IRC Stock No.	Shaft Length
R8-213	2 13/32″

TYPE R9 INNER SHAFT. .187″ diameter slotted 1/8″ long flat. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
R9-208	2 1/4″	R9-314	3 7/16″

TYPE R10 INNER SHAFT. .187″ diameter full round with 1/8″ knurled band on end for type W rear element. **List $.60**

IRC Stock No.	Shaft Length
R10-028	7/8″

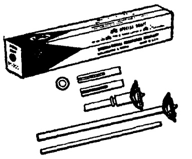
TYPE R11 INNER SHAFT. .187″ diameter full round 1/8″ knurled end. **List $.60**

IRC Stock No.	Shaft Length
R11-031	31/32″

TYPE R12 INNER SHAFT. .202″ diameter 7/32″ wide knurled band on ends. **List $.60**

IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length	IRC Stock No.	Shaft Length
R12-122	1 11/16″	R12-129	1 29/32″	R12-131	1 31/32″

UNIVERSAL SHAFT KITS FOR CONCENTRIKIT

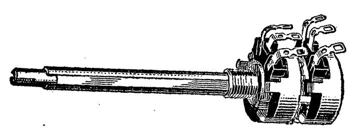


For use with CONCENTRIKITS in place of Exact Duplicate Shafts. Require shaft modification to desired specification. KS-2 Shaft Kit with K-2 CONCENTRIKIT are equivalent to former K-1 CONCENTRIKIT. Shaft Ends E-187 and E-202 are included in both Shaft Kits.

KS-2 Universal Shaft Kit for use with K-2, K-4 and K-5 CONCENTRIKITS. **List $1.20**

KS-3 Universal Shaft Kit for use with K-3 CONCENTRIKIT. **List $1.20**

317 FACTORY ASSEMBLED EXACT DUPLICATE CONCENTRIC DUAL CONTROLS

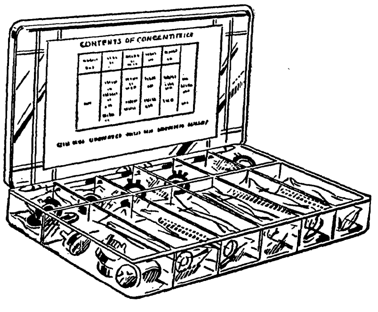


Cover 452 Manufacturers' Parts Numbers
Both Carbon and Wire Wound Controls
Guaranteed for Mechanical Operation and
Electrical Performance
Form S012 Contains Full Listing
and Description

REPLACEMENT CONTROL KITS

Preferred for Performance

CONCENTRIPAKS COVER MAJOR TV SETS



IRC CONCENTRIPAKS are practical assortments of CONCENTRIKITS, Base Elements, Exact Duplicate Replacement Shafts, and Switches selected to meet concentric dual requirements of specific brands of TV sets. CONCENTRIPAKS afford wide coverage of replacement needs at a fraction of the cost of factory-assembled controls for the same coverage.

Contained in an extra heavy plastic stock box with 11 compartments and sturdy hinged top, each CONCENTRIPAK includes complete replacement data, showing manufacturer's part and stock numbers, IRC parts required for control assembly, pricing guide.

CONCENTRIPAK FOR PHILCO — KC-1

Replaces any one of 13 Philco concentric duals plus specific controls of 11 other widely sold makes. Contains both K-2 and K-3 CONCENTRIKITS, 9 selected Base Elements, 18 Exact Duplicate Shafts and Switch and replacement data. **List $17.00**

CONCENTRIPAK FOR RCA — KC-2

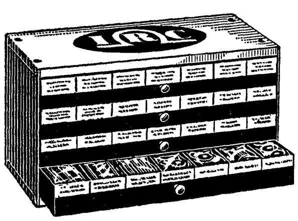
Replaces any one of 14 RCA concentric duals plus 36 part number listings among 15 other makes. Contains K-2 CONCENTRIKIT, 10 selected Base Elements, 8 Exact Duplicate Shafts and Switch and complete replacement data. **List $12.40**

CONCENTRIPAK FOR ADMIRAL — KC-3

Replaces any one of 14 Admiral concentric dual controls plus additional controls for Packard Bell, Sparton and Stromberg Carlson. Contains K-2 CONCENTRIKIT, 10 selected Base Elements, 8 Exact Duplicate Shafts and 2 Switches. Replacement data included. **List $13.00**

NEW DEALER CONCENTRIKIT STOCK CABINET — ASSORTMENT #14

Wide-coverage, low cost dealer stock of CONCENTRIKIT parts. Provides coverage of 338 concentric dual listings — equivalent to 175 different concentric duals. Contained in sturdy four-drawer, all metal stock cabinet with 28 prominently labeled compartments. Full replacement data on stock coverage is included. Contains 30 selected Base Elements, 34 Exact Duplicate Replacement Shafts, 4 K-2 CONCENTRIKITS and 3 Switches. **Coverage:** Supplies replacement coverage among 81 trade names, including RCA, Emerson, Admiral, Philco, Crosley, G.E. and many others. **List $44.60**



CONTENTS OF IRC CONCENTRIKIT ASSORTMENTS

BASE-ELEMENTS

Item	KC 1	KC 2	KC 3	#14
B17-105X	—	—	—	1
B11-108	—	1	—	1
B11-110	—	—	—	1
B17-110	—	—	1	1
W17-111	1	—	—	—
B17-112	—	—	—	1
B11-114	—	—	—	1
B17-114	—	1	—	1
W17-114	1	—	—	—
B17-116	—	1	—	1
B11-120	—	—	1	1
B11-123	2	1	1	2
B11-128	1	—	1	2
B11-130	1	—	—	1
B13-130	—	—	1	1
B11-133	—	1	—	2
B13-133	—	1	—	1
B19-133X	—	—	—	1
B11-137	1	1	1	2
B13-137	—	—	—	1
B13-137X	—	1	—	1
B18-137X	—	—	—	1
B19-137X	—	—	1	1
B11-138	—	—	1	1
B11-139	—	—	1	1
B11-239	—	1	—	—
B13-139X	—	—	—	1
B18-139X	1	—	1	1
B18-139XX	—	1	—	—
B12-141	1	—	—	1

SHAFTS

Item	KC 1	KC 2	KC 3	#14
P1-102	—	—	—	1
P1-106	1	—	—	1
P1-109	1	—	1	1
P1-112	—	—	1	1
P1-121	1	1	—	2
P1-126	—	1	1	1
P1-128	1	—	1	1
P1-200	—	—	—	1
P1-204	—	—	—	1
P1-210	1	1	—	1
P1-212	—	—	—	1
P2-031	—	—	—	1
P2-116	—	1	—	1
P2-128	—	—	—	1
P2-200	—	—	—	1
P3-106	1	—	—	—
P3-118	1	—	—	—
P3-121	1	—	—	—
P3-123	1	—	—	—
P3-127	1	—	—	—
R1-122	1	—	—	1
R1-126	1	—	—	1
R1-130	—	—	—	1
R1-202	—	1	—	—
R1-205	1	1	—	2
R1-207	1	—	—	1
R1-210	1	—	—	1
R1-212	1	1	—	1
R1-216	1	—	—	1
R1-220	—	—	—	1
R1-226	1	—	—	—
R1-228	—	1	—	1
R2-117	—	—	—	1
R2-127	—	—	1	1
R2-131	—	—	1	1
R2-204	—	—	—	1
R2-212	—	—	1	1
R2-216	—	—	1	1
R2-218	—	—	—	1

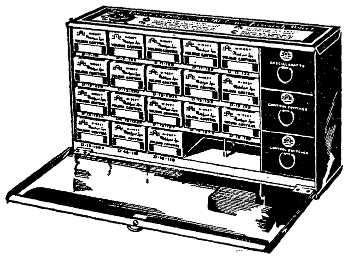
CONCENTRIKITS

Item	KC 1	KC 2	KC 3	#14
K-2	1	1	1	4
K-3	1	—	—	—

SWITCHES

Item	KC 1	KC 2	KC 3	#14
76-1	1	1	1	2
76-2	—	—	1	1

VOLUME CONTROL CABINET



IRC Volume Control Cabinets are stocked with 18 new Type Q Controls, plus switches and special shafts. This stock handles over 90% of all AM, FM and TV control replacements. Beautiful blue, yellow and silver metal cabinet measures 4½" x 7⅜" x 14½" with identified compartments and 3 drawers for shafts, switches and spare parts. Hinged front cover. No extra charge is made for metal cabinet. **List $30.90**

Quantity	Q Control No.	Resistance Value	Quantity	Q Control No.	Resistance Value
1	Q 11-116	10 K	2	Q 13-133	0.5 meg
1	Q 11-123	50 K	1	Q 13-133X	0.5 meg
1	Q 13-123	50 K	1	Q 11-137	1.0 meg
1	Q 11-128	0.1 meg	1	Q 13-137	1.0 meg
1	Q 13-128	0.1 meg	1	Q 13-137X	1.0 meg
1	Q 11-130	0.25 meg	1	Q 13-139	2.0 meg
1	Q 13-130	0.25 meg	1	Q 13-139X	2.0 meg
1	Q 13-130X	0.25 meg	1	Q 18-139X	2.0 meg
1	Q 11-133	0.5 meg			

SWITCHES

6	76-1	SPST	Quickly attached switch.

SPECIAL SHAFTS

1	**BQ Shaft**—Universal slotted and tongued—3½" long.
1	**GQ Shaft**—Short slotted shaft—1½" long.
2	**HQ Shaft**—Flatted and grooved shaft—1 11/16" long.
1	**NQ Shaft**—Universal flatted and slotted shaft—3/16" diameter.

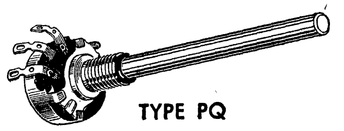
SPECIAL PURPOSE CONTROLS

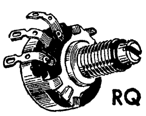
Preferred for Performance

IRC

TYPE PQ AND RQ

DISTRIBUTOR CONTROLS FOR INDUSTRY


TYPE PQ


RQ

IRC Distributor Controls for Industry offer commercial users a wide selection of resistance values and two industrial shaft types. Shafts are fixed. This combination of wide selection of values and speedy Distributor delivery holds many advantages for industrial purchasers. These Industrial Controls are adaptations of the new, compact 15/16″ Q Control. Power rating is ½ watt, 500 volts maximum. Electrical rotation is the same with or without switch. ⅜″ bushing is brass and held to close tolerance for snug shaft fit.

Terminals are heavily tinned for easy soldering, and may be bent without becoming noisy. Two locating lugs are provided, either or both of which may be bent down if not needed. Molded base. Both Types PQ and RQ are supplied in standard tapers.

TYPE PQ. Full round ¼″ shaft, approximately 3″ from mounting face, with ⅜″ long bushing. Available in 33 stock values as shown. Regular IRC stock numbers are used with prefix PQ.
List $1.25

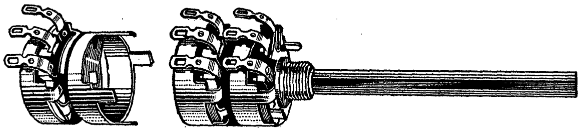
TYPE RQ. Very short screw-driver slot shaft, ¼″ diameter and approximately ½″ long from mounting face with ⅜″ long bushing. Available in 33 values as shown. Regular IRC stock numbers are used with prefix RQ. **List $1.25**

STANDARD VALUES

TYPE PQ	TYPE RQ	RESISTANCE IN OHMS	TAPER
PQ11-103	RQ11-103	500	A
PQ11-108	RQ11-108	1K	A
PQ11-110	RQ11-110	2K	A
PQ11-112	RQ11-112	3K	A
PQ11-114	RQ11-114	5K	A
PQ11-115	RQ11-115	7.5K	A
PQ11-116	RQ11-116	10K	A
PQ13-116	RQ13-116	10K	C
PQ14-116	RQ14-116	10K	D
PQ11-119	RQ11-119	20K	A
PQ11-120	RQ11-120	25K	A
PQ14-120	RQ14-120	25K	D
PQ11-121	RQ11-121	30K	A
PQ11-123	RQ11-123	50K	A
PQ13-123	RQ13-123	50K	C
PQ14-123	RQ14-123	50K	D
PQ11-128	RQ11-128	0.1 meg	A
PQ13-128	RQ13-128	0.1 meg	C
PQ11-129	RQ11-129	0.2 meg	A
PQ11-130	RQ11-130	0.25 meg	A
PQ13-130	RQ13-130	0.25 meg	C
PQ11-133	RQ11-133	0.5 meg	A
PQ13-133	RQ13-133	0.5 meg	C
PQ11-137	RQ11-137	1.0 meg	A
PQ13-137	RQ13-137	1.0 meg	C
PQ11-138	RQ11-138	1.5 meg	A
PQ11-139	RQ11-139	2.0 meg	A
PQ13-139	RQ11-139	2.0 meg	C
PQ11-239	RQ11-239	2.5 meg	A
PQ11-140	RQ11-140	3.0 meg	A
PQ13-140	RQ13-140	3.0 meg	C
PQ11-141	RQ11-141	5.0 meg	A
PQ11-143	RQ11-143	10.0 meg	A

Taper A is linear. Taper C is logarithmic.
Taper D is reverse curve for control of bias.

MULTISECTIONS FOR STANDARD DUALS

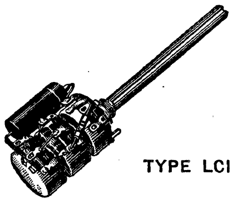


IRC MULTISECTIONS are complete control sections that can be added like a switch to any Q, PQ or RQ Control. With these units, the Radio Technician or Engineer is provided with an endless variety of dual, triple or even quadruple controls. Duals assembled from IRC MULTISECTIONS will accommodate Type 76 switches. Available in a selection of 21 values, as shown in following table. Each MULTISECTION adds 19/32″ to basic control.

STOCK VALUES OF IRC MULTISECTIONS

RESISTANCE IN OHMS	TAPER	IRC STOCK NO.
500	A	M11-103
1K	A	M11-108
2K	A	M11-110
5K	A	M11-114
10K	A	M11-116
25K	A	M11-120
30K	A	M11-121
50K	A	M11-123
0.1 meg	A	M11-128
0.1 meg	C	M13-128
0.25 meg	A	M11-130
0.25 meg	C	M13-130
0.5 meg	A	M11-133
0.5 meg	C	M13-133
1.0 meg	A	M11-137
1.0 meg	C	M13-137
2.0 meg	A	M11-139
2.0 meg	C	M13-139
3.0 meg	C	M13-140
5.0 meg	A	M11-141
10.0 meg	A	M11-143

CONTINUOUSLY VARIABLE LOUDNESS CONTROLS


TYPE LCI

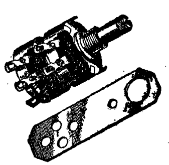
IRC Type LCI Continuously Variable Loudness Controls actualy bring high fidelity tone to commercial audio systems — even at whisper level! Only three connections are needed to install the new Type LCI Loudness Control. No special taps or complicated circuits are required. Type LCI's eliminate the need for tapped volume controls, stepped-type loudness controls, bass and treble boost circuits. Type LCI's do what these other devices have failed to do.

IRC Loudness Control also can be easily assembled with a standard IRC Type Q Volume Control and two Multisections. Simple assembly instructions are included with each Multisection. All parts, etc.
List $9.95 complete

IRC Parts for Assembling Loudness Control	List Price
Q11-133—Control (Panel section)	$1.25
M13-137—MULTISECTION (2nd section)	1.25
M13-128—MULTISECTION (Rear section)	1.25
BTS 0.1 megohm ½ watt Resistor	.17
BTS 10K ohm ½ watt Resistor	.17

(Capacitors not supplied separately by IRC)

IRC TV ATTENUATOR
Type QJ-3 — FOR ADJUSTMENT OF SIGNAL INPUT



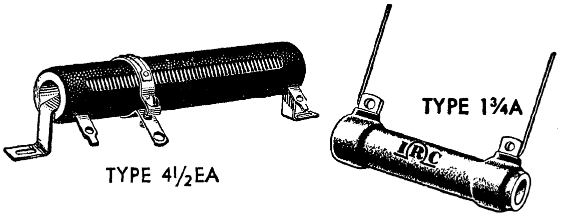
Where excessive signal strength causes poor reception, IRC's Type QJ-3 TV Attenuator readily permits adjustment of signal input at the set. This attenuator has been successfully used to reduce or correct such undesirable conditions as: Adjacent channel interference — Background pictures on weaker stations — Horizontal or vertical patterns in picture — Poor picture definition — Annoying hum or buzz — Picture and sound breakover. Type QJ-3 is easily installed in any TV set.
List $3.30

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

IRC POWER RESISTORS

Preferred for Performance

IRC FIXED AND ADJUSTABLE POWER WIRE WOUND RESISTORS



IRC Power Wire Wounds are rugged resistors specially engineered for dependable heavy duty performance. They are full size, thus continuous operation at full rated power can be maintained. Derating at high resistance values is unnecessary. Special IRC cement coating is noted for its rapid heat dissipation, and protection against humidity. Operating temperatures are lower, thus assuring long life.

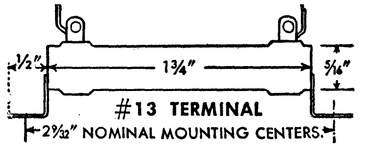
All terminals are hot tin dipped for easy soldering. 10 and 20 watt sizes use combination lead and lug terminal from which lugs may be cut for tight space applications. Clear, permanent markings show type, size, watts and resistance. Tolerances: Fixed Types—standard ± 5% for 50 ohms and over, ± 10% below 50 ohms. Adjustable Types—standard ± 10%.

FIXED TYPES

TYPE 1¾A—10 WATTS

formerly type AB

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	3160	100	316	1,000	100	7,500	36
1.5	2580	125	283	1,100	95	8,000	35
2	2235	150	258	1,200	91	8,500	34
3	1825	200	223	1,250	89	9,000	33
4	1580	225	211	1,450	83	10,000	31
5	1410	250	200	1,500	81	11,000	30
7.5	1150	300	182	1,750	75	12,000	28
10	1000	350	169	2,000	70	12,500	28
12	913	400	158	2,250	66	13,500	27
15	816	450	149	2,500	63	14,300	26
20	707	500	141	3,000	57	15,000	25
25	632	600	129	3,500	53	16,000	25
30	577	700	119	4,000	50	17,500	23
35	535	750	115	4,500	47	18,000	23
40	500	800	111	5,000	44	20,000	22
50	447	900	105	6,000	40	22,500	21
75	365			7,000	37	25,000	20



SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$0.75
1,100 to 5,000 ohms	.80
6,000 to 10,000 ohms	.92
11,000 to 20,000 ohms	1.03
22,500 to 25,000 ohms	1.08
ZO Brackets (not included with resistor)	.12

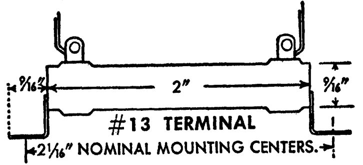
TYPE 2D—20 WATTS

formerly type DG

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	4470	100	447	500	200	1,200	129
5	2000	150	365	650	175	1,250	126
10	1415	200	316	700	169	1,500	115
25	894	250	282	750	163	1,750	107
50	633	300	258	800	158	1,850	104
75	517	350	238	850	153	2,000	100
		400	223	1,000	141		

TYPE 2D—20 WATTS (Cont'd)

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
2,250	94	4,500	66	9,000	47	20,000	31
2,400	91	5,000	63	10,000	44	25,000	28
2,500	89	6,000	57	11,000	42	30,000	25
2,750	85	7,000	53	12,000	40	35,000	23
3,000	81	7,500	51	12,500	40	40,000	22
3,500	75	8,000	50	15,000	36	45,000	21
4,000	70	8,500	48			50,000	20



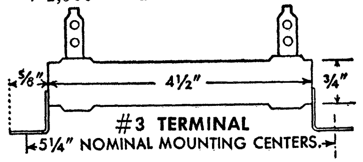
SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$0.95
1,200 to 5,000 ohms	.97
6,000 to 10,000 ohms	1.12
11,000 to 20,000 ohms	1.20
25,000 to 40,000 ohms	1.37
45,000 to 50,000 ohms	1.58
Z1 Brackets (not included with resistor)	.12

TYPE 4½E—50 WATTS

formerly type EP

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	7070	100	707	3,000	129	12,500	63
2	5000	150	577	4,000	111	15,000	57
3	4080	200	500	5,000	100	20,000	50
4	3535	250	447	6,000	91	25,000	44
5	3160	500	316	7,000	84	30,000	40
10	2235	750	258	7,500	81	35,000	37
25	1415	800	250	8,000	79	40,000	35
50	1000	1,000	223	10,000	70	50,000	31
75	816	1,500	182	12,000	64	60,000	28
		2,000	158			75,000	25
		2,500	141			0.1 meg	22



SLOTTED BRACKETS PERMIT ±³⁄₁₆" VARIATION.

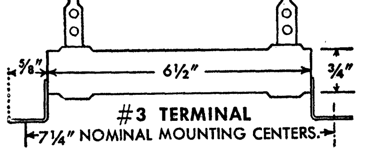
PRICES	LIST
1 to 4 ohms	$2.25
5 to 1,000 ohms	1.63
1,500 to 5,000 ohms	1.75
6,000 to 10,000 ohms	1.92
12,000 to 20,000 ohms	2.08
25,000 to 40,000 ohms	2.33
50,000 to 60,000 ohms	2.58
75,000 ohms	2.90
0.1 megohm	3.20

Z2 Brackets included with resistor.

TYPE 6½E—80 WATTS

formerly type ES

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
5	4000	500	400	5,000	127	25,000	57
10	2830	750	327	6,000	115	30,000	52
25	1790	1,000	283	7,500	103	40,000	45
50	1265	1,500	227	8,000	100	50,000	40
100	895	2,000	200	10,000	89	60,000	36
200	632	2,500	179	15,000	73	75,000	33
250	565	3,000	163	20,000	63	0.1 meg.	28
		4,000	141				



SLOTTED BRACKETS PERMIT ±³⁄₁₆" VARIATION.

POWER RESISTORS

Preferred for Performance

TYPE 6½E—80 WATTS (Cont'd)

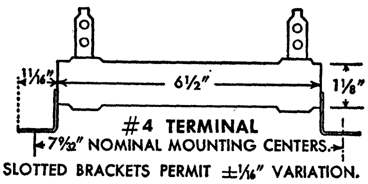
PRICES	LIST
5 to 1,000 ohms	$2.00
1,500 to 5,000 ohms	2.08
6,000 to 10,000 ohms	2.25
15,000 to 20,000 ohms	2.45
25,000 to 40,000 ohms	2.78
50,000 to 60,000 ohms	2.87
75,000 ohms	3.22
0.1 megohm	3.58

Z2 Brackets included with resistor.

TYPE 6½H—100 WATTS

formerly type HA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	10,000	50	1,414	1,250	282	7,500	115
2	7,070	75	1,155	1,500	258	10,000	100
3	5,770	100	1,000	2,000	223	15,000	81
4	5,000	125	895	2,500	200	20,000	70
5	4,470	150	816	3,000	182	25,000	63
10	3,160	250	632	5,000	141	30,000	57
25	2,000	500	447			40,000	50
		750	365			50,000	44
		1,000	316			60,000	40
						75,000	36
						0.1 meg	31


1⅟₁₆"
6½"
1⅛"
#4 TERMINAL
7⁹⁄₃₂" NOMINAL MOUNTING CENTERS.
SLOTTED BRACKETS PERMIT ±⅟₁₆" VARIATION.

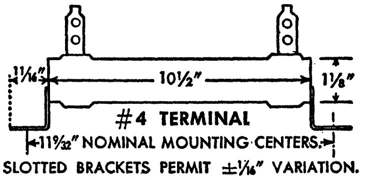
PRICES	LIST
1 to 4 ohms	$3.37
5 to 1,000 ohms	2.42
1,250 to 5,000 ohms	2.53
7,500 to 10,000 ohms	2.70
15,000 to 20,000 ohms	2.97
25,000 to 40,000 ohms	3.20
50,000 to 60,000 ohms	3.37
75,000 ohms	3.58
0.1 megohm	3.80

Z3 Brackets included with resistor.

TYPE 10½H—200 WATTS

formerly type HO

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	14,140	75	1,630	1,500	365	20,000	100
2	10,000	100	1,414	2,000	316	25,000	89
3	8,160	150	1,150	2,500	283	30,000	81
4	7,070	250	895	3,000	258	40,000	70
5	6,320	500	632	5,000	200	50,000	63
10	4,470	750	516	7,500	163	60,000	57
25	2,830	1,000	447	10,000	141	75,000	51
50	2,000			15,000	115	0.1 meg	44


1⅟₁₆"
10½"
1⅛"
#4 TERMINAL
11⁹⁄₃₂" NOMINAL MOUNTING CENTERS.
SLOTTED BRACKETS PERMIT ±⅟₁₆" VARIATION.

PRICES	LIST
1 to 5 ohms	$4.53
10 to 1,000 ohms	3.22
1,500 to 5,000 ohms	3.30
7,500 to 10,000 ohms	3.53
15,000 to 20,000 ohms	3.77
25,000 to 40,000 ohms	3.90
50,000 to 60,000 ohms	4.03
75,000 ohms	4.25
0.1 megohm	4.53

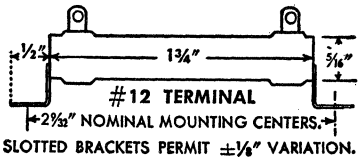
Z3 Brackets included with resistor.

ADJUSTABLE TYPES

TYPE 1¾AA—10 WATTS

formerly type ABA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	3160	50	447	750	115	3,000	57
2	2235	75	365	800	111	3,500	53
3	1825	100	316	1,000	100	4,000	50
5	1410	150	258	1,250	89	4,500	47
7.5	1150	200	223	1,450	83	5,000	44
10	1000	250	200	1,500	81	6,000	40
15	816	300	182	2,000	70	7,000	37
20	707	350	169	2,250	66	7,500	36
25	632	400	158	2,500	63	8,000	35
		500	141			8,500	34
		600	129			9,000	33
						10,000	31

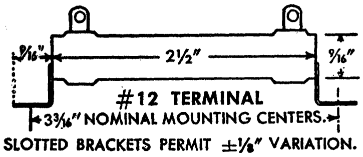

½"
1¾"
⁵⁄₁₆"
#12 TERMINAL
2²⁵⁄₃₂" NOMINAL MOUNTING CENTERS.
SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$1.47
1,250 to 5,000 ohms	1.53
6,000 to 10,000 ohms	1.63
Z0 Brackets (not included with resistor)	.12

TYPE 2½DA—25 WATTS

formerly type DHA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	5000	50	707	1,000	158	4,500	74
2	3530	75	577	1,250	141	5,000	70
3	2880	100	500	1,500	129	6,000	64
5	2230	150	408	2,000	111	7,000	59
7.5	1825	200	353	2,250	105	7,500	57
10	1580	250	316	2,500	100	8,000	55
15	1290	300	289	3,000	91	9,000	52
20	1117	400	250	3,500	84	10,000	50
25	1000	500	223	4,000	79	12,000	45
		750	182			15,000	40
		800	176			20,000	35
						25,000	31


⁹⁄₁₆"
2½"
⁹⁄₁₆"
#12 TERMINAL
3³⁄₁₆" NOMINAL MOUNTING CENTERS.
SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

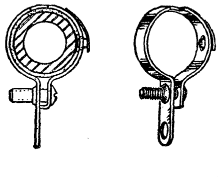
PRICES	LIST
1 to 1,000 ohms	$1.87
1,250 to 5,000 ohms	1.88
6,000 to 10,000 ohms	2.03
12,000 to 20,000 ohms	2.08
25,000 ohms	2.28

Z1 Brackets included with resistor.

TYPE X BANDS

Adjustable Bands designated as Type X feature stainless steel spring with silver contact button. Cannot corrode—constant pressure is assured. Type 1¾AA Resistor because of its small size is furnished with a special adjustable band.

Resistor	Band	List
1¾AA	special "A"	20¢
2½DA	X2	25¢
4½EA, 6½EA	X3	25¢
6½HA, 10½HA	X4	42¢



IRC

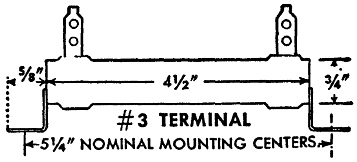
POWER RESISTORS

Preferred for Performance

TYPE 4½EA—50 WATTS

formerly type EPA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	7070	150	577	2,500	141	9,000	74
2	5000	200	500	3,000	129	10,000	70
3	4080	250	447	3,500	119	12,000	64
4	3535	300	408	4,000	111	15,000	57
5	3160	400	353	4,500	105	20,000	50
10	2235	500	316	5,000	100	25,000	44
25	1415	750	258	6,000	91	30,000	40
50	1000	800	250	7,000	84	40,000	35
75	816	1,000	223	7,500	81	50,000	31
100	707	1,250	200	8,000	79	60,000	28
		1,500	182			75,000	25
		2,000	158			80,000	25
		2,250	149			0.1 meg	22



SLOTTED BRACKETS PERMIT ±3/16" VARIATION.

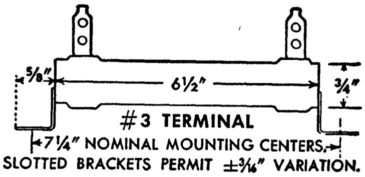
PRICES	LIST
1 to 4 ohms	$3.00
5 to 1,000 ohms	2.37
1,250 to 5,000 ohms	2.47
6,000 to 10,000 ohms	2.63
12,000 to 20,000 ohms	2.83
25,000 to 40,000 ohms	3.08
50,000 to 60,000 ohms	3.30
75,000 to 80,000 ohms	3.67
0.1 megohm	3.92

Z2 Brackets included with resistor.

TYPE 6½EA—80 WATTS

formerly type ESA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	8950	300	516	3,500	151	15,000	73
2	6330	400	448	4,000	141	20,000	63
3	5160	500	400	4,500	133	25,000	57
4	4470	750	327	5,000	127	30,000	52
5	4000	800	316	6,000	115	35,000	48
10	2830	1,000	283	7,000	107	40,000	45
15	2310	1,250	253	7,500	103	45,000	42
25	1790	1,500	227	8,000	100	50,000	40
50	1265	2,000	200	9,000	94	60,000	36
100	895	2,250	189	10,000	89	80,000	32
200	632	2,500	179	12,000	82	0.1 meg	28
250	565	3,000	163				



SLOTTED BRACKETS PERMIT ±3/16" VARIATION.

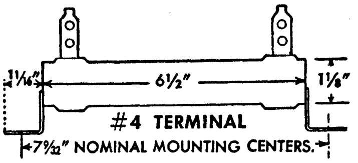
PRICES	LIST
1 to 4 ohms	$3.53
5 to 1,000 ohms	2.75
1,250 to 5,000 ohms	2.83
6,000 to 10,000 ohms	3.00
12,000 to 20,000 ohms	3.20
25,000 to 40,000 ohms	3.53
45,000 to 60,000 ohms	3.62
80,000 ohms	3.97
0.1 megohm	4.33

Z2 Brackets included with resistor.

TYPE 6½HA—100 WATTS

formerly type HAA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	10,000	200	707	3,000	182	25,000	63
2	7,070	250	632	4,000	158	30,000	57
3	5,770	400	500	5,000	141	40,000	50
4	5,000	500	447	6,000	129	50,000	44
5	4,470	750	365	7,500	115	60,000	40
10	3,160	1,000	316	8,000	111	75,000	36
25	2,000	1,500	258	10,000	100	0.1 meg	31
50	1,414	2,000	223	15,000	81		
100	1,000	2,500	200	20,000	70		



SLOTTED BRACKETS PERMIT ±1/16" VARIATION.

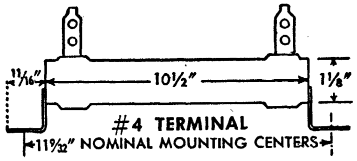
PRICES	LIST
1 to 4 ohms	$4.53
5 to 1,000 ohms	3.58
1,500 to 5,000 ohms	3.67
6,000 to 10,000 ohms	3.87
15,000 to 20,000 ohms	4.12
25,000 to 40,000 ohms	4.37
50,000 to 60,000 ohms	4.53
75,000 ohms	4.75
0.1 megohm	4.95

Z3 Brackets included with resistor.

TYPE 10½HA—200 WATTS

formerly type HOA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	14,140	25	2,830	2,000	316	20,000	100
2	10,000	50	2,000	2,500	283	25,000	89
3	8,160	100	1,414	3,000	258	30,000	81
4	7,070	250	895	5,000	200	40,000	70
5	6,320	500	632	10,000	141	50,000	63
10	4,470	1,000	447	15,000	115	60,000	57
		1,500	365			75,000	51
						0.1 meg	44



SLOTTED BRACKETS PERMIT ±1/16" VARIATION.

PRICES	LIST
1 to 5 ohms	$5.67
10 to 1,000 ohms	4.37
1,500 to 5,000 ohms	4.45
10,000 ohms	4.70
15,000 to 20,000 ohms	4.92
25,000 to 40,000 ohms	5.03
50,000 to 60,000 ohms	5.17
75,000 ohms	5.42
0.1 megohm	5.67

Z3 Brackets included with resistor.

RESISTORS

Preferred for Performance

IRC

4-WATT POWER RESISTOR WITH AXIAL LEADS

IRC
PW 4 WATT

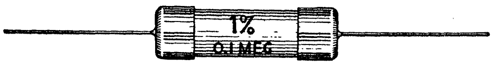
IRC's PW4 4-watt Power Resistor is a completely insulated unit molded in high temperature plastic. Wire element is uniformly wound on glass fibre core. Standard resistance tolerance is 10% (5% tolerance available on special order). Each PW4 Resistor is prominently stamped with resistance value, tolerance and wattage rating. Sturdy axial leads are 1½″ long. Body dimensions: 1¾″ long by 21/64″ diameter.

List $0.49

STANDARD STOCK VALUES OF TYPE PW4

Resistance in Ohms	Tolerance 10% Max. M.A.	Resistance in Ohms	Max. M.A.
1	2000	300	115
2	1415	400	100
3	1155	500	89
4	1000	750	73
5	895	1000	63
10	633	1250	56
15	517	1500	51
20	448	2000	44
25	400	2500	40
50	283	3000	36
75	231	4000	31
100	200	5000	28
150	163	7500	23
200	141	8200	22
250	126		

CLOSE TOLERANCE PRECISTORS



New IRC PRECISTORS are deposited carbon precision resistors offering a unique combination of close tolerance, stability and economy. Pure crystalline carbon is bonded to selected ceramic cores producing a resistor ideally suited to the requirements of instrumentation, advanced electronics and critical television circuits. Guaranteed accuracy ± 1%. DCF is rated at 1 watt. DCH is rated at 2 watts.

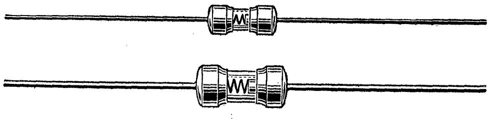
IRC PRECISTORS

IRC PRECISTORS are specially packaged in plastic tubes for protection.

STANDARD VALUES

Range Ohms	List	Range Ohms	List	Range Megohms	List	Range Megohms	List
TYPE DCF		3,000	$1.25	0.10	$1.25	4.00	$1.25
100	$1.25	4,000	1.25	0.15	1.25	5.00	1.50
200	1.25	5,000	1.25	0.20	1.25	**TYPE DCH**	
250	1.25	10,000	1.25	0.25	1.25	0.5	$1.50
300	1.25	15,000	1.25	0.30	1.25	1.0	1.50
400	1.25	20,000	1.25	0.40	1.25	1.5	1.50
500	1.25	25,000	1.25	0.50	1.25	2.0	1.50
1,000	1.25	30,000	1.25	1.00	1.25	3.0	1.50
1,500	1.25	40,000	1.25	1.50	1.25	4.0	1.50
2,000	1.25	50,000	1.25	2.00	1.25	5.0	2.00
2,500	1.25			2.50	1.25	10.0	2.50
				3.00	1.25	15.0	2.50
						20.0	3.00

MICROSTAK SELENIUM DIODES



Type GA Microstak Diodes for use in low current circuits where very high back resistance and low forward resistance are required. Miniature selenium cells with outstanding performance characteristics, they are ideal for such applications as A. V. C., switching, blocking and bias supplies. Design and small size give high frequency performance not found in conventional cells — tests prove their successful performance in circuit applications up to 1 megacycle. Hermetically sealed to assure stable operation under high humidity, dust, fumes and changing pressures.

Dimensions: (Type 6GA1) Length of leads — 1½″. Body length — .450″. Diameter — .145″. (Type 9GA1) Length of leads—1½″. Body length—.500″. Diameter — .210″.

TYPE 6GA1

Stock No. 6GA1-2B. Minimum forward current (at 2 V.D.C.) is 0.5 M.A. and corresponding resistance, 4000 ohms. Maximum inverse current (at 20 V.D.C.) is 20 microamperes and corresponding resistance, 1 megohm. Peak inverse volts —36. Continuous inverse volts —22. Maximum A.C. input (RMS volts with resistive load only) —26. Temperature range is —55°C to +90°C. Shunt capacitance — approximately 25 mmf (measured with two plates back-to-back on 1000 cycle bridge). **List $1.67**

Stock No. 6GA1-3C. Minimum forward current (at 2 V.D.C.) is 1 M.A. and corresponding resistance, 2000 ohms. Maximum inverse current (at 20 V.D.C.) is 10 microamperes and corresponding resistance, 2 megohms. **List $2.25**

TYPE 9GA1

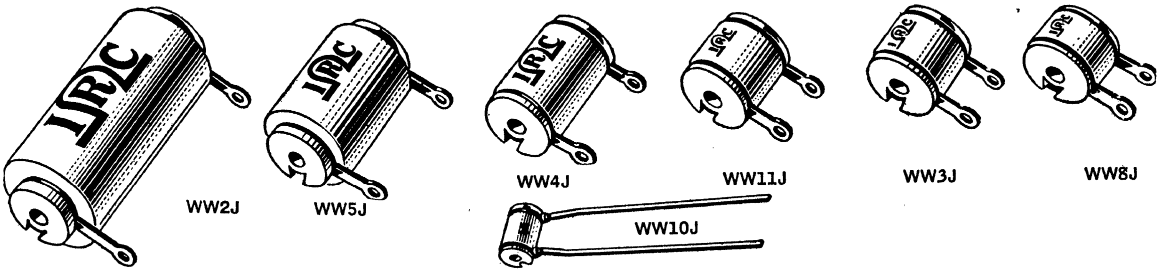
Stock No. 9GA1-2B. Characteristics are the same as the 6GA1-2B. **List $1.50**

Stock No. 9GA1-3C. Characteristics are the same as the 6GA1-3C. **List $2.04**

IRC PRECISION RESISTORS

Preferred for Performance

PRECISION WIRE WOUND RESISTORS



A line of precision wire wound resistors for both old and new applications. Completely interchangeable with the long established and familiar types WW-2, WW-3, WW-4, and WW-5 plus new sizes all surpassing MIL-R-93A characteristic E specification.

Winding technique developed by IRC engineers provides winding control that substantially eliminates the effect of the human element thus eliminating possibility of shorted turns or winding strains. All wire used in the construction of precision resistors is subjected to rigid insulation tests of the enamel coating. Particular attention is given to insure transfer of wire to winding form without strain or break in insulation. Many production tests insure high quality in the finished resistor.

The winding is multiple vacuum impregnated with a new compound developed by IRC chemists, which has the unique characteristic of remaining approximately the same consistency throughout the entire range of temperature to which the resistor may be subjected. It is neither glassy hard nor tacky soft under any condition so that wire strains are minimized. This is conducive to a higher degree of stability and freedom from noise. This impregnant also provides a very excellent humidity protection to insure long life under all environmental conditions.

Tolerance—1% is standard. For special tolerance on all types except WW-10J, add to prices shown as follows: Add 10% for ½% tolerance (2 ohms and over); add 15% for ¼% tolerance (5 ohms and over); add 25% for 1/10% tolerance (20 ohms and over). On Type WW-10J, add 10% for ½% tolerance (65 ohms and over); add 15% for ¼% tolerance (200 ohms and over); add 25% for 1/10% tolerance (1500 ohms and over).

Temperature Coefficient—Minimum temperature coefficient of .003% per degree C, from 0°C to 100°C, is standard on all IRC Wire Wound Precision Resistors.

SPECIFICATIONS

IRC TYPE	WW2J	WW3J	WW4J
JAN TYPE	RB14	RB11	RB12
MIL TYPE	RB19	RB16	RB17
DIMENSIONS	2⅛" x $\frac{22}{32}$"	$\frac{9}{16}$" x $\frac{19}{32}$"	$\frac{31}{32}$" x $\frac{19}{32}$"
MIN. VALUE	0.1 ohm	0.1 ohm	0.1 ohm
MAX. VALUE	6.0 meg.	0.225 meg.	0.9 meg.
MAX. MIL OR JAN VALUE	4.0 meg.	0.185 meg.	0.3 meg.
TERMINALS	Lugs	Lugs	Lugs

IRC TYPE	WW5J	WW8J	WW10J	WW11J
JAN TYPE	RB13	RB10		RB11
MIL TYPE	RB18	RB15		RB16
DIMENSIONS	1¼" x $\frac{25}{32}$"	$\frac{15}{32}$" x $\frac{19}{32}$"	$\frac{13}{32}$" x $\frac{9}{32}$"	$\frac{21}{32}$" x $\frac{19}{32}$"
MIN. VALUE	0.1 ohm	0.1 ohm	10 ohm	0.1 ohm
MAX. VALUE	2.7 meg.	.225 meg.	.15 meg.	0.45 meg.
MAX. MIL OR JAN VALUE	0.75 meg.	0.185 meg.		0.3 meg.
TERMINALS	Lugs	Lugs	Leads	Lugs

STANDARD VALUES AND PRICES
IRC PRECISION RESISTORS

STANDARD VALUE	WW2J List Price	WW3J WW4J WW5J List Price	WW10J List Price
0.1 ohm		$2.03	
0.2 ohm		2.03	
0.5 ohm		2.03	
1.0 ohm		2.03	
5 ohms		2.17	
10 ohms		2.17	$1.70
25 ohms		2.17	1.70
50 ohms		2.17	1.70
100 ohms		2.17	1.70
200 ohms		2.17	1.70
250 ohms		2.17	1.70
300 ohms		2.17	1.70
500 ohms		2.17	1.70
1,000 ohms		2.17	1.70
1,500 ohms		2.20	1.78
2,000 ohms		2.20	1.78
2,500 ohms		2.20	1.78
3,000 ohms		2.20	1.78
3,500 ohms		2.20	1.78
4,000 ohms		2.20	1.78
5,000 ohms		2.20	1.78
7,500 ohms		2.20	1.78
10,000 ohms		2.20	1.78
12,500 ohms		2.37	1.97
15,000 ohms		2.37	1.97
20,000 ohms		2.37	1.97
22,500 ohms		2.37	1.97
25,000 ohms		2.37	1.97
30,000 ohms		2.53	1.97
40,000 ohms		2.53	1.97
50,000 ohms		2.53	2.13
60,000 ohms		2.97	2.13
75,000 ohms		2.97	2.30
0.1 megohm		3.27	
0.125 megohm		3.73	
0.15 megohm		3.73	
0.175 megohm		4.73	
0.2 megohm		4.73	
0.225 megohm		5.13*	
0.25 megohm		5.13	
0.3 megohm		5.83	
0.4 megohm		6.20	
0.5 megohm		7.10**	
0.6 megohm	$ 9.20	7.61†	
0.75 megohm	10.10	9.00	
0.9 megohm	12.78	10.38	
1.0 megohm	12.78	11.22	
1.5 megohm	20.43		
2.0 megohms	26.57		
2.5 megohms	33.13		

*Max. Stock Value—WW3J. **Max. Stock Value—WW4J.
†Min. Stock Value—WW5J.

VITROHM RESISTORS

WARD LEONARD

Wire wound resistors, sturdy construction, using low temperature coefficient materials. Coated with Ward Leonard's own crazeless Green Enamel.

5 WATTS Size—1" x 5/16" TYPE 5F

Ohms	M.A.	List Price	Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	2230	$0.67	100	223	$0.67	1250	63	$0.72
1.5	1820	.67	125	200	.67	1500	57	.72
2	1580	.67	150	182	.67	1750	53	.72
3	1290	.67	200	158	.67	2000	50	.72
4	1117	.67	250	141	.67	2250	47	.72
5	1000	.67	300	129	.67	2500	45	.72
7.5	811	.67	350	119	.67	3000	40	.72
10	707	.67	400	112	.67	3500	37	.72
12	644	.67	450	105	.67	4000	35	.72
15	577	.67	500	100	.67	4500	33	.72
20	500	.67	600	91	.67	5000	31	.72
25	450	.67	700	84	.67	6000	28	.78
30	408	.67	750	81	.67	7000	26	.78
35	378	.67	800	79	.67	7500	25	.78
40	353	.67	900	74	.67	8000	25	.78
50	316	.67	1000	70	.67	9000	23	.78
75	257	.67	1100	67	.72	10000	22	.78
			1200	64	.72			

10 WATTS Type 10F–*Fixed* Type 10A–*Adj.*

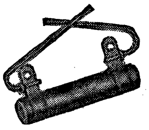
Size—1¾" x 5/16" Mtg. Centers—2⅛"

Ohms	M.A.	List Price		Ohms	M.A.	List Price	
		Fixed	Adj.			Fixed	Adj.
1	3160	$0.75	$1.47	1200	91	$0.80	*
1.5	2580	.75	*	1250	89	.80	$1.53
2	2235	.75	1.47	1500	81	.80	1.53
3	1825	.75	1.47	1750	75	.80	*
4	1580	.75	*	2000	70	.80	1.53
5	1415	.75	1.47	2250	66	.80	*
7.5	1155	.75	1.47	2500	63	.80	1.53
10	1000	.75	1.47	3000	58	.80	1.53
12	913	.75	*	3500	53	.80	1.53
15	815	.75	1.47	4000	50	.80	1.53
20	707	.75	1.47	4500	47	.80	1.53
25	630	.75	1.47	5000	45	.80	1.53
30	577	.75	*	6000	41	.92	1.63
35	534	.75	*	7000	38	.92	1.63
40	500	.75	*	7500	36	.92	1.63
50	450	.75	1.47	8000	35	.92	1.63
75	365	.75	1.47	8500	34	.92	1.63
100	316	.75	1.47	9000	33	.92	1.63
125	283	.75	*	10000	32	.92	1.63
150	258	.75	1.47	11000	30	1.03	*
200	224	.75	1.47	12000	29	1.03	*
225	211	.75	*	12500	28	1.03	*
250	200	.75	1.47	13500	27	1.03	*
300	182	.75	1.47	15000	25.5	1.03	*
350	169	.75	1.47	16000	25	1.03	*
400	158	.75	1.47	17500	24	1.03	*
450	149	.75	*	18000	23	1.03	*
500	142	.75	1.47	20000	22	1.03	*
600	129	.75	1.47	22500	21	1.08	*
700	120	.75	*	25000	20	1.08	*
750	115	.75	1.47	30000	18	1.22	*
800	112	.75	1.47	35000	17	1.22	*
900	105	.75	*	40000	16	1.22	*
1000	100	.75	1.47	45000	15	1.22	*
1100	95	.80	*	50000	14	1.22	*

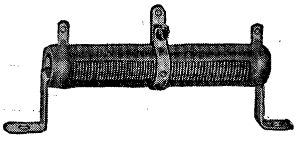
20 WATTS TYPE 20F

Size—2" x 7/16" Mtg. Centers 2⅝"

Ohms	M.A.	List Price	Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	4480	$0.95	850	153	$0.95	8000	50	$1.12
3	2580	.95	1000	141	.95	10000	45	1.12
5	2000	.95	1200	130	.97	12500	40	1.20
10	1410	.95	1250	125	.97	15000	36	1.20
15	1150	.95	1500	115	.97	20000	32	1.20
25	900	.95	1750	107	.97	25000	28	1.37
50	630	.95	1850	104	.97	30000	26	1.37
75	517	.95	2000	100	.97	35000	24	1.37
100	450	.95	2250	94	.97	40000	22	1.37
150	365	.95	2400	91	.97	45000	21	1.58
175	340	.95	2500	90	.97	50000	20	1.58
200	320	.95	2750	85	.97	55000	18	1.58
250	285	.95	3000	81	.97	60000	16	1.58
300	258	.95	3500	76	.97	65000	15	1.83
350	240	.95	4000	70	.97	70000	14	1.83
400	224	.95	4500	67	.97	75000	13	1.83
500	200	.95	5000	63	.97	80000	12	1.83
650	175	.95	6000	57	1.12	85000	11.5	2.11
700	169	.95	7000	53	1.12	90000	11	2.11
750	163	.95	7500	51	1.12	95000	10.5	2.11
800	155	.95				100000	10	2.11



Types 5F, 10F, and 20F. Furnished with wire terminal leads. Brackets supplied on request.



Type 10A, 25A, 50A, 80A, 100A, 160A, 200A. Furnished with mounting brackets and one adjustable band.

Order by Type Number and Resistance Value.

Asterisks (*) in Tables Indicate that Resistors are not Stock Items.

ADJUSTABLE BANDS

Screw Driver Type

Size of Resistor	Cat. No.	Price
10 Watts	507-685	$0.25
25 Watts	507-686	.25
50 Watts	507-688	.25
80 Watts	507-688	.25
100 Watts	507-690	.42
160 Watts	507-690	.42
200 Watts	507-690	.42

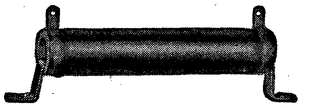
Bakelite Knob Type

Size of Resistor	Cat. No.	Price
25 Watts	507-691	$0.36
50 Watts	507-693	.36
80 Watts	507-693	.36
100 Watts	507-695	.47
160 Watts	507-695	.47
200 Watts	507-695	.47

80 WATTS TYPE 80A

Size—6½" x ¾" Mtg. Centers—7¼"

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	8660	$3.53	3000	158	$2.83
2	6120	3.53	3500	146	2.83
3	5000	2.72	4000	137	2.83
4	4330	2.72	4500	129	2.83
5	3870	2.72	5000	122	2.83
10	2740	2.72	6000	111	3.00
15	2235	2.72	7000	103	3.00
25	1730	2.72	7500	100	3.00
50	1220	2.72	8000	97	3.00
75	1000	2.72	9000	91	3.00
100	866	2.72	10000	87	3.00
200	612	2.72	15000	71	3.17
250	550	2.72	20000	61	3.17
300	500	2.72	25000	55	3.50
400	433	2.72	30000	50	3.50
500	387	2.72	35000	43	3.50
750	315	2.72	40000	37	3.50
800	305	2.72	45000	33	3.61
1000	274	2.72	50000	30	3.61
1250	245	2.72	60000	25	3.61
1500	224	2.83	70000	21	3.94
2000	195	2.83	80000	19	3.94
2250	183	2.83	100000	15	4.33
2500	173	2.83			



HEAVY DUTY RESISTORS

Types 25F, 50F, 100F, 160F, 200F

Furnished with lug terminals and mounting brackets.

25 WATTS Type 25F–*Fixed* Type 25A–*Adj.*

Size—2" x ⅝" Mtg. Centers—2⅝"

Ohms	M.A.	List Price		Ohms	M.A.	List Price	
		Fixed	Adj.			Fixed	Adj.
1	5000	$0.97	$1.86	2500	100	$1.03	$1.89
2	3535	.97	1.86	3000	90	1.03	1.89
3	2890	.97	1.86	3500	85	1.03	1.89
4	2500	.97	*	4000	80	1.03	1.89
5	2235	.97	1.86	4500	74	*	1.89
7.5	1825	*	1.86	5000	70	1.03	1.89
10	1580	.97	1.86	6000	65	1.14	2.03
15	1290	.97	1.86	7000	60	*	2.03
25	1000	.97	1.86	7500	58	1.14	2.03
50	710	.97	1.86	8000	56	*	2.03
75	580	.97	1.86	8500	54	1.14	2.03
100	500	.97	1.86	9000	52	*	2.03
150	410	.97	1.86	10000	50	1.14	2.03
200	354	.97	1.86	12000	46	1.19	2.11
250	315	.97	1.86	15000	41	1.19	2.11
300	289	.97	1.86	20000	34	1.19	2.11
400	250	.97	1.86	25000	32	1.36	2.28
500	224	.97	1.86	30000	29	1.36	*
750	182	.97	1.86	35000	27	1.36	*
800	177	.97	1.86	40000	25	1.36	*
850	170	.97	1.86	50000	20	1.56	*
1000	158	.97	1.86	60000	17	1.56	*
1250	140	1.03	1.89	70000	14	1.83	*
1500	129	1.03	1.89	75000	13	1.83	*
2000	112	1.03	1.89	80000	12	1.83	*
2250	105	*	1.89	100000	10	2.11	*

50 WATTS Type 50F–*Fixed* Type 50A–*Adj.*

Size—4½" x ¾" Mtg. Centers—5⅛"

1	7070	$2.25	$3.00	4500	105	*	$2.47
2	5000	1.63	2.37	5000	100	$1.75	2.47
3	4080	1.63	2.37	6000	91	1.92	2.63
4	3535	1.63	2.37	7500	82	1.92	2.63
5	3160	1.63	2.37	8000	79	1.92	2.63
10	2235	1.63	2.37	9000	75	*	2.63
25	1415	1.63	2.37	10000	71	1.92	2.63
50	1000	1.63	2.37	12000	65	2.08	2.83
75	815	1.63	2.37	12500	63	2.08	*
100	707	1.63	2.37	15000	58	2.08	2.83
150	575	1.63	2.37	20000	50	2.08	2.83
200	500	1.63	2.37	25000	45	2.33	3.08
250	445	1.63	2.37	30000	41	2.33	3.08
300	408	1.63	2.37	35000	38	2.33	*
400	353	1.63	2.37	40000	35	2.33	3.08
500	316	1.63	2.37	45000	33	2.58	*
750	258	1.63	2.37	50000	32	2.58	3.30
800	250	1.63	2.37	60000	29	*	3.30
1000	224	1.63	2.37	75000	23	2.92	3.67
1250	200	*	2.47	80000	21	*	3.67
1500	180	1.75	2.47	100000	17	3.20	3.92
2000	160	1.75	2.47	125000	14	3.36	*
2250	150	*	2.47	150000	12	3.50	*
2500	141	1.75	2.47	175000	10	3.64	*
3000	130	1.75	2.47	200000	9	3.78	*
3500	120	*	2.47	225000	8	4.22	*
4000	110	1.75	2.47	250000	7	4.22	*

100 WATTS Type 100F–*Fixed* Type 100A–*Adj.*

Size—6½" x 1⅛" Mtg. Centers—7¼"

1	10000	$3.37	$4.53	2500	200	$2.53	$3.67
2	7070	3.37	4.53	3000	180	2.53	3.67
3	5770	3.37	4.53	3500	170	2.53	*
4	5000	2.42	3.58	4000	158	2.53	3.67
5	4470	2.42	3.58	4500	150	2.53	3.67
10	3160	2.42	3.58	5000	141	2.53	3.67
25	2000	2.42	3.58	6000	130	*	3.87
50	1410	2.42	3.58	7500	115	2.70	3.87
75	1150	2.42	*	10000	100	2.70	3.87
100	1000	2.42	3.58	15000	80	2.97	4.12
125	895	2.42	*	20000	70	2.97	4.12
150	815	2.42	*	25000	63	3.20	4.37
200	707	*	3.58	30000	58	3.20	4.37
250	630	2.42	3.58	35000	54	3.20	*
400	500	*	3.58	40000	50	3.20	4.37
500	447	2.42	3.58	50000	45	3.37	4.53
750	365	2.42	3.58	60000	41	3.37	4.53
1000	316	2.42	3.58	70000	38	3.58	*
1250	285	2.53	*	75000	36	3.58	4.75
1500	260	2.53	3.67	100000	32	3.80	4.95
2000	225	2.53	3.67				

VITROHM RESISTORS

Order by Type Number and Resistance Value

Asterisks (*) in Tables Indicate that Resistors are not Stock Items.

WARD LEONARD

160 WATTS Type 160F–*Fixed* Type 160A–*Adj.*

Size—8½″ x 1⅛″ Mtg. Centers—9¼″

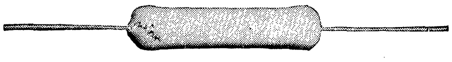
Ohms	M.A.	List Price		Ohms	M.A.	List Price	
		Fixed	Adj.			Fixed	Adj.
1	12650	$4.16	$5.33	2500	252	$3.04	$4.19
2	8940	4.16	5.33	3000	230	3.04	4.19
3	7300	4.16	5.33	3500	215	3.04	4.19
4	6320	4.16	5.33	4000	200	3.04	4.19
5	5650	4.16	5 33	4500	185	3.04	4.19
10	4000	2.98	4.14	5000	178	3.04	4.19
15	3265	2.98	4.14	7500	146	3.30	4.44
25	2525	2.98	4.14	10000	126	3.30	4.44
50	1785	2.98	4 14	15000	105	3.54	4.69
75	1460	2.98	*	20000	90	3.54	4.69
100	1265	2.98	4.14	25000	80	3.64	4.81
150	1035	2.98	*	30000	73	3.64	4.81
200	894	2.98	4.14	35000	68	3.64	*
250	800	2.98	4.14	40000	64	3.64	4.81
500	565	2.98	4.14	50000	57	3.76	4.94
750	460	2.98	*	60000	52	3.76	4.94
1000	400	2.98	4.14	75000	46	4.03	5.17
1500	326	3.04	4.19	80000	45	4.26	5.17
2000	280	3.04	4.19	100000	40	4.26	5.44

200 WATTS Type 200F–*Fixed* Type 200A–*Adj.*

Size—10½″ x 1⅛″ Mtg. Centers—11¼″

1	14140	$4.53	$5.67	3500	240	$3.30	$4.45
2	10000	4.53	5.67	4000	225	3.30	4.45
3	8162	4.53	5.67	4500	210	3.30	4.45
4	7070	4.53	5.67	5000	200	3.30	4.45
5	6320	4.53	5.67	7500	163	3.53	4.70
10	4470	3.22	4.37	10000	141	3.53	4.70
25	2825	3.22	4.37	15000	115	3.77	4.92
50	2000	3.22	4.37	20000	100	3.77	4.92
75	1630	3.22	*	25000	90	3.90	5.03
100	1414	3.22	4.37	30000	82	3.90	5.03
150	1150	3.22	*	35000	76	3.90	*
250	900	3.22	4.37	40000	71	3.90	5.03
500	632	3.22	4.37	50000	63	4.03	5.17
750	515	3.22	*	60000	58	4.03	5.17
1000	447	3.22	4.37	75000	52	4.25	5.42
1500	365	3.30	4.45	100000	45	4.53	5.67
2000	315	3.30	4.45	125000	40	*	5.67
2500	282	3.30	4.45	150000	35	*	5.67
3000	260	3.30	4.45				

AXIOHM RESISTORS



5 WATTS – TYPE 5X
10 WATTS – TYPE 10X

Vitreous enameled wire-wound resistors with 1½″ tinned copper leads for self-mounting.

The same fine materials used in the manufacture of Ward Leonard Vitrohm Resistors are used in making Axiohms.

Order by Type Number and Resistance Value.

◆

OTHER STOCK RESISTORS

Plaque Type — Available in three sizes, 25-watt, 50-watt, and 150-watt.

Disc Type — Available in 24-watt size.

Non-Inductive Type — Available in three sizes, 35-watt, 80 watt, and 160-watt.

For complete information on all our stock resistors ask for our Catalog D-130.

5 WATTS Size—1″ x 11/32″ TYPE 5X

Ohms	M.A.	List Price	Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	2230	$0.80	125	200	$0.80	1200	64	$0.86
1.5	1820	.80	150	182	.80	1250	63	.86
2	1580	.80	200	158	.80	1500	57	.86
3	1290	.80	225	148	.80	1750	53	.86
4	1117	.80	250	141	.80	2000	50	.86
5	1000	.80	300	129	.80	2250	47	.86
7.5	811	.80	350	119	.80	2500	45	.86
10	707	.80	400	112	.80	3000	40	.86
12	644	.80	450	105	.80	3500	37	.86
15	577	.80	500	100	.80	4000	35	.86
20	500	.80	600	91	.80	4500	33	.86
25	450	.80	700	84	.80	5000	31	.86
30	408	.80	750	81	.80	6000	28	.94
35	378	.80	800	79	.80	7000	26	.94
40	353	.80	900	74	.80	7500	25	.94
50	316	.80	1000	70	.80	8000	25	.94
75	257	.80	1100	67	.86	9000	23	.94
100	223	.80				10000	22	.94

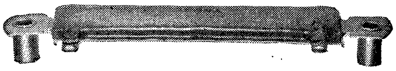
10 WATTS Size—1¾″ x 13/32″ TYPE 10X

1	3160	$0.90	300	182	$0.90	6000	41	$1.10
1.5	2580	.90	350	169	.90	7000	38	1.10
2	2235	.90	400	158	.90	7500	36	1.10
3	1825	.90	450	149	.90	8000	35	1.10
4	1580	.90	500	142	.90	8500	34	1.10
5	1415	.90	600	129	.90	9000	33	1.10
7.5	1155	.90	700	120	.90	10000	32	1.10
10	1000	.90	750	115	.90	11000	30	1.24
12	913	.90	800	112	.90	12000	29	1.24
15	815	.90	900	105	.90	12500	28	1.24
20	707	.90	1000	100	.90	13500	27	1.24
25	630	.90	1100	95	.96	15000	25.5	1.24
30	577	.90	1200	91	.96	16000	25	1.24
35	534	.90	1250	89	.96	17500	24	1.24
40	500	.90	1500	81	.96	18000	23	1.24
50	450	.90	1750	75	.96	20000	22	1.24
75	365	.90	2000	70	.96	22500	21	1.30
100	316	.90	2250	66	.96	25000	20	1.30
125	283	.90	2500	63	.96	30000	18	1.30
150	258	.90	3000	58	.96	35000	17	1.30
200	224	.90	3500	53	.96	40000	16	1.30
225	211	.90	4000	50	.96	45000	15	1.46
250	200	.90	4500	47	.96	50000	14	1.46
			5000	45	.96			

STRIPOHM RESISTORS —

30 WATTS • TYPE 30S
40 WATTS • TYPE 40S
55 WATTS • TYPE 55S
65 WATTS • TYPE 65S
75 WATTS • TYPE 75S

Vitreous enameled wire-wound resistors built on a strong refractory core, and provided with low mounting brackets. Particularly suited for applications where space is limited. Specially adapted to stacking for networks.



Order by Type Number and Resistance Value

30 WATTS • TYPE 30S

1¼″ long—Mtg. Centers 2″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	5480	$1.84	500	244	$1.84
3	3160	1.84	750	200	1.84
5	2450	1.84	1000	173	1 84
10	1730	1.84	1250	154	1.84
15	1420	1.84	1500	142	1.84
25	1095	1.84	2000	122	1.84
50	774	1.84	2500	109	1.84
100	547	1.84	3000	100	1.98
150	447	1.84	3500	92	1.98
200	387	1.84	4000	86	1.98
250	346	1.84	5000	77	1.98
400	273	1.84			

40 WATTS • TYPE 40S

2″ long—Mtg. Centers 2¾″

1	6320	$1.93	750	230	$1.93
3	3650	1.93	1000	200	1.93
5	2830	1.93	1250	180	1.93
10	2000	1.93	1500	163	1.93
15	1630	1.93	2000	141	1.93
25	1270	1.93	2500	126	1.93
50	894	1.93	3000	114	2.06
100	632	1.93	3500	106	2.06
150	510	1.93	4000	100	2.06
200	447	1.93	5000	88	2.06
250	400	1.93	7500	73	2.32
400	315	1.93	10000	63	2.32
500	283	1.93	15000	51	2.42

55 WATTS • TYPE 55S

3½″ long—Mtg. Centers 4¼″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	7420	$2.22	1250	209	$2.22
3	4280	2.22	1500	191	2.22
5	3320	2.22	2000	165	2.22
10	2350	2.22	2500	148	2.22
15	1910	2.22	3000	135	2.35
25	1480	2.22	3500	129	2.35
50	1050	2.22	4000	117	2.35
100	741	2.22	5000	104	2.35
150	604	2.22	7500	84	2.60
200	522	2.22	10000	74	2.60
250	469	2.22	15000	60	2.71
400	370	2.22	20000	52	2.82
500	331	2.22	25000	47	2.98
750	270	2.22	30000	42	3.11
1000	234	2.22			

65 WATTS • TYPE 65S

4¾″ long—Mtg. Centers 5½″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	8060	$2.53	1500	208	$2.53
3	4650	2.53	2000	180	2.53
5	3610	2.53	2500	161	2.53
10	2550	2.53	3000	146	2.66
15	2080	2.53	3500	136	2.66
25	1610	2.53	4000	127	2.66
50	1140	2.53	5000	114	2.66
100	806	2.53	7500	92	2.90
150	658	2.53	10000	82	2.90
200	570	2.53	15000	65	3.02
250	509	2.53	20000	57	3.13
400	403	2.53	25000	51	3.29
500	360	2.53	30000	46	3.43
750	294	2.53	35000	43	3.43
1000	254	2.53	40000	40	3.58
1250	228	2.53	50000	36	3.58

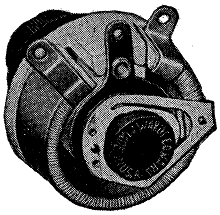
75 WATTS • TYPE 75S

6″ long—Mtg. Centers 6¾″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	8660	$2.76	2000	193	$2.76
3	5000	2.76	2500	173	2.76
5	3870	2.76	3000	158	2.89
10	2740	2.76	3500	146	2.89
15	2235	2.76	4000	137	2.89
25	1730	2.76	5000	122	2.89
50	1220	2.76	7500	100	3.13
100	866	2.76	10000	87	3.13
150	707	2.76	15000	71	3.24
200	612	2.76	20000	61	3.36
250	550	2.76	25000	55	3.52
400	433	2.76	30000	50	3.65
500	387	2.76	35000	46	3.65
750	315	2.76	40000	43	3.78
1000	274	2.76	50000	37	3.96
1250	245	2.76	60000	35	3.96
1500	224	2.76	65000	33	3.96

Vitrohm
RING RHEOSTATS

WARD LEONARD



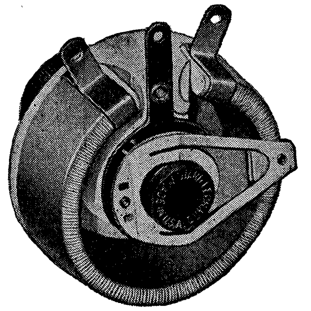
TYPE 25R

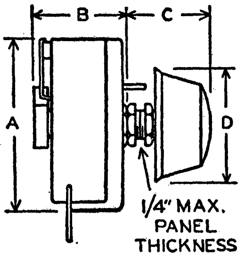
25-Watt — 50-Watt

The Ward Leonard 25-watt (Type 25R) and 50-watt (Type 50R) Type Rheostats are especially suited for use in electronic and electrical circuits where gradual and positive resistance change is essential. Balanced contact arms, self-lubricating metal graphite contact shoes, and no backlash in the drive shaft combine to assure uniform contact pressure and smooth operation.

Standard shaft length for back-of-board mounting on 1/4" panel.

TYPE 50R





DIMENSION SKETCH

SEE DIMENSIONS HEADING EACH TABLE

25 WATTS TYPE 25R — Dimensions: A-1 13/16" B-1 1/8" C-1" D-1 1/8"

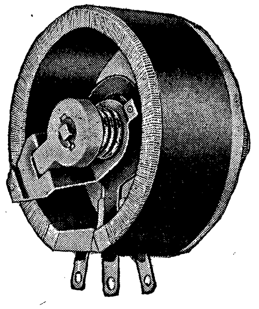
50 WATTS TYPE 50R — Dimensions: A-2 7/16" B-1 1/8" C-1 1/8" D-1 1/2"

25 WATTS TYPE 25R Current M.A.	Approx. No. of Steps	List Price	Ohms	50 WATTS TYPE 50R Current M.A.	Approx. No. of Steps	List Price
5000	27	$7.03	1	7070	49	$7.81
3540	27	6.22	2	5000	49	7.81
2880	27	6.22	3	*	*	*
*	*	*	4	3540	59	7.03
2040	81	6.22	6	2880	108	7.03
1770	90	6.22	8	2500	113	7.03
1580	90	6.22	10	2230	150	7.03
1280	103	6.22	15	1810	150	7.03
1000	103	6.22	25	1415	188	7.03
840	108	6.22	35	1190	119	7.03
707	137	6.22	50	1000	188	7.03
574	137	6.22	75	812	188	7.03
500	171	6.22	100	707	225	7.03
407	171	6.22	150	574	225	7.03
316	240	6.22	250	447	300	7.03
267	274	6.22	350	374	338	7.03
223	308	6.22	500	316	375	7.03
181	308	6.22	750	256	450	7.39
158	390	7.03	1000	223	450	7.39
128	376	7.03	1500	181	570	7.39
100	520	7.03	2500	141	570	7.39
84	520	7.39	3500	119	713	7.81
70	520	7.39	5000	100	713	7.81
*	*	*	7500	81	855	7.81
*	*	*	10000	70	998	7.81

The Ring Rheostats shown on this page are standard values and sizes carried in stock at our factory and by our Distributors. Information concerning Rheostats of special construction available on request.

100-Watt — 150-Watt

The Ward Leonard 100-watt (Type 100R) and 150-watt (Type 150R) Ring Type Rheostats are of sturdy construction for electrical applications, such as control of fractional h.p. motors, rectifiers, voltage regulators, and some electronic circuits, such as filament and battery control.

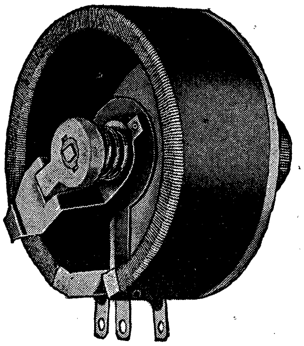


TYPE 100R

100 WATTS TYPE 100R — Dimensions: A-3 5/32" B-1 3/4" C-1 1/8" D-1 1/2"

150 WATTS TYPE 150R — Dimensions: A-3 13/16" B-2" C-1 1/8" D-1 1/2"

100 WATTS TYPE 100R Current M.A.	Approx. No. of Steps	List Price	Ohms	150 WATTS TYPE 150R Current M.A.	Approx. No. of Steps	List Price
10000	41	$11.70	1	12240	43	$14.83
7070	41	11.70	2	8660	43	14.83
5740	72	11.70	3	7070	54	14.83
4470	82	11.70	5	5470	107	14.83
3640	82	10.95	7.5	4470	107	14.83
3160	72	10.95	10	3870	107	14.03
2560	156	10.95	15	3160	107	14.03
2000	196	10.95	25	2440	204	14.03
1415	274	10.95	50	1730	245	14.03
1150	313	10.95	75	1415	286	14.03
1000	274	10.95	100	1224	367	14.03
707	313	10.95	200	866	326	14.03
574	353	10.95	300	707	408	14.03
500	392	10.95	400	612	408	14.03
447	392	10.95	500	547	489	14.03
364	464	10.95	750	447	489	14.83
316	470	11.70	1000	387	620	14.83
223	595	11.70	2000	273	775	15.61
200	744	11.70	2500	244	775	15.61
141	893	12.47	5000	173	930	16.36
115	893	13.28	7500	141	1240	17.17
100	1041	14.03	10000	122	1240	18.72



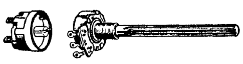
TYPE 150R

For Correct Current Control Use Ward Leonard

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CONTROLS

BLUE SHAFT RADIOHMS®



The modern, most widely accepted line of 15/16" diameter carbon type controls, constructed to meet exacting radio, television and industrial standards. Switch types are tested to assure instant and smooth, positive operation. Distinctive blue, anodized aluminum shafts, 3" long with universal fluted full length mill. Rating ½ Watt. Type BSK units have 2⅛" brass split-knurl shafts. Switches are universal DPST, easily wired for SPST or 3 wire use.

Ohm Max. Resistance	Taper or Tap	Cat. No. Plain	Cat. No. with Switch	List Price Plain	List Price with Switch
500	C1	B-4	B-4-S	$1.25	$1.75
1,000	C1	B-5	B-5-S	1.25	1.75
2,000	C1	B-6	B-6-S	1.25	1.75
2,500	C1	B-7	B-7-S	1.25	1.75
3,000	C1	B-8	B-8-S	1.25	1.75
5,000	C1	B-10	B-10-S	1.25	1.75
5,000	C2	B-11	B-11-S	1.25	1.75
5,000	C5	B-12	B-12-S	1.25	1.75
6,500	C1	B-13	B-13-S	1.25	1.75
10,000	C1	B-14	B-14-S	1.25	1.75
10,000	C2	B-15	B-15-S	1.25	1.75
10,000	C4	B-18	B-18-S	1.25	1.75
10,000	C5	B-17	B-17-S	1.25	1.75
10,000	C6	B-16	B-16-S	1.25	1.75
15,000	C6	B-20	B-20-S	1.25	1.75
20,000	C1	B-22	B-22-S	1.25	1.75
20,000	C5	B-23	B-23-S	1.25	1.75
20,000	C6	B-24	B-24-S	1.25	1.75
25,000	C1	B-26	B-26-S	1.25	1.75
25,000	C5	B-27	B-27-S	1.25	1.75
25,000	C6	B-28	B-28-S	1.25	1.75
50,000	C1	B-31	B-31-S	1.25	1.75
50,000	C2	B-32	B-32-S	1.25	1.75
50,000	25K	BT-33	BT-33-S	1.85	2.35
75,000	C1	B-35	B-35-S	1.25	1.75
100,000	C1	B-40	B-40-S	1.25	1.75
100,000	C2	B-41	B-41-S	1.25	1.75
150,000	C2	B-44	B-44-S	1.25	1.75
200,000	C1	B-46	B-46-S	1.25	1.75
250,000	C1	B-50	B-50-S	1.25	1.75
250,000	C2	B-51	B-51-S	1.25	1.75
250,000	C5	B-52	B-52-S	1.25	1.75
250,000	125K	BT-53	BT-53-S	1.85	2.35
250,000	75K	BT-55	BT-55-S	1.85	2.35
350,000	70K	BT-57	BT-57-S	1.85	2.35
½ meg.	C1	B-59	B-59-S	1.25	1.75
½ meg.	C2	B-60	B-60-S	1.00	1.50
½ meg.	C4	B-58	B-58-S	1.25	1.75
½ meg.	C5	B-61	B-61-S	1.25	1.75
½ meg.	C7	B-617	B-617-S	1.25	1.75
½ meg.	250K	BT-65	BT-65-S	1.85	2.35
½ meg.	200K	BT-66	BT-66-S	1.85	2.35
½ meg.	150K	BT-67	BT-67-S	1.85	2.35
½ meg.	50K	BT-63	BT-63-S	1.85	2.35
1 meg.	C1	B-69	B-69-S	1.25	1.75
1 meg.	C2	B-70	B-70-S	1.00	1.50
1 meg.	C4	B-744	B-744-S	1.25	1.75
1 meg.	C5	B-68	B-68-S	1.25	1.75
1 meg.	C7	B-697	B-697-S	1.25	1.75
1 meg.	½ meg.	BT-71	BT-71-S	1.85	2.35
1 meg.	200K	BT-72	BT-72-S	1.85	2.35
1 meg.	300K	BT-73	BT-73-S	1.85	2.35
1 meg.	100K	BT-74	BT-74-S	1.85	2.35
1 meg.	500K	BT-7417	BT-7417-S	1.85	2.35
2 megs.	C1	B-75	B-75-S	1.25	1.75
2 megs.	C2	B-76	B-76-S	1.25	1.75
2 megs.	C5	B-77	B-77-S	1.25	1.75
2 megs.	1 meg.	BT-78	BT-78-S	1.85	2.35
2 megs.	400K	BT-79	BT-79-S	1.85	2.35
2 megs.	600K	BT-80	BT-80-S	1.85	2.35
2 megs.	200K	BT-81	BT-81-S	1.85	2.35
2 megs.	1 meg.	BT-82	BT-82-S	1.85	2.35
2½ megs.	C1	B-83	B-83-S	1.25	1.75
3 megs.	C1	B-84	B-84-S	1.25	1.75
3 megs.	C2	B-85	B-85-S	1.25	1.75
4 megs.	C1	B-86	B-86-S	1.25	1.75
5 megs.	C1	B-87	B-87-S	1.25	1.75
7 megs.	C7	B-89	B-89-S	1.25	1.75
10 megs.	C1	B-98	B-98-S	1.25	1.75
250,000	C2	BSK-1	BSK-51-S	1.10	1.60
½ meg.	C2	BSK-60	BSK-60-S	1.10	1.60
½ meg.	100K	BTSK-66	BTSK-66-S	1.85	2.35
½ meg.	150K	BTSK-67	BTSK-67-S	1.85	2.35
1 meg.	C2	BSK-70	BSK-70-S	1.10	1.60
1 meg.	200K	BTSK-72	BTSK-72-S	1.85	2.35

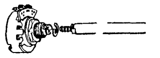
HANDY-ADASHAFT KIT

14 AB Adashaft controls, 17 shafts and couplers, and 6-"KB" switches CAT. No. AB-100. List Price $22.30

TYPE "AB" ADASHAFT RADIOHMS®

SELECT THE CONTROL
ADD-A-SHAFT TO MEET YOUR NEEDS

Adashaft Controls are now built in the popular Model "B"—15/16" construction. The basic control unit is constructed with a patented stub shaft . . . usable just this way in many cases as a short, screwdriver slotted unit. A selection of nine basic shaft types are available, ranging from ⅜" to 10" in length, including auto types, insulating nylon and many others. This original, patented Centralab construction permits instant locking . . . resulting in a solid, integral, well aligned unit. There is no price premium on Adashaft . . . you pay for exactly what you need. After adding the required shaft, the units may be converted to switch type with the new "Fastatch"† type KB line switches. All "AB" characteristics same as Model B. Packaged—singly including all data.



Ohms Max. Resistance	Taper or Tap	CRL Cat. No.	Ohms Max. Resistance	Taper or Tap	CRL Cat. No.
500	C1	AB-4	250,000	50K	ABT-54
1,000	C1	AB-5	250,000	75K	ABT-55
2,000	C1	AB-6	250,000	25K	ABT-56
2,500	C1	AB-7	350,000	70K	ABT-57
3,000	C1	AB-8	.5 megs.	C1	AB-59
4,000	C1	AB-9	.5 megs.	C2	AB-60
5,000	C1	AB-10	.5 megs.	C4	AB-58
5,000	C2	AB-11	.5 megs.	C5	AB-61
5,000	C5	AB-12	.5 megs.	C7	AB-617
6,500	C1	AB-13	.5 megs.	250K	ABT-65
10,000	C1	AB-14	.5 megs.	100K	ABT-66
10,000	C2	AB-15	.5 megs.	150K	ABT-67
10,000	C4	AB-18	.5 megs.	50K	ABT-63
10,000	C5	AB-17	.5 megs.	250K	ABT-64
10,000	C6	AB-16	.5 megs.	50K	ABT-62
15,000	C5	AB-19	1 meg.	C1	AB-69
15,000	C6	AB-20	1 meg.	C2	AB-70
20,000	C1	AB-22	1 meg.	C4	AB-744
20,000	C5	AB-23	1 meg.	C5	AB-68
20,000	C6	AB-24	1 meg.	C7	AB-697
25,000	C1	AB-26	1 meg.	500K	ABT-71
25,000	C4	AB-29	1 meg.	200K	ABT-72
25,000	C5	AB-27	1 meg.	300K	ABT-73
25,000	C6	AB-28	1 meg.	500K	ABT-74
50,000	C1	AB-31	1 meg.	100K	ABT-7417
50,000	C2	AB-32	2 megs.	C1	AB-75
50,000	C5	AB-34	2 megs.	C2	AB-76
50,000	25K	ABT-33	2 megs.	C5	AB-77
75,000	C1	AB-35	2 megs.	1 meg.	ABT-78
75,000	C5	AB-36	2 megs.	400K	ABT-79
100,000	C1	AB-40	2 megs.	600K	ABT-80
100,000	C2	AB-41	2 megs.	200K	ABT-81
100,000	50K	ABT-39	2 megs.	1 meg.	ABT-82
150,000	C2	AB-44	2.5 megs.	C1	AB-83
200,000	C1	AB-46	3 megs.	C1	AB-84
200,000	100K	ABT-47	3 megs.	C2	AB-85
250,000	C1	AB-50	4 megs.	C1	AB-86
250,000	C2	AB-51	5 megs.	C1	AB-87
250,000	C5	AB-52	7 megs.	C7	AB-89
250,000	125K	ABT-53	10 megs.	C1	AB-98

AB 60 and AB 70..........List Price $0.95
All other AB units..........List Price $1.10
All ABT units..........List Price $1.70

DUAL TAPPED AB ADASHAFTS

Ohms. Max.	Cat. No.	Taps — Ohms	Ohms. Max.	Cat. No.	Taps — Ohms
250,000	ABT-155	50K and 125K	1 meg.	ABT-165	200K and 500K
250,000	ABT-156	41K and 82K	1.5 megs.	ABT-167	250K and 500K
500,000	ABT-159	82K and 165K	2 megs.	ABT-174	250K and 500K
500,000	ABT-160	100K and 250K	2 megs.	ABT-175	400K and 1 meg.
1 meg.	ABT-164	165K and 330K	2.5 megs.	ABT-176	300K and 625K

LIST PRICE ON ALL ABOVE ITEMS..........$1.70 EA.

FASTATCH† SWITCHES

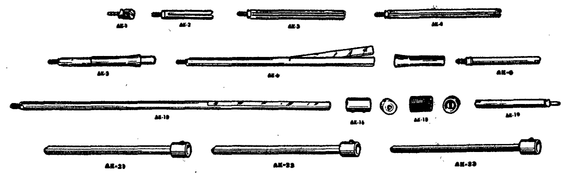
TYPE KB—For field attachment to plain Type B and AB controls bearing blue and white label. Easiest switch on the market to install. Rated 5 amps. 125 V.A.C., underwriters approved. Packaged 1 per carton.

Type	Cat. No.	List Price
SPST	KB-1	$0.50
DPST	KB-2	.60
SPDT	KB-3	.75

†Trade Mark

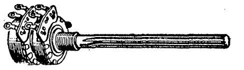
CONTROLS *(Cont'd)*

ADASHAFT SHAFTS—COUPLERS—SHAFT EXTENSIONS



Cat. No.	Description	List Price
AK-1	Fingertip Knurl and Screwdriver slot ⅜" long from bushing	$0.15
AK-2	1-9/16" long from bushing with .078" wide slot	.20
AK-3	Universal fluted mill full length, 3" long from bushing	.15
AK-4	Split Knurl Shaft 3⅞" long from bushing	.25
AK-5	3" from bushing Auto Type with Guide Funnel	.55
AK-6	6" from bushing Auto Type with Guide Funnel	.65
AK-8	3/16" Diameter full round, 2⅛" long from bushing	.30
AK-10	10" long from bushing with flat mill .216"x4-5/16"	.30
AK-16	Coupler adaptable to ¼" and ¼" or ¼" and 3/16" shafts	.40
AK-18	Coupler Insulating Auto Type	.30
AK-19	Insulating Nylon, 2-1/16" long from bushing	.55
AK-21	Shaft Extension 4" long, ¼" diam., .218" flat	.40
AK-22	Shaft Extension 4" long, ¼" diam., .154" flat	.40
AK-23	Shaft Extension 4" long, 3/16" diam., .172 flat	.40

MODEL "BB" TWIN RADIOHMS®



Twins consist of two tandem mounted Model B 15/16" diameter Radiohms operated by a single shaft. Specifications same as Model B Blue Shaft Radiohm. Switch types are not available. Shaft 3" from ⅜" long bushing, universal fluted mill full length. Packaged 1 per carton.

FRONT SECTION		REAR SECTION		
Ohms Max. Resistance	Taper	Ohms Max. Resistance	Taper	CRL Cat. No.
10,000	C1	25,000	C1	BB-1001
10,000	C1	50,000	C1	BB-1011
10,000	C2	50,000	C1	BB-101
10,000	C4	25,000	C3	BB-100
50,000	C1	50,000	C1	BB-1051
50,000	C3	50,000	C3	BB-105
100,000	C1	100,000	C1	BB-1021
100,000	C2	100,000	C2	BB-102
250,000	C1	250,000	C1	BB-1031
250,000	C2	250,000	C2	BB-103
500,000	C1	500,000	C1	BB-1041
500,000	C2	500,000	C2	BB-104
1 meg.	C1	1 meg.	C1	BB-108
1 meg.	C2	1 meg.	C2	BB-107
2 megs.	C1	2 megs.	C1	BB-110
5 megs.	C1	5 megs.	C1	BB-112

List Price..........$2.50 ea.

MODEL "SVP" FOUR WATT WIREWOUND LINEAR TAPER

1-25/32" diam., 31/32" deep. Not available in switch types

	List Price
SVP-982 to SVP-990—⅜" fingertip knurl and slot shaft	$2.25
SVP-991 to SVP-996—2⅛" full length split knurl shaft	2.35
SVP-997 to SVP-999—3" full length mill shaft	2.25

Ohms Resistance	Cat. No. ⅜" Shaft	Cat. No. Sp. Knurl	Cat. No. 3" Shaft
25	SVP-982	—	—
100	SVP-983	—	—
200	SVP-984	—	SVP-997
400	—	SVP-991	—
500	SVP-985	—	—
600	—	SVP-992	—
750	SVP-986	—	—
1000	—	SVP-993	—
1500	—	SVP-994	—
2000	—	—	SVP-998
2200	SVP-987	—	—
2500	SVP-998	—	—
5000	SVP-989	—	SVP-999
7500	SVP-990	—	—
10000	—	SVP-995	—
20000	—	SVP-996	—

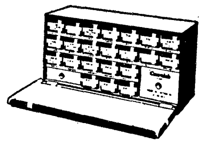
HANDY PLASTI-PAKS

12 UNITS — MODELS B AND BSK IN PLASTIC BOXES

Popular ½ and 1 Meg. Audio taper Model B Blue shaft controls furnished in plastic kits of 12 controls each. The hinged lid kit is 8¼" x 4¼" x 1¼" deep. The following ten assortments are available.

Cat. No.	Description	List Price
BP-1	PAK-12 Cat. No. B-60 plain controls, ½ Megohm, C2 Audio taper	$12.00
BP-2	PAK-12 Cat. No. B-70 plain controls, 1 Megohm, C2 Audio taper	12.00
BP-3	PAK-12 Cat. No. B-60-S switch type controls, ½ Megohm, C2 Audio taper	18.00
BP-4	PAK-12 Cat. No. B-70-S switch type controls, 1 Megohm, C2 Audio taper	18.00
BP-5	PAK-12 Cat. No. BSK-60 plain controls, ½ Megohm, C2 Audio taper with split knurl shafts	13.20
BP-6	PAK-12 Cat. No. BSK-70 plain controls, 1 Megohm, C2 Audio taper with split knurl shafts	13.20
BP-7	PAK-12 Cat. No. BSK-60-S switch type controls, ½ Megohm, C2 Audio taper with split knurl shafts	19.20
BP-8	PAK-12 Cat. No. BSK-70-S switch type controls, 1 Megohm, C2 Audio taper with split knurl shafts	19.20
BP-9	PAK-2 Cat. No. B-60 plain, ½ Megohm—C2; 5 Cat. No. B-60-S switch, ½ Megohm—C2 2 Cat. No. B-70 plain, 1 Megohm—C2; 3 Cat. No. B-70-S switch, 1 Megohm—C2	16.00
BP-10	PAK-2 Cat. No. BSK-60 plain, ½ Megohm—C2; 5 Cat. No. BSK-60-S switch, ½ Megohm—C2 2 Cat. No. BSK-70 plain, 1 Megohm—C2; 3 Cat. No. BSK-70-S switch, 1 Megohm—C2. All with split knurl shafts.	17.20

B-A AND B-B METAL CABINET KITS OF 22 CONTROLS



Two assortments of popular Model B Blue Shaft Controls are furnished in handy, useful cabinets at no price premium. The B-A Kit contains values you use every day. Half and one Megohm, audio taper units only. The B-B Kit contains fifteen different types . . . the fifteen controls most often used in radio and television service. The kits contain no slow movers.

KIT DEAL B-A

22 Controls—Values You Use Every Day

PLAIN TYPE				SWITCH TYPE			
Quan.	Cat. No.	Ohms Resist.	Taper	Quan.	Cat. No.	Ohms Resist.	Taper
3	B-60	½ meg.	C2	5	B-60-S	½ meg.	C2
2	B-70	1 meg.	C2	3	B-70-S	1 meg.	C2
2	BSK-60	½ meg.	C2	3	BSK-60-S	½ meg.	C2
2	BSK-70	1 meg.	C2	2	BSK-70-S	1 meg.	C2

Plus one metal cabinet..........List Price $29.40

KIT DEAL B-B

22 Controls—15 Types Most Used in Radio and TV

PLAIN TYPE

Quan.	Cat. No.	Ohms Resist.	Taper
1	B-5	1,000	C1
1	B-10	5,000	C1
1	B-26	25,000	C1
2	B-31	50,000	C1
2	B-40	100,000	C1
1	B-59	500,000	C1
2	B-69	1 meg.	C1
1	B-75	2 megs.	C1
2	B-83	2.5 megs.	C1
1	B-84	3 megs.	C1
1	B-87	5 megs.	C1

SWITCH TYPE

Quan.	Cat. No.	Ohms Resist.	Taper
3	B-60-S	½ meg.	C2
1	BSK-60-S	½ meg.	C2
2	B-70-S	1 meg.	C2
1	BT-80-S	2 megs.- T-600K	C13

"FASTATCH"† SWITCHES

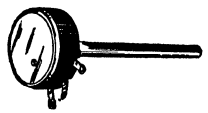
1	KB-1	SPST
1	KB-2	DPST
1	KB-3	SPDT

Plus one metal cabinet..........List Price $32.55

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CONTROLS *(Cont'd)*

MODEL "A" 1 WATT PATENTED NON-RUBBING CONTACT CONTROLS

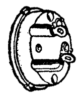


Wall type resistor element provides one-third longer effective resistor length assuring low noise level, closer taper tolerance, double load carrying ability. Patented non-rubbing contact eliminates all friction between resistance element and contacting member assuring accuracy . . . the resistance strip CAN'T wear out.

Ohms Max. Resistance	Taper	Cat. No.	Ohms Max. Resistance	Taper	Cat. No.
500	C1	A-100	500,000	C1	A-128
1,000	C1	A-101	500,000	C2	A-130
2,000	C1	A-102	1 meg.	C1	A-232
5,000	C1	A-105	1 meg.	C2	A-132
10,000	C1	A-108	2 megs.	C1	A-233
25,000	C1	A-115	2 megs.	C2	A-133
50,000	C1	A-118	3 megs.	C1	A-234
50,000	C2	A-119	3 megs.	C2	A-134
100,000	C1	A-122	5 megs.	C1	A-249
100,000	C2	A-123	5 megs.	C2	A-149
250,000	C1	A-227	10 megs.	C1	A-250
250,000	C2	A-127	10 megs.	C2	A-150

List Price.......................................$1.75 ea.

SWITCHES FOR MODEL "A" AND "V" CONTROLS



Attachable switch "covers" are rated 3 amps. 125 V.A.C.

TYPE	CAT. NO.	LIST PRICE
SPST	K-10	$0.60
SPDT	K-11	.75
DPST	K-12	.75

MODEL "V" AND "VK" WIREWOUND RADIOHMS® 3 WATT LINEAR TAPER

Model "V" smooth action wirewound controls are regularly furnished without switches. Attachable switches are available, as listed above 1-7/16" diameter, 9/16" depth behind mounting surface. Shafts: "V"—3" fluted mill; "VK"—3/8" fingertip knurl and slot. "VK" series not adaptable to switch type.

Ohms Resistance	Cat. No. "V"	Cat. No. "VK"	Ohms Resistance	Cat. No. "V"	Cat. No. "VK"
2	V-100	—	200	V-123	VK-123
4	V-102	—	300	V-125	VK-125
6	V-104	—	400	V-126	VK-126
8	V-106	—	500	V-127	VK-127
10	V-108	—	750	V-128	—
15	V-109	—	1000	V-129	VK-129
20	V-110	VK-110	1500	V-130	VK-130
25	V-111	VK-111	2000	V-131	VK-131
30	V-112	VK-112	2500	V-132	VK-132
40	V-114	—	3000	V-133	VK-133
50	V-116	VK-116	4000	V-134	VK-134
60	V-117	VK-117	5000	V-135	VK-135
75	V-118	—	7500	V-136	—
100	V-121	VK-121	10000	V-137	VK-137

List Price......................................$1.85 ea.

CUSTOM CONTROLS FOR TV-RADIO REPLACEMENT

Centralab listing of "ready to use" Customs now contains 240 units, plus 10 Custom Wire Wound Controls. There is NO assembly, NO time wasted building a unit. Factory tested and inspected to original manufacturers' specifications. Ask for your copy of CRL TV Control Guide.

THE COMPENTROL †

The COMPENTROL is a volume control and special Printed Electronic Circuit network designed to better reproduce the apparent bass and treble response of amplifiers, radio, and television sets when volume is at low level. For use in radio sets (5 or more tube AC or DC), audio amplifiers, or phono combinations.

Resistance	Type	Cat. No.
1/2 meg.	Plain Type	C1-60
1/2 meg.	Switch Type	C1-60-S
1 meg.	Plain Type	C1-70
1 meg.	Switch Type	C1-70-S

User Net Price—Plain...............$2.50 ea. Switch...............$3.00 ea.

MODEL "SVT" CENTER TAPPED WIREWOUND RADIOHMS®

Tapped at 50% rotation—otherwise similar electrically to Model "V" Wirewound Linear Taper. Furnished with 3/8" fingertip knurl and screwdriver slot shaft. Units are not adaptable to switches.

Ohms Resistance	Tap Resistance	Cat. No.
20	10	SVT-901
30	15	SVT-902
40	20	SVT-903
50	25	SVT-904

List Prices.........................$2.45 ea.

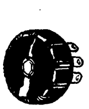
SERIES MX CONTROLS — DELTA T TYPE

For use in equipment where it may be necessary to maintain an impedance match. Not adapted for switches. Rating, 1 watt. Shaft, 1 7/8" long from end of 3/8" bushing. Diameter, 1-7/16" x 1-1/16" depth. Packaged singly.

Resistance Ohms	Cat. No.
50	MX-146
200	MX-147
500	MX-148
600	MX-149

List Price.........................$5.00 ea.

MODEL B16 RADIOHM®

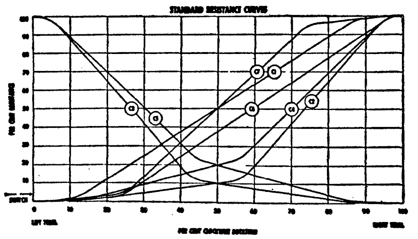


This tiny control is smaller than a dime, virtually a watch makers' production job. The noise level is exceptionally low. In the switch types, the switches are built entirely within the unit. 5/8" diameter without knob, 23/32" with knob. 1/4" total thickness, including knob. Rating, 1/10 watt.

Ohms Max. Resistance	Taper	Cat. No. Plain	Cat. No. with Switch
500,000	C2	B16-118	B16-218
1 meg.	C2	B16-120	B16-220
2 megs.	C2	B16-122	B16-222
3 megs.	C2	B16-124	B16-224
5 megs.	C2	B16-128	B16-228

List Price—Plain..................$2.50 ea. With Switch..................$4.00 ea.

STANDARD RESISTANCE TAPERS

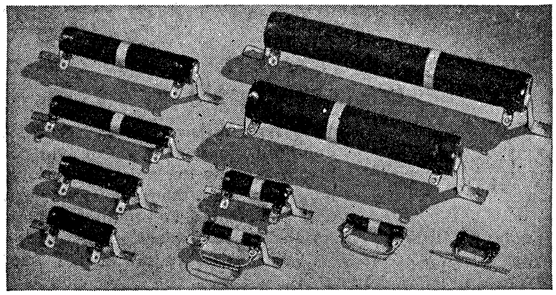


LECTROHM

INCORPORATED • 5560 NORTHWEST HIGHWAY, CHICAGO 30, ILLINOIS

VITREOUS ENAMELED RESISTORS

Fixed Wire-Wound Types



LECTROHM Resistors are manufactured from the highest quality materials obtainable and are rated according to RTMA standards. They are rugged, dependable, accurate—quality components that will give long, trouble-free service. Mounting brackets available for 10, 20, 50, 80, 100, 160 and 200 watt units.

TYPE 1¼L—5-WATT

DIMENSIONS..............¼" x 5/32" x 1¼"
TERMINALS..............................Pig Tail
MAXIMUM RESISTANCE.........10,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	2240	$0.67	300	129	$0.67
2	1580	.67	350	119	.67
3	1290	.67	400	111	.67
4	1110	.67	500	100	.67
5	1000	.67	600	91	.67
10	707	.67	700	84	.67
15	575	.67	750	81	.67
20	500	.67	800	79	.67
25	447	.67	900	74	.67
30	408	.67	1000	70	.67
35	374	.67	1100	64	.72
40	346	.67	1200	60	.72
50	316	.67	1250	59	.72
75	258	.67	1500	54	.72
100	222	.67	1750	50	.72
125	200	.67	2000	44	.72
150	182	.67	2500	40	.72
200	158	.67	3000	36	.72
225	149	.67	4000	31	.72
250	141	.67	5000	28	.72

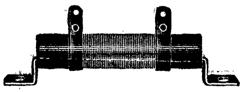
TYPE 1¾E—10-WATT

DIMENSIONS..............5/16" x 3/16" x 1¾"
TERMINALS..............................Pig Tail
MAXIMUM RESISTANCE.........40,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150	$0.75	1500	79	$0.80
2	2230	.75	1750	74	.80
3	1825	.75	2000	69	.80
5	1415	.75	2250	64	.80
7.5	1155	.75	2500	61	.80
10	1000	.75	3000	56	.80
15	815	.75	3500	51	.80
20	707	.75	4000	47	.80
25	630	.75	4500	44	.80
50	447	.75	5000	40	.80
75	365	.75	6000	36	.92
100	315	.75	7000	33	.92
150	258	.75	7500	32	.92
200	223	.75	8000	31	.92
250	200	.75	8500	30	.92
300	182	.75	10000	24	.92
350	169	.75	12000	20	1.03
400	158	.75	12500	20	1.03
500	141	.75	15000	18	1.03
600	129	.75	17500	17	1.03
700	119	.75	18000	16	1.03
750	115	.75	20000	15	1.03
800	111	.75	22500	15	1.08
900	105	.75	25000	14	1.08
1000	100	.75	30000	8	1.22
1200	91	.80	40000	7	1.22
1250	89	.80			

LECTROHM
R. F. PLATE CHOKES

(1000 Milliamps.)



Type	RFC-1	RFC-2	RFC-3	RFC-4
Amateur Band Meters	5	10 & 20	20 & 40	20, 40 80 & 160
Microhenries	5.4	35	95	220
D. C. Ohms	0.85	2	5	9
Lgth. Overall	1¾"	3"	6"	6½"
Diameter	¼"	9/16"	9/16"	¾"
List Price	$0.33	$1.04	$1.56	$2.15

TYPE 2R—20-WATT

DIMENSIONS..................½" x 5/16" x 2"
TERMINALS ....Solder Lug
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET............Centers 2⅞"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	2000	$0.95	1100	134	$0.97
10	1414	.95	1250	126	.97
15	1153	.95	1500	115	.97
20	1000	.95	2000	100	.97
25	894	.95	2500	89	.97
40	707	.95	3000	81	.97
50	633	.95	4000	70	.97
60	574	.95	5000	63	.97
75	517	.95	6000	57	1.12
100	448	.95	7000	53	1.12
125	400	.95	7500	51	1.12
150	365	.95	8000	50	1.12
200	316	.95	10000	43	1.12
250	283	.95	12500	39	1.20
300	258	.95	15000	30	1.20
350	238	.95	20000	24	1.20
400	223	.95	25000	21	1.37
500	200	.95	30000	21	1.37
600	182	.95	35000	18	1.37
700	169	.95	40000	17	1.37
750	163	.95	45000	13	1.58
800	158	.95	50000	11	1.58
1000	141	.95			

TYPE 4½M—50-WATT

DIMENSIONS..................¾" x ½" x 4½"
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.......100,000 ohms
MOUNTING BRACKET..........Centers 5½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	3165	$1.63	6000	85	$1.92
10	2230	1.63	7000	78	1.92
25	1390	1.63	7500	77	1.92
50	1000	1.63	8000	75	1.92
100	700	1.63	10000	66	1.92
200	500	1.63	12000	63	2.08
250	440	1.63	12500	60	2.08
500	300	1.63	15000	56	2.08
750	250	1.63	20000	48	2.08
1000	215	1.63	25000	43	2.33
1500	175	1.75	30000	39	2.33
2000	155	1.75	40000	34	2.33
2500	135	1.75	50000	30	2.58
3000	120	1.75	60000	28	2.92
4000	105	1.75	75000	25	2.92
5000	95	1.75	100000	21	2.92

TYPE 6½M—80-WATT

DIMENSIONS...............¾" x ½" x 6½"
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 7½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	4000	$2.00	5000	122	$2.08
10	2730	2.00	6000	112	2.25
25	1730	2.00	7500	100	2.25
50	1220	2.00	8000	98	2.25
100	865	2.00	10000	86	2.25
200	612	2.00	15000	70	2.45
250	545	2.00	20000	61	2.45
500	387	2.00	25000	55	2.78
750	316	2.00	30000	50	2.78
1000	274	2.00	40000	43	2.87
1500	223	2.08	50000	39	2.87
2000	193	2.08	60000	35	3.22
2500	173	2.08	75000	31	3.22
3000	158	2.08	100000	27	3.58
4000	137	2.08			

TYPE 6½K—100-WATT

DIMENSIONS...............1⅛" x ¾" x 6½"
TERMINALS.........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET............Centers 7½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
25	2000	$2.42	3000	180	$2.53
50	1414	2.42	5000	140	2.53
75	1155	2.42	7500	115	2.70
100	1100	2.42	10000	100	2.70
150	815	2.42	15000	80	2.97
250	632	2.42	20000	70	2.97
500	447	2.42	25000	63	3.20
750	365	2.42	30000	58	3.20
1000	315	2.42	40000	50	3.20
1250	280	2.53	50000	44	3.37
1500	250	2.53	60000	41	3.37
2000	220	2.53	75000	36	3.58
2500	200	2.53	100000	31	3.58

TYPE 8½K—160-WATT

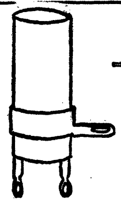
DIMENSIONS...............1⅛" x ¾" x 8½"
TERMINALS.........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 9½"

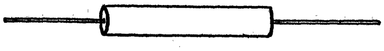
Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660	$4.16	4500	185	$3.04
10	4000	2.98	5000	180	3.04
25	2530	2.98	7500	145	3.30
50	1788	2.98	10000	125	3.30
75	1460	2.98	15000	105	3.54
100	1260	2.98	20000	90	3.54
200	900	2.98	25000	80	3.64
500	570	2.98	30000	67	3.64
1000	400	2.98	35000	57	3.64
1500	330	3.04	40000	50	3.64
2000	280	3.04	50000	40	3.76
2500	250	3.04	60000	33	3.76
3000	230	3.04	70000	28	3.76
3500	215	3.04	80000	25	4.03
4000	200	3.04	100000	20	4.26

TYPE 10½K—200-WATT

DIMENSIONS.............1⅛" x ¾" x 10½"
TERMINALS.........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 11½"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	6310	$4.53	4500	210	$3.30
10	4470	3.22	5000	200	3.30
25	2830	3.22	7500	165	3.53
50	2000	3.22	10000	140	3.53
75	1635	3.22	15000	115	3.77
100	1400	3.22	20000	100	3.77
250	900	3.22	25000	90	3.90
500	630	3.22	30000	82	3.90
1000	450	3.22	35000	71	3.90
1500	365	3.30	40000	62	3.90
2000	315	3.30	50000	50	4.03
2500	280	3.30	60000	42	4.03
3000	260	3.30	75000	33	4.25
3500	240	3.30	100000	25	4.25
4000	225	3.30			





ALSO AVAILABLE
Upright and axial lead designs

LECTROHM

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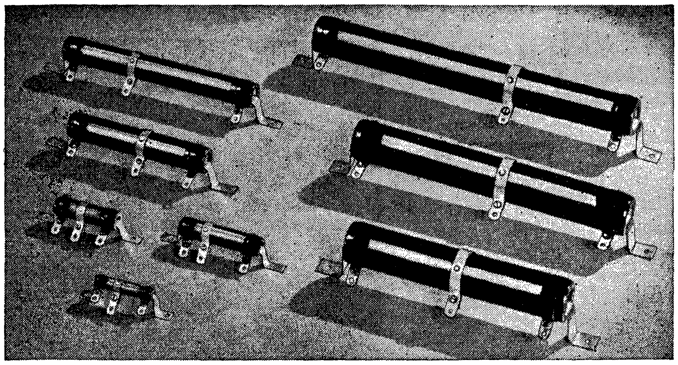
VITREOUS ENAMELED RESISTORS



Adjustable Wire-Wound Types

The same high quality and construction are used for LECTROHM Adjustable Resistors as are incorporated in LECTROHM fixed units.

These resistors are used for replacing voltage dividers in radio receivers, for radio transmitter power supply, and for general experimental work.

TYPE 1¾EV—10-WATT

DIMENSIONS .... 5/16″ x 3/16″ x 1¾″
TERMINALS ....Lug Type
MAXIMUM RESISTANCE........10,000 ohms
MOUNTING BRACKET ....Centers 2¼″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150	$1.47	750	115	$1.47
2	2230	1.47	800	111	1.47
3	1825	1.47	1000	100	1.47
5	1415	1.47	1250	89	1.53
7.5	1155	1.47	1500	79	1.53
10	1000	1.47	2000	69	1.53
15	815	1.47	2250	64	1.53
20	707	1.47	2500	61	1.53
25	630	1.47	3000	56	1.53
50	447	1.47	3500	51	1.53
75	365	1.47	4000	47	1.53
100	315	1.47	4500	44	1.53
150	258	1.47	5000	40	1.53
200	223	1.47	6000	36	1.63
250	200	1.47	7000	33	1.63
300	182	1.47	7500	32	1.63
350	169	1.47	8000	31	1.63
400	158	1.47	8500	30	1.63
500	141	1.47	10000	24	1.63
600	129	1.47			

TYPE 2SV—25-WATT

DIMENSIONS ....9/16″ x 5/16″ x 2″
TERMINALS ....Solder Lug
MAXIMUM RESISTANCE..........25,000 ohms
MOUNTING BRACKET............Centers 2⅞″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	5000	$1.87	1000	158	$1.87
3	2890	1.87	1250	141	1.88
5	2240	1.87	1500	129	1.88
10	1580	1.87	2000	112	1.88
15	1290	1.87	2500	100	1.88
25	1000	1.87	3000	91	1.88
50	707	1.87	3500	84	1.88
75	575	1.87	4000	79	1.88
100	500	1.87	5000	71	1.88
150	400	1.87	6000	64	2.03
200	353	1.87	7500	57	2.03
250	316	1.87	10000	50	2.03
300	288	1.87	12000	44	2.08
400	250	1.87	15000	26	2.08
500	224	1.87	20000	22	2.08
750	182	1.87	25000	20	2.28

TYPE 4½MV—50-WATT

DIMENSIONS....................¾″ x ½″ x 4½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 5½″

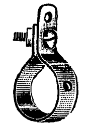
Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	3160	$2.37	3000	129	$2.47
10	2230	2.37	4000	112	2.47
25	1410	2.37	5000	100	2.47
50	1000	2.37	7500	81	2.63
75	816	2.37	10000	70	2.63
100	707	2.37	12000	64	2.83
150	577	2.37	15000	57	2.83
200	500	2.37	20000	50	2.83
250	447	2.37	25000	44	3.08
300	408	2.37	30000	41	3.08
400	354	2.37	40000	35	3.08
500	316	2.37	50000	20	3.30
750	258	2.37	60000	18	3.30
1000	224	2.37	75000	17	3.67
1500	182	2.47	80000	16	3.67
2000	158	2.47	100000	14	3.92
2500	141	2.47			

TYPE 6½MV—80-WATT

DIMENSIONS....................¾″ x ½″ x 6½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 7½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
10	2830	$2.75	3500	152	$2.83
15	2310	2.75	5000	126	2.83
25	1790	2.75	7500	103	3.00
50	1265	2.75	10000	89	3.00
100	894	2.75	15000	73	3.20
250	566	2.75	20000	63	3.20
300	517	2.75	25000	57	3.53
400	495	2.75	30000	51	3.53
500	400	2.75	40000	44	3.53
750	327	2.75	50000	25	3.62
1000	283	2.75	60000	23	3.62
1500	231	2.83	75000	21	3.97
2000	200	2.83	80000	20	3.97
2500	179	2.83	100000	18	4.33

ADJUSTABLE LUGS



Screw-Driver Type

Diameter of Resistor	List Price
⅜″	$0.25
⅝″	.25
⅞″	.42
1¼″	.42

TYPE 6½KV—100-WATT

DIMENSIONS................1⅛″ x ¾″ x 6½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 7½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	1413	$3.58	15000	81	$4.12
100	1000	3.58	20000	70	4.12
500	447	3.58	25000	63	4.37
1000	316	3.58	30000	57	4.37
2000	223	3.67	35000	53	4.37
3000	182	3.67	40000	50	4.37
4000	158	3.67	50000	44	4.53
5000	141	3.67	75000	23	4.75
7500	115	3.67	100000	20	4.95
10000	100	3.87			

TYPE 8½KV—160-WATT

DIMENSIONS.................1⅛″ x ¾″ x 8½″
TERMINALS.............................. Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 9½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660	$5.33	10000	126	$4.44
10	4000	4.14	15000	103	4.69
25	2530	4.14	20000	89	4.69
50	1788	4.14	25000	80	4.81
100	1266	4.14	30000	73	4.81
500	566	4.14	40000	55	4.81
1000	400	4.14	50000	43	4.94
2500	253	4.19	75000	27	5.17
5000	179	4.19	100000	18	5.44

TYPE 10½KV—200-WATT

DIMENSIONS................1⅛″ x ¾″ x 10½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET..........Centers 11½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	2000	$4.37	10000	141	$4.70
100	1414	4.37	20000	100	4.92
500	632	4.37	25000	89	5.03
1000	447	4.37	30000	81	5.03
1500	361	4.45	50000	63	5.17
2000	316	4.45	75000	51	5.42
2500	283	4.45	100000	28	5.67
5000	200	4.45			

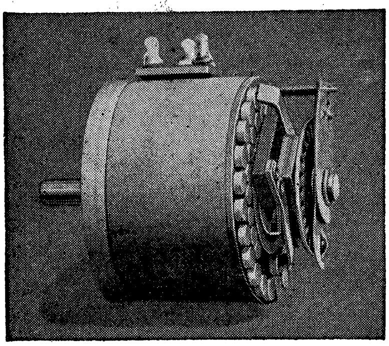
Mounting brackets and one band are furnished with all adjustable types.

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS MANUFACTURING CO.

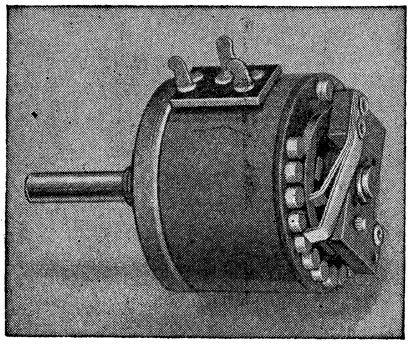
COLLINGDALE, PENNSYLVANIA

SHALLCROSS AUDIO ATTENUATORS



◄ SHALLCROSS ATTENUATOR NO. 420-2B2

SHALLCROSS ATTENUATOR NO. C720-2A3 ►



These Shallcross Features Mean

✓ BETTER PERFORMANCE

✓ BIGGER VALUE

- ✓ Off position attenuation well in excess of 100 db.
- ✓ 25% to 50% fewer soldered joints.
- ✓ Noise level ratings that are factual. (130 db or more below zero level).
- ✓ Non-inductive Shallcross precision resistors used throughout assure flat attenuation to and beyond 30 kc.
- ✓ Types and sizes engineered for all needs. Attenuation accuracies of 1%, resistor accuracies of 0.1%, on special order.

Shallcross Audio Attenuators are available in either variable or fixed units, the former often being referred to as a "control" and the latter, as a "pad".

Controls are available with as few as 5 steps or as many as 52 steps with an attenuation as small as 0.1 db per step. The total attenuation for a single control does not exceed about 125 db since such high attenuation approaches the noise level of the switching mechanism.

The complete story of Shallcross attenuators may be found in Shallcross Engineering Bulletin #4, copies of which are available on request. Specifications and prices are given below for a few of the most popular variable attenuators.

IMPEDANCE: 150, 500, 250/500, 600 ohms, except potentiometers, which are 100,000 and 250,000 ohms.

RESISTORS: All non-inductively wirewound, ±5% tolerance, except types preceded with "C", which are composition selected to ±5%.

ATTENUATION: Increases for counter-clockwise rotation of knob end of shaft.

FREQUENCY RESPONSE: Flat over entire audio range.

SWITCH MECHANISM: Multi-leaf wiper arms, collector rings and contacts available in tarnish resistant silver alloy or brass. Noise level −130 db.

DETENT: Indexing mechanism available on any unit for $0.75 list. Back of panel depth is then increased 5/16″.

DIALS: $1.50 list each additional.

KNOBS (VA-16906): $0.60 list each additional.

120-2A3 **$ 9.50 silver** **10.50 brass**	Ladder attenuator, 20 steps, 2 db per step, tapered on last 3 steps to off. MOUNTING: single hole, ⅜″-32 threaded bushing or two hole, 6-32 screws, 1⅜″ centers. DIMENSIONS: 1¾″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
C720-2A3 **$ 9.50 silver** **10.50 brass**	Potentiometer, 20 steps, 2 db per step, tapered on last 3 steps to off. MOUNTING: single hole, ⅜″-32 threaded bushing or two hole, 6-32 screws, 1⅜″ centers. DIMENSIONS: 1¾″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
132-1.5B3 **$16.50 silver** **18.00 brass**	Ladder attenuator, 32 steps, 1.5 db per step, tapered on last 3 steps to off. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 10°.
430-1C1 **$29.00 silver** **27.00 brass**	Bridged T attenuator, 30 steps, 1 db. per step, 30 db total. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2½″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 11¼°.
430-1.5C3 **$29.00 silver** **27.00 brass**	Bridged T attenuator, 30 steps, 1.5 db per step, tapered on last 5 steps to off. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2½″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 11¼°.
420-2B2 **$21.50 silver**	Bridged T attenuator, 20 steps, 2 db per step, attenuation linear with off on last step. MOUNTING: two hole, 8-32 or 6-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
C820-2B2 **$21.50 silver**	Dual potentiometer, each section 20 steps, 2 db per step, attenuation linear with off on last step. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.

SHALLCROSS V.U. METER RANGE EXTENDING ATTENUATORS

IMPEDANCE: Available with input impedances of 3900-7100-7500 ohms. Output impedance is 3900 ohms to match Weston Type 30B or General Electric Type DO 61 V.U. meters.

TOLERANCE: ±1% except "C" types which are ±5%.

INSERTION LOSS: Zero.

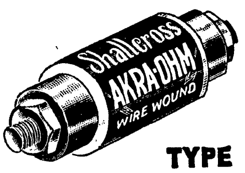
DETENT: All units supplied with indexing mechanism; back of panel depth includes detent.

C35-4A4 **$16.00 silver** **15.00 brass**	T attenuator, 0, +4 to +20 V.U., 5 steps, 4 V.U. per step. MOUNTING: single hole, ⅜″-32 threaded bushing. DIMENSIONS: 1¾″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 30°.
C35-4A5 **$16.00 silver** **15.00 brass**	T attenuator, 0, +4 to +16 V.U., and OFF, 5 steps, 4 V.U. per step. MOUNTING: single hole, ⅜″-32 threaded bushing. DIMENSIONS: 1¾″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 30°.
320-2C4 **$31.50 silver**	T attenuator, +4 to +44 V.U., 20 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2½″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 15°.
320-2C5 **$31.50 silver**	T attenuator, +4 to +42 V.U. and OFF, 20 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2½″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 15°.
412-2B4 **$22.50 silver**	Bridged T attenuator, +4 to +28 V.U., 12 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2⅛″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 12°.
412-2B5 **$22.50 silver**	Bridged T attenuator, +4 to +26 V.U. and OFF, 12 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2⅛″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 12°.

SHALLCROSS MANUFACTURING CO.
COLLINGDALE, PENNSYLVANIA

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS AKRA-OHM RESISTORS



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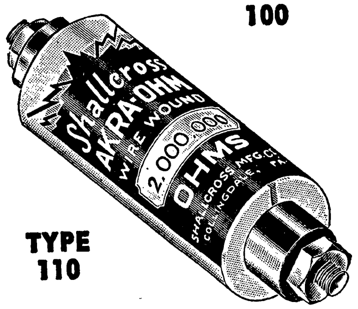

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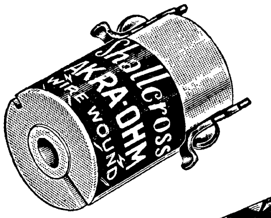
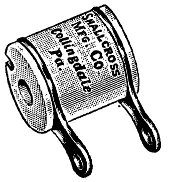


TYPES 140 160

Shallcross
AKRA-OHM
WIRE WOUND

TYPES 196 116



TYPE 183 A

Shallcross
AKRA-OHM
WIRE WOUND

TYPE 193

LIST PRICES—Standard BX Types, ±1% Tolerance

November 23, 1950 | RESISTOR PRICE SCHEDULE | PS-22

TOL. ± 1% Resistance to and Including OHMS	BX110, BX112, BX116, BX160 Wire Spec.			BX196, BX100 Wire Spec.			BX120, BX140, BX173, BX183A, BX193 Wire Spec.		
	N	J-E	L	N	J-E	L	N	J-E	L
.099	......	......	4.55	......	......	3.90	......	......	3.30
.499	......	......	3.60	......	......	3.00	......	......	2.45
1,000	......	......	3.00	......	......	2.40	......	......	2.00
5,000	3.30	3.45	4.35	2.50	2.70	3.40	2.10	2.20	3.05
10,000	3.45	3.65	4.90	2.60	2.85	3.80	2.15	2.25	3.45
15,000	3.60	3.70	5.50	2.75	3.05	4.30	2.20	2.30	3.95
30,000	3.70	4.00	6.90	2.85	3.20	5.40	2.25	2.55	4.95
50,000	3.90	4.35	8.70	3.00	3.40	6.80	2.40	2.60	6.10
75,000	4.20	4.90	10.50	3.30	3.75	8.25	2.70	3.10	6.80
100,000	4.60	5.15	12.30	3.60	4.30	9.70	3.00	3.45	7.55
125,000	4.80	5.60	13.20	3.95	4.65	10.40	3.30	3.95	8.10
150,000	5.10	6.10	14.10	4.30	5.15	11.15	3.45	4.35	8.60
200,000	5.50	6.60	15.00	4.90	5.70	11.85	3.95	4.80	9.70
250,000	6.00	7.05	16.80	5.40	6.40	13.30	4.30	5.30	10.80
300,000	6.15	7.15	16.95	6.00	7.00	13.45	4.45	5.55	11.35
400,000	7.00	8.15	19.55	6.60	7.70	15.50	5.05	6.15	13.45
500,000	7.85	9.00	22.10	7.45	8.50	17.55	5.85	6.90	14.80
600,000	8.50	9.65	24.70	8.05	9.20	19.65	6.30	7.55	16.20
700,000	8.95	10.05	27.30	8.60	9.85	21.70	6.75	8.25	17.55
750,000	9.45	10.35	28.55	9.20	10.35	22.75	7.35	8.70	18.25
900,000	10.10	11.20	30.75	9.75	10.90	24.45	8.05	9.30	21.70
1 megohm	11.20	12.35	31.60	10.35	11.50	25.15	8.60	9.75	22.40
1.5 "	13.50	16.95	45.40	12.35	13.50	36.20	10.90	12.65	......
2 "	19.55	21.25	59.20	15.80	17.25	47.25	13.20	15.50	......
Deduct if not BX	$0.50			$0.40			$0.40		

SPECIAL TOLERANCE

Resistors to closer tolerances can be supplied at higher prices. Add to list prices as follows:

±½%, add 5%
±2/10%, add 15%
±¼%, add 10%
±1/10%, add 25%

NOTES

1. BX impregnated resistors will be furnished unless order specifies "without BX".
2. Letters in separate price columns above indicate resistance wire alloy, as follows:
   - a. "L"—manganin.
   - b. "J"—iron-free nichrome.
   - c. "N"—iron-bearing nichrome.
   - d. "E"—high resistivity nichrome.

TYPES BX183A AND BX193—±1% IN COMMON VALUES—IN STOCK

In addition to the popular standard types listed here, Shallcross Akra-Ohm Resistors are made in a complete line of standard and special designs for precise electronic equipment demanding great stability and long life even under difficult conditions of temperature and humidity.

Shallcross achievements include the development of really practical hermetically-sealed units; BX processed resistors "tropicalized" against moisture and fungus; the use of spun glass insulated wire for applications where considerable power must be dissipated; bifilar wound resistors, 1000 ohms or less, for exacting instrument use; heavy-duty surge resistors; accurate heavy-duty power resistors, and various others. Write for Shallcross resistor bulletin R3-B for complete information.

ACCURATE FIXED WIRE-WOUND TYPES (JAN R93) PRICES ON REQUEST.

Shallcross Type	** JAN Style	Wattage	* Maximum Ohms	Std. Terminal	Mounting	Dimensions Length—Diam.
100	RB21B	1	750,000	#8 screw	5 amp. fuse clip	2 1/16" x 9/16"
110	RB22B	2	2 Meg.	#8 screw	5 amp. fuse clip	2 7/8" x 3/4"
116	RB14B	1	2 Meg.	Solder lugs	#6 screw	2 5/32" x 3/4"
140	RB41B	0.5	350,000	Solder lugs	#6 screw	1 1/4" x 11/16"
160	RB42B	1	500,000	Solder lugs	#6 screw	1 9/16" x 11/16"
183A	RB11B	0.5	300,000	Solder lugs	#6 screw	5/8" x 1/2"
193	RB12B	1	400,000	Solder lugs	#6 screw	1" x 1/2"
196	RB13B	1	1 Meg.	Solder lugs	#6 screw	1 1/4" x 3/4"
1101▲	RB12A	0.5	300,000	Solder lugs	#6 screw	7/8" x 7/8"
1105▲	RB14A	1.5	400,000	Solder lugs	#6 screw	2" x 7/8"
1180▲	RB11A	0.25	300,000	Solder lugs	#2 screw	19/32" x 1/2"
1196▲	RB13A	1	1 Meg.	Solder lugs	#6 screw	1 1/4" x 7/8"

* Based on use of .0014" diameter nickel chromium wire. Smaller wire sizes will greatly increase maximum allowable resistance on any form.
** JAN style refers to Joint Army-Navy Specification R93. Price depends on wire size and specification.
△ Hermetically sealed. Other sizes available.

SEND FOR RESISTOR ENGINEERING CHART FOR COMPLETE DATA

Net

SHALLCROSS MANUFACTURING CO.

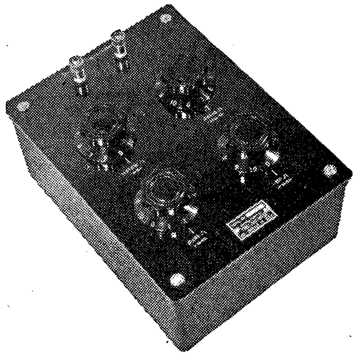
COLLINGDALE, PENNSYLVANIA

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS DECADE RESISTANCE BOXES

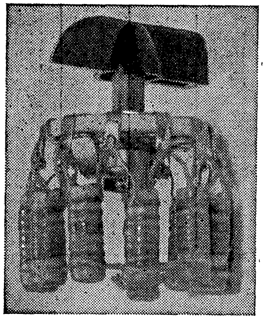
The large assortment and wide range of resistance available makes the Shallcross line of Resistance Boxes unique in the instrument field. They are used extensively as laboratory standards, AC and DC Bridge and ratio arms, voltage dividers, etc.

Accuracy adjustment of Resistors as follows:
0.1 ohm...... 1% 1. ohm..... 0.25% all others...... 0.1%



No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price	No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price
543	1	0.1	1	$22.00	821	3	10	11,100	$60.00
544	1	1.0	10	22.00	822	3	100	111,000	63.00
545	1	10	100	22.00	823	3	1,000	1,110,000	77.00
546	1	100	1,000	22.00	824	3	10,000	11,100,000	120.00
547	1	1,000	10,000	24.00	825	4	1	11,110	77.00
548	1	10,000	100,000	26.00	826	4	10	111,100	79.00
549	1	100,000	1,000,000	36.00	827	4	100	1,111,000	92.00
550	1	1,000,000	10,000,000	66.00	828	4	1,000	11,110,000	139.00
817	3	.01	11.1	60.00	8285	5	0.1	11,111	94.00
817A	4	.01	111.1	75.00	829	5	1	111,110	101.00
817B	5	.01	1,111.1	94.00	830	5	10	1,111,100	113.00
818	3	0.1	111	51.00	831	5	100	11,111,000	155.00
819	4	0.1	1,111	71.00	832	6	1	1,111,110	121.00
820	3	1	1,110	56.00	833	6	10	11,111,100	169.00

UNMOUNTED DECADE RESISTANCES



In response to a demand from engineers, manufacturers and physicists who design and construct their own electrical measuring instruments, we have made the Shallcross Unmounted Decade Resistances available. They are of the same construction as those used in the popular Shallcross Resistance Decades described above and consist of ten Shallcross Resistors mounted on a ceramic instrument switch.

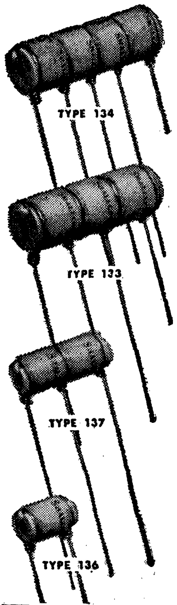
SPECIFICATIONS

Type No.	Total Resistance Ohms	Unit Resistance Ohms	Switch No.	Accuracy	*Price
435	1.0	.1	4485-S	1.0%	$12.00
436	10	1.0	4485-B	0.25%	13.25
437	100	10	4485-B	0.1	13.25
438	1,000	100	4485-B	0.1	15.00
439	10,000	1,000	4485-B	0.1	16.00
440	100,000	10,000	4485-B	0.1	18.50
441	1 Meg.	100,000	4485-B	0.1	32.50
442	10 Meg.	1 Meg.	4485-B	0.1	60.00

* Does not include knob or dial.

MOUNTING: Single 3/8" Hole Mounting—Panels up to 3/16" Thick. All of the above are available with aluminum dust cover, shield, and isolated shaft at $3.00 additional.

Knob #1916-1 (illustrated): $0.25 additional and aluminum dial 0-10 #1522-1 $0.70 additional.



SHALLCROSS AKRA-OHM PRECISION RESISTORS

for "Miniaturization" applications

UNUSUAL ACCURACY IN SMALL SPACE

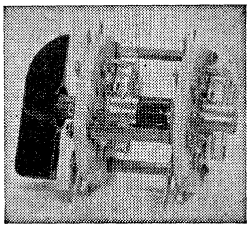
These new Shallcross Akra-Ohm Wire-Wound Precision Resistors have been designed to meet the needs of modern, miniature equipment. Standard tolerance is 1%. Closer tolerances can be furnished on special order.

The units offer unusually high and accurate resistance values in small space and are light enough to be suspended by their own tinned copper leads, or may be secured with mounting screw.

Type	Sections	Size	Watts Each Section	Maximum Resistance per Section Ohms	Minimum Resistance per Section Ohms
10	1	$\frac{1}{4}$" x $\frac{1}{4}$"	0.1	70,000	1.
136	1	$\frac{13}{32}$" x $\frac{1}{4}$"	0.15	150,000	1.
137	2	$\frac{45}{64}$" x $\frac{1}{4}$"	0.15	150,000	1.
133	3	$1\frac{4}{32}$" x $\frac{3}{8}$"	0.25	550,000	1.
134	4	$1\frac{1}{4}$" x $\frac{3}{8}$"	0.25	375,000	1.

Prices on application.

SHALLCROSS ROTARY SELECTOR SWITCHES



Like other Shallcross instrument components, these Rotary Selector Switches are designed to cover a very wide field of application in both shorting and non-shorting types, and can be modified to control a variety of circuits. Details on any type for practically any application on request. Suffixes B and S denote Brass and Silver contacts and contact arms. Write for Specification Sheet SS-6.

SPECIFICATIONS

Poles	Positions	Contact Spacing	Contact Plate Material	Type Number		*List Price
				Shorting	Non-Shorting	
1	11	32.7°	Steatite	4605-B	4610-B	$ 4.25
2	11	32.7°	Steatite	4620-B	4615-B	9.50
1	11	32.7°	Steatite	4605-S	4610-S	4.50
2	11	32.7°	Steatite	4620-S	4615-S	10.00
1	12	30°	Bakelite	5550-B	5620-B	4.95
1	12	30°	Bakelite	5550-S	5620-S	5.25
1	15	24°	Steatite	5610-B	4225-B	5.55
2	15	24°	Steatite	5615-B	4980-B	12.50
1	15	24°	Steatite	5610-S	4225-S	6.00
2	15	24°	Steatite	5615-S	4980-S	13.50
1	18	20°	Steatite	5155-B	5625-B	6.50
1	18	20°	Steatite	5155-S	5625-S	7.00
1	24	15°	Bakelite	5630-B	5570-B	9.50
1	24	15°	Bakelite	5630-S	5570-S	10.00
1	36	10°	Bakelite	.....	10054-S	28.00
1	40	8.8°	Melamine	8140-S	.....	35.00
1	60	6°	Bakelite	.....	10061-S	30.00

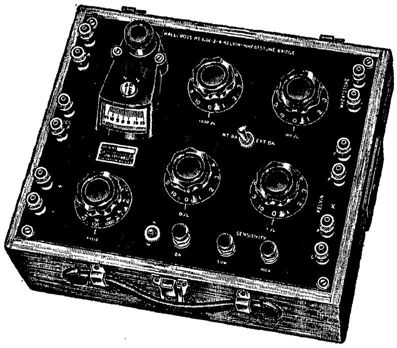
* Does not include knob or dial.

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

SHALLCROSS D-C BRIDGES



No. 638-R
KELVIN WHEATSTONE BRIDGE

Resistance range 0.0001 ohm to 11.11 megohms

SPECIFICATIONS

ACCURACY—0.3% between 1.0 ohm and .1111 megohms. Below and above this range—2%.

GALVANOMETER—Built-in—sensitivity 1 micro-ampere per millimeter division.

RHEOSTAT ARM—Four decades—1.0 ohm steps in Wheatstone and 1.0 micro-ohm steps in Kelvin ranges.

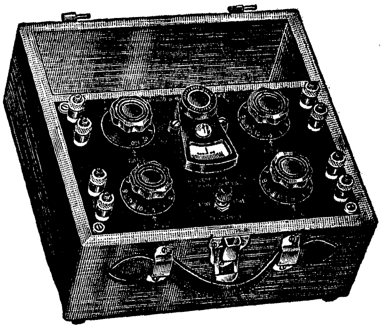
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.

PUSH BUTTONS—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover (not illustrated) and compartment for 4½ volt battery (not supplied) for Wheatstone range measurements.

DIMENSIONS—Length 12½", width 10½", height 6¾".

WEIGHT—Approx. 9 lbs. Price $260.00.



No. 630
WHEATSTONE BRIDGE

Resistance range from 0.1 ohm to 11.1 megohms

SPECIFICATIONS

ACCURACY—1.0% between 10 ohms and 1.0 megohm—2% over 1 megohm.

COMPONENT RESISTORS—0.1% accurate except 1 ohm, which are 0.25%.

RHEOSTAT ARM—Three decades—variable in 10.0 ohm steps.

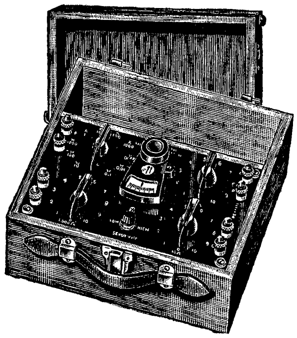
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.

CAM SWITCHES—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover and compartment for batteries and leads (not supplied).

DIMENSIONS—Length 10", width 9¾", height 6".

WEIGHT—Approx. 6 lbs. Price $145.00.



No. 637
KELVIN WHEATSTONE BRIDGE

Resistance range 0.001 ohm to 11.1 megohms

SPECIFICATIONS—Same as No. 638-R except:

ACCURACY—1.0% between 1.0 ohm and 1.0 megohm; 2.0% above 1.0 megohm; and 3.0% below 0.1 ohm.

GALVANOMETER—Sensitivity 1.0 micro-ampere per millimeter division. Built-in.

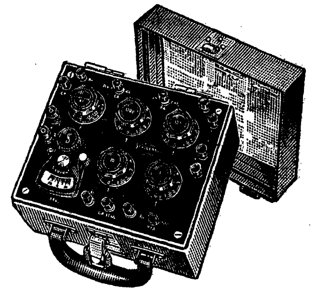
RHEOSTAT ARM—Three decades—10 ohm steps in Wheatstone and 10 micro-ohm steps in Kelvin ranges.

CANNOT be used as Resistance Box.

DIMENSIONS—Length 10", width 9¾", height 5¼".

WEIGHT—Approx. 7 lbs. Price $185.00.

No. 6100
FAULT LOCATION WHEATSTONE BRIDGE



Resistance range 1 ohm to 1.011 megohms

SPECIFICATIONS

APPLICATIONS—Measures resistance from 1 ohm to 1 megohm. Locates grounds, crosses, opens, and shorts by Murray, Varley, Hilborn, or Fisher Loop and Capacitance tests.

ACCURACY—Overall—±0.1%+0.01 ohm; Ratio resistors—±0.05%; All others—±0.1%.

RHEOSTAT ARM—Four decades. 10,110 ohms in 1 ohm steps. Can also be used as a resistance box.

GALVANOMETER—Rugged Shallcross galvanometer is built-in. Sensitivity 1 micro-amp. per mm scale division.

SWITCHES—Shallcross molded phenolic instrument switches. Pure nickel contacts, beryllium copper brushes.

CASE:—Light weight aluminum carrying-type case with battery compartment and removal lid.

DIMENSIONS—Length 8⅞", width 7⅜", height 5¾".

WEIGHT—Approx. 8 lbs. PRICE—$175.00.

VOLTAGE DIVIDERS (DECADE POTENTIOMETERS)

No.	Dials	Total Resistance	Price	No.	Dials	Total Resistance	Price
835	4	10,000 ohms	$132.00	845	3	1,000 ohms	$ 98.00
836	4	100,000 ohms	146.00	846	3	10,000 ohms	105.00
837	4	1,000 ohms	126.00	850	3	100,000 ohms	123.00

Net

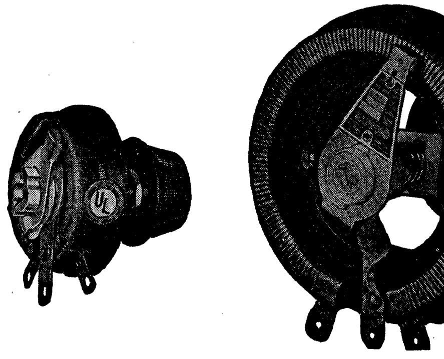
B E R I G H T W I T H

OHMITE ★ RHEOSTATS RESISTORS SWITCHES CHOKES

OHMITE RHEOSTATS

All-Porcelain — Vitreous-Enameled

The design and construction of these sturdy, compact Ohmite Rheostats insure permanently smooth, gradual, close control. The wire is wound over a porcelain core, bonded to porcelain base, and permanently locked in place by special Ohmite Vitreous Enamel. Nothing to smoke, char, shrink, or shift. Dissipates heat rapidly. Insulated shafts and bushings. Copper graphite contacts. Ratings are for "free air" use. Time-proved through long trouble-free service in countless installations the world over. Underwriters' Laboratories Listed.



MODEL "H" 25 Watt

Diameter 1 9/16". Depth behind panel 1⅜".

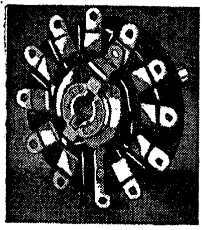
Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0140	1	5,000	$7.03	0152	125	445	$6.22
0141	2	3,540	6.22	0153	175	375	6.22
0142	3	2,880	6.22	0154	250	316	6.22
0143	6	2,040	6.22	0155	350	267	6.22
0144	8	1,770	6.22	0156	500	222	6.22
0145	10	1,580	6.22	0157	750	182	6.22
0146	15	1,290	6.22	0158	1,000	155	7.03
0147	25	1,000	6.22	0159	1,500	129	7.03
0148	35	845	6.22	0160	2,500	100	7.03
0149	50	707	6.22	0161	3,500	84	7.39
0150	75	575	6.22	0162	5,000	70	7.39
0151	100	500	6.22				

MODEL "J" 50 Watt

Diameter 2 5/16". Depth behind panel 1⅜".

Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0308	0.5	10,000	$7.81	0321	150	575	$7.03
0309	1	7,070	7.81	0322	225	470	7.03
0310	2	5,000	7.81	0323	300	408	7.03
0311	4	3,530	7.03	0324	500	316	7.03
0312	6	2,880	7.03	0325	800	250	7.39
0313	8	2,500	7.03	0326	1,000	224	7.39
0314	12	2,040	7.03	0327	1,600	176	7.39
0315	16	1,760	7.03	0328	2,500	141	7.39
0316	22	1,500	7.03	0329	3,500	119	7.81
0317	35	1,190	7.03	0330	5,000	100	7.81
0318	50	1,000	7.03	0331	8,000	79	7.81
0319	80	790	7.03	0332	10,000	70	7.81
0320	125	630	7.03				

NON-SHORTING TYPE ROTARY POWER TAP SWITCH



Single-pole, multi-position switch with all-ceramic insulation, silver-to-silver contacts and "slow-break" action designed especially for alternating current. Switch shaft is electrically "dead". A.C. rating 10 amps., 150 volts. Diameter 1¾" —Depth behind panel 1⅛"— Shaft diameter ¼" — Recommended knob, stock number 4500 (round type) or 4516 (bar type).

Number of Taps	Total Rotation	Stock Number	List Price Less Knob
11	300°	111-11	$4.67
10	270°	111-10	4.53
9	240°	111- 9	4.53
8	210°	111- 8	4.36
7	180°	111- 7	4.36
6	150°	111- 6	4.19
5	120°	111- 5	4.19
4	90°	111- 4	4.06
3	60°	111- 3	4.06
2	30°	111- 2	4.06

MODEL "K" 100 Watt

Diameter 3¼". Depth behind panel 1¾".

Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0440	0.5	14,100	$11.70	0452	200	707	$10.95
0441	1	10,000	11.70	0453	300	575	10.95
0442	2	7,070	11.70	0454	400	500	10.95
0443	3	5,750	11.70	0455	500	447	10.95
0444	5	4,470	11.70	0456	750	365	10.95
0445	7.5	3,650	10.95	0457	1,000	316	11.70
0446	10	3,160	10.95	0458	1,500	258	11.70
0447	16	2,500	10.95	0459	2,000	224	11.70
0448	25	2,000	10.95	0460	2,500	200	11.70
0449	50	1,410	10.95	0461	5,000	141	12.47
0450	75	1,150	10.95	0462	7,500	115	13.28
0451	100	1,000	10.95	0463	10,000	100	14.03

MODEL "L" 150 Watt

Diameter 4". Depth behind panel 2".

Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0524	0.5	17,300	$14.83	0537	150	1,000	$14.03
0525	1	12,300	14.83	0538	200	865	14.03
0526	2	8,650	14.83	0539	250	775	14.03
0527	3	7,070	14.83	0540	350	655	14.03
0528	5	5,480	14.83	0541	500	548	14.03
0529	7.5	4,470	14.83	0542	750	447	14.83
0530	10	3,880	14.03	0543	1,250	346	14.83
0531	15	3,163	14.03	0544	1,800	288	15.61
0532	25	2,450	14.03	0545	2,250	259	15.61
0533	35	2,070	14.03	0546	3,000	224	15.61
0534	50	1,735	14.03	0547	4,500	182	16.36
0535	75	1,415	14.03	0548	7,500	141	17.17
0536	100	1,225	14.03	0549	10,000	122	18.72

MODEL "N" 300 Watt

Diameter 6". Depth behind panel 2⅝".

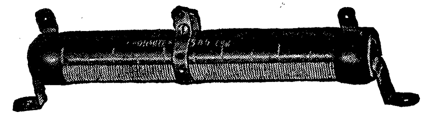
Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0650	1	17,320	$21.06	0661	100	1,730	$21.06
0651	2	12,240	21.06	0662	150	1,410	21.06
0652	3	10,000	21.06	0663	200	1,220	21.06
0553	4	8,660	21.06	0664	300	1,000	21.06
0654	5	7,750	21.06	0665	400	866	21.06
0655	7.5	6,320	21.06	0666	700	655	21.06
0656	10	5,480	21.06	0667	900	578	21.06
0657	15	4,470	21.06	0668	1,200	500	21.06
0658	25	3,460	21.06	0669	1,500	447	21.06
0659	50	2,450	21.06	0670	1,750	414	21.06
0660	75	2,000	21.06	0671	2,500	346	21.06

OTHER OHMITE RHEOSTATS

Ohmite Rheostats are also available in Model G, 75 Watt; Model P, 225 Watt; Model R, 500 Watt; Model T, 750 Watt; and Model U, 1,000 Watt units, in many resistance values. Special Rheostats with tapered windings, etc., can be supplied; also Special Rheostats for Model Train Control. Cages and other accessories also available.

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

OHMITE DIVIDOHM RESISTORS



All-Porcelain

Vitreous-Enameled

You can adjust the resistance or secure odd resistance values quickly with these Dividohms; easily put on more taps where needed. Ideal voltage dividers. With one adjustable lug and with mounting brackets.

OHMITE FIXED RESISTORS

Extra-sturdy, wire-wound, all-porcelain resistors with the permanent protection of Ohmite Vitreous Enamel. Widely used for heavy duty applications to assure continuous trouble-free service. With mounting brackets.

10 WATTS

Core Size 1¾" x ⅝" Mounting Centers 2¼"

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils	Stock No.
1	3,150	1001	750	115	1021
2	2,235	1002	800	111	1022
3	1,825	1003	1,000	100	1023
5	1,415	1004	1,250	89	1024
7.5	1,155	1005	1,500	79	1025
10	1,000	1006	2,000	69	1026
15	816	1007	2,250	64	1027
20	707	1008	2,500	63	1028
25	632	1009	3,000	56	1029
50	447	1010	3,500	51	1030
75	365	1011	4,000	47	1031
100	316	1012	4,500	45	1032
150	258	1013	5,000	43	1033
200	223	1014	6,000	38	1034
250	200	1015	7,000	34	1035
300	182	1016	7,500	33	1036
350	169	1017	8,000	31	1037
400	158	1018	8,500	29	1038
500	141	1019	9,000	28	1039
600	129	1020	10,000	26	1040

List Price, 1 thru 1000 ohms..........$1.47
List Price, 1,250 thru 5,000 ohms...... 1.53
List Price, 6,000 thru 10,000 ohms..... 1.63

25 WATTS

Core Size 2"x⅝" Mounting Centers 2¾"

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
1	5,000	0200J	$0.97	0360	$1.87
2	3,535	0200K	.97	0360B	1.87
3	2,885	0200L	.97	0361	1.87
5	2,235	0200A	.97	0362	1.87
7.5	1,825			0362B	1.87
10	1,580	0200B	.97	0363	1.87
15	1,290	0200R	.97	0364	1.87
20	1,117			0364B	1.87
25	1,000	0200C	.97	0365	1.87
50	707	0200D	.97	0366	1.87
75	577	0200E	.97	0367	1.87
100	500	0200F	.97	0368	1.87
150	408	0200G	.97	0369	1.87
200	353	0200H	.97	0370	1.87
250	316	0201	.97	0371	1.87
300	288			0371B	1.87
400	250			0371C	1.87
500	223	0202	.97	0372	1.87
750	182	0203	.97	0373	1.87
800	176	0204	.97	0374	1.87
1,000	158	0205	.97	0375	1.87
1,250	141			0375B	1.88
1,500	129	0206	1.03	0376	1.88
2,000	111	0207	1.03	0377	1.88
2,250	105			0377B	1.88
2,500	100	0208	1.03	0378	1.88
3,000	91	0209	1.03	0379	1.88
3,500	84	0210	1.03	0380	1.88
4,000	79	0211	1.03	0381	1.88
4,500	74			0381B	1.88
5,000	70	0212	1.03	0382	1.88
6,000	64	0213	1.14	0383	2.03
7,000	60			0383B	2.03
7,200	59			0383C	2.03
7,500	57	0214	1.14	0384	2.03
8,000	55			0384B	2.03
9,000	52			0384C	2.03
10,000	50	0215	1.14	0385	2.03
12,000	42	0216	1.19	0386	2.08
15,000	34	0217	1.19	0387	2.08
20,000	26	0218	1.19	0388	2.08
25,000	21	0219	1.36	0389	2.28
40,000	14	0222	1.36		
50,000	12	0224	1.56		
100.000	7	0229	2.11		

50 WATTS

Core Size 4"x⅝" Mounting Centers 4¾"

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
5	3,160	0400A	$1.63	0560	$2.37
10	2,235	0400B	1.63	0561	2.37
25	1,414	0400C	1.63	0562	2.37
50	1,000	0400D	1.63	0563	2.37
75	816	0400E	1.63	0564	2.37
100	707	0400F	1.63	0565	2.37
150	577	0400G	1.63	0566	2.37
200	500	0400H	1.63	0567	2.37
250	447	0401	1.63	0568	2.37
300	408			0568B	2.37
400	353			0568C	2.37
500	316	0402	1.63	0569	2.37
750	258	0403	1.63	0570	2.37
1,000	223	0405	1.63	0572	2.37
1,250	200			0572B	2.47
1,500	182	0406	1.75	0573	2.47
2,000	158	0407	1.75	0574	2.47
2,500	141	0408	1.75	0575	2.47
3,000	129	0409	1.75	0576	2.47
3,500	119			0576B	2.47
4,000	111	0410	1.75	0577	2.47
4,500	105			0577B	2.47
5,000	100	0411	1.75	0578	2.47
6,000	91			0578B	2.63
7,000	84			0578C	2.63
7,500	81	0412	1.92	0579	2.63
8,000	79	0413	1.92	0580	2.63
9,000	74			0580B	2.63
10,000	70	0414	1.92	0581	2.63
12,000	64	0415	2.08	0582	2.83
15,000	57	0416	2.08	0583	2.83
20,000	48	0417	2.08	0584	2.83
25,000	41	0418	2.33	0585	3.08
30,000	36			0586	3.08
35,000	32	0419	2.33		
40,000	28			0587	3.08
50,000	23	0420	2.58	0588	3.30
60,000	19			0589	3.30
75,000	16	0421	2.92		
80,000	15			0590	3.67
100,000	12	0422	3.20	0591	3.92

75 WATTS

Core Size 6" x ⅝" Mounting Centers 6¾"

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils	Stock No.
5	3,870	0769	5,000	122	0783
10	2,735	0770	6,000	111	0783B
15	2,236	0771	7,000	103	0783C
25	1,732	0772	7,500	100	0784
50	1,224	0773	8,000	96	0784B
100	866	0774	9,000	91	0784C
200	612	0774B	10,000	86	0785
250	547	0775	12,000	79	0785B
300	500	0775B	15,000	70	0786
400	433	0775C	20,000	61	0787
500	387	0776	25,000	49	0788
750	316	0777	30,000	42	0789
1,000	273	0778	35,000	36	0790
1,250	245	0778B	40,000	32	0791
1,500	223	0779	45,000	29	0792
2,000	193	0780	50,000	26	0793
2,500	173	0781	60,000	22	0794
3,000	158	0781B	80,000	17	0795
3,500	146	0782	100,000	13	0796
4,000	136	0782B			

List Price, 5 thru 1,000 ohms..........$2.75
List Price, 1,250 thru 5,000 ohms...... 2.83
List Price, 6,000 thru 10,000 ohms..... 3.00
List Price, 12,000 thru 20,000 ohms.... 3.20
List Price, 25,000 thru 40,000 ohms.... 3.53
List Price, 45,000 thru 60,000 ohms.... 3.62
List Price, 80,000 ohms................ 3.97
List Price, 100,000 ohms............... 4.33

100 WATTS

Core Size 6½"x¾" Mounting Centers 7⅝"

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
5	4,470	0600A	$2.42	0956	$3.58
10	3,160	0600B	2.42	0957	3.58
25	2,000	0601	2.42	0958	3.58
50	1,414	0602	2.42	0959	3.58
75	1,153	0603	2.42		
100	1,000	0604	2.42	0960	3.58
150	816	0605	2.42		
250	632	0606	2.42	0960B	3.58
500	447	0607	2.42	0961	3.58
750	365	0608	2.42		
1,000	316	0609	2.42	0962	3.58
1,500	258	0610	2.53	0962B	3.67
2,000	223	0611	2.53		
2,500	200	0612	2.53	0963	3.67
3,000	182	0613	2.53		
5,000	141	0614	2.53	0964	3.67
7,500	115	0615	2.70		
10,000	100	0616	2.70	0965	3.87
15,000	81	0617	2.97	0966	4.12
20,000	70	0618	2.97	0967	4.12
25,000	53	0619	3.20	0968	4.37
30,000	47	0620	3.20	0969	4.37
40,000	36	0621	3.20	0970	4.37
50,000	29	0622	3.37	0971	4.53
60,000	24	0623	3.37		
75,000	19	0624	3.58	0972	4.75
100,000	15	0625	3.80	0973	4.95

160 Watt Resistors—Core Size 8½" x 1⅛". Mounting Centers 9⅜" available in same resistances as the 200 Watt Resistors.

Ohms	Fixed Res. List Price	Adj. Res. List Price
5	$4.16	$5.33
10 thru 1,000	2.98	4.14
1,500 thru 5,000	3.04	4.19
7,500 & 10,000	3.30	4.44
15,000 & 20,000	3.54	4.69
25,000 thru 40,000	3.64	4.81
50,000 & 60,000	3.76	4.94
75,000	4.03	5.17
100,000	4.26	5.44

200 WATTS

Core Size 10½"x1⅛" M'nt'ng Centers 11⅜"

5	6,320	0900A	$4.53	1356	$5.67
10	4,470	0900B	3.22	1357	4.37
25	2,828	0901	3.22	1358	4.37
50	2,000	0902	3.22	1359	4.37
75	1,635	0903	3.22		
100	1,414	0904	3.22	1360	4.37
150	1,153	0905	3.22		
250	894	0906	3.22	1360B	4.37
500	632	0907	3.22	1361	4.37
750	516	0908	3.22		
1,000	447	0909	3.22	1362	4.37
1,500	365	0910	3.30	1362B	4.45
2,000	316	0911	3.30		
2,500	283	0912	3.30	1363	4.45
3,000	258	0913	3.30		
5,000	200	0914	3.30	1364	4.45
7,500	163	0915	3.53		
10,000	141	0916	3.53	1365	4.70
15,000	115	0917	3.77	1366	4.92
20,000	100	0918	3.77	1367	4.92
25,000	80	0919	3.90	1368	5.03
30,000	81	0920	3.90	1369	5.03
40,000	61	0921	3.90	1370	5.03
50,000	49	0922	4.03	1371	5.17
60,000	41	0923	4.03		
75,000	33	0924	4.25	1372	5.42
100,000	25	0925	4.53	1373	5.67

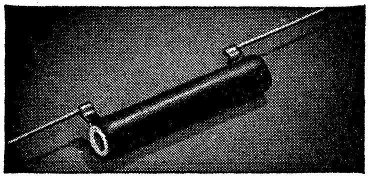
ADJUSTABLE LUGS

Bakelite Knob			Screw Driver Type		
Res. Dia.	Stock No.	List Price	Res. Dia.	Stock No.	List Price
⅝"	0359	$0.36	⅜"	1058	$0.25
¾"	1959	.47	⅝"	0358	.25
1⅛"	2159	.47	¾"	1958	.42
			1⅛"	2158	.42

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Popular OHMITE "BROWN DEVIL" RESISTORS



High quality, small size, wire-wound resistors ideal for voltage dropping, bias units, bleeders, etc. They're extra-sturdy, all-ceramic, vitreous enameled. They give time-proved protection against shock, vibration, heat and humidity. Their long record of continuous trouble-free service—their wide use in all climates of the world—prove their complete reliability and economy. All units can be conveniently mounted by means of their 1½" tinned wire leads.

The all-welded construction of the 5 watt unit makes it possible to extend the resistance range to 10,000 ohms, an unusually high value for a vitreous enameled stock unit.

5 Watt—1" x 5/16" Core Size

Ohms	Mils.	Ohms	Mils.	Ohms	Mils.
1	2,236	125	200	1,250	63
1.5	1,820	150	182	1,500	57
2	1,580	200	158	1,750	53
3	1,290	225	149	2,000	49
4	1,120	250	141	2,250	46
5	1,000	300	129	2,500	44
7.5	818	350	120	3,000	39
10	707	400	112	3,500	36
12	645	450	105	4,000	33
15	575	500	100	4,500	31
20	500	600	91	5,000	29
25	447	700	84	6,000	26
30	408	750	81	7,000	24
35	378	800	79	7,500	22
40	353	900	74	8,000	21
50	316	1,000	70	9,000	19
75	258	1,100	67	10,000	18
100	224	1,200	64		

List Price, 1 thru 1,000 ohms..........$0.67
List Price, 1,100 thru 5,000 ohms...... .72
List Price, 6,000 thru 10,000 ohms..... .78

10 Watt—1¾" x 5/16" Core Size

Ohms	Mils,	Ohms	Mils.	Ohms	Mils.
1	3,160	350	169	6,000	38
2	2,235	400	158	7,000	34
3	1,825	450	149	7,500	32
4	1,580	500	141	8,000	31
5	1,414	600	129	8,500	29
7.5	1,155	700	119	10,000	26
10	1,000	750	115	11,000	24
12	910	800	111	12,000	23
15	816	900	105	12,500	22
20	707	1,000	100	13,500	21
25	632	1,100	95	14,300	20
30	575	1,200	91	15,000	19
35	535	1,250	89	16,000	18
40	500	1,500	79	17,500	17
50	447	1,750	74	18,000	17
75	365	2,000	69	20,000	16
100	316	2,250	64	22,500	15
125	283	2,500	63	25,000	14
150	258	3,000	56	30,000	12
200	223	3,500	51	35,000	10
225	217	4,000	47	40,000	9
250	200	4,500	45	45,000	8
300	182	5,000	43	50,000	7

List Price, 1 thru 1,000 ohms..........$0.75
List Price, 1,100 thru 5,000 ohms...... .80
List Price, 6,000 thru 10,000 ohms..... .92
List Price, 11,000 thru 20,000 ohms.... 1.03
List Price, 22,500 & 25,000 ohms....... 1.08
List Price, 30,000 thru 50,000 ohms.... 1.22

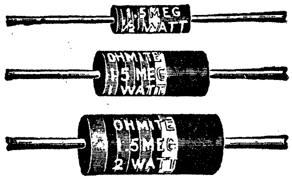
20 Watt—2" x 7/16" Core Size

Ohms	Mils.	Ohms	Mils.	Ohms.	Mils.
5	2,000	1,250	126	15,000	30
10	1,414	1,500	115	20,000	24
25	894	1,750	107	25,000	20
50	632	1,850	104	30,000	17
75	516	2,000	100	35,000	15
100	447	2,250	94	40,000	14
150	365	2,400	91	45,000	13
200	316	2,500	89	50,000	12
250	283	2,750	85	55,000	10
300	258	3,000	81	60,000	9.0
350	239	3,500	75	65,000	8.0
400	223	4,000	70	70,000	7.0
500	200	4,500	66	75,000	7.0
650	175	5,000	63	80,000	7.0
700	169	6,000	57	85,000	6.0
750	163	7,000	53	90,000	6.0
800	158	7,500	51	95,000	6.0
850	153	8,000	50	100,000	6.0
1,000	141	10,000	43		
1,200	129	12,500.	35		

List Price, 5 thru 1,000 ohms.........$0.95
List Price, 1,200 thru 5,000 ohms...... .97
List Price, 6,000 thru 10,000 ohms..... 1.12
List Price, 12,500 thru 20,000 ohms.... 1.20
List Price, 25,000 thru 40,000 ohms.... 1.37
List Price, 45,000 thru 60,000 ohms.... 1.58
List Price, 65,000 thru 80,000 ohms.... 1.83
List Price, 85,000 thru 100,000 ohms... 2.11

OHMITE "LITTLE DEVIL" RESISTORS

Individually Marked



Ohmite "Little Devils" are full ½ Watt, 1 Watt and 2 Watt Insulated Composition Resistors and can be used at their full wattage ratings at 70° C. (158° F.) ambient temperature. They meet requirements of specification JAN-R-11. All units are color coded. Each resistor is marked with the resistance value, wattage rating and the Ohmite trademark. "LITTLE DEVILS" are available from stock in ½, 1 and 2 watt sizes with ±5% or ±10% tolerance. The standard RMA values, 10 ohms to 22 megohms can be furnished. In the 1 watt size, ±10% tolerance values as low as 2.7 ohms are available from stock.

Stocked in RMA Values ±5% or ±10% Tolerance

(Figures in bold type are ±10% RMA values. All values except (*) available in ±5% tolerance.)

Ohms	Ohms	Ohms	Ohms	Megs.
***2.7**	110	2,400	51,000	1.1
***3.3**	**120**	**2,700**	**56,000**	**1.2**
***3.9**	130	3,000	62,000	1.3
***4.7**	**150**	**3,300**	**68,000**	**1.5**
***5.6**	160	3,600	75,000	1.6
***6.8**	**180**	**3,900**	**82,000**	**1.8**
***8.2**	200	4,300	91,000	2.0
10	**220**	**4,700**	MEGS	**2.2**
11	240	5,100	**0.1**	2.4
12	**270**	**5,600**	0.11	**2.7**
13	300	6,200	**0.12**	3.0
15	**330**	**6,800**	0.13	**3.3**
16	360	7,500	**0.15**	3.6
18	**390**	**8,200**	0.16	**3.9**
20	430	9,100	**0.18**	4.3
22	**470**	**10,000**	0.20	**4.7**
24	510	11,000	**0.22**	5.1
27	**560**	**12,000**	0.24	**5.6**
30	620	13,000	**0.27**	6.2
33	**680**	**15,000**	0.30	**6.8**
36	750	16,000	**0.33**	7.5
39	**820**	**18,000**	0.36	**8.2**
43	910	20,000	**0.39**	9.1
47	**1,000**	**22,000**	0.43	**10.0**
51	1,100	24,000	**0.47**	11.0
56	**1,200**	**27,000**	0.51	**12.0**
62	1,300	30,000	**0.56**	13.0
68	**1,500**	**33,000**	0.62	**15.0**
75	1,600	36,000	**0.68**	16.0
82	**1,800**	**39,000**	0.75	**18.0**
91	2,000	43,000	**0.82**	20.0
100	**2,200**	**47,000**	0.91	**22.0**
			1.0	

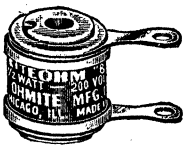
*1 Watt Size Only. ±10% tolerance.

Type	Size Length	Size Diam.	Max. Volts	List Price ±10%	List Price ±5%
½ Watt	3/8"	9/64"	350	17c	**33c**
1 Watt	9/16"	7/32"	500	25c	**50c** 10 Ohms and up
2 Watt	11/16"	5/16"	1,000	**33c**	**66c**

RITEOHM SERIES "84" PRECISION RESISTORS

Ohms	Max. Voltage	Ohms	Max. Voltage	Ohms	Max. Voltage
*0.1	.316	4,000	44.70	.125 Meg.	200
0.5	.500	5,000	50.00	.150 Meg.	200
1	.707	7,500	61.20	.175 Meg.	200
10	2.24	10,000	70.70	.200 Meg.	200
25	3.54	12,500	79.00	*.225 Meg.	400
50	5.00	15,000	86.60	*.250 Meg.	400
100	7.07	20,000	100	*.300 Meg.	400
200	10.00	22,500	106	*.400 Meg.	400
250	11.20	25,000	112	†.500 Meg.	400
300	12.20	30,000	122	†.600 Meg.	400
500	15.80	40,000	141	†.750 Meg.	400
1000	22.40	50,000	158	†.900 Meg.	400
1500	27.40	60,000	173	†1.0 Meg.	400
2000	31.60	75,000	194	†1.5 Meg.	400
2500	35.40	.1 Meg.	200		

*Type 844-A 4 Pie—1 Watt Size 9/16" x 7/8"
†Type 844-B 4 Pie—1 Watt Size 3/4" x 1 3/16"
All others Type 842-A 2 Pie—½ Watt Size 9/16" x 9/16"



High quality, 1% tolerance, non-inductive, pie-wound units for meter multipliers, lab. equipment, etc. Prices are for stock values shown in table.

Ohms	List Price	Ohms	List Price
0.1 thru 500	**$1.33**	.225 & .25 Meg.	**$4.06**
1,000 thru 2,500	**1.39**	.3 megohm	**4.44**
4,000 thru 10,000	**1.56**	.4 megohm	**4.67**
12,500 & 15,000	**1.69**	.5 megohm	**5.31**
20,000 thru 50,000	**2.11**	.6 megohm	**6.64**
60,000 & 75,000	**2.50**	.75 megohm	**7.03**
.1 megohm	**2.89**	.9 megohm	**7.39**
.125 megohm	**3.28**	1.0 megohm	**8.20**
.15 thru .2 megohm	**3.67**	1.5 megohm	**11.70**

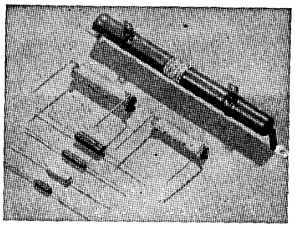
Complete Listings in Bulletin 126

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

BE RIGHT WITH

OHMITE ★ RHEOSTATS RESISTORS SWITCHES CHOKES

OHMITE R.F. PLATE CHOKES

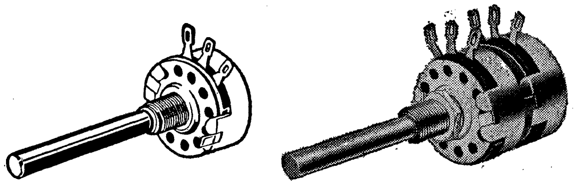


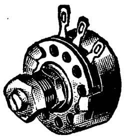
This series of seven Ohmite single layer wound solenoid radio frequency plate chokes covers the entire frequency range of 3 to 520 megacycles. The four highest frequency chokes are wound on low power factor plastic cores while the other three units are wound on steatite tubes. Windings are insulated and protected by a moisture-proof coating. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

Stock Number	Operating Range Megacycles	Micro-henries	Core Dimensions	List Price
Z-7	3 to 20 Mc.	84.0	6″ x 9/16″	$1.56
Z-14	7 to 35 Mc.	44.0	2″ x 7/16″	.68
Z-28	20 to 60 Mc.	21.0	1¾″ x 5/16″	.44
Z-50	35 to 110 Mc.	7.0	⅞″ x 9/32″	.33
Z-144	80 to 200 Mc.	1.8	¾″ x 3/16″	.33
Z-235	160 to 350 Mc.	0.84	¾″ x 3/16″	.33
Z-460	320 to 520 Mc.	0.20	½″ x 5/32″	.33

Non-magnetic Brackets Furnished with Z-7. The Z-14 and Z-28 are rated at 600 ma. All others 1000 ma.

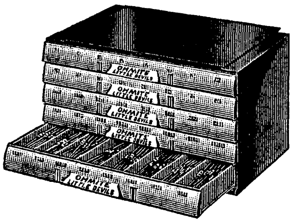
2 WATT MOLDED COMPOSITION POTENTIOMETER—TYPE AB





The Type AB Potentiometer is an exceptionally high quality unit designed especially for industrial, laboratory, radio service and other uses where reliability is particularly important. Because the resistor element is molded, the unit has an exceptionally large safety factor. The power rating of 2 watts is unusual for a unit of such small size. The unit has a very low noise level and low voltage coefficient. It will pass the Army-Navy 200 hour salt spray test, specification AN-QQ-S-91. The single unit is 1-1/16″ diameter and extends 9/16″ behind the panel. The dual unit extends 1-3/16″ behind the panel. The 2″ long round shaft (including the ⅜″ long mounting bushing) is available from stock on potentiometers with all three resistance tapers and on the dual unit. The screwdriver shaft with locking-nut is available from stock on the linear taper units only. A SPST switch, to be attached to the back of the control, can be supplied extra.

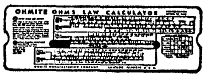
LITTLE DEVIL RESISTOR ASSORTMENTS FOR SERVICE USE



Serviceman's assortments of 150 Ohmite "Little Devil," ½-watt, or 125, 1-watt or 2-watt insulated composition resistors, in the 40 values (10 ohms to 10 megohms) most frequently used by servicemen. The assortment is offered at the price of the resistors alone—the cabinet is furnished without extra cost! Cabinet is only 9″ long, 4¾″ high, and 5¼″ deep.

Assortment	Stock No.	Quantity of Resistors	Wattages	Net Price
SERVICE ±10% tolerance (40 resistance values)	CAB-10 CAB-2 CAB-3	150 125 125	½ watt 1 watt 2 watt	**$15.00** **18.75** **25.00**

NEW OHM'S LAW CALCULATOR



Redesigned! This new, improved version of the famous Ohmite Ohm's Law Calculator—popular the world over with servicemen, engineers and students—now has scales for solving parallel resistance problems, AND a standard slide rule. More useful than ever! With one setting of the slide the calculator gives the answer to any Ohm's Law problem—reading directly in ohms, volts, amperes, and watts. Three of the new scales on the back provide a quick, one-setting means of solving parallel resistance problems. The slide rule scales will multiply, divide, find squares, and square roots.

Ohm's Law Calculator (Cardboard)........**Net Price $0.25**
Ohm's Law Calculator (Plastic)..............**Net Price 1.50**

Total Resistance- ±10% Except as Noted	Resistance Rotation Characteristics (Taper)				
	LINEAR			Type A Clockwise Log. Stock No.	Type B Counterclock. Log. Stock No.
	Type U 2″ Shaft Stock No.	Type LU Locking Shaft Stock No.	Type U Dual Unit Stock No.		
50 Ohms	CU 5001	CLU 5001			
100 Ohms	CU 1011	CLU 1011			
250 Ohms	CU 2511	CLU 2511			
500 Ohms	CU 5011	CLU 5011			
1,000 Ohms	CU 1021	CLU 1021			
2,500 Ohms	CU 2521	CLU 2521			
5,000 Ohms	CU 5021	CLU 5021			
10,000 Ohms	CU 1031	CLU 1031	CCU 1031		CB 1031
25,000 Ohms	CU 2531	CLU 2531	CCU 2531		CB 2531
50,000 Ohms	CU 5031	CLU 5031	CCU 5031		CB 5031
.10 Meg.	CU 1041	CLU 1041	CCU 1041	CA 1041	
.25 Meg.	CU 2541	CLU 2541	CCU 2541	CA 2541	
.5 Meg.	CU 5041	CLU 5041	CCU 5041	CA 5041	
1.0 Meg. ±20%	CU 1052	CLU 1052	CCU 1052	CA 1052	
2.5 Meg. ±20%	CU 2552	CLU 2552		CA 2552	
5.0 Meg. ±20%	CU 5052	CLU 5052			

Type AB Potentiometer with 2″ long shaft..........**List Price $3.00**
Type AB Potentiometer with locking shaft illustrated above..............**List Price 3.75**

Dual Type AB Potentiometer with 2″ long shaft..............**List Price 7.00**

Stock No. CS-1, Switch only for above unit (supplied unmounted)..............**List Price .90**

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

SLIDEOHM WIRE-WOUND VITREOUS-ENAMELED ADJUSTABLE RESISTORS

Slideohm Resistors are for use in any application where it is necessary or desirable to have one or more intermediate resistance values; or in circuits that need to be changed from time to time to meet varying electrical conditions. Slideohm Resistors are built of the highest grade low temperature coefficient materials, and are coated with tough crazeless Vitreous Enamel.

Adjustable resistors combining adjustment to any resistance value within unit's range, with positive, permanent, non-fluctuating qualities of wire-wound resistor. Each Slideohm Resistor is provided with horizontal mounting brackets and one adjustable contact slider.

25 WATTS Type 952

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	5000	$1.85	1250	140	$1.90
2	3535	1.85	1500	129	1.90
3	2890	1.85	2000	112	1.90
5	2230	1.85	2250	105	1.90
7	1825	1.85	2500	100	1.90
10	1580	1.85	3000	90	1.90
15	1290	1.85	3500	85	1.90
20	1115	1.85	4000	80	1.90
25	1000	1.85	4500	74	1.90
50	710	1.85	5000	70	1.90
75	580	1.85	6000	65	2.05
100	500	1.85	7000	57	2.05
150	410	1.85	7200	56	2.05
200	354	1.85	7500	53	2.05
250	315	1.85	8000	50	2.05
300	289	1.85	8500	47	2.05
400	250	1.85	9000	44	2.05
500	224	1.85	10000	40	2.05
750	182	1.85	12000	33	2.10
800	177	1.85	15000	27	2.10
850	170	1.85	20000	20	2.10
1000	158	1.85	25000	16	2.30

80 WATTS Type 956

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	8660	$3.55	3000	158	$2.85
2	6120	3.55	3500	146	2.85
3	5000	3.55	4000	137	2.85
4	4330	3.55	4500	129	2.85
5	3870	3.55	5000	122	2.85
10	2740	3.55	6000	111	3.00
15	2235	3.55	7000	103	3.00
25	1730	3.55	7200	102	3.00
50	1220	3.55	7500	100	3.00
75	1000	3.55	8000	97	3.00
100	866	3.55	9000	91	3.00
200	612	3.55	10000	87	3.00
250	550	3.55	15000	71	3.15
300	500	3.55	20000	61	3.15
400	433	3.55	25000	55	3.50
500	387	3.55	30000	50	3.50
750	315	3.55	35000	43	3.50
800	305	3.55	40000	37	3.50
1000	274	3.55	45000	33	3.60
1250	245	2.85	50000	30	3.60
1500	224	2.85	60000	25	3.60
2000	195	2.85	70000	21	3.95
2250	183	2.85	80000	19	3.95
2500	173	2.85	100000	15	4.35

200 WATTS Type 958

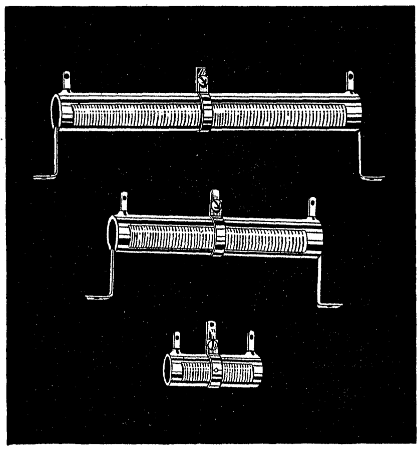
Ohms	Current m. a.	List Price		Current	List
7	6320	$5.65	4500	210	$4.45
10	4470	4.35	5000	200	4.45
25	2825	4.35	7500	163	4.45
75	2000	4.35	10000	141	4.70
100	1414	4.35	15000	115	4.90
250	900	4.35	20000	100	4.90
500	632	4.35	25000	90	5.05
1000	447	4.35	30000	82	5.05
1500	365	4.45	40000	62	5.05
2000	315	4.45	50000	50	5.15
2500	282	4.45	60000	42	5.15
3000	260	4.45	75000	33	5.40
3500	240	4.45	100000	25	5.65
4000	225	4.45			

50 WATTS Type 954

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	7070	$3.00	3000	130	$2.45
2	5000	3.00	3500	120	2.45
3	4080	3.00	4000	110	2.45
4	3535	3.00	4500	105	2.45
5	3160	3.00	5000	100	2.45
10	2235	3.00	6000	91	2.65
25	1415	3.00	7000	85	2.65
50	1000	3.00	7200	83	2.65
75	815	3.00	7500	82	2.65
100	707	3.00	8000	79	2.65
150	575	3.00	9000	75	2.65
200	500	3.00	10000	71	2.65
250	445	3.00	12000	64	2.85
300	408	3.00	15000	58	2.85
400	353	3.00	20000	48	2.85
500	316	3.00	25000	40	3.10
750	258	3.00	30000	33	3.10
800	250	3.00	40000	25	3.10
1000	224	3.00	50000	20	3.30
1250	200	2.45	60000	17	3.30
1500	180	2.45	75000	13	3.60
2000	160	2.45	80000	12	3.60
2250	150	2.45	100000	10	3.90
2500	141	2.45			

100 WATTS Type 957

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	10000	$4.55	2500	200	$3.65
2	7070	4.55	3000	180	3.65
3	5770	4.55	4000	160	3.65
4	5000	3.60	4500	150	3.65
5	4470	3.60	5000	141	3.65
10	3160	3.60	6000	130	3.85
25	2000	3.60	7500	115	3.85
50	1410	3.60	10000	100	3.85
100	1000	3.60	15000	80	4.10
200	707	3.60	20000	70	4.10
250	630	3.60	25000	60	4.35
400	500	3.60	30000	50	4.35
500	447	3.60	40000	37	4.35
750	365	3.60	50000	30	4.55
1000	316	3.60	60000	25	4.55
1500	260	3.65	75000	20	4.75
2000	225	3.65	100000	15	4.95

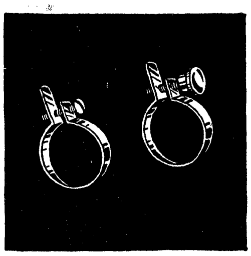


WATT RATINGS

Nominal Watt ratings for Slideohm Resistors apply when the entire resistor is in the circuit. For most practical purposes the watt rating for each part of the resistor is approximately proportional to the amount of the resistance that is in the circuit.

Mounting brackets are furnished with all Slideohm Resistors.

Price of resistor includes brackets and one adjustable band.



ADJUSTABLE BANDS

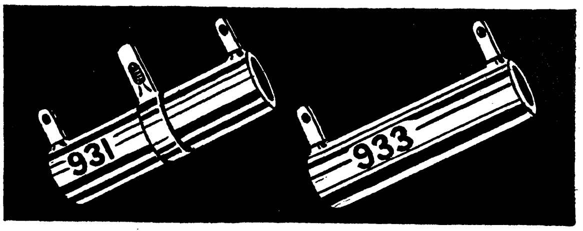
One screw-driver type adjustable band terminal is supplied with each "Slideohm" resistor. Order additional bands, screw-driver or knob type as illustrated by resistor type number for which band is to be used.

Resistor Rating	Size of Resistor	SCREW DRIVER TYPE Cat. No.	SCREW DRIVER TYPE List	BAKELITE KNOB TYPE Cat. No.	BAKELITE KNOB TYPE List
25 Watt	2″ x ⅝″	RB 25	$.25	BB 25	$.35
50 Watt	4½″ x ¾″	RB 80	.25	BB 50	.35
80 Watt	6½″ x ¾″	RB 80	.25	BB 80	.35
100 Watt	6½″ x 1⅛″	RB 100	.42	BB 100	.47
200 Watt	10½″ x 1⅛″	RB 200	.42	BB 200	.47

WIRE-WOUND VITREOUS ENAMELED FIXED RESISTORS • TYPES 931-933

Compact genuine wire-wound, vitreous-enamel. Correctly designed, highest quality materials used throughout. Note these features:

1. Crack-proof refractory tubing for the support. Adequate heat dissipation.
2. Quality resistance wire precisely spaced, tension wound.
3. Copper terminal band clamped to tubing. Wire ends wrapped and brazed around raised ear.
4. Heavy vitreous-enamel coating for permanent seal against moisture, oxidation and mechanical damage.
5. Pig-tail of stiff wire 2 in. long soldered to terminal band for positive, non-breakable connection.



10 Watts Type 931

Ohms	Current m. a.	List Price
1	3160	$.75
1.5	2580	.75
2	2235	.75
3	1825	.75
4	1580	.75
5	1415	.75
7.5	1155	.75
10	1000	.75
12	913	.75
15	815	.75
20	707	.75
25	630	.75
30	577	.75
35	534	.75
40	500	.75
50	450	.75
75	365	.75
100	316	.75
125	283	.75
150	258	.75
200	224	.75
225	211	.75
250	200	.75
300	182	.75
350	169	.75
400	158	.75
450	149	.75
500	142	.75
600	129	.75
700	120	.75
750	115	.75
800	110	.75
900	105	.75
1000	100	.75
1100	95	.80
1200	91	.80

10 Watts Type 931

Ohms	Current m. a.	List Price
1250	89	$.80
1500	81	.80
1750	75	.80
2000	70	.80
2250	66	.80
2500	63	.80
3000	58	.80
3500	53	.80
4000	50	.80
4500	47	.80
5000	45	.80
6000	41	.90
7000	38	.90
7500	36	.90
8000	35	.90
8500	34	.90
9000	33	.90
10000	30	.90
11000	27	1.05
12000	25	1.05
12500	24	1.05
13500	22	1.05
14300	21	1.05
15000	20	1.05
16000	19	1.05
17500	17	1.05
18000	16	1.05
20000	15	1.05
22500	13	1.10
25000	12	1.10
30000	*13	1.20
35000	*12	1.20
40000	*11	1.20
45000	*10.5	1.20
50000	*10	1.20

*Operated at low temp., rated at 5 watts.

20 Watts Type 933

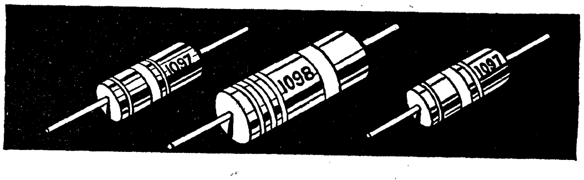
Ohms	Current m. a.	List Price
1	4480	$.95
3	2580	.95
5	2000	.95
10	1410	.95
15	1150	.95
25	900	.95
50	630	.95
75	510	.95
100	450	.95
150	365	.95
175	340	.95
200	320	.95
250	285	.95
300	258	.95
350	240	.95
400	220	.95
500	200	.95
650	175	.95
700	169	.95
750	160	.95
800	155	.95
850	153	.95
1000	141	.95
1200	130	.95
1250	125	.95
1500	115	.95
1750	107	.95
1850	104	.95
2000	100	.95
2250	94	.95
2400	91	.95
2500	90	.95
2750	85	.95
3000	80	.95
3500	76	.95
4000	70	.95

20 Watts Type 933

Ohms	Current m. a.	List Price
4500	67	$.95
5000	63	.95
6000	55	1.10
7000	53	1.10
7500	51	1.10
8000	50	1.10
10000	40	1.10
12500	32	1.20
15000	27	1.20
20000	20	1.20
25000	16	1.35
30000	13	1.35
35000	11	1.35
40000	10	1.35
45000	9	1.60
50000	8	1.60
55000	7	1.60
60000	†10.8	1.60
65000	†10.5	1.85
70000	†10.0	1.85
75000	† 9.5	1.85
80000	† 9.3	1.85
85000	† 9.1	2.10
90000	† 8.8	2.10
95000	† 8.6	2.10
100000	† 8.4	2.10

†Operated at low temp., rated at 7 watts.

INSULATED MOLDED CARBON RESISTORS • TYPES 1097-1098



Small, noiseless, vibration-proof. Crack-proof molded casing around molded carbon resistance element. Tinned copper pig-tail leads 2 in. long. Resists humidity effects. Ideal for AVC circuits, high-gain amplifiers. RTMA color-coded; stamped with resistance value. Precision tested. Standard tolerance ±10%.

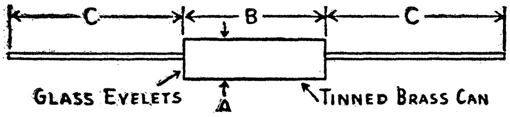
TYPE 1097—½ Watt-Size: 5/32″ x 3/8″ lg.........List $0.17
TYPE 1098—1 Watt-Size: ¼″ x ¾″ lg..........List $0.25

JOBBERS' STOCK IN PREFERRED RTMA RANGES

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs	Megs
0.47	3.0	18	110	680	4.300	27,000	0.1	0.62	3.9
0.51	3.3	20	120	750	4,700	30,000	0.11	0.68	4.3
0.56	3.6	22	130	820	5,100	33,000	0.12	0.75	4.7
0.62	3.9	24	150	910	5,600	36,000	0.13	0.82	5.1
0.68	4.3	27	160	1,000	6,200	39,000	0.15	0.91	5.6
0.75	4.7	30	180	1,100	6,800	43,000	0.16	1.0	6.2
0.82	5.1	33	200	1,200	7,500	47,000	0.18	1.1	6.8
0.91	5.6	36	220	1,300	8,200	51,000	0.20	1.2	7.5
1.0	6.2	39	240	1,500	9,100	56,000	0.22	1.3	8.2
1.1	6.8	43	270	1,600	10,000	62,000	0.24	1.5	9.1
1.2	7.5	47	300	1,800	11,000	68,000	0.27	1.6	10.0
1.3	8.2	51	330	2,000	12,000	75,000	0.30	1.8	11.0
1.5	9.1	56	360	2,200	13,000	82,000	0.33	2.0	12.0
1.6	10	62	390	2,400	15,000	91,000	0.36	2.2	13.0
1.8	11	68	430	2,700	16,000		0.39	2.4	15.0
2.0	12	75	470	3,000	18,000		0.43	2.7	16.0
2.2	13	82	510	3,300	20,000		0.47	3.0	18.0
2.4	15	91	560	3,600	22,000		0.51	3.3	20.0
2.7	16	100	620	3,900	24,000		0.56	3.6	22.0

CAPACITORS AEROVOX RESISTORS

HERMETICALLY-SEALED *Carbofilm* RESISTORS



*Type	A	B	C	Standard Min. Ohms	Standard Max. Megohms	Standard Peak Volts**
CPH ½	0.312″ ± .005	22/32″ ± 1/32″	#20 gauge x 1⅜″	90	2.5	350
CPH –1	0.400″ ± .005	1⅛″ ± 1/32″	#20 gauge x 1⅜″	100	5	500
CPH –2	0.400″ ± .005	2¼″ ± 1/32″	#20 gauge x 1⅜″	150	15	750

No Mil-R-10509 Specifications for Hermetically-Sealed units.

*Numerals signify wattage.

**Provided wattage rating is not exceeded.

TOLERANCE ±1% Ohms	CPH ½ ½ Watt ±1% List	CPH 1 1 Watt ±1% List	CPH 2 2 Watt ±1% List
100	$3.00	$3.25	$3.50
120	3.00	3.25	3.50
130	3.00	3.25	3.50
150	3.00	3.25	3.50
175	3.00	3.25	3.50
200	3.00	3.25	3.50
225	3.00	3.25	3.50
250	3.00	3.25	3.50
300	3.00	3.25	3.50
350	3.00	3.25	3.50
400	3.00	3.25	3.50
450	3.00	3.25	3.50
500	3.00	3.25	3.50
550	3.00	3.25	3.50
600	3.00	3.25	3.50
650	3.00	3.25	3.50
750	3.00	3.25	3.50
800	3.00	3.25	3.50
850	3.00	3.25	3.50
900	3.00	3.25	3.50
1000	3.00	3.25	3.50
1200	3.00	3.25	3.50
1250	3.00	3.25	3.50
*1450	3.00	3.25	3.50
1500	3.00	3.25	3.50
1750	3.00	3.25	3.50
2000	3.00	3.25	3.50
2250	3.00	3.25	3.50
2500	3.00	3.25	3.50
*2950	3.00	3.25	3.50
3000	3.00	3.25	3.50
3500	3.00	3.25	3.50
4000	3.00	3.25	3.50
*4450	3.00	3.25	3.50
4500	3.00	3.25	3.50
5000	3.00	3.25	3.50
5500	3.00	3.25	3.50
*5950	3.00	3.25	3.50
6000	3.00	3.25	3.50
6500	3.00	3.25	3.50

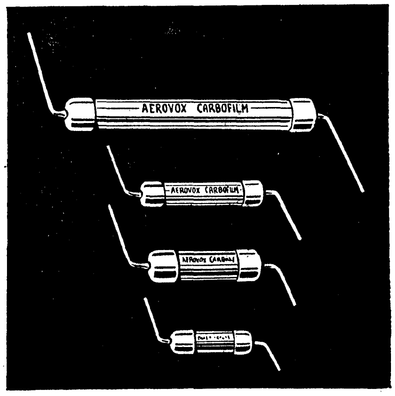
TOLERANCE ±1% Ohms	CPH ½ ½ Watt ±1% List	CPH 1 1 Watt ±1% List	CPH 2 2 Watt ±1% List
7000	$3.00	$3.25	$3.50
*7450	3.00	3.25	3.50
7500	3.00	3.25	3.50
8000	3.00	3.25	3.50
8500	3.00	3.25	3.50
*8950	3.00	3.25	3.50
9000	3.00	3.25	3.50
*9950	3.00	3.25	3.50
10,000	3.00	3.25	3.50
12,000	3.00	3.25	3.50
12,500	3.00	3.25	3.50
*13,500	3.00	3.25	3.50
15,000	3.00	3.25	3.50
17,500	3.00	3.25	3.50
20,000	3.00	3.25	3.50
22,500	3.00	3.25	3.50
25,000	3.00	3.25	3.50
30,000	3.00	3.25	3.50
40,000	3.00	3.25	3.50
45,000	3.00	3.25	3.50
50,000	3.00	3.25	3.50
55,000	3.00	3.25	3.50
60,000	3.00	3.25	3.50
65,000	3.00	3.25	3.50
70,000	3.00	3.25	3.50
75,000	3.00	3.25	3.50
80,000	3.00	3.25	3.50
85,000	3.00	3.25	3.50
90,000	3.00	3.25	3.50
Megohms			
0.10	3.00	3.25	3.50
0.125	3.00	3.25	3.50
0.150	3.00	3.25	3.50
0.175	3.00	3.25	3.50
0.200	3.00	3.25	3.50
0.225	3.00	3.25	3.50
0.250	3.00	3.25	3.50
0.300	3.00	3.25	3.50
0.350	3.00	3.25	3.50
0.400	3.00	3.25	3.50

TOLERANCE ±1% Ohms	CPH ½ ½ Watt ±1% List	CPH 1 1 Watt ±1% List	CPH 2 2 Watt ±1% List
0.450	$3.00	$3.25	$3.50
0.500	3.00	3.25	3.50
0.550	3.00	3.25	3.50
0.600	3.00	3.25	3.50
0.650	3.00	3.25	3.50
0.700	3.00	3.25	3.50
0.750	3.00	3.25	3.50
0.800	3.00	3.25	3.50
0.850	3.00	3.25	3.50
0.900	3.00	3.25	3.50
1.0	3.00	3.25	3.50
1.2	3.00	3.25	3.50
1.25	3.00	3.25	3.50
1.5	3.00	3.25	3.50
2.0	3.00	3.25	3.50
2.225	3.00	3.25	3.50
2.5	3.00	3.25	3.50
3.0		3.25	3.50
3.5		3.25	3.50
4.0		3.25	3.50
4.5		3.25	3.50
5.0		3.50	3.50
5.5			3.50
6.0			3.50
6.5			3.50
7.0			3.50
7.5			3.50
8.0			3.50
8.5			3.50
9.0			3.50
10.0			3.50
12.5			3.50
15.			3.50

*Meter multiplyer resistance values—other odd values can be ordered as specials.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

AEROVOX *Carbofilm* RESISTORS

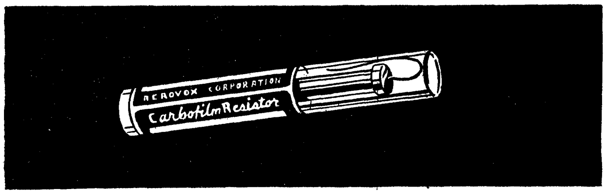


PRECISION RESISTORS MADE WITH MATCHLESS ACCURACY

Made under licensed agreement with Western Electric, these precision resistors are the result of years of intensive research in developing components with extreme accuracy and stability. Carbofilm resistors are intended for circuits calling for the accuracy and stability of wire-wound resistors with the marked economy of carbon resistors. They serve a real need in test equipment and laboratory instruments. All in all, Carbofilm resistors meet the requirements of accuracy, stability and economy.

The Carbofilm resistors are a carbon deposit type and are available in the following standard or jobber stock sizes with the resistance value shown in the listing.

Packed and sealed in plastic tubes for your protection.



SIZES

CP ½ watt 0.230D x 11/16L		CP 1 watt 0.293D x 7/8L	
CPL ½ watt 0.230D x 15/16L		CP 2 watt 0.293D x 2"	

TOLERANCE ± 1%

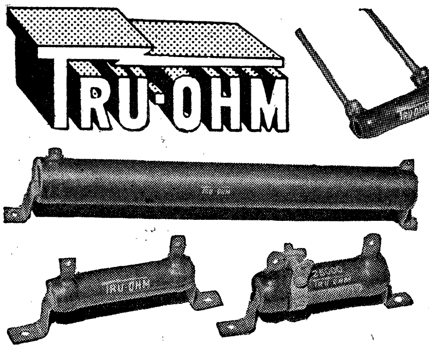
TOLERANCE ±1% Ohms	CP ½ ½ Watt ±1% List	CP 1 1 Watt ±1% List	CP 2 2 Watt ±1% List
100	$1.00	$1.25	$1.50
120	1.00	1.25	1.50
130	1.00	1.25	1.50
150	1.00	1.25	1.50
175	1.00	1.25	1.50
200	1.00	1.25	1.50
225	1.00	1.25	1.50
250	1.00	1.25	1.50
300	1.00	1.25	1.50
350	1.00	1.25	1.50
400	1.00	1.25	1.50
450	1.00	1.25	1.50
500	1.00	1.25	1.50
550	1.00	1.25	1.50
600	1.00	1.25	1.50
650	1.00	1.25	1.50
750	1.00	1.25	1.50
800	1.00	1.25	1.50
850	1.00	1.25	1.50
900	1.00	1.25	1.50
1000	1.00	1.25	1.50
1200	1.00	1.25	1.50
1250	1.00	1.25	1.50
*1450	1.00	1.25	1.50
1500	1.00	1.25	1.50
1750	1.00	1.25	1.50
2000	1.00	1.25	1.50
2250	1.00	1.25	1.50
2500	1.00	1.25	1.50
*2950	1.00	1.25	1.50
3000	1.00	1.25	1.50
3500	1.00	1.25	1.50
4000	1.00	1.25	1.50
*4450	1.00	1.25	1.50
4500	1.00	1.25	1.50
5000	1.00	1.25	1.50
5500	1.00	1.25	1.50
*5950	1.00	1.25	1.50
6000	1.00	1.25	1.50
6500	1.00	1.25	1.50
7000	1.00	1.25	1.50
*7450	1.00	1.25	1.50
7500	1.00	1.25	1.50

TOLERANCE ±1% Ohms	CP ½ ½ Watt ±1% List	CP 1 1 Watt ±1% List	CP 2 2 Watt ±1% List
8000	$1.00	$1.25	$1.50
8500	1.00	1.25	1.50
*8950	1.00	1.25	1.50
9000	1.00	1.25	1.50
*9950	1.00	1.25	1.50
10,000	1.00	1.25	1.50
12,000	1.00	1.25	1.50
12,500	1.00	1.25	1.50
*13,500	1.00	1.25	1.50
15,000	1.00	1.25	1.50
17,500	1.00	1.25	1.50
20,000	1.00	1.25	1.50
22,500	1.00	1.25	1.50
25,000	1.00	1.25	1.50
30,000	1.00	1.25	1.50
40,000	1.00	1.25	1.50
45,000	1.00	1.25	1.50
50,000	1.00	1.25	1.50
55,000	1.00	1.25	1.50
60,000	1.00	1.25	1.50
65,000	1.00	1.25	1.50
70,000	1.00	1.25	1.50
75,000	1.00	1.25	1.50
80,000	1.00	1.25	1.50
85,000	1.00	1.25	1.50
90,000	1.00	1.25	1.50
Megohms			
0.10	1.00	1.25	1.50
0.125	1.00	1.25	1.50
0.150	1.00	1.25	1.50
0.175	1.00	1.25	1.50
0.200	1.00	1.25	1.50
0.225	1.00	1.25	1.50
0.250	1.00	1.25	1.50
0.300	1.00	1.25	1.50
0.350	1.00	1.25	1.50
0.400	1.00	1.25	1.50
0.450	1.00	1.25	1.50
0.500	1.00	1.25	1.50
0.550	1.00	1.25	1.50
0.600	1.00	1.25	1.50
0.650	1.00	1.25	1.50

TOLERANCE ±1% Megohms	CP ½ ½ Watt ±1% List	CP 1 1 Watt ±1% List	CP 2 2 Watt ±1% List
0.700	$1.00	$1.25	$1.50
0.750	1.00	1.25	1.50
0.800	1.00	1.25	1.50
0.850	1.00	1.25	1.50
0.900	1.00	1.25	1.50
1.0	1.00	1.25	1.50
1.2	1.00	1.25	1.50
1.25	1.00	1.25	1.50
1.5	1.00	1.25	1.50
2.0	1.00	1.25	1.50
2.225	1.00	1.25	1.50
2.5	1.00	1.25	1.50
3.0	1.00	1.25	1.50
3.5	1.00	1.25	1.50
4.0	1.00	1.25	1.50
4.5	1.00	1.25	1.50
5.0	1.00	1.50	1.50

TOLERANCE ±1% Megohms	CPL ½ ½ Watt List	CP 1 1 Watt List	CP 2 2 Watt List
5.5	$1.00	$1.50	$1.50
6.0	1.00	1.50	1.50
6.5	1.00	1.50	1.50
7.0	1.00	1.50	1.50
7.5	1.00	1.50	1.50
8.0		1.50	1.50
8.5		1.50	1.50
9.0		1.50	1.50
10.0		1.50	1.50
12.5		1.50	1.50
15.		1.50	1.50
20.			1.50
25.			1.95
50.			3.50

*Meter multiplyer resistance values — other odd values can be ordered as specials.



VITREOUS ENAMELED

RESISTORS

● FIXED ● ADJUSTABLE ● TRU-RIB

Our new, modern plant occupies 80,000 square feet devoted to producing the finest power rheostats and wire wound resistors available. If you need a rheostat or resistor, whether it be right from stock or to your specifications, we assure you of courteous service, prompt delivery and quality merchandise.

10 WATT—TYPE FRL-10

OHMS	MILLIAMPS	VOLTS
1	3160	3.1
1.5	2580	3.8
2	2230	4.4
3	1820	5.4
4	1580	6.3
5	1410	7.0
7.5	1150	8.6
10	1000	10
12	914	11
15	816	12
20	707	14
25	631	16
30	577	17
35	535	19
40	500	20
50	447	22
75	365	27
100	316	31
125	283	35
150	254	38
200	223	44
225	211	47
250	200	50
300	182	54
350	169	59
400	158	63
450	149	67
500	141	70
600	129	77
700	120	84
750	115	86
800	112	89
900	105	94
1000	100	100
1100	95	104
1200	91	109
1250	89	111
1500	82	123
1750	76	133
2000	71	142
2250	67	151
2500	63	158
3000	57	171
3500	53	185
4000	50	200
4500	47	212
5000	45	225
6000	41	246
7000	38	266
7500	36	270
8000	35	280
8500	34	289
9000	33	297
10,000	30	300
11,000	27	300
12,000	25	300
12,500	24	300
13,500	22	300
14,300	21	300
15,000	20	300
16,000	19	300
17,500	17	300
18,000	16	300

25 WATT—TYPE FR-25

RATING	100% RATING		50%
AMPS	VOLTS	AMPS	OHMS
1	5.0	5.000	3.535
2	7.0	3.535	2.500
3	8.6	2.885	2.040
4	10	2.500	1.770
5	11	2.236	1.580
10	15	1.580	1.118
15	19	1.291	.914
25	25	1.000	.707
50	35	.707	.500
75	43	.577	.408
100	50	.500	.353
150	61	.408	.289
200	70	.353	.250
250	79	.316	.223
300	86	.289	.204
400	100	.250	.177
500	111	.223	.158
750	136	.182	.129
800	141	.177	.125
850	145	.171	.121
1000	158	.158	.111
1250	176	.141	.100
1500	193	.129	.091
2000	222	.111	.079
2500	250	.100	.070
3000	273	.091	.064
3500	294	.084	.058
4000	316	.079	.056
5000	350	.070	.050
6000	384	.064	.045
7500	427	.057	.040
10,000	500	.050	.035
12,000	505	.042	.029
15,000	510	.034	.024
20,000	520	.026	.018
25,000	530	.022	.014
30,000	540	.018	.012
35,000	550	.016	.010
40,000	560	.014	.009
50,000	585	.012	.008
60,000	610	.010	.007
70,000	630	.009	.006
75,000	635	.008	.005
80,000	640	.008	.005
100,000	700	.007	.005

Free air rating to 10,000 Ohms at 25 Watts

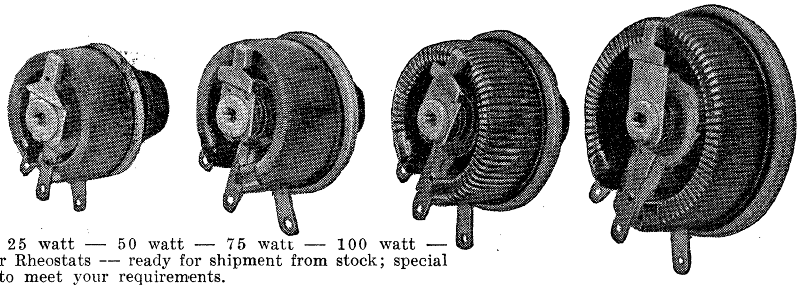
10 WATT—TYPE AR-10

RATING	100% RATING		50%
AMPS	VOLTS	AMPS	OHMS
1	3.1	3.160	2.230
2	4.4	2.230	1.580
3	5.4	1.820	1.290
5	7.0	1.410	1.000
7.5	8.6	1.150	.816
10	10	1.000	.707
15	12	.816	.576
20	14	.707	.500
25	16	.631	.447
50	22	.447	.316
75	27	.365	.258
100	31	.316	.223
150	38	.254	.182
200	44	.223	.158
250	50	.200	.141
300	54	.182	.129
350	59	.169	.119
400	63	.158	.112
500	70	.141	.100
600	77	.129	.091
750	86	.115	.081
800	89	.112	.079
1000	100	.100	.071
1250	111	.089	.063
1500	123	.082	.058
2000	142	.071	.050
2250	151	.067	.047
2500	158	.063	.045
3000	171	.057	.041
3500	185	.053	.038
4000	200	.050	.035
4500	212	.047	.033
5000	225	.045	.032
6000	246	.041	.029
7000	226	.038	.027
7500	270	.036	.026
8000	280	.035	.025
8500	289	.034	.024
9000	297	.033	.023
10,000	300	.030	.022

25 WATT—TYPE AR-20

RATING	100% RATING		50%
AMPS	VOLTS	AMPS	OHMS
1	5.0	5.000	3.535
2	7.0	3.535	2.500
3	8.6	2.885	2.040
5	11	2.236	1.580
7.5	13	1.825	1.290
10	15	1.580	1.118
15	19	1.291	.914
20	22	1.117	.790
25	25	1.000	.707
50	35	.707	.500
75	43	.577	.408
100	50	.500	.353
150	61	.408	.289
200	70	.353	.250
250	79	.316	.223
300	86	.289	.204
400	100	.250	.177
500	111	.223	.158
750	136	.182	.129
800	141	.177	.125
850	145	.171	.121
1000	158	.158	.111
1250	176	.141	.100
1500	193	.129	.091
2000	222	.111	.079
2250	236	.105	.074
2500	250	.100	.070
3000	273	.091	.064
3500	294	.084	.058
4000	316	.079	.056
4500	332	.074	.052
5000	350	.070	.050
6000	384	.064	.045
7000	420	.060	.042
7200	425	.059	.041
7500	427	.057	.040
8000	440	.055	.039
9000	468	.052	.037
10,000	500	.050	.035
12,000	505	.042	.029
15,000	510	.034	.024
20,000	520	.026	.018
25,000	530	.022	.014

TRU-OHM



POWER RHEOSTATS

Now Available — 25 watt — 50 watt — 75 watt — 100 watt — 150 watt — Power Rheostats — ready for shipment from stock; special features available to meet your requirements.

You are guaranteed to receive 24 hour delivery as we maintain jobber stock items!

Mfd. by TRU-OHM DIVISION, MODEL ENG. & MFG. CO., General Sales Office: Chicago 18, Ill.

Composition and Wire Wound RESISTORS

"CARBOMITE" M-TYPE
Composition Resistors

(Actual size as Illustrated)

M1-1 WATT

M2-2 WATT

M½-½ WATT

- Meet JAN-R-11 Specifications
- Low Noise Level
- Small Size
- Insulated

Continental's "Carbomite" type M resistors meet all the requirements for a fixed, stable and rugged resistor. The insulated bakelite shell has a 1000 volt breakdown test and will not short out when stacked together. Instant solderability with a touch of a soldering iron is another of the features of this resistor. They are packaged in boxes of 10 and 50 in the ½ watt and 1 watt sizes and 10 and 25 in the 2 watt size. Standard RTMA Color Coding is marked on each unit. Both 5% and 10% tolerance resistance values are carried in stock.

Type	Wattage	Size L x D	Resistance Range	List Prices 5%	List Prices 10%
M½	½ Watt	3/8 x 9/64	10 Ohms to 22 Megohms	$0.33	$0.17
M1	1 Watt	9/16 x 7/32	2.7 Ohms to 22 Megohms	.50	.25
M2	2 Watt	15/16 x 5/16	10 Ohms to 22 Megohms	.66	.33

"WM" TYPE
Wire Wound Resistors

WM1-1 WATT

WM½-½ WATT

WM⅓-⅓ WATT

- Resistance Wire Molded in Bakelite
- Axial Leads
- Soldered Connections
- RTMA Standard Color Coded

Continental's type WM resistors are wound evenly to prevent shorting of turns. A minimum of .0015 inch wire is used for the winding. The terminals are securely and permanently connected to the winding. They are resistance to moisture. The WM resistor is recommended for circuits requiring very low resistance which is not ordinarily available in the carbon style. Packaged in boxes of 10 or 50 each.

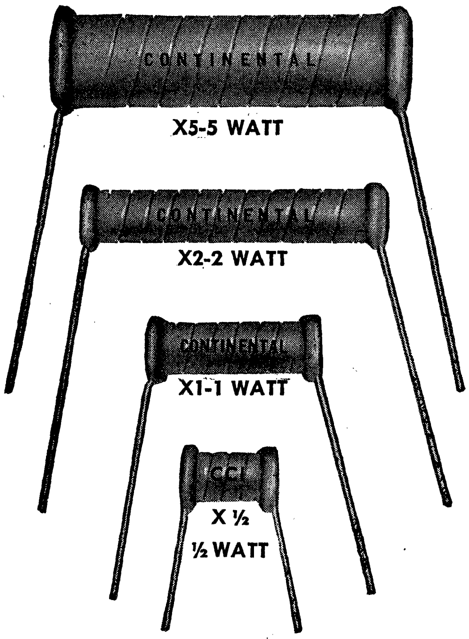
Type	Wattage	Size L x D	Resistance Range	List Prices 5%	List Prices 10%
WM⅓	⅓ Watt	7/16 x 1/8	.47 Ohm to 12 Ohms	$0.30	$0.25
WM½	½ Watt	5/8 x 7/32	.47 Ohm to 12 Ohms	.33	.28
WM1	1 Watt	1 x 9/32	.47 Ohm to 12 Ohms	.40	.35

PRECISION RESISTORS

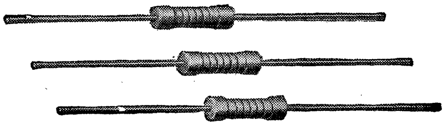
"Nobleloy" Metal Film Resistors

Trade Mark Reg.

X & PX TYPE



NF TYPE



NF—Continental "Nobleloy" type NF metal film resistors are small in size, with axial leads and are designed to meet government specification MIL-R-10509. Initial accuracy and long time stability make these resistors ideally suited for critical applications. RTMA color coded to standard values.

X — Continental "Nobleloy" type X metal film resistors have radial leads soldered to the body for a rugged construction. The hollow centers allow for greater heat radiation thus enabling these resistors to withstand overloads. The resistance and tolerance are marked on the body of the unit. Coated with gray rubberized enamel.

PX—Continental "Nobleloy" type PX metal film resistors are constructed the same as type X. A different improved alloy resistance film is employed to allow for better temperature coefficient. The resistance and tolerance are marked on each unit. Coated with an orange colored enamel for identification.

Type	Wattage	Size	Resistance Range	Voltage		List Price	
				Rec'd	Max.	½%	1%
X½	½	9/32" x 5/8"	1 Ohm to 1 Megohm				$ .80
			1.1 Meg to 5 Megohm	500	700		1.05
X1	1	9/32" x 1"	1 Ohm to 1 Megohm				1.00
			1.1 Meg to 10 Megohm	700	1000		1.30
X2	2	9/32" x 1¾"	2 Ohm to 1 Megohm				1.25
			1.1 Meg to 20 Megohm	1000	1500		1.65
X5	5	½" x 2"	3 Ohm to 1 Megohm				1.50
			1.1 Meg to 30 Megohm	1250	2000		2.00
PX½	½	9/32" x 5/8"	1 Ohm to 1 Megohm	500	700	$1.10	$ .90
PX1	1	9/32" x 1"	1 Ohm to 1 Megohm	700	1000	1.30	1.10
PX2	2	9/32" x 1¾"	1 Ohm to 1 Megohm	1000	1500	1.75	1.40
PX5	5	½" x 2"	3 Ohm to 1 Megohm	1250	2000	2.10	1.65

No. 18 tinned copper leads 1½" long.

						1%	5%
NF½	½	.155" x 15/32"	1 Ohm to 1 Megohm	200	350	$ .80	$ .70

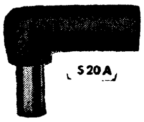
No. 20 tinned copper leads 1½" long.

SUPPRESSORS SUPPRESSORS

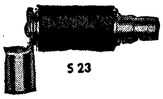
CONTINENTAL SUPPRESSORS have been subjected to years of laboratory development and actual road service. They effectively remove noise interference from spark discharge at the plugs and high-tension distributor—yet do not in any way affect the motor car ignition system.

They have mechanical strength to stand the most severe service. The resistance value of 10,000 ohms has been scientifically determined. Sparking across the terminals is eliminated by careful shaping of the electrodes and cases.

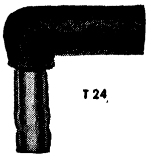
S19


S20A

S21

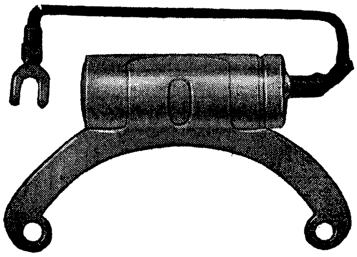

S23

C11

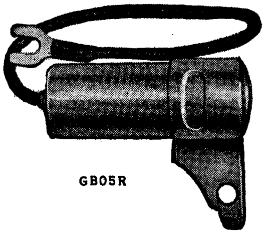

T24

LIST PRICE (All Suppressors)..$ .30 each

GENERATOR CONDENSERS

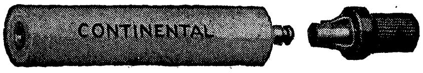

GB05F

GB05


GB05R

Type	Application	Capacity	Size	List Price
GB05	Generator and coil	.5 mfd.	2⅛" x ¾"	$0.75
GB05F	Ford V-8 coil 1936 Models	.5 mfd.	2⅛" x ¾"	1.00
GB05R	Ford Generator and coil Latest Models	.5 mfd.	2⅛" x ¾"	1.00

OIL BURNER SUPPRESSORS



OB15

CONTINENTAL
OB15A

CONTINENTAL
OB15B

CONTINENTAL
OB15C

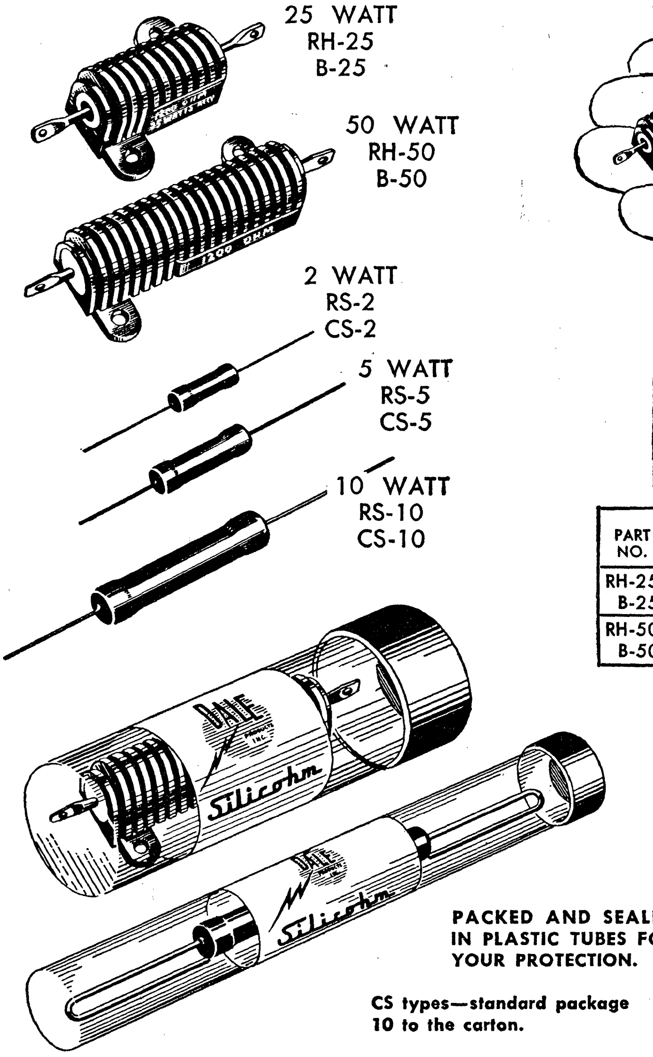
Type	List Price
OB15 with Rajah Terminal	$1.80
OB15A	1.40
OB15B	1.40
OB15C	1.40

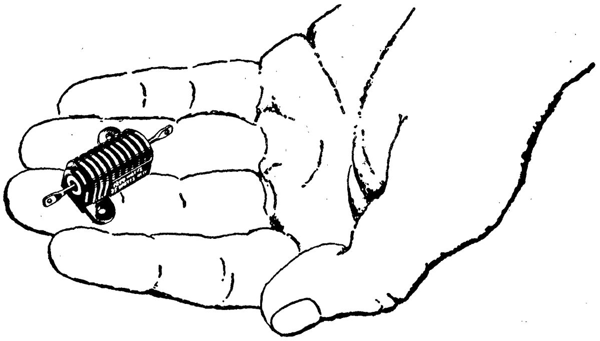
DALE PRODUCTS, INC.

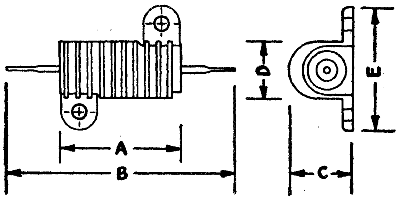
COLUMBUS, NEBRASKA U.S.A.

Silicohm Miniature Power Resistors

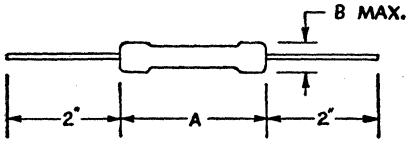
Carefully designed and skillfully made for electronic and allied industries, these miniature power resistors are completely welded from terminal to terminal. They are coated with a special Silicone material and are impervious to moisture. They are ruggedly built for long life service under the most adverse operating conditions.


25 WATT
RH-25
B-25
50 WATT
RH-50
B-50
1200 OHM
2 WATT
RS-2
CS-2
5 WATT
RS-5
CS-5
10 WATT
RS-10
CS-10
DALE PRODUCTS INC.
Silicohm
DALE
Silicohm





PART NO.	FULL WATTAGE RATING	A	B	C	D	E
RH-25 B-25	25	1 1/16	1 15/16	9/16	1/2	1 1/16
RH-50 B-50	50	1 61/64	2 25/32	5/8	9/16	1 1/8



PART NO.	FULL WATTAGE RATING	NOM. DIMENSIONS A	NOM. DIMENSIONS B
RS-2 CS-2	2	11/16	1/4
RS-5 CS-5	5	15/16	5/16
RS-10 CS-10	10	1 55/64	3/8

PACKED AND SEALED IN PLASTIC TUBES FOR YOUR PROTECTION.

CS types—standard package 10 to the carton.

Silicohm power resistors are the answer to that space problem because it is true POWER in MINIATURE. Carefully crafted in every respect, Silicohm Miniature Power Resistors are designed to give trouble-free performance under all conditions.

- **Complete welded construction from terminal to terminal.**
- **Sealed in Silicone.**
- **Impervious to moisture.**
- **Smallest in size.**

See next page for Stock Values and Prices.

DALE PRODUCTS, INC.

COLUMBUS, NEBRASKA U. S. A.

FOR THOSE TIGHT SPECIFICATIONS

DALE "Silicohm"—Silicone Coated Miniature Wire-Wound Power Resistors —see preceding page for size and description.

RS and RH types meet JAN-R-26A Specification. For use in all government and commercial applications where the equipment must survive the most severe environmental, shock and vibration conditions. Available in .1%, .25%, .5%, 1%, 3% and 5% tol.—T. C. 0.00002/°C.

CS and B types (Red Dot Line) are designed for use in commercial electrical and electronic equipment—combine economy with quality and miniaturization. Res. tol. 10% and 5%.

STANDARD STOCK RESISTANCE VALUES
OHMS

1	5	20	50	200	400	750	1200	2250	4500	8000	12000	17500	30000
1.5	7.5	25	75	225	450	800	1250	2500	5000	8500	12500	18000	35000
2	10	30	100	250	500	900	1500	3000	6000	9000	13500	20000	40000
3	12	35	125	300	600	1000	1750	3500	7000	10000	15000	22500	45000
4	15	40	150	350	700	1100	2000	4000	7500	11000	16000	25000	50000

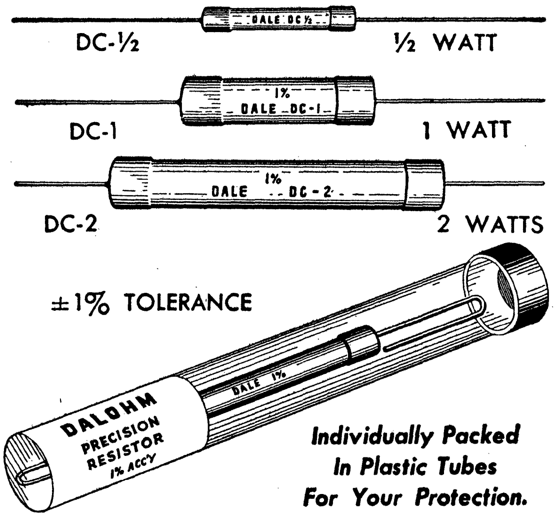
TYPES	RESISTANCE RANGE	LIST PRICE	
		CS & B TYPES 10% TOL.*	RS & RH TYPES 5% TOL.**
2 WATT CS-2 and RS-2	1 thru 1,000 ohms	$ .67	$1.08
	1,100 thru 5,000 ohms	.72	1.08
5 WATT CS-5 and RS-5	1 thru 1,000 ohms	.67	1.08
	1,100 thru 5,000 ohms	.72	1.08
	6,000 thru 10,000 ohms	.78	1.08
	11,000 thru 15,000 ohms	.90	1.08
10 WATT CS-10 and RS-10	1 thru 1,000 ohms	.75	1.15
	1,100 thru 5,000 ohms	.80	1.24
	6,000 thru 10,000 ohms	.92	1.24
	11,000 thru 20,000 ohms	1.03	1.55
	22,500 thru 25,000 ohms	1.08	1.65
	30,000 thru 50,000 ohms	1.22	1.85
25 WATT B-25 and RH-25	1 thru 1,000 ohms	.97	2.68
	1,100 thru 5,000 ohms	1.03	2.68
	6,000 thru 10,000 ohms	1.14	2.68
	11,000 thru 15,000 ohms	1.19	2.68
50 WATT B-50 and RH-50	1 thru 4 ohms	2.25	3.50
	5 thru 1,000 ohms	1.63	3.34
	1,100 thru 5,000 ohms	1.75	3.34
	6,000 thru 10,000 ohms	1.92	3.34
	11,000 thru 20,000 ohms	2.08	3.34
	25,000 thru 35,000 ohms	2.33	3.34
	40,000 thru 50,000 ohms	2.58	3.34

***CS & B types—add 10% for 5% tolerance.**
****RS & RH types—add 10% for 3% tolerance.**
" " " add 30% for 1% tolerance.

For lower tolerances, price quoted on request.

DALE PRODUCTS, INC.
COLUMBUS, NEBRASKA U.S.A.

DALOHM DEPOSITED CARBON RESISTORS



Individually Packed
In Plastic Tubes
For Your Protection.

FOR EXCEPTIONAL ACCURACY IN ANY LOW-HIGH RESISTANCE RANGE

Dalohm deposited carbon resistors are manufactured under a licensed agreement with Western Electric. The matchless stability and accuracy of these precision resistors are the result of years of intensive research and development. Dalohm deposited carbon resistors are manufactured by depositing pure carbon in crystalline form which is bonded to a selected ceramic core. They are intended for circuits calling for the accuracy and stability of wire wound resistors such as instrumentation, advanced electronics and critical television circuits but with the marked economy of carbon resistors.

Dalohm deposited carbon resistors are sealed from moisture by special silicone coating material having a high dielectric strength, excellent thermal conductivity, and offer high resistance to abrasion.

SIZES	LIST PRICE
DC-½, ½ WATT 0.175"x1 13/16" Long	**$1.00 each**
DC-1, 1 WATT 0.300"x⅞" Long	**1.00 each**
DC-2, 2 WATT 0.300"x2" Long	**1.20 each**

STANDARD STOCK VALUES

DC-½ and DC-1			DC-2
Ohms	**Ohms**	**Megohms**	**Megohms**
100	4,450**	0.10	0.5
150	5,000	0.15	1.0
200	5,950**	0.20	2.0
250	7,450**	0.25	3.0
300	8,950**	0.30	5.0
400	9,950**	0.40	10.0
500	10,000	0.50	15.0
1,000	13,500**	1.00	20.0
1,450**	15,000	1.50	
1,500	20,000	2.00	
2,000	25,000	2.50*	
2,500	30,000	3.00*	
2,950**	40,000	4.00*	
3,000	50,000	5.00*	
4,000			

***NOT STOCK VALUES FOR DC-½**
****METER MULTIPLIER VALUES**

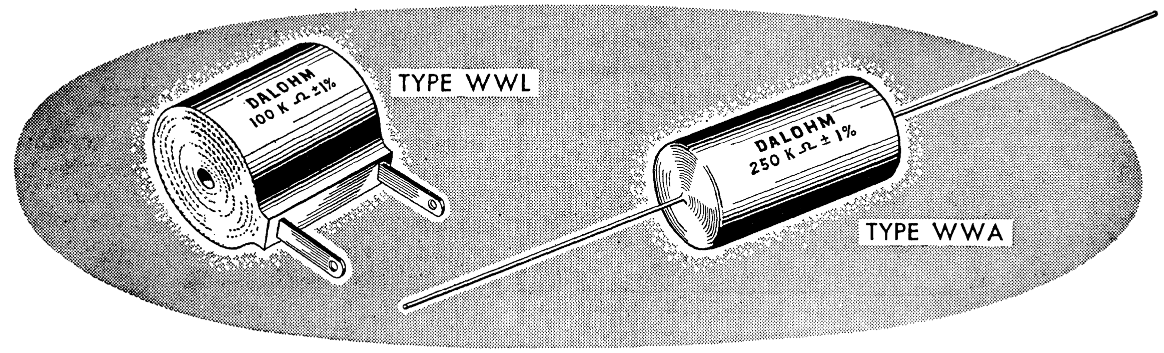
OTHER VALUES CAN BE ORDERED AS SPECIALS FROM 10 OHMS TO 100 MEGS.

HERMETICALLY SEALED UNITS ALSO AVAILABLE

DALE PRODUCTS, INC.

COLUMBUS, NEBRASKA U. S. A.

HERMETICALLY SEALED LIGHT WEIGHT W. W. PRECISION RESISTORS EXCEED JAN-R-93A or MIL-R-93A SPECIFICATIONS



PRECISION RESISTORS

For Critical Electronic Applications

Exceed JAN-R-93A or MIL-R-93A specifications

STANDARD TOLERANCE ±1%. TOLERANCES AS LOW AS ± .05% CAN BE HAD ON SPECIAL ORDER. TEMP. COEF. 0.00002/° C.

DALE Engineers and chemists have compounded a chemically inert material making possible these light weight, hermetically sealed precision resistors that surpass the requirements of JAN-R-93A and MIL-R-93A.

In addition to these resistors being completely impervious to the penetrating effects of salt ions, humidity, moisture and corrosive gases and vapors, this new material in which the Dalohm precision wire wound resistors are incased has very high dielectric strength and due to its coefficient of expansion being very close to that of the wire itself it eliminates the possibility of distorted windings and shorted turns which are quite common in other types of resistors.

The superior quality of Dalohm precision wire wound resistors is assured through thorough testing, temperature cycling, salt water immersion, humidity and overload tests. These are without a doubt the precision resistors for dependable and long life operation under the most adverse conditions.

LUG TYPE WWL			
TYPE	**DIAM.**	**LENGTH**	**MOUNTING SCREW SIZE**
WWL-1	.575	.520	6
WWL-2	.575	.625	6
WWL-3	.575	1.02	6
WWL-4	.575	1.54	6
WWL-5	.575	2.04	6

AXIAL LEAD TYPE WWA			
TYPE	**DIAM.**	**LENGTH**	**LEAD WIRE SIZE**
WWA-1	.525	.520	22 AWG
WWA-2	.525	.625	22 AWG
WWA-3	.525	1.02	22 AWG
WWA-4	.525	1.54	22 AWG
WWA-5	.525	2.04	22 AWG

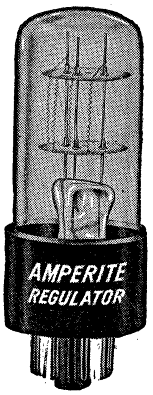
AVAILABLE IN RESISTANCE VALUES FROM 0.05 OHMS TO 3 MEGOHMS.

OTHER CASE SIZES AND STYLES AVAILABLE.

ALL PRICES QUOTED ON REQUEST.

AUTOMATIC AMPERITE REGULATOR

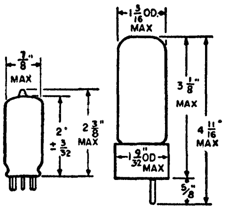
BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE



T9 BULB

AUTOMATIC REGULATION

WHAT IT IS! *AMPERITE* is an automatic "rheostat" designed to keep the current in a circuit at a definite value, e.g., 0.5 amps. Should the supply voltage increase, the *AMPERITE* will automatically increase in resistance to take up the increase in supply voltage. Since *AMPERITE* is a constant current device, it can only be used on a fixed load.

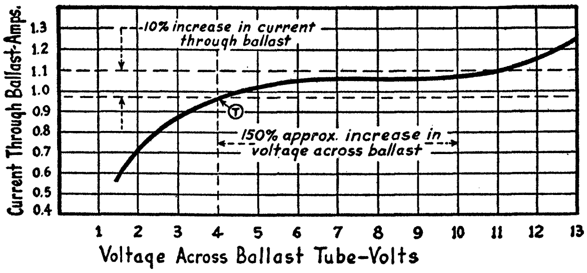


SIZES:

T-5½ L, Miniature. O.D. 11/16"; seated height, 2⅜".

T-6½ L, Miniature. O.D. 1 3/16"; seated height, 2⅜".

T-9, Octal base. O.D. 1 5/16"; seated height, 3".



Ⓣ= Threshold Current & Voltage

CHARACTERISTIC CURVE

Characteristic curve of a typical Amperite. Approximate curve of any other Amperite can be obtained by multiplying or dividing the current or voltage scale by any number.

We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.

AMPERITE NUMBERING SYSTEM

In general, the AMPERITE number approximately denotes the current—voltage threshold value:

AMPERITE NUMBER	3-4	3H4	10-7	12-11	12H11
THRESHOLD CURRENT	0.3	0.35	1.0	1.2	1.25
THRESHOLD VOLTAGE	4.0	4.0	7.0	11.0	11.0

SPECIAL BALLAST TUBES
List $3.00 — Dealer Cost $1.80

D6-1E	1H20	3V4	4A10	6-3	**7HTF3	9A10	12-3
*D6T4	1H22	3-7	4-12	6-4	**7HTF4	9-11	12-4
**D6TK7	**2TK7	*3T7	4H3	6-4A	7H4	10T1	12-7
*D6T11	2A10	**3TF7	4H4	6-4B	7H4B	**10TF2	12A10
**D6TF10	2A12	3A10	**4HTF4	*6T4	7H7	10-3	12-11
**D6TF30	2A20	3-11	**4HTF7	**6TF4	7H11	10-4A	13-4
D7-20	*2HT2	*3T11	4H10	6-7	**8TF2	10-4B	15-2
D7H4	2H4	3TF11	4H11	**6TF7	8-3B	10-4C	15-4
*D7HT4	*2HT4	**3TF12	5E1	6-8B	8-4	10-4D	16-4
*D7HT11	**2HTF4	3-14	**5TF2	6A10	8A10	10-4E	17-3
1A10	2H10	3-16	5-4	6-11	**9TF2	10A10	20-3
**1TF10	3-2	3A20	**5TF4	6-12	9-3	10A12	20-4
1-15	*3T2	3-38A	5A10	6-13	9-4	10-25	22-4
*1HT2	**3TF2	3-50A	5-11	6A15	9-4A	11-3	24-3
1H4	**3TK2	3H-1-7	5-16	6-36	9-7	11-4	34-2
*1HT4	3-4	3H4	5H3	6H4	9-8	11A10	35-4
1H10	*3T4	**3HTF4	5H4	**6HTF4		11-11	40-6E
**1HTF10	*3T4A	3H11	5H10	6H6			41-7E
*1HT11	**3TF4A	3H-25	5H11	7-4			55-1
**1HTF11	**3TF4			**7TF4			55-4
	**3TFV4			7A10			
				7-11			
				**7HTF2			

124A—List $10.00

*T denotes T5½ bulb-7 pin miniature, e.g., 3T4.

**TF denotes T6½ bulb-9 pin miniature, e.g., 3TF4.

Base Wiring: Octal, 7 and 9 pin miniature—prongs 2-7.

ADVANTAGES

Light . . . Compact . . . No Moving Parts (Will withstand vibrations of 10G min.) . . . Hermetically Sealed (Not affected by altitude or humidity changes) . . . Can Be Changed as Easily as a Radio Tube . . . Operates Equally Well on AC or DC . . . Inexpensive.

CAPACITIES AVAILABLE

Current values of 60 ma. to 5 amps; threshold voltage 0.4 to 40 V. Maximum dissipation per **AMPERITE** 50w per tube (ST19 bulb). Any number of **AMPERITES** with the same voltage range can be operated in parallel. **AMPERITES** should not be used in series.

AMBIENT EFFECTS

Variations of —50° to +70° C. will change the current of an **AMPERITE** approximately ±2% on the regulating portion of the curve.

LIFE EXPECTANCY

Average life 2000 hours prox.; if **AMPERITE** filament is operated at black temperature—average life 5000 hours prox., depending on use.

AGEING

AMPERITE Ballast Tubes may change approximately up to 3% in current if aged for 4 to 8 hours, at maximum voltage. They will change very little thereafter.

POWER SUPPLIES

We strongly recommend, for any particular application, to fill and return one of our special problem sheets (ASP 343) and permit us to recommend the most suitable **AMPERITE.**

Power Supply	Dry Cells	6 Volts	12 Volts	26 Volts	115-Volts
Supply Variation	2.2-3.0V	5.5-7.5V	10.0-14.0V	22.0-30.0V	105-125V
Desired on load	1.8-2.0V	3.9-4.1V	6.1- 6.4V	17.5-18.5V	90- 95V
Required on **AMPERITE**	0.4-1.0V	1.6-3.4V	3.9- 7.6V	4.5-11.5V	15- 30V
Current Variation	.29-.32a	.29-.31a	.29-.31a	.29-.32a	.29-.32a

The above chart shows the maximum load voltage for the given supply to obtain 2% regulation on load. Better regulation is obtainable by increasing the voltage across the **AMPERITE.** In general, the higher the percent of the supply voltage taken by the **AMPERITE,** the better the regulation.

SHIELDED MULTIPLE CONDUCTOR CABLE

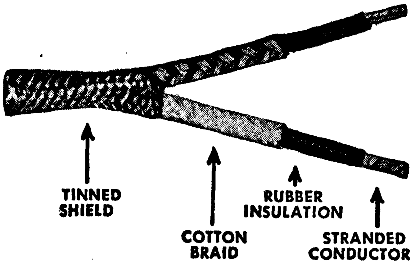
GENERAL PURPOSE: For indoor permanent or portable P.A. systems, photo electric cell circuits, sound recording and auto radios.

TINNED SHIELD OVERALL

No.	Cond.	Size	Strand	O.D.	Standard Put-Up	Alternate Put-Ups		
1256	2	20	10/30	.215″	100′	250′	500′	1000′
1256V	2	20	10/30	.155″	100′	250′	500′	1000′
1257	3	20	10/30	.245″	100′	250′	500′	1000′
1257V	3	20	10/30	.170″	100′	250′	500′	1000′
1258	4	20	10/30	.270″	100′	250′	500′	1000′
1259V	2	18	16/30	.195″	100′	250′	500′	1000′
1260V	2	16	26/30	.215″	100′	250′	500′	1000′

COTTON BRAID OVER SHIELD

No.	Cond.	Size	Strand	O.D.	Standard Put-Up	Alternate Put-Ups		
1262	2	20	10/30	.225″	100′	250′	500′	1000′
1262V	2	20	10/30	.190″	100′	250′	500′	1000′
1263	3	20	10/30	.240″	100′	250′	500′	1000′
1264	4	20	10/30	.275″	100′	250′	500′	1000′



Construction: Nos. 1256-7-8: Each conductor stranded tinned copper, 1/64″ rubber, waxed cotton braid, color coded, conductors twisted, tinned copper shield overall.
Nos. 1256V, 1257V, 1259V, 1260V: Each conductor stranded tinned copper, 1/64″ plastic, color coded, conductors twisted, tinned copper shield overall.
Nos. 1262-3-4: Same as Nos. 1256-7-8 plus cotton braid over shield.
No. 1262V: Same as No. 1256V plus cotton braid over shield.
For alternate put-ups use code: D=250 ft., E=500 ft., F=1000 ft.

SHIELDED DUPLEX SPEAKER CABLE

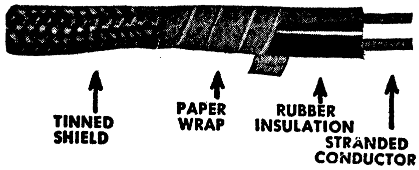
GENERAL PURPOSE: For P.A. systems, photo-electric cell circuits, master control sound systems, etc.

TINNED SHIELD OVERALL

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up
1265	2	18	16/30	.250″	500′	1000′

WAXED COTTON BRAID OVER SHIELD

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up
1266	2	18	16/30	.280″	500′	1000′



Construction: Two conductors 18-16/30 stranded tinned copper, 1/32″ "Hi-Tension" rubber, color coded, conductors twisted, paper wrap, close tinned copper shield overall. No. 1266 same as No. 1265 except with waxed cotton braid over shield.
For alternate put-up use code: F=1000 ft.

SHIELDED TRANSMISSION LINE

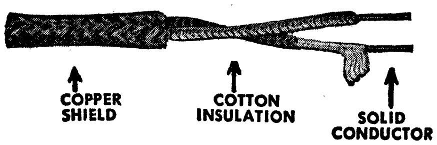
GENERAL PURPOSE: For broadcast, public address and sound systems, intercommunication systems, short wave, etc.

TINNED SHIELD OVERALL

No.	Cond.	Size	O.D.	Standard Put-up	Alternate Put-up
1267	2	20 Solid	.135″	500′	1000′
1267V	2	20 Solid	.145″	500′	1000′

WAXED COTTON BRAID OVER SHIELD

No.	Cond.	Size	O.D.	Standard Put-up	Alternate Put-up
1268	2	20 Solid	.165″	500′	1000′
1268V	2	20 Solid	.175″	500′	1000′



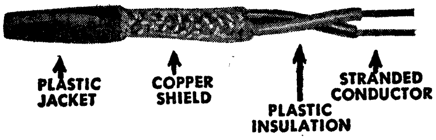
Construction: No. 1267—Two conductors 20 AWG solid tinned enameled copper, insulated, color coded, conductors twisted, close copper shield overall.
No. 1267V—Two conductors 20 AWG solid tinned copper, 1/64″ plastic, color coded, conductors twisted, close copper shield overall.
No. 1268—Same as No. 1267 plus waxed cotton braid over shield.
No. 1268V—Same as No. 1267V plus waxed cotton braid over shield.
For alternate put-up use code: F=1000 ft.

SHIELDED AUDIO CABLE

(PLASTIC JACKET)

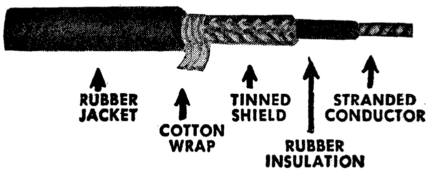
GENERAL PURPOSE: For broadcast, public address and sound systems, intercommunication systems, short wave, and for any installation where a cable is required to eliminate interference and cross talk.

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up
1736	2	22	7/30	.160″	500′	1000′
1775	2	22 Solid	—	.150″	500′	1000′



Construction: No. 1736—Two conductors 22-7/30 stranded tinned copper, plastic insulated, color coded, twisted, braided copper shield, plastic jacket overall.
No. 1775—Same as No. 1736 except 22 AWG solid conductors and 22 AWG solid tinned copper wire under shield parallel to twisted pair.
For alternate put-up use code: F=1000 ft.

CRYSTAL MICROPHONE CABLE


RUBBER JACKET
COTTON WRAP
TINNED SHIELD
RUBBER INSULATION
STRANDED CONDUCTOR

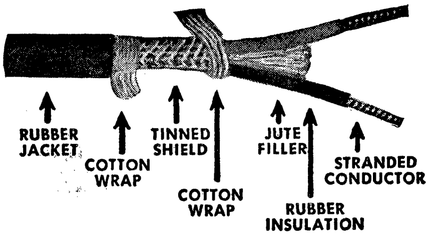
GENERAL PURPOSE: Low loss design for use with crystal, ribbon, dynamic and velocity microphones, photo-electric cells. Use No. 1248 FOR LAPEL MICROPHONES and phonograph pickups.

No.	Size	Strand	Capacity Per Ft.	O.D.	Standard Put-up	Alternate Put-ups		
1248	20	26/34	40 mmf.	.175″	100′	250′	500′	1000′
1249	20	26/34	30 mmf.	.245″	100′	250′	500′	1000′
1249/18	18	41/34	45 mmf.	.250″	100′	250′	500′	1000′

Construction: Single conductor, extra flexible stranded tinned copper, cotton serve, insulated with special low loss SIC rubber compound, braided tinned copper shield, cotton serve, tough black rubber jacket overall.

For alternate put-up use code: D=250 ft., E=500 ft., F=1000 ft.

SHIELDED MICROPHONE CABLE


RUBBER JACKET
COTTON WRAP
TINNED SHIELD
COTTON WRAP
JUTE FILLER
RUBBER INSULATION
STRANDED CONDUCTOR

GENERAL PURPOSE: Adaptable for all indoor and outdoor crystal, carbon and condenser microphones as well as public address systems.

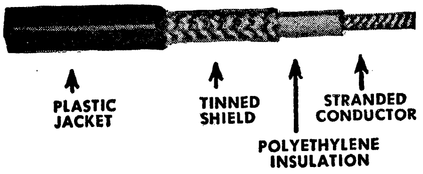
No.	Cond.	Size	Capacity Per Ft.	O.D.	Standard Put-up	Alternate Put-ups		
1250	2	20	70 mmf.	.290″	100′	250′	500′	1000′
1250/18	2	18	75 mmf.	.300″	100′	250′	500′	1000′
1251	3	20	65 mmf.	.305″	100′	250′	500′	1000′
1251/18	3	18	65 mmf.	.355″	100′	250′	500′	1000′
1252	4	20	65 mmf.	.345″	100′	250′	500′	1000′
1253	5	20	60 mmf.	.350″	100′	250′	500′	1000′
1254	6	20	60 mmf.	.375″	100′	250′	500′	1000′
1254/18	6	18	60 mmf.	.430″	100′	250′	500′	1000′
1255	7	20	60 mmf.	.380″	100′	250′	500′	1000′
1255/8	8	20	60 mmf.	.400″	100′	250′	500′	1000′

Construction: Each conductor, extra flexible stranded tinned copper, cotton wrap, .020″ "Hi-Tension" low capacity rubber, color coded, conductors twisted, braided tinned copper shield, cotton wrap, tough black rubber jacket overall.

For alternate put-up use code: D=250 ft., E=500 ft., F=1000 ft.

PLASTIC MICROPHONE CABLE

SINGLE CONDUCTOR


PLASTIC JACKET
TINNED SHIELD
POLYETHYLENE INSULATION
STRANDED CONDUCTOR

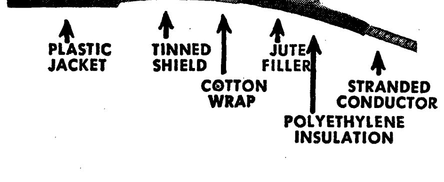
GENERAL PURPOSE: For use with all lapel, crystal, ribbon and other impedance microphones. Use No. 1703 for LAPEL MICROPHONES. Use No. 1704 and No. 1706 for CRYSTAL, RIBBON and other IMPEDANCE MICROPHONES.

No.	Size	Strand	Capacity Per Ft.	O.D.	Standard Put-up	Alternate Put-up		
1703	24	7/32	38 mmf.	.145″	500′	100′	250′	1000′
1704	24	10/34	25 mmf.	.200″	500′	100′	250′	1000′
1706	20	26/34	39 mmf.	.175″	500′	100′	250′	1000′

Construction:

Single conductor flexible stranded tinned copper, polyethylene insulation, braided tinned copper shield, plastic jacket overall.

TWO CONDUCTOR


PLASTIC JACKET
TINNED SHIELD
COTTON WRAP
JUTE FILLER
POLYETHYLENE INSULATION
STRANDED CONDUCTOR

GENERAL PURPOSE: For use with carbon and other low impedance microphones.

No.	Cond.	Size	Strand	Capacity Per Ft.	O.D.	Standard Put-up	Alternate Put-ups		
1710	2	22	16/34	32 mmf.	.235″	500′	100′	250′	1000′

Construction:

Two conductors 22-16/34 flexible stranded tinned copper, polyethylene insulation, color coded, conductors twisted, cushioned with fillers, cotton wrap, braided tinned copper shield, plastic jacket overall.

For alternate put-ups use code: Q=100 ft., D=250 ft., F=1000 ft.

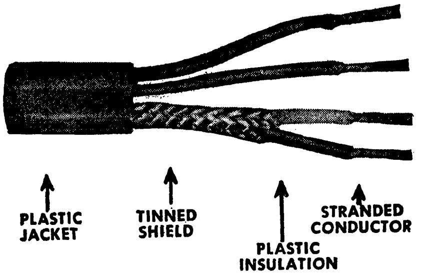
PLASTIC INTER-COMMUNICATION CABLE

4 CONDUCTORS (2 Shielded—2 Unshielded)

GENERAL PURPOSE: This cable is designed for general wiring from station to station where a shielded twisted pair is essential to eliminate cross talk.

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up
1243/4	4	22	7/30	.315″	500′	1000′

Construction: Four conductors 22-7/30 tinned copper, vinyl plastic insulation, color coded; tinned copper shield over two conductors, two conductors unshielded; plastic jacket overall.


PLASTIC JACKET
TINNED SHIELD
PLASTIC INSULATION
STRANDED CONDUCTOR

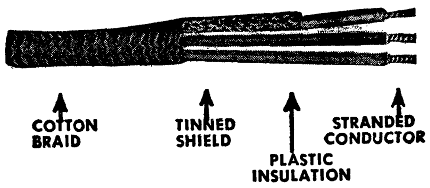
3 CONDUCTORS (1 Shielded—2 Unshielded)

GENERAL PURPOSE: This cable is designed for general wiring from station to station where a shielded single conductor is essential to eliminate cross talk.

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up
1242	3	22	7/30	.170″	500′	1000′
1243	3	22	7/30	.215″	500′	1000′

Construction: Three conductors 22-7/30 tinned copper, vinyl plastic insulation, color coded; tinned copper shield over one conductor, two conductors unshielded; cotton braid overall (No. 1242), or plastic jacket overall (No. 1243).

For alternate put-up use code: F=1000 ft.

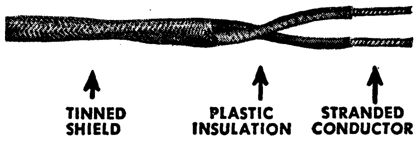

COTTON BRAID
TINNED SHIELD
PLASTIC INSULATION
STRANDED CONDUCTOR

SHIELDED TWISTED PAIR CABLE

GENERAL PURPOSE: Where small diameter is required for sound recording, photo electric cell circuits, public address systems, etc.

No.	Cond.	Size	Strand	O.D.	Standard Put-up
1261	2	24	16/36	.115″	1000′

Construction: Two conductors 24-16/36 extra flexible tinned copper, 1/64″ vinyl insulation, color coded, conductors twisted, very fine tinned copper shield overall.


TINNED SHIELD
PLASTIC INSULATION
STRANDED CONDUCTOR

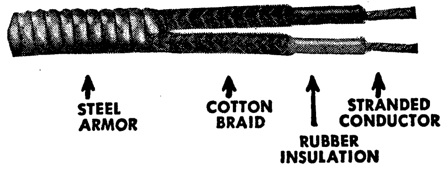
ARMORED DUPLEX SPEAKER CABLE

GENERAL PURPOSE: For P.A. systems, oil burner installations, automotive wiring, etc.

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up
1272	2	18	16/30	.132″ x .182″	500′	1000′

Construction: Two conductors parallel, 18-16/30 stranded tinned copper, rubber insulated, color coded, lacquered cotton braid, galvanized steel armor overall.

For alternate put-up use code: F=1000 ft.


STEEL ARMOR
COTTON BRAID
RUBBER INSULATION
STRANDED CONDUCTOR

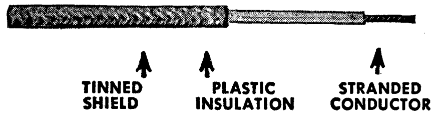
SHIELDED PHONO AND GRID WIRE

GENERAL PURPOSE: Extreme flexibility and limpness make this an ideal wire for phonograph pick-up arm cable and grid wire.

No.	Cond.	Size	Strand	Insulation	O.D.	Standard Put-up	Alternate Put-up
1200	1	24	16/36	.010″	.080″	1000′	100′
1201	1	24	16/36	.010″	.095″	1000′	100′
1202	2	24	16/36	.010″	.115″	1000′	—

Construction: No. 1200—Single conductor 24-16/36 extra flexible stranded tinned copper, vinyl plastic insulation, fine close tinned copper shield overall.
No. 1201 same as No. 1200 plus cotton braid over shield.
No. 1202 same as No. 1200 except two conductors with shield overall.

For alternate put-ups use code: Q=100 ft.

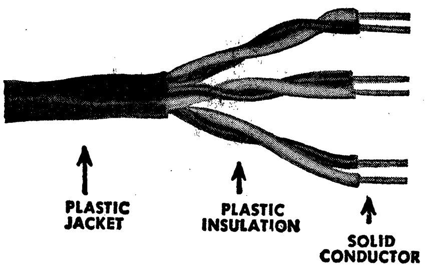

TINNED SHIELD
PLASTIC INSULATION
STRANDED CONDUCTOR

ALPHA WIRE CORPORATION

PLASTIC COMMUNICATION CABLE

(TWISTED PAIRS)

GENERAL PURPOSE: For use in connecting intercommunication systems, annunciators, telephones and wherever a multiple circuit hook-up is required.



SOLID CONDUCTORS

No.	Pairs	Cond.	Size	O.D.	Standard Put-up	Alternate Put-up
1300	1	2	22 Solid	.145″	1000′	100′
1302	2	4	22 Solid	.205″	1000′	100′
1304	3	6	22 Solid	.215″	1000′	100′
1307	6	12	22 Solid	.250″	1000′	100′
1308	10	20	22 Solid	.320″	1000′	100′
1310	16	32	22 Solid	.405″	1000′	100′
1312	26	52	22 Solid	.475″	1000′	100′

Construction:

Each conductor 22 AWG tinned copper, plastic insulation, conductors color coded, twisted into pairs, plastic jacket overall.

For alternate put-up use code: Q=100 ft.

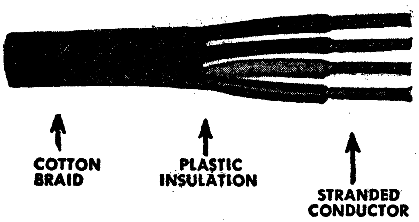
STRANDED CONDUCTORS

No.	Pairs	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up
1316	1	2	22	7/30	.135″	1000′	100′
1317	2	4	22	7/30	.190″	1000′	100′
1318	3	6	22	7/30	.225″	1000′	100′
1319	4	8	22	7/30	.235″	1000′	100′
1320	5	10	22	7/30	.245″	1000′	100′
1322	6	12	22	7/30	.260″	1000′	100′

MULTI-CONDUCTOR FLEXIBLE CABLE

(COTTON BRAID)

GENERAL PURPOSE: For connecting speakers, analyzers, remote control units, P.A. systems or wherever a multiple circuit hook-up is required.



Construction:

Each conductor 20-10/30 stranded tinned copper, 1/64″ thermo-plastic insulation, color coded, conductors twisted, brown cotton braid overall.

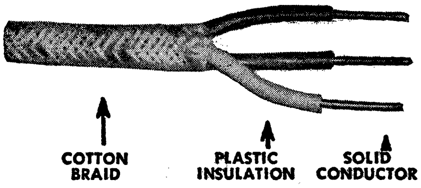
Alternate put-up use code:
D=250 ft., E=500 ft., F=1000 ft.

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up		
1182	2	20	10/30	.135″	100′	250′	500′	1000′
1183	3	20	10/30	.170″	100′	250′	500′	1000′
1184	4	20	10/30	.180″	100′	250′	500′	1000′
1185	5	20	10/30	.205″	100′	250′	500′	1000′
1186	6	20	10/30	.225″	100′	250′	500′	1000′
1187	7	20	10/30	.240″	100′	250′	500′	1000′
1188	8	20	10/30	.255″	100′	250′	500′	1000′
1189	9	20	10/30	.275″	100′	250′	500′	1000′
1190	10	20	10/30	.310″	100′	250′	500′	1000′
1192	12	20	10/30	.340″	100′	250′	500′	1000′

INTER-COMMUNICATION CABLE

(BRAIDED)

GENERAL PURPOSE: Designed for interior use for connecting inter-communication systems, annunciators, thermostat controls of oil burners, air conditioners, etc.



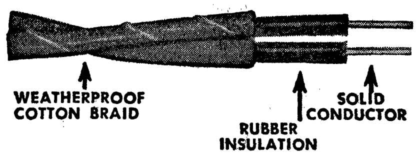
Construction:

Each conductor 18 AWG solid bare copper wire, thermoplastic insulation, color coded, conductors twisted, waxed cotton braid overall.

No.	Cond.	Size	O.D.	Standard Put-up
1274	2	18 Solid	.150″	500′
1275	3	18 Solid	.165″	500′
1275/4	4	18 Solid	.180″	500′
1275/5	5	18 Solid	.200″	500′
1275/6	6	18 Solid	.220″	500′

OUTDOOR INTER-COMMUNICATION WIRE

GENERAL PURPOSE: For outdoor and indoor use or in any damp location, for connecting communication systems, telephones, etc.



Construction:

Nos. 1279, 1280: Each conductor 19 AWG solid tinned copper, 1/64″ telephone compound rubber, heavy cotton braid (ridged for polarity) with specially treated compound to make it weatherproof for resistance against rain, snow, hail and cold.

Nos. 1279V, 1280V: Each conductor 19 AWG solid tinned copper, .024″ plastic insulation (ridged for polarity), conductors twisted.

No.	Cond.	Size	O.D.	Standard Put-up
1279	2	19 Solid	.255″	500′
1279V	2	19 Solid	.165″	500′
1280	3	19 Solid	.275″	500′
1280V	3	19 Solid	.175″	500′

NOTE: See Page S-16 for ALPHA Prices and Other Information.

BRAIDED COMMUNICATION CABLE

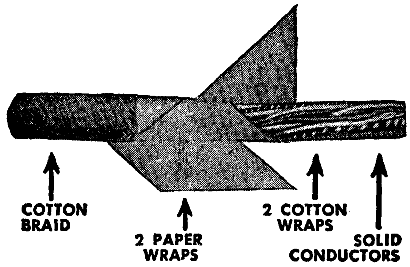
(TWISTED PAIRS)

GENERAL PURPOSE: For interior use designed for connecting inter-communication systems, annunciators, telephones, etc.

No.	Pairs	Cond.	Size	O.D.	Standard Put-up	Alternate Put-up
1276/2	2	4	22 Solid	.185″	1000′	100′
1276/3	3	6	22 Solid	.210″	1000′	100′
1276	6	12	22 Solid	.240″	1000′	100′
1277	10	20	22 Solid	.300″	1000′	100′
1277/13	13	26	22 Solid	.360″	1000′	100′
1277/15	16	32	22 Solid	.380″	1000′	100′
1277/25	26	52	22 Solid	.445″	1000′	100′
1277/50	51	102	22 Solid	.650″	1000′	—

Construction: Each conductor 22 AWG solid tinned copper wire, two reverse serves paraffined, color coded, conductors twisted into pairs, then covered with an impregnated double paper wrap, and overall a cotton braid saturated with a moisture-proof, flame retarding, rodent-proof compound.

For alternate put-up use code: Q=100 ft.



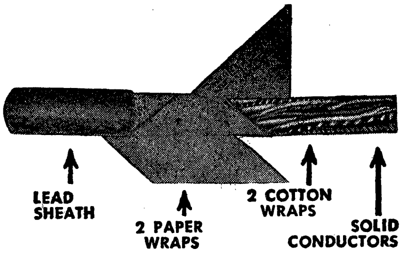
LEAD-COVERED COMMUNICATION CABLE

(TWISTED PAIRS)

GENERAL PURPOSE: For use indoors, outdoors, underground and in pipes for connecting inter-communication systems, annunciators, telephones, etc.

No.	Pairs	Cond.	Size	O.D.	Standard Put-up
1289	6	12	22 Solid	.375″	1000′
1291	10	20	22 Solid	.450″	1000′
1293	16	32	22 Solid	.510″	1000′
1295	26	52	22 Solid	.560″	1000′

Construction: Similar to Braided Communication Cable above, but with lead antimony sheath instead of cotton braid over the twisted pairs.



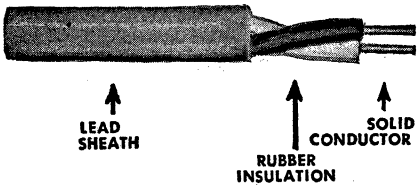
LEAD SHEATHED CABLE

GENERAL PURPOSE: For P.A. systems, communications, traffic control, mines, railroads and many other uses where severe moisture conditions are encountered. For all outdoor use including underground and underwater.

No.	Cond.	Size	O.D.	Standard Put-up
1271	2	19 Solid	.325″	1000′

Construction:

Two conductors 19 AWG solid tinned copper, 1/32″ "Hi-Tension" rubber, color coded, conductors twisted, pure lead sheath overall.



PLASTIC INTER-COMMUNICATION WIRE

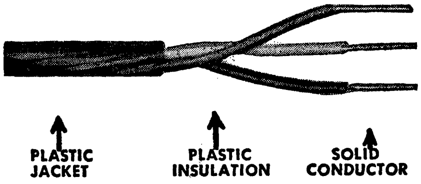
GENERAL PURPOSE: For connecting sound and inter-communication systems, general audio hook-up, etc.

No.	Cond.	Size	O.D.	Standard Put-up	Alternate Put-up
1793	2	22 Solid	.125″	500′	1000′
1794	3	22 Solid	.130″	500′	1000′

Construction:

Conductors 22 AWG solid tinned copper, plastic insulation, color coded, conductors twisted, plastic jacket overall.

For alternate put-up use code: F=1000 ft.



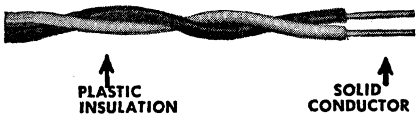
INDOOR INTER-COMMUNICATION WIRE

GENERAL PURPOSE: For connecting sound and communication systems, telephones, etc.

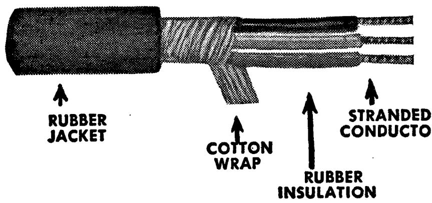
No.	Cond.	Size	O.D.	Standard Put-up
1269	2	22 Solid	.115″	500′
1270	3	22 Solid	.125″	500′

Construction:

Conductors 22 AWG solid copper, plastic insulated, color coded, conductors twisted.



ALPHA WIRE CORPORATION



MULTI-CONDUCTOR FLEXIBLE CABLE

(RUBBER JACKETED)

GENERAL PURPOSE: For indoor and outdoor speakers, permanent or portable P.A. systems, sound recording and auto radios.

Construction:

Each conductor 20-26/34 extra flexible stranded tinned copper, cotton wrap, 1/32″ "Hi-Tension" rubber, color coded, conductors twisted, cushioned with cotton fillers, cotton wrap, tough black rubber jacket overall.

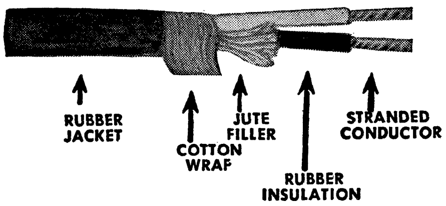
For alternate put-ups use code:
D=250 ft., E=500 ft., F=1000 ft.

No.	Cond.	Size	Strand	O.D.	Standard Put-up	Alternate Put-up		
1244	2	20	26/34	.250″	100′	250′	500′	1000′
1245	3	20	26/34	.285″	100′	250′	500′	1000′
1246	4	20	26/34	.305″	100′	250′	500′	1000′
1247	5	20	26/34	.335″	100′	250′	500′	1000′
1247/6	6	20	26/34	.355″	100′	250′	500′	1000′
1247/8	8	20	26/34	.395″	100′	250′	500′	1000′

RUBBER SHEATHED SERVICE CORD

(UNDERWRITERS APPROVED)

GENERAL PURPOSE: For amplifiers, sound systems, speakers, vacuum cleaners, electric tools, washing machines, refrigerators, appliances, trouble lights, garage lamps or wherever a rough usage power line is required.

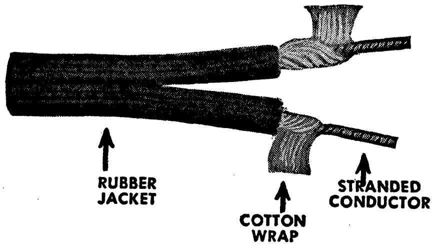


Construction:

Each conductor stranded bare copper, cotton separator, 1/32″ rubber, color coded, conductors twisted, cushioned with jute fillers, 40% tough rubber jacket overall.

No.	Cond.	Size	Type	Current Carrying Capacity	Voltage Rating	O.D.	Standard Put-up
1951	2	18	SV	5 amps	300	.250″	250′
1952	2	18	SJ	5 amps	300	.310″	250′
1952/3	3	18	SJ	5 amps	300	.345″	250′
1953	2	16	SJ	7 amps	300	.340″	250′
1953/3	3	16	SJ	7 amps	300	.375″	250′
1954	2	18	S	5 amps	600	.390″	250′
1955	2	16	S	7 amps	600	.410″	250′
1956	2	14	S	15 amps	600	.540″	250′
1957	2	12	S	20 amps	600	.605″	250′
1958	2	10	S	25 amps	600	.640″	250′

Available with Additional Conductors. Also other sizes.



E-Z STRIP LAMP CORD—TYPE POSJ

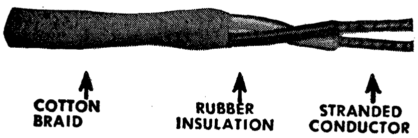
(UNDERWRITERS APPROVED)

GENERAL PURPOSE: For line cord on radios, lamps, electric clocks, food mixers and other small instruments and appliances.

Construction:

Two conductors parallel, 18-41/34 extra flexible bare copper, color coded, cotton serve, 40% tough rubber jacket overall. Slit in jacket to permit "E-Z" separation.

No.	Cond.	Size	Strand	O.D.	Standard Put-up
1966	2	18	41/34	.235″ x .130″	100′
1967	2	18	41/34	.235″ x .130″	250′



TWISTED PAIR TRANSMISSION LINE

(WEATHERPROOF BRAID)

GENERAL PURPOSE: For inter-com hook-up. Also suitable for low loss coupling between antenna and receiver as doublet style twisted lead-in.

Construction:

Two conductors stranded tinned copper, "Hi-Tension" rubber, color coded, conductors twisted, cotton braid overall, saturated weather-proof finish.

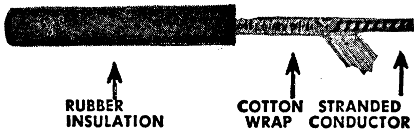
No.	Cond.	Size	Strand	O.D.	Standard Put-up
1146	2	22	7/30	.175″	500′
1135	2	18	16/30	.190″	500′

NOTE: See Page S-16 for ALPHA Prices and Other Information.

KINKLESS TEST LEAD WIRE

GENERAL PURPOSE: As test leads in analyzers, oscillators and all other types of testing apparatus or wherever an EXTRA FLEXIBLE insulated wire is required.

No.	Size	Strand	Insul.	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	Alternate Put-up
1633	20	41/36	3/64″	10,000	.140″	100′	—
1635	20	41/36	3/64″	10,000	.140″	500′	1000′
1636	18	65/36	3/64″	12,000	.150″	500′	1000′
1636Q	18	65/36	3/64″	12,000	.150″	100′	—



Construction:

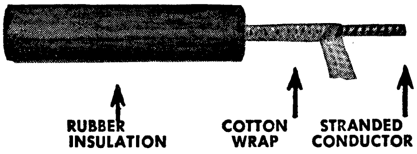
Single conductor extra flexible tinned soft annealed copper, concentric strand, cotton wrap, 3/64″ "Super Hi-Tension" rubber, satin finish.

STOCK COLORS:
Red, Black

HEAVY DUTY TYPE

GENERAL PURPOSE: For television, therapeutic equipment, analyzers, oscillators, etc., or wherever a heavy duty EXTRA FLEXIBLE high voltage line is required.

No.	Size	Strand	Insul.	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	Alternate Put-up
1637	18	65/36	7/64″	22,000	.245″	100′	—
1638	18	65/36	7/64″	22,000	.245″	500′	1000′



Construction:

Single conductor 18-65/36 extra flexible tinned soft annealed copper, concentric strand, cotton wrap, 7/64″ "Super Hi-Tension" rubber, satin finish.

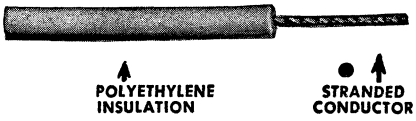
STOCK COLORS:
Red, Black

For alternate put-up use code: F=1000 ft.

HI-VOLTAGE & CATHODE RAY WIRE

GENERAL PURPOSE: This wire is designed for high-voltage leads for all applications, especially for cathode ray tubes in television receivers and oscilloscopes. This wire has high dielectric strength and is resistant to heat, flame, and moisture.

No.	Size	Strand	Insul.	Voltage Rating	O.D.	Standard Put-up	Alternate Put-ups	
1642	20	10/30	4/64″	20,000	.175″	100′	500′	1000′



Construction:

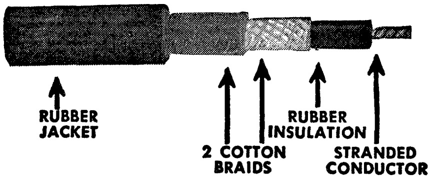
Single conductor 20-10/30 stranded tinned copper, special polyethylene insulation.

For alternate put-ups use code:
E=500 ft., F=1000 ft.

DIATHERMY CABLE

GENERAL PURPOSE: Its extreme flexibility and tough rubber jacket give it long life. This cable is used as a lead on therapy apparatus, charging cable, battery lead, underground cable, etc.

No.	Size	Strand	Insulation	O.D.	Standard Put-up
1623	14	104/34	3/64″	.300″	100′
1625	14	104/34	3/64″	.300″	1000′

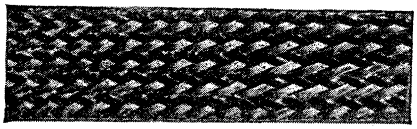


Construction:

Single conductor 14-104/34 copper, paper serve, 3/64″ ASTM performance grade rubber, double cotton braid, .040″ oil resistant neoprene rubber jacket.

NOTE: See Page S-16 for ALPHA Prices and Other Information.

TINNED COPPER SHIELDING



FLEXIBLE TINNED COPPER

Construction:

Composed of very fine soft annealed tinned copper wires braided and rolled flat.

For alternate put-ups use code:
Q=100 ft., D=250 ft., E=500 ft., F=1000 ft.

GENERAL PURPOSE: For shielding speaker leads, lead-ins, amplifier wires, auto radio installations. Also for bonding.

No.	Sizes of Wires	I.D.	Standard Put-up	Alternate Put ups			
1229	36 AWG	1/8″	50′	100′	250′	500′	1000′
1230	36 AWG	3/16″	50′	100′	250′	500′	1000′
1231	36 AWG	1/4″	50′	100′	250′	500′	1000′
1232	36 AWG	3/8″	50′	100′	250′	500′	1000′
1233/2	36 AWG	1/2″	50′	100′	250′	500′	1000′
1233	36 AWG	5/8″	50′	100′	250′	500′	1000′
1234	36 AWG	3/4″	50′	100′	250′	500′	1000′
1235	36 AWG	1″	50′	100′	250′	500′	1000′

BRAIDED TINNED COPPER

FLEXIBLE TINNED COPPER

Construction:

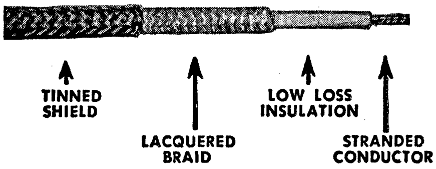
Composed of very fine soft annealed tinned copper wires braided and rolled flat.

For alternate put-up use code:
E=500 ft.

GENERAL PURPOSE: For shielding small sizes of insulated wire, flexible leads, and in hook-ups wherever a small size uninsulated extremely flexible wire is needed.

No.	Sizes of Wires	Approx. Width	Standard Put-up	Alternate Put-up
1222	36 AWG	1/32″	1000′	500′
1223	36 AWG	1/16″	1000′	500′
1224	36 AWG	3/64″	1000′	500′

SHIELDED HOOK-UP AND LEAD-IN WIRE



Construction:

Single conductor stranded tinned copper, low loss insulation, highly lacquered braid, close tinned copper shield overall.

Construction:

Single conductor stranded tinned copper, low loss insulation, close tinned copper shield, plastic jacket overall.

For alternate put-ups use code:
E=500 ft., Q=100 ft.

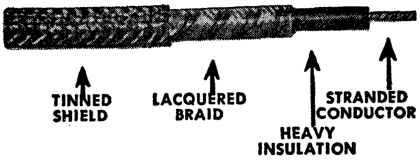
GENERAL PURPOSE: To reduce interference caused by motors, high tension wires, x-ray machines or other apparatus that radiates electrical impulses. Ideal for grid-lead use.

No.	Size	Strand	O.D.	Standard Put-up	Alternate Put-ups	
1194/22	22	7/30	.105″	1000′	500′	100′
1194	20	10/30	.110″	1000′	500′	100′
1196	18	16/30	.145″	1000′	500′	100′
1197	16	26/30	.160″	1000′	500′	100′
1198	14	41/30	.180″	1000′	500′	100′
1199	12	19/25	.210″	1000′	500′	100′
1199/10	10	19/23	.220″	1000′	500′	100′

PLASTIC JACKETED

No.	Size	Strand	O.D.	Standard Put-up	Alternate Put-ups	
1208	24	7/32	.150″	1000′	500′	100′
1210	20	26/34	.170″	1000′	500′	100′

SHIELDED LOW LOSS CABLE



Construction:

Single conductor 20-10/30 stranded tinned copper, heavy low loss insulation, white braid, tinned copper shield overall.

For alternate put-ups use code:
D=250 ft., E=500 ft., F=1000 ft.

GENERAL PURPOSE: For auto radio, lead-ins, short wave receivers and for grid leads in the input stages of P.A. amplifiers.

No.	Size	Strand	O.D.	Standard Put-up	Alternate Put-ups		
1241	20	10/30	.225″	100′	250′	500′	1000′

NOTE: See Page S-16 for ALPHA Prices and Other Information.

HI-TEMP PLASTIC WIRE

GENERAL PURPOSE: For hook-up wherever small size and/or high temperature (105°C) is required especially in miniaturization of electronic equipment, etc.

†UNSHIELDED

No.	Size	Strand	O.D.	Standard Put-up
1607	28	7/36	.035″	1000′
1608	27	7/35	.040″	1000′

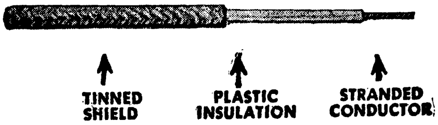
SHIELDED

No.	Size	Strand	O.D.	Standard Put-up
1334	28	7/36	.060″	1000′
1337	24	16/36	.080″	1000′

†STOCK COLORS

(1) Black	(3) Green	(5) Blue	(7) White	(9) Purple
(2) Red	(4) Yellow	(6) Brown	(8) Orange	(10) Slate

Available to order in additional sizes, solid colors and tracer combinations.



Construction:

Single conductor stranded tinned copper, plastic insulation (105°C) overall.

Construction:

Single conductor stranded tinned copper, plastic insulation (105°C), fine braided tinned copper shield overall.

"CL" PUSHBACK WIRE

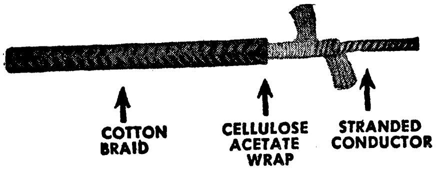
GENERAL PURPOSE: Pushback hook-up wire in various bright colors for circuit identification; radio, radar, electronics, electrical toys, etc.

STRANDED

No.	Size	Strand	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	†Stock Colors
1460	22	7/30	1000	.065″	1000′	1 thru 8
1460Q	22	7/30	1000	.065″	100′	1 thru 8
1461	20	10/30	1000	.070″	1000′	1 thru 8
1461Q	20	10/30	1000	.070″	100′	1 thru 8
1462	18	16/30	1000	.082″	1000′	1 thru 8
1462Q	18	16/30	1000	.082″	100′	1 thru 8
1463	16	26/30	1000	.093″	1000′	1 and 2
1463Q	16	26/30	1000	.093″	100′	1 and 2
1464	14	41/30	1000	.105″	1000′	1 and 2
1464Q	14	41/30	1000	.105″	100′	1 and 2

SOLID

No.	Size	Strand	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	†Stock Colors
1465	22	Solid	1000	.060″	1000′	1 thru 8
1465Q	22	Solid	1000	.060″	100′	1 thru 8
1466	20	Solid	1000	.065″	1000′	1 thru 8
1466Q	20	Solid	1000	.065″	100′	1 thru 8
1467	18	Solid	1000	.075″	1000′	1 thru 8
1467Q	18	Solid	1000	.075″	100′	1 thru 8
1468	16	Solid	1000	.085″	1000′	1 and 2
1468Q	16	Solid	1000	.085″	100′	1 and 2
1469	14	Solid	1000	.095″	1000′	1 and 2
1469Q	14	Solid	1000	.095″	100′	1 and 2



Construction:

Single conductor stranded and solid tinned copper, heavy wrap of cellulose acetate, cotton braid with flame-retarding lacquer.

†STOCK COLORS

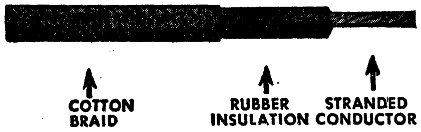
(1) Black	(3) Green	(5) Blue
(2) Red	(4) Yellow	(6) Brown
(7) White	(8) Orange	

Available to order in additional sizes, solid colors and tracer combinations.

LACQUERED HOOK-UP AND LEAD-IN WIRE

GENERAL PURPOSE: For point to point soldering connections on transformers, amplifiers, panel hook-up, etc., where a low loss dielectric is required. It is not a pushback wire but will strip easily.

No.	Size	Strand	Insulation	Voltage (60 Cycles) Breakdown	O.D.	Standard Put-up	†Stock Colors
1513	20	10/30	1/64″	7000	.090″	100′	1 thru 7
1515	20	10/30	1/64″	7000	.090″	500′	1 thru 7
1533	18	16/30	1/32″	8500	.125″	100′	1 thru 7
1535	18	16/30	1/32″	8500	.125″	500′	1 thru 7
1543	16	26/30	1/32″	8500	.140″	100′	1 and 2
1545	16	26/30	1/32″	8500	.140″	500′	1 and 2
1546	14	41/30	1/32″	8500	.170″	500′	1 and 2
1546Q	14	41/30	1/32″	8500	.170″	100′	1 and 2
1547	12	19/25	1/32″	8500	.190″	500′	1 and 2
1547Q	12	19/25	1/32″	8500	.190″	100′	1 and 2
1548	10	19/23	1/32″	8500	.208″	500′	1 and 2
1548Q	10	19/23	1/32″	8500	.208″	100′	1 and 2



Construction:

Single conductor stranded tinned copper, free stripping insulation, single braid highly lacquered.

†STOCK COLORS

(1) Black	(3) Green	(5) Blue
(2) Red	(4) Yellow	(6) Brown
	(7) White	

Available to order in additional sizes, solid colors and tracer combinations.

NOTE: See Page S-16 for ALPHA Prices and Other Information.

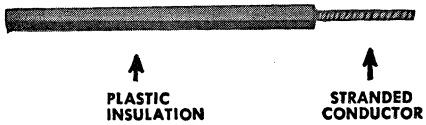
ALPHA WIRE CORPORATION

TYPE SRIR—PLASTIC HOOK-UP WIRE (JAN-C-76)

(1000 VOLT)

GENERAL PURPOSE:

Electronic Devices
Aircraft Instruments
Radio
Radar
Transmitters
Receivers
Lighting and Power
Rectifiers



CONSTRUCTION:

Single conductor, stranded and solid tinned copper with thermoplastic insulation. FUNGUS PROOF.

CHARACTERISTICS:

High Dielectric Strength • Stability at High Temperatures • Flexibility at Low Temperatures Resistant to: Acids, Alkalis, Oil, Flame, Moisture.

SAMPLE JAN TYPE DESIGNATION

3/5 (7) 22 924

3/5 — Size (approx. cir. mils)
(7) — Minimum Strands
22 — AWG Size
924 — *Color Code: 1st Digit—Base 2nd & 3rd Digits—Tracer

***COLOR CODE**

0—Black
1—Brown
2—Red
3—Orange
4—Yellow
5—Green
6—Blue
7—Purple
8—Slate
9—White

STRANDED

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	†Stock Colors
1550	2/5(7)-24	24	7/32	1/64″	8000	.059″	1000′	1 thru 10
1550Q	2/5(7)-24	24	7/32	1/64″	8000	.059″	100′	1 thru 10
1551	3/5(7)-22	22	7/30	1/64″	8000	.064″	1000′	1 thru 22
1552	3/5(7)-22	22	7/30	1/64″	8000	.064″	100′	1 thru 22
1553	1(10)-20	20	10/30	1/64″	8000	.073″	1000′	1 thru 22
1554	1(10)-20	20	10/30	1/64″	8000	.073″	100′	1 thru 22
1555	1½(16)-18	18	16/30	1/64″	8000	.084″	1000′	1 thru 22
1556	1½(16)-18	18	16/30	1/64″	8000	.084″	100′	1 thru 22
1557	2½(26)-16	16	26/30	1/64″	8000	.095″	1000′	1 thru 22
1558	2½(26)-16	16	26/30	1/64″	8000	.095″	100′	1 thru 22
1559	4(41)-14	14	41/30	1/64″	12000	.107″	1000′	1 thru 13
1559Q	4(41)-14	14	41/30	1/64″	12000	.107″	100′	1 thru 13
1560	6(65)-12	12	65/30	1/64″	12000	.120″	1000′	1 thru 3
1560Q	6(65)-12	12	65/30	1/64″	12000	.120″	100′	1 thru 3
1560/10	9(105)-10	10	105/30	1/64″	12000	.180″	1000′	1
1560/10Q	9(105)-10	10	105/30	1/64″	12000	.180″	100′	1

SOLID

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	†Stock Colors
1561	3/5(1)-22	22	1	1/64″	8000	.060″	1000′	1 thru 13
1562	3/5(1)-22	22	1	1/64″	8000	.060″	100′	1 thru 13
1563	1(1)-20	20	1	1/64″	8000	.066″	1000′	1 thru 13
1564	1(1)-20	20	1	1/64″	8000	.066″	100′	1 thru 13
1565	1½(1)-18	18	1	1/64″	8000	.074″	1000′	1 thru 10
1566	1½(1)-18	18	1	1/64″	8000	.074″	100′	1 thru 10

†STOCK COLORS

(1) White
(2) Black
(3) Red
(4) Green
(5) Yellow
(6) Light Blue
(7) Brown
(8) Orange
(9) Slate
(10) Purple
(11) Tan
(12) Pink
(13) Dark Blue
(14) White/Black
(15) White/Red
(16) White/Green
(17) White/Yellow
(18) White/Blue
(19) White/Brown
(20) White/Orange
(21) White/Slate
(22) White/Purple

Also available to order in additional sizes and tracer combinations.

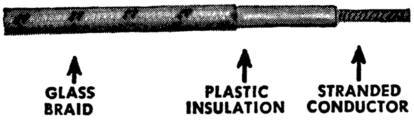
TYPE SRHV AVAILABLE TO ORDER IN ALL SIZES AND COLORS

TYPE SRIR—GLASS BRAID HOOK-UP WIRE (JAN-C-76)

(1000 VOLT)

GENERAL PURPOSE: For hook-up where secondary insulation is required on SRIR wire in electronic devices, aircraft instruments, radio, radar, transmitters, receivers, etc.

Construction: Single conductor stranded tinned copper, thermoplastic insulation, glass braid, lacquered.



No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	Stock Colors
1590	3/5(7)-C-22	22	7/30	1/64″	8000	.085″	1000′	1 thru 10
1590Q	3/5(7)-C-22	22	7/30	1/64″	8000	.085″	100′	1 thru 10
1591	1(10)-C-20	20	10/30	1/64″	8000	.095″	1000′	1 thru 10
1591Q	1(10)-C-20	20	10/30	1/64″	8000	.095″	100′	1 thru 10
1592	1½(16)-C-18	18	16/30	1/64″	8000	.110″	1000′	1 thru 10
1592Q	1½(16)-C-18	18	16/30	1/64″	8000	.110″	100′	1 thru 10
1593	2½(26)-C-16	16	26/30	1/64″	8000	.125″	1000′	1 thru 10
1593Q	2½(26)-C-16	16	26/30	1/64″	8000	.125″	100′	1 thru 10
1594	4(41)-C-14	14	41/30	1/64″	12000	.145″	1000′	1 thru 7
1594Q	4(41)-C-14	14	41/30	1/64″	12000	.145″	100′	1 thru 7
1595	6(65)-C-12	12	65/30	1/64″	12000	.165″	1000′	1 thru 3
1595Q	6(65)-C-12	12	65/30	1/64″	12000	.165″	100′	1 thru 3
1596	9(105)-C-10	10	105/30	1/64″	12000	.190″	1000′	1
1596Q	9(105)-C-10	10	105/30	1/64″	12000	.190″	100′	1

STOCK COLORS

(1) White
(2) White/Black
(3) White/Red
(4) White/Green
(5) White/Yellow
(6) White/Blue
(7) White/Brown
(8) White/Orange
(9) White/Slate
(10) White/Purple

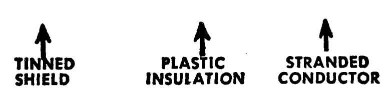
Also available to order in additional sizes, solid colors and tracer combinations.

TYPE SRIR—SHIELDED HOOK-UP WIRE (JAN-C-76)

(1000 VOLT)

GENERAL PURPOSE: For use when a shielded wire is required in electronic devices, aircraft instruments, radio, radar, transmitters, receivers, etc.

Construction: Single conductor stranded tinned copper, thermoplastic insulation, braided tinned copper shield overall.



No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up
1351	3/5(7)-22	22	7/30	1/64″	8000	.090″	1000′
1352	1(10)-20	20	10/30	1/64″	8000	.100″	1000′
1353	1½(16)-18	18	16/30	1/64″	8000	.110″	1000′

Also available to order in additional sizes and multiple conductors.

NOTE: See Page S-16 for ALPHA Prices and Other Information.

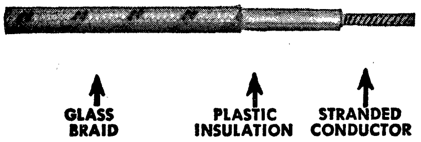
ALPHA WIRE CORPORATION

TYPE WL HOOK-UP WIRE (JAN-C-76)

(600 VOLT)

GENERAL PURPOSE:

Electronic Devices	Radio	Transmitters	Lighting and Power
Aircraft Instruments	Radar	Receivers	Rectifiers



CONSTRUCTION:

Single conductor stranded tinned copper with thermoplastic insulation, lacquered cotton or glass braid, or nylon jacket. FUNGUS PROOF.

CHARACTERISTICS:

Stability at High Temperatures • Flexibility at Low Temperatures • Resistant to: Flame, Moisture

SAMPLE JAN TYPE DESIGNATION

3/5 (7) 22 924

- 3/5 — Size (approx. cir. mils)
- (7) — Minimum Strands
- 22 — AWG Size
- 924 — *Color Code: 1st Digit—Base 2nd & 3rd Digits—Tracer

***COLOR CODE**

0—Black	2—Red	4—Yellow	6—Blue	8—Slate
1—Brown	3—Orange	5—Green	7—Purple	9—White

COTTON BRAID

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	†Stock Colors
1480	3/5(7)-22	22	7/30	1/64″	5000	.090″	1000′	1 thru 10
1480Q	3/5(7)-22	22	7/30	1/64″	5000	.090″	100′	1 thru 10
1481	1(10)-20	20	10/30	1/64″	5000	.100″	1000′	1 thru 10
1481Q	1(10)-20	20	10/30	1/64″	5000	.100″	100′	1 thru 10
1482	1½(16)-18	18	16/30	1/64″	5000	.115″	1000′	1 thru 10
1482Q	1½(16)-18	18	16/30	1/64″	5000	.115″	100′	1 thru 10
1483	2½(26)-16	16	26/30	1/64″	5000	.130″	1000′	1 thru 10
1483Q	2½(26)-16	16	26/30	1/64″	5000	.130″	100′	1 thru 10
1484	4(41)-14	14	41/30	1/64″	5000	.150″	1000′	1 thru 3
1484Q	4(41)-14	14	41/30	1/64″	5000	.150″	100′	1 thru 3
1485	6(65)-12	12	65/30	1/64″	5000	.170″	1000′	1 thru 3
1485Q	6(65)-12	12	65/30	1/64″	5000	.170″	100′	1 thru 3

†STOCK COLORS

(1) White	(3) Red	(5) Yellow	(7) Brown	(9) Slate
(2) Black	(4) Green	(6) Blue	(8) Orange	(10) Purple

Also available to order in additional sizes, solid colors and tracer combinations.

GLASS BRAID

1490	3/5(7)-22	22	7/30	1/64″	5000	.085″	1000′	1 thru 10
1490Q	3/5(7)-22	22	7/30	1/64″	5000	.085″	100′	1 thru 10
1491	1(10)-20	20	10/30	1/64″	5000	.095″	1000′	1 thru 10
1491Q	1(10)-20	20	10/30	1/64″	5000	.095″	100′	1 thru 10
1492	1½(16)-18	18	16/30	1/64″	5000	.110″	1000′	1 thru 10
1492Q	1½(16)-18	18	16/30	1/64″	5000	.110″	100′	1 thru 10
1493	2½(26)-16	16	26/30	1/64″	5000	.125″	1000′	1 thru 10
1493Q	2½(26)-16	16	26/30	1/64″	5000	.125″	100′	1 thru 10
1494	4(41)-14	14	41/30	1/64″	5000	.145″	1000′	1 thru 7
1494Q	4(41)-14	14	41/30	1/64″	5000	.145″	100′	1 thru 7
1495	6(65)-12	12	65/30	1/64″	5000	.165″	1000′	1 thru 3
1495Q	6(65)-12	12	65/30	1/64″	5000	.165″	100′	1 thru 3
1496	9(105)-10	10	105/30	1/64″	5000	.190″	1000′	1
1496Q	9(105)-10	10	105/30	1/64″	5000	.190″	100′	1

†STOCK COLORS

(1) White	(3) White/Red	(5) White/Yellow	(7) White/Brown	(9) White/Slate
(2) White/Black	(4) White/Green	(6) White/Blue	(8) White/Orange	(10) White/Purple

Also available to order in additional sizes, solid colors and tracer combinations.

NOTE: See Page S-16 for ALPHA Prices and Other Information.

TYPE WL HOOK-UP WIRE (JAN-C-76)

(600 VOLT)

(Continued)

NYLON JACKET

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Standard Put-up	†Stock Colors
1504	3/5(7)-22	22	7/30	1/64"	5000	.075"	1000'	1 thru 6
1504Q	3/5(7)-22	22	7/30	1/64"	5000	.075"	100'	1 thru 6
1505	1(10)-20	20	10/30	1/64"	5000	.085"	1000'	1 thru 6
1505Q	1(10)-20	20	10/30	1/64"	5000	.085"	100'	1 thru 6
1506	1½(16)-18	18	16/30	1/64"	5000	.095"	1000'	1 thru 6
1506Q	1½(16)-18	18	16/30	1/64"	5000	.095"	100'	1 thru 6
1507	2½(26)-16	16	26/30	1/64"	5000	.105"	1000'	1
1507Q	2½(26)-16	16	26/30	1/64"	5000	.105"	100'	1

†STOCK COLORS

(1) White (2) Black (3) Red (4) Green (5) Yellow (6) Blue

Also available to order in additional sizes, solid colors and tracer combinations.

MIL-W-5086 WIRE & MIL-C-7078 CABLE

(Aircraft Type)

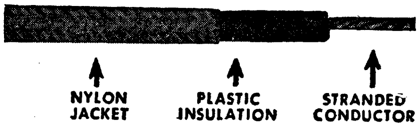
GENERAL PURPOSE: For applications requiring single conductor, 600 volt insulated, aircraft electrical wire resistant to: abrasion, moisture, cold, heat, flame, fungus, oil, salt water.

UNSHIELDED (MIL-W-5086)

No.	Wire Designation	Strand	O.D.	Standard Put-up
1381	AN-22	19/34	.085"	1000'
1382	AN-20	19/32	.095"	1000'
1383	AN-18	19/30	.105"	1000'

SHIELDED (MIL-C-7078)

No.	Wire Designation	Strand	O.D.	Standard Put-up
1391	AN-22	19/34	.110"	1000'
1392	AN-20	19/32	.120"	1000'
1393	AN-18	19/30	.130"	1000'



Construction:
Single conductor stranded tinned copper, plastic insulation, nylon jacket overall.

Construction:
Single conductor stranded tinned copper, plastic insulation, nylon jacket, braided tinned copper shield overall.

Also available to order in additional sizes and multiple conductors.

7 MM LACQUERED CABLE

(UNSHIELDED)

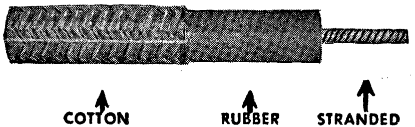
GENERAL PURPOSE: For high voltage leads in television receivers, cathode-ray tubes, oscilloscopes, automotive, etc.

No.	Size	Strand	Insul.	O.D.	Standard Put-up	Alternate Put-ups		
1981	16	19/29	3/32"	.275"	100'	250'	500'	1000'

(SHIELDED)

GENERAL PURPOSE: For automotive and aircraft ignition systems requiring grounding to overcome interference.

No.	Size	Strand	Insul.	O.D.	Standard Put-up	Alternate Put-ups		
1193	16	19/29	3/32"	.300"	100'	250'	500'	1000'



Construction:
Single conductor 16-19/29 stranded tinned copper, rubber insulated, cotton braid highly lacquered.

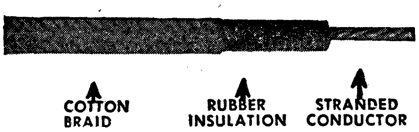
Construction:
Single conductor 16-19/29 stranded tinned copper, rubber insulated, cotton braid highly lacquered, tinned copper shield overall.

For alternate put-ups use code:
D=250 ft., E=500 ft., F=1000 ft.

LACQUERED PRIMARY WIRE

GENERAL PURPOSE: For automobile head, tail, side, dashboard lamps, horn, spotlight, instrument leads and general high voltage and primary voltage applications.

No.	Size	Strand	Insul.	O.D.	Standard Put-up	Alternate Put-ups		
1991	18	16/30	1/32"	.125"	100'	250'	500'	1000'
1995	16	26/30	1/32"	.140"	100'	250'	500'	1000'
1997	14	41/30	1/32"	.170"	100'	250'	500'	1000'
1999	12	19/25	1/32"	.190"	100'	250'	500'	1000'
1983	10	19/23	1/32"	.208"	100'	250'	500'	1000'

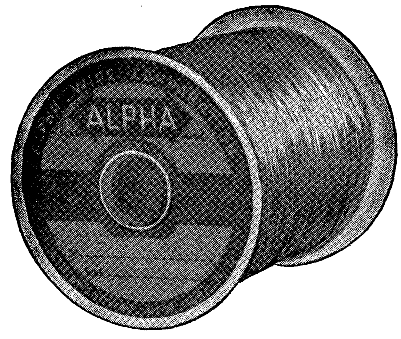


Construction:
Single conductor stranded soft annealed tinned copper, insulated with rubber, highly lacquered braid. Oil, heat, and moisture resistant.

STOCK COLORS:
Red, Black

For alternate put-ups use code:
D=250 ft., E=500 ft., F=1000 ft.

ALPHA WIRE CORPORATION



TINNED COPPER WIRE

TINNED COPPER WIRE

GENERAL PURPOSE: Winding of coils, antennas, point to point, bus bar, etc.

SOLID (Bus Bar)

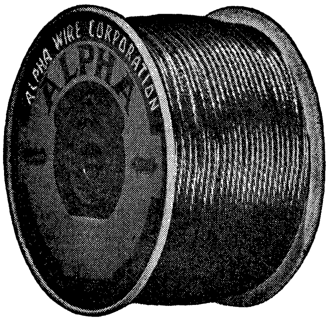
No.	Size	Circular Mils	O.D.	Standard Put-up
292	10 AWG	10380	.103″	1000′
289	12 AWG	6530	.082″	1000′
286	14 AWG	4107	.065″	1000′
295	16 AWG	2583	.051″	1000′
296	18 AWG	1624	.040″	1000′
297	20 AWG	1022	.033″	1000′
298	22 AWG	642.4	.025″	1000′
299	24 AWG	404.0	.020″	1000′
299/1	26 AWG	254.1	.016″	1000′
299/2	28 AWG	159.8	.013″	1000′
299/3	30 AWG	100.5	.010″	1000′

STRANDED

No.	Size	Strand	Circular Mils	O.D.	Standard Put-up
194	14 AWG	7/22	4496.8	.075″	1000′
196	18 AWG	16/30	1608.0	.045″	1000′
197	20 AWG	10/30	1005	.037″	1000′
198	22 AWG	7/30	703.5	.030″	1000′

Construction:

Pure electrolytic copper properly annealed and tinned for quick soldering.



BRONZE AERIAL WIRE

BRONZE AERIAL WIRE

GENERAL PURPOSE: Recommended especially for ship, short wave and transmitting aerials where high tensile strength is required.

No.	Size	Strand	Breaking Strength	O.D.	Standard Put-up
1160	14	7/22	420 Lbs.	.075″	500′
1161	12	7/20	650 Lbs.	.100″	500′
1163	10	7/18	1000 Lbs.	.122″	500′
1164	8	7/16	1600 Lbs.	.150″	500′
1165	6	7/14	2140 Lbs.	.190″	500′
1166	4	7/12	3670 Lbs.	.240″	500′

Construction:
7 strands Bronze.

DIAL CABLE

DIAL CABLE

PHOSPHOR BRONZE

Construction: 42 strands (6x7x.004) genuine phosphor bronze wire with a linen center for extra flexibility.

No.	Tensile Strength	O.D.	Standard Put-up
1692	50 lbs.	.036″	500′

BRAIDED LINEN

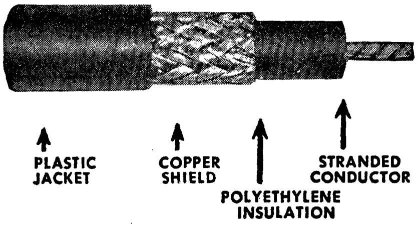
Construction: Composed of a very strong linen center over which is a smooth black braid.

No.	Tensile Strength	O.D.	Standard Put-up
HEAVY			
1696	40 lbs.	.057″	500′
LIGHT			
1699	22.5 lbs.	.036″	500′
EXTRA-THIN			
1700E	18 lbs.	.027″	500′

NOTE: See Page S-16 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

RG—COAXIAL CABLE



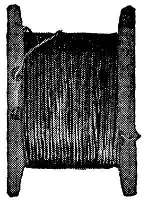
GENERAL PURPOSE: For radio frequency applications wherever a low capacitance shielded cable is required.

No.	Type	Size	Strand	Capacitance Per Ft.	O.D.	Standard Put-up
1803	RG-8/U	13	7/21 Bare Copper	29.5 mmf.	.405″	500′
1806	RG-11/U	18	7/26 Tinned Copper	20.5 mmf.	.405″	500′
1825	RG-58/U	20	Solid Bare Copper	28.5 mmf.	.195″	500′
1827	RG-59/U	22	Solid Copperweld	21.0 mmf.	.242″	500′

Construction:

Single conductor, polyethylene insulation, braided copper shield, plastic jacket overall.

AC-DC ANTENNA WIRE



GENERAL PURPOSE: Ideal replacement wire for universal midgets, indoor aerials and loop antennas.

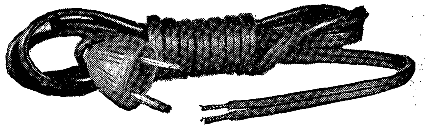
No.	Type	Size	Strand	O.D.	Standard Put-up
1281	Cotton	24	16/36	.050″	25′
1281V	Plastic	24	16/36	.047″	25′
1284	Cotton	24	16/36	.050″	1000′
1284V	Plastic	24	16/36	.047″	1000′

Construction:

Single conductor 24-16/36 extra flexible bare copper, covered with dark brown cotton braid or plastic insulation.

ALPHA E-Z STRIP LINE CORD

(UNDERWRITERS APPROVED)



GENERAL PURPOSE: This is the modern and ideal power supply cord for replacement on radios, lamps, fans, etc.

No.	Conductors	Size	Strand	O.D.	Length
2106	2	18	41/34	.235″ x .130″	6′
2109	2	18	41/34	.235″ x .130″	9′
2112	2	18	41/34	.235″ x .130″	12′

Construction:

E-Z strip rubber parallel cord (Type POSJ) with small unbreakable soft rubber attachment plug. Free end stripped and tinned ready to attach. Also available in other lengths.

FLEXIBLE VARNISHED TUBING AND SLEEVING

RADIO VARNISHED TUBING—(Spaghetti). A sleeving with a heavy coat of varnish, in high gloss vivid colors. Average dielectric strength: 4,000 volts.

SATURATED SLEEVING—A fibre yarn sleeving saturated with high grade insulating varnish. Cuts clean and has a smooth interior wall. Average dielectric strength: 800 volts.

MAGNETO VARNISHED TUBING—The production of this type of tubing is under rigid control so as to insure a maximum in quality. It is thoroughly impregnated with a varnish of maximum insulating value. It is resistant to heat, oil, gas and acids. Colors are bright and vivid. Average dielectric strength: 7,000 volts.

SPAGHETTI

No.	Approx. I.D.
20	.034″
19	.038″
18	.042″
17	.047″
16	.053″

No.	Approx. I.D.
15	.059″
*14	.066″
13	.076″
12	.085″
11	.095″

No.	Approx. I.D.
10	.106″
9	.118″
8	.133″
7	.148″
6	.166″

No.	Approx. I.D.
5	.186″
4	.208″
3	.234″
2	.263″
1	.294″

No.	Approx. I.D.
0	.330″
3/8″	.375″
7/16″	.438″
1/2″	.500″
5/8″	.625″

Tolerances: Sizes:
0 to 2—plus or minus .005″
3 to 13—plus or minus .004″
14 to 20—plus or minus .002″

Sizes follow the B & S System of gauging wires. For instance, a No. 10 tubing will fit over a No. 10 bare wire or any wire with an insulation of which the O.D. is equivalent to No. 10 B & S gauge. If in doubt, it is best to submit a sample of the wire or product to be covered.

LENGTHS—STANDARD 36″ LONGER LENGTHS AVAILABLE

*ALPHA No. 2091—STOCK COLORS: BLACK, RED, YELLOW, GREEN, BROWN.

NOTE: See Page S-16 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

NOTE: USEFUL INFORMATION FOR ORDERING

- All tests on specifications are approximate and subject to normal manufacturing tolerances.
- Lengths other than those regularly listed can be furnished.
- Other wires and cables made to specifications.
- Use the following symbols alongside catalog number for other than standard put-ups.

COILS	COILS	COILS	SPOOLS	SPOOLS	SPOOLS
25 Ft.........H	100 Ft.........K	500 Ft.......B	25 Ft.........N	100 Ft.........Q	250 Ft.......D
50 Ft.........Z	150 Ft.........L	1000 Ft.......C	50 Ft.........T	150 Ft.........R	500 Ft.......E
75 Ft.........J	200 Ft.........M	250 Ft.......A	75 Ft.........P	200 Ft.........S	1000 Ft. ......F

G — LONGER LENGTHS ON SPOOLS OR REELS

The constant development of new and improved designs and manufacturing processes results in continually changing specifications. In every case where Alpha wires shipped are different in specifications from those shown in this catalog, an improvement will be noted.

Cat. No.	List Price
194	$ 32.50
196	18.75
197	15.00
198	11.88
286	23.75
289	35.00
292	52.50
295	16.25
296	13.00
297	8.00
298	5.25
299	6.00
299/1	5.50
299/2	5.00
299/3	4.88
1114	15.00
1114E	8.13
1131	17.25
1135	35.00
1146	24.38
1150	41.25
1150/3	50.00
1150/4	62.50
1150/5	77.50
1151	37.50
1152	35.00
1157	112.50
1160	26.25
1161	45.00
1163	50.00
1164	70.00
1165	112.50
1166	172.50
1168	25.00
1169	16.25
1170	1.75
1182	5.25
1183	7.75
1184	10.00
1185	12.25
1186	14.25
1187	16.00
1188	17.75
1189	20.50
1190	23.00
1192	28.50
1193	17.25
1194/22	57.50
1194	61.25
1196	70.00
1197	82.50
1198	112.50
1199	187.50
1199/10	245.00
1200	46.25
1201	56.25
1202	68.75
1208	65.00
1210	90.00
1222	42.50
1223	45.00
1224	46.25
1229	2.45
1230	3.13
1231	3.88
1232	6.25
1233	8.75
1233/2	8.25
1234	18.75

Cat. No.	List Price
1235	$ 20.00
1241	12.50
1242	43.75
1243	43.75
1243/4	56.25
1244	11.25
1245	13.75
1245/18	18.75
1246	17.25
1246/18	23.75
1247	20.25
1247/6	25.75
1247/8	33.50
1248	9.75
1249	12.25
1249/18	14.75
1250	14.88
1250/18	19.50
1251	19.00
1251/18	30.00
1252	22.00
1253	25.50
1254	29.50
1254/18	49.50
1255	34.00
1255/8	40.00
1256	9.75
1256V	7.25
1257	13.50
1257V	11.00
1258	17.00
1259V	9.50
1260V	17.25
1261	68.75
1262	11.50
1262V	9.50
1263	16.25
1264	19.75
1265	58.75
1266	67.50
1267	30.00
1267V	28.13
1268	41.25
1268V	36.88
1269	16.25
1270	24.38
1271	230.00
1272	51.25
1274	25.00
1275	31.25
1275/4	43.75
1275/5	57.50
1275/6	73.75
1276/2	105.00
1276/3	125.00
1276	230.00
1277	315.00
1277/13	385.00
1277/15	437.50
1277/25	700.00
1277/50	1725.00
1279	31.25
1279V	21.25
1280	46.88
1280V	31.25
1281	.40
1281V	.38
1284	11.25
1284V	7.50

Cat. No.	List Price
1289	$550.00
1291	725.00
1293	807.50
1295	1155.00
1300	35.00
1302	63.75
1304	90.00
1307	150.00
1308	240.00
1310	375.00
1312	600.00
1316	40.00
1317	70.00
1318	110.00
1319	145.00
1320	180.00
1322	225.00
1334	60.00
1337	55.00
1351	52.50
1352	55.00
1353	60.00
1381	35.00
1382	40.00
1383	50.00
1391	80.00
1392	87.50
1393	100.00
1460	18.75
1460Q	2.13
1461	21.88
1461Q	2.45
1462	27.50
1462Q	3.00
1463	37.25
1463Q	4.00
1464	49.50
1464Q	5.25
1465	17.25
1465Q	1.98
1466	19.75
1466Q	2.25
1467	24.75
1467Q	2.75
1468	32.00
1468Q	3.50
1469	43.00
1469Q	4.63
1480	27.25
1480Q	3.00
1481	31.25
1481Q	3.50
1482	39.00
1482Q	4.25
1483	53.75
1483Q	5.75
1484	75.00
1484Q	7.88
1485	122.50
1485Q	12.88
1490	29.00
1490Q	3.25
1491	32.00
1491Q	3.50
1492	40.00
1492Q	4.38
1493	55.00
1493Q	5.88
1494	77.50

Cat. No.	List Price
1494Q	$ 8.13
1495	140.00
1495Q	14.63
1496	187.50
1496Q	19.38
1504	28.00
1504Q	3.13
1505	31.50
1505Q	3.50
1506	39.50
1506Q	4.25
1507	55.00
1507Q	5.88
1508	76.25
1509	137.50
1513	3.63
1515	16.50
1533	4.25
1535	19.50
1543	5.75
1545	26.88
1546	37.50
1546Q	7.88
1547	52.50
1547Q	11.13
1548	61.25
1548Q	12.88
1550*	14.75
1550Q*	1.73
1551*	15.25
1552*	1.78
1553*	18.75
1554*	2.13
1555*	23.75
1556*	2.63
1557*	34.75
1558*	3.75
1559*	52.50
1559Q*	5.63
1560*	90.00
1560Q*	9.63
1560/10*	150.00
1560/10Q*	15.63
1561*	12.50
1562*	1.50
1563*	15.00
1564*	1.75
1565*	19.50
1566*	2.25
1567*	30.00
1569*	45.63
1571*	21.25
1573*	28.13
1575*	39.00
1577*	51.75
1579*	76.00
1581*	18.75
1583*	22.75
1585*	34.00
1587*	45.75
1589*	72.00
1590	32.50
1590Q	3.50
1591	36.25
1591Q	3.88
1592	45.00
1592Q	4.75
1593	61.25
1593Q	6.50

Cat. No.	List Price
1594	$ 85.00
1594Q	9.00
1595	147.50
1595Q	15.38
1596	197.50
1596Q	20.38
1607	13.50
1608	14.13
1623	19.38
1625	187.50
1633	3.80
1635	17.75
1636	24.25
1636Q	5.10
1637	8.50
1638	39.25
1642	7.00
1692	18.75
1696	17.50
1699	16.88
1700E	13.50
1703	32.50
1704	45.00
1706	45.00
1710	67.50
1736	38.75
1775	36.25
1793	35.00
1794	55.00
1803	136.25
1806	124.75
1825	48.13
1827	56.25
1951	23.13
1952	30.00
1952/3	42.50
1953	37.50
1953/3	53.75
1954	41.88
1955	51.25
1956	85.00
1957	118.75
1958	162.50
1964	.15
1966	6.13
1967	14.00
1981	12.50
1983	12.88
1991	4.25
1995	5.75
1997	7.88
1999	11.13
2091	21.38
2106	.50
2109	.65
2112	.80
2126	.70

RADIO VARNISHED TUBING
(Per 100 Ft.)

Size	List Price
24	$ 6.13
20	6.25
19	6.50
18	6.63

Cat. No.	List Price
17	$ 7.00
16	7.25
15	7.50
14	7.88
13	8.25
12	9.13
11	9.75
10	10.50
9	11.00
8	11.75
7	12.63
6	13.75
5	15.38
4	16.88
3	18.38
2	17.25
1	19.50
0	23.25
3/8	28.13
7/16	33.63
1/2	38.88
5/8	47.50
3/4	54.75
7/8	59.00
1 In.	74.00

SATURATED SLEEVING
(Per 100 Ft.)

Size	List Price
24	$ 3.75
20	3.75
19	3.88
18	4.00
17	4.25
16	4.50
15	4.75
14	5.00
13	5.25
12	5.63
11	6.00
10	6.38
9	6.75
8	7.13
7	7.50
6	7.88
5	8.25
4	8.63
3	9.75
2	10.88
1	12.00
0	13.88
3/8	18.25
7/16	22.00
1/2	24.63
5/8	28.13
3/4	34.50
7/8	38.00
1 In.	47.75

Cat. No. List Price

MAGNETO VARNISHED TUBING
(Per 100 Ft.)

Size	List Price
24	$ 6.00
20	6.00
19	6.25
18	6.50
17	6.63
16	7.13
15	7.50
14	7.88
13	8.25
12	8.63
11	9.38
10	10.38
9	11.25
8	11.88
7	13.00
6	14.25
5	15.38
4	16.75
3	18.00
2	19.38
1	20.63
0	24.75
3/8	31.00
7/16	35.13
1/2	41.25
5/8	47.50
3/4	54.75
7/8	59.00
1 In.	74.00

MEASURING MACHINE

Unit 1
Folding Reel $22.50

Unit 2
Measuring Machine $67.50

Unit 3
Wire Winder $33.75

Units 1, 2 and 3
Complete Outfit $120.00

*For Striped Tracers, add to List Price $1.88 per 1,000 Feet.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Belden

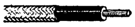
RADIO • TELEVISION WIRE

accessories

litz wire

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
8817	100'S		For rewinding antenna primaries and for hand-wound r-f coils. 5x44 Celenamel with a wrap of Nylon.	5x44		.008

lead-in wire



Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
8206	250'S	18	Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield	7x27	.040"	.155

voice coil lead wire

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
8127	***10'	25	Bare copper wire braided	32x40		.024

***Packaged 10 ft on card, 5 cards in carton.

indoor aerial wire — EXTRA FLEXIBLE

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
8014	**25' 500'SK	25	Tinned copper, flexible stranding; chrome vinyl plastic insulation	13x36	.010"	.044

**Packaged 25 ft on card, 5 cards in carton.

aerial wire

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
8000	50'C 75'C 100'C 1000'S	7x22	STRANDED BARE COPPER			
8002	50'C 75'C 100'C 1000'S	7x24				

SOLID BELDENAMEL

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
8008	100'CK 200'S 500'S	12				
8009	100'CK 500'S	14				

SOLID TINNED COPPER (BUS BAR WIRE)

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
8011	100'CK	12				
8012	100'CK	14				
8013	100'CK	16				

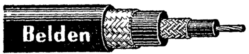
auto and aircraft radio wires and shielding

Auto Radio Antenna Lead-In

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8664	100'S Black	26	Tinned copper, solid; polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket; NOMINAL CAPACITANCE Per Ft 15.0 MMF	solid	.245

High-Voltage Ignition Cable

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8667	100'S Black	16	Tinned copper, flexible stranding; rubber insulation; cotton braid; lacquer coating	19x29	.280



Shielded High-Voltage Ignition Cable

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8665	100'S Black	19	Stainless steel alloy, flexible stranding; rubber insulation; glass yarn web braid; neoprene jacket; tinned copper braid shield; neoprene jacket; NOMINAL CAPACITANCE Per Ft 33.0 MMF	6x.013" + 1x.011" steel alloy	.365

auto and aircraft radio wires and shielding (cont'd)

Heavy-Duty Hook-Up Wire

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8833	100'S 1000'S Black Blue Green Red Yellow	18	Tinned copper, flexible stranding; paper wrap; rubber insulation; cellulose acetate yarn braid; lacquer coating	16x30	.136

Heavy-Duty Hook-Up Wire

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8652	100'S Black with one White Tracer	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; lacquer coating	19x29	.140
8651	100'S Green with two White Tracers	14		19x27	.170
8650	100'S Red with three White Tracers	12		19x25	.200

Shielded Heavy-Duty Hook-Up Wire

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8656	100'S	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; blue lacquer coating; tinned copper braid shield	19x29	.170

Shielding and Bonding Braid

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8660	50'SK 250'S		Tinned copper braid in form of tubing	96x34	1/8 ID
8668	50'SK 250'S			120x34	11/64 ID
8661	50'SK 250'S			192x34	3/8 ID
8669	50'S 250'S			336x34	1/2 ID
8662	50'S 250'S			576x34	25/32 ID

Duplex Lighting Cable

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
8677	100'S Chrome	16-2	Tinned copper, flexible stranding; vinyl plastic insulation; one black and one white conductor parallel; chrome vinyl plastic jacket	19x29	.168X .284
8675	100'S Chrome	14-2		19x27	.199X .334
8673	100'S Chrome	12-2		19x25	.214X .388

microphone cables

plastic microphone cable

For lapel microphones

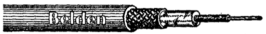
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8411	25'CK 100'S 500'S Chrome	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; chrome vinyl plastic jacket	3x33 copper plus 4x33 steel	.144	37

• Also for TV grounding   CK—Coiled in carton   K—Carton   CR—Crate reel   S—Spool   C—Coil   SK—Spooled in carton

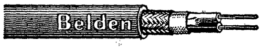
BELDEN RADIO · TELEVISION WIRE

microphone cables (cont'd)

plastic microphone cable (Cont'd)

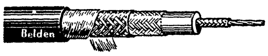

For crystal, ribbon, and carbon microphones

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8401	25'CK 50'CK 100'S 500'S Chrome	25-1		3x33 copper plus 4x33 steel	.200	25

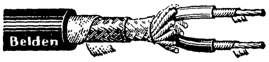

For carbon microphones

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8422	25'CK 50'CK 100'S 500'S Chrome	22-2	Tinned copper, flexible stranding; polyethylene insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; chrome vinyl plastic jacket	16x34	.225	**32

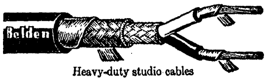
rubber microphone cable


For crystal, ribbon, and carbon microphones

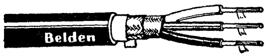
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8410	25'CK 50'CK 100'S 500'S Black	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; rubber insulation; rayon braid; tinned copper braid shield; rayon wrap; black rubber jacket	3x33 copper plus 4x33 steel	.245	33


For carbon microphones

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8412	25'CK 50'CK 100'S 500'S Black	20-2	Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.280	**68


Heavy-duty studio cables

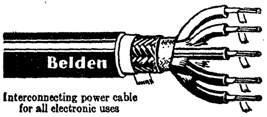
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8428	100'S 500'S	18-2		41x34	.295	**80


For all low impedance microphones

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nomina Capacitance Per Ft (mmf)
8423	50'CK 250'S Black	20-3		26x34	.276	**85
8424	50'CK 250'S Black	20-4		26x34	.295	**95

** Between one conductor and remaining conductors connected to shield.

shielded multiple conductor cables

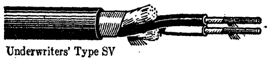

Interconnecting power cable for all electronic uses

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Insulation Thick. (inches)	Nom. Jacket Thick. (inches)	Nom. Diam (inches)
8425	50'CK 250'S Black	20-5	Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.020	.040	.323
8426	100'S Black	20-6		26x34	.020	.040	.349
8427	100'S Black	20-7		26x34	.020	.040	.370

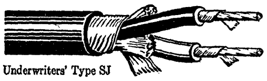
* Also used as microphone cable.

multiple conductor cables

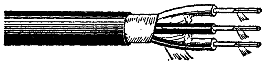
rubber-jacketed portable cord


Underwriters' Type SV

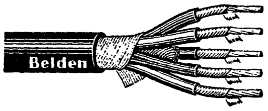
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8452	100'S 500'S Black	18-2	Bare copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; cotton wrap; black rubber jacket	41x34	1/64	1/32	.245


Underwriters' Type SJ

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8472	250'S Black	16-2		65x34	1/32	1/32	.325



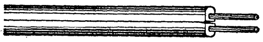
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8453	100'S 500'S Black	18-3		41x34	1/64	1/32	.265
8454	100'S 500'S Black	18-4		41x34	1/64	1/32	.265



Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8455	100'S 250'S Black	22-3 18-2		16x34 41x34	1/64	1/32	.280

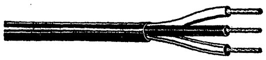
Underwriters' Type POSJ-64

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8462	100'S 250'S Brown	18-2	Bare copper, flexible stranding; cotton wrap, color coded; parallel conductors with rubber insulation and jacket integral	41x34	1/32		.123x .223

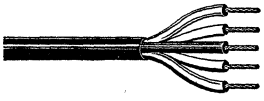

Underwriters' Type POT-64

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8888	250'S	18-2	One bare and one tinned copper conductor, flexible stranding; parallel conductors with vinyl plastic insulation and jacket integral	41x34	1/32		.114x .231

plastic-insulated cable



Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8443	100'S 500'S Brown	22-3	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; conductors cabled; over-all tubed brown vinyl plastic jacket	7x30	.010		.140
8444	100'S 500'S Brown	22-4		7x30	.010		.158



Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8445	100'S 500'S Brown	22-5		7x30	.010		.170

† CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

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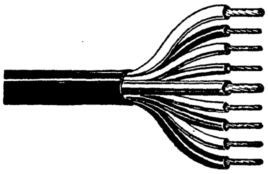
multiple conductor cables (cont'd)

plastic-insulated cable (Cont'd)



Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8446	100'S Brown	22-4 18-2		7x30 16x30	.010 .018		.212
8447	100'S Brown	22-5 18-2		7x30 16x30	.010 .018		.236
8448	100'S Brown	22-6 18-2		7x30 16x30	.010 .018		.240
8449	100'S Brown	22-7 18-2		7x30 16x30	.010 .018		.262

transmission line cables

NOMINAL ELECTRICAL PROPERTIES

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8204	500'S White	18 7x26	Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; white cotton braid treated with weather-resistant compound. **For extension speakers.**	.190					

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8209	500'S White	18 7x26	Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; paper wrap; tinned copper braid shield; white cotton braid, treated with weather-resistant compound. **For long runs in extension speaker installations.**	.235					

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8208	500'S 1000'S Brown	18 7x26	Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; paper wrap; tinned copper braid shield; over-all tubed brown vinyl plastic jacket. **For extension speakers.**	.240					

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8205	500'S Black	22 7x30	Tinned copper, flexible stranding; rubber insulation, color coded; two conductors cabled; black cotton braid, treated with weather-resistant compound. **For extension speaker and control circuits.**	.165					

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8222	100'SK 500'S Brown	20 7x28	Bare copper, flexible stranding; conductors parallel; polyethylene plastic insulation. **For use with receiving antenna at high frequencies.**	.075 x.128	100. 200. 300. 400.	7.7 11.0 13.6 15.9	72	69	20.3

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8223	100'SK 500'S Brown	20 7x28	Same as 8222. **For use with receiving antenna, matching transformer, connecting link between electronic units, and experimental applications at high frequencies.**	.075 x.143	100. 200. 300. 400.	5.1 7.2 8.9 10.3	100	72	14.4

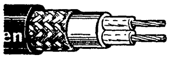
transmission line cables (cont'd)

NOMINAL ELECTRICAL PROPERTIES

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8224	100'S 500'S Brown	20 7x28	Same as 8222. **For use with receiving antenna, matching transformer, and experimental applications at high frequencies.**	.075 x.182	100. 200. 300. 400.	2.8 4.2 5.4 6.4	150	76	9.0

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8225	100'S 500'S 1000'S Brown	20 7x28	Same as 8222. **For use with television and FM receiving antenna. Exceptionally low losses at high frequencies.**	.072 x.400	100. 200. 300. 400.	1.1 1.7 2.2 2.7	300	85	4.6

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8230	100'S 500'S 1000'S Brown	20 7x28	"Weldohm" copper coated steel wire, flexible stranding; conductors parallel; polyethylene plastic insulation. **Greater service life in TV installations requiring long runs from receiving antennas. Has over 2½ times the flex-life and over 1½ times the breaking strength of the equivalent in copper.**	.072 x.400	100. 200. 300. 400.	1.1 1.7 2.2 2.7	300	85	4.6



Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8227	100'S 250'S Black	20 7x28	One bare and one tinned copper conductor, flexible stranding; polyethylene plastic insulation; two conductors cabled; polyethlene plastic jacket; tinned copper braid shield; black vinyl plastic jacket. **For use with television and FM antenna in extremely noisy locations.**	.325	100. 200. 300. 400.	4.1 6.4 8.4 10.2	100	62	15.5*

RGU transmission line cables

RG-5A/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8264	100'S 500'S 1000'CR Gray	16 solid	Silver coated copper wire, solid; polyethylene plastic insulation; silver coated copper double braid shield; gray plastic jacket.	.328	100. 200. 400.	2.40 3.50 5.25	50	66	29

RG-5/U

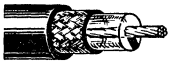
Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8236	100'S 500'S 1000'CR Black	16 solid	Bare copper, solid; polyethylene plastic insulation; bare copper double braid shield; black vinyl plastic jacket. **A small diameter microwave cable.**	.332	100. 200. 400.	2.65 3.85 5.60	52.5	66	28.5

RG-6/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8253	100'S 500'S 1000'CR Gray	21 solid	Bare "Copperweld" solid; polyethylene plastic insulation; silver coated copper braid shield; bare copper braid shield; gray plastic jacket.	.332	100. 200. 400.	2.65 3.85 5.60	76	66	20

RG-7/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8265	100'S 500'CR 1000'R Black	19 solid	Bare copper solid; semi-solid polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket.	.370	100. 200. 400.	2.00 3.00 4.40	97	66	12.5



RG-8/U

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8237	100'S 500'CR 1000'R Black	13 7x21	Bare copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket. **Medium sized 50 ohm video & communications cable.**	.405	100. 200. 400.	2.10 3.30 4.50	52	66	29.5

* Belden RGU Cables can be furnished on special order with Type II-A Noncontaminating Jacket.

*Capacitance between conductors †CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

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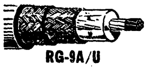
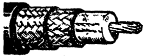
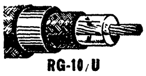
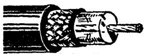
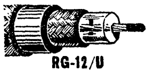
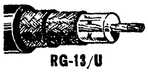
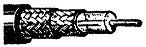
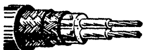
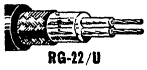
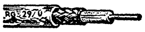
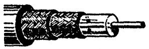
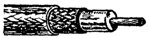
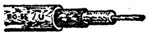
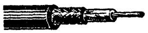
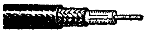
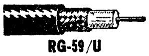
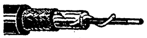
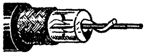
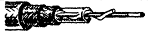
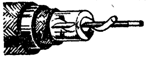
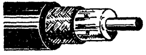
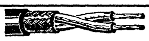
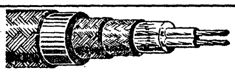
RGU transmission line cables (Cont'd)

NOMINAL ELECTRICAL PROPERTIES

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
			 **RG-9A/U**						
8246	100'S 500'CR 1000'R Gray	13 7x21	Silver coated copper wire, flexible stranding; polyethylene plastic insulation; silver coated copper wire double braid shield; gray plastic jacket.	.420	100. 200. 400.	2.10 3.30 4.50	51	66	30
			 **RG-9/U**						
8242	100'S 500'CR 1000'R Gray	13 7x21	Silver coated copper wire, flexible stranding; polyethylene plastic insulation; silver coated copper braid shield; bare copper braid shield; gray plastic jacket. **Medium size 50 ohm video & communications cable.**	.420	100. 200. 400.	2.10 3.30 4.50	51	66	30.0
			 **RG-10/U**						
8247	100'S 500'CR 1000'R Aluminum	13 7x21	Bare copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; gray plastic jacket; aluminum braid armor.	.475	100. 200. 400.	2.10 3.30 4.50	52	66	29.5
			 **RG-11/U**						
8238	100'S 500'CR 1000'R Black	18 7x26	Tinned copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket. **Medium sized 75 ohm video & communications cable.**	.405	100. 200. 400.	1.90 2.85 4.35	75	66	20.5
			 **RG-12/U**						
8248	100'S 500'CR 1000'R Aluminum	18 7x26	Tinned copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; gray plastic jacket; aluminum braid armor.	.475	100. 200. 400	1.90 2.85 4.35	75	66	20.5
			 **RG-13/U**						
8250	100'S 500'CR 1000'R Black	18 7x26	Tinned copper, flexible stranding; polyethylene plastic insulation; bare copper double braid shield; black vinyl plastic jacket.	.420	100. 200. 400.	1.90 2.85 4.35	74	66	20.5
			 **RG-21/U**						
8243	100'S 500'S 1000'CR Gray	16 solid	Tophet A resistance wire solid; polyethylene plastic; silver coated copper wire double shield; gray plastic jacket. **Special high attentuation cable with small temperature coefficient of attenuation.**	.332	100. 200. 400.	14.50 20.50 29.00	53	66	29.0
			 **RG-22A/U**						
8260	100'S 500'CR 1000'R Gray	18 7x .0152" 2 condrs.	Bare copper, flexible stranding; polyethylene plastic insulation; 2 conductors cabled; core jacket polyethylene plastic; tinned copper double braid shield; gray plastic jacket.	.420	100. 200. 400.	4 00 5.50 8.50	95	66	16
			 **RG-22/U**						
8251	100'S 500'CR 1000'R Black	18 7x .0152" 2 condrs.	Bare copper, flexible stranding; 2 conductors parallel; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket.	.405	100. 200. 400.	3.40 5.20 8.30	95	66	16
			 **RG-29/U**						
8244	100'S 500'S 1000'S Clear	20 solid	Bare copper solid; polyethylene plastic; tinned copper braid shield; polyethylene plastic jacket. **Small diameter general purpose cable.**	.184	100. 200. 400.	4.10 6.20 9.50	53.5	66	28.5
			 **RG-42/U**						
8249	100'S 500'S 1000'CR Gray	21 solid	High resistance wire, solid; polyethylene plastic insulation; silver coated copper wire double braid shield; gray plastic jacket.	.342	100. 200. 400.	17.00 24.00 34.00	78	66	20

RGU transmission line cables (Cont'd)

NOMINAL ELECTRICAL PROPERTIES

Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
			 **RG-54A/U**						
8239	100'S 500'S 1000'CR Clear	18 7x .0152"	Bare copper, flexible stranding; polyethylene plastic insulation; tinned copper braid shield; polyethylene plastic jacket.	.250	100. 200. 400.	3.10 4.40 6.70	58	66	26.5
			 **RG-55/U**						
8245	100'S 500'S 1000'S Clear	20 solid	Bare copper solid; polyethylene plastic; tinned copper double braid shield; polyethylene plastic jacket. **Small diameter general purpose cable.**	.206	100. 200. 400.	4.10 6.20 9.50	53.5	66	28.5
			 **RG-58A/U**						
8259	100'S 500'S 1000'S Black	20 19x .0068"	Tinned copper, flexible stranding; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket.	.195	100. 200. 400.	5.30 8.20 12.60	50	66	29
			 **RG-58/U**						
8240	100'S 500'S 1000'S Black	20 solid	Bare copper, solid; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket. Puncturing voltage 20,000 volts. **For use with radio Frequency Transmission, video, test equipment, and pulse transmission.**	.195	100. 200. 400.	4.10 6.20 9.50	53.5	66	28.5
			 **RG-59/U**						
8241	100'S 500'S 1000'CR Black	22 solid	Bare "Copperweld" solid; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket. Puncturing voltage 20,000 volts. **For use with television antenna.**	.242	100. 200. 400.	3.75 5.60 8.30	73	66	21.0
			 **RG-62/U**						
8254	100'S 500'S 1000'CR Black	22 solid	Bare "Copperweld" solid; semi-solid polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket.	.242	100. 200. 400.	3.10 4.40 6.30	93	84	13.5
			 **RG-63/U**						
8255	100'S 500'CR 1000'R Black	22 solid	Bare "Copperweld" solid; semi-solid polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket.	.405	100. 200. 400.	2.00 2.90 4.20	125	84	10
			 **RG-71/U**						
8257	100'S 500'S 1000'CR Clear	22 solid	Bare•"Copperweld" solid; semi-solid polyethylene plastic insulation; tinned copper double braid shield; polyethylene plastic jacket.	.250	100. 200. 400.	3.10 4.40 6.30	93	84	13.5
			 **RG-79/U**						
8256	100'S 500'CR 1000'R Aluminum	22 solid	Bare "Copperweld" solid; semi-solid polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket; aluminum braid armor.	.475	100. 200. 400.	2.00 2.90 4.20	125	84	10
			 **RG-83/U**						
8252	100'S 500'CR 1000'R Black	10 solid	Bare copper, solid; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket.	.405	100. 200. 400.	3.00 4.40 7.00	35	66	44
			 **RG-108/U**						
8266	100'S 500'S 1000'S Gray	20 7x28 2 condrs.	Tinned copper, flexible stranding; polyethylene plastic insulation; 2 conductors cabled (one conductor bare copper for coding); tinned copper braid shield; gray plastic jacket.	.230	100. 200. 400.	— — 32.00	76	66	24.5
			 **RG-111/U**						
8258	100'S 500'CR 1000'R Aluminum	18 7x .0152" 2 condrs.	Bare copper, flexible stranding; polyethylene plastic insulation; 2 conductors cabled; core jacket, polyethylene plastic; tinned copper double braid shield; gray plastic jacket; aluminum braid armor.	.490	100. 200. 400.	4.00 5.50 8.50	95	66	16

†R—Returnable reel CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

• Belden RGU Cables can be furnished on special order with Type II-A Noncontaminating Jacket.

See Page S-25 for BELDEN Prices

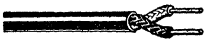
BELDEN RADIO · TELEVISION WIRE

magnet wire

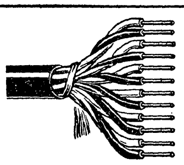
Size	Turns Per Linear Inch	Turns Per Square Inch	Approx. Length in Feet ¼-Lb Spool	Approx. Length in Feet ½-Lb Spool	Approx. Length in Feet 1-Lb Spool
BELDENAMEL					
14	15.2	231	...	40	...
16	19.1	365	...	62	...
18	23.9	571	...	100	...
20	29.9	894	...	160	...
22	37.4	1399	...	250	...
24	46.9	2200	...	400	...
26	59.0	3481	...	638	...
28	73.8	5446	505	1010	...
30	92.2	8501	805	1610	...
32	114.0	12996	1270	2540	...
34	144.0	20736	2015	4030	...
36	180.0	32400	3200	6400	...
38	225.0	50625	5070	...	...
40	290.0	84100	8050	...	...
HNC NYLCLAD					
14	...	...	...	...	79
16	...	...	...	...	125
18	...	...	...	...	199
20	...	...	...	...	316
22	...	...	...	...	503
24	...	...	...	...	809
26	...	...	...	...	1264
28	...	...	...	...	2001
30	...	...	...	...	3167
32	...	...	...	...	5023
34	...	...	...	...	7962
36	...	...	...	...	12618
38	...	...	...	...	20004
40	...	...	...	...	31686
SINGLE COTENAMEL					
14	14.1	199	...	39	78
16	17.4	303	...	61	123
17	...	...	...	...	155
18	21.4	458	...	97	195
19	...	...	...	...	245
20	26.1	681	...	154	307
22	31.9	1018	...	241	481
24	38.6	1490	...	376	752
25	...	...	...	...	942
26	46.4	2153	295	590	1178
28	55.1	3036	458	916	1832
30	64.7	4186	710	1420	2843
32	74.6	5565	1090	2180	...
34	86.6	7500	1606	...	...
36	97.6	9526	2425	...	...

intercommunicating and sound system cables

For Station-to-Station and Extension Wiring
(Unshielded)



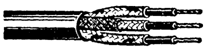
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8740	100'S 500'S	22- 2	1	Bare copper, solid; baked enamel film; cotton braid; waxed; color coded; conductors cabled in pairs; over-all tubed brown vinyl plastic jacket	None	solid		.145
8741	100'S 500'S	22- 4	2		None	solid		.205
8742	100'S 500'S	22- 6	3		None	solid		.230



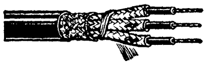
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8743	100'S 500'S	22-12	6	Tinned copper, solid; vinyl plastic insulated; color coded; conductors cabled in pairs; over-all tubed brown vinyl plastic jacket	None	solid	.010	.265
8744	100'S 500'S	22-18	9		None	solid	.010	.320
8745	100'S 500'CR	22-30	15		None	solid	.010	.380
8746	100'S 500'CR	22-54	27		None	solid	.010	.510

intercommunicating and sound system cables (cont'd)

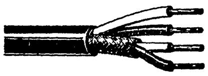
For Station-to-Station and Extension Wiring
(Shielded)



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8734	100'S 500'S	22- 3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; **three conductors** cabled; one conductor tinned copper braid shield; and two conductors unshielded; over-all tubed brown vinyl plastic jacket	Over 1 conductor	7x30	.012	.210

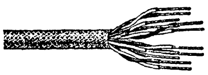


Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8735	100'S 500'S	22- 3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; **three conductors** cabled; tinned copper braid shield; over-all tubed brown vinyl plastic jacket	Over 3 conductors	7x30	.012	.220
8737	100'S 500'S	22- 2	1	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield; over-all tubed brown vinyl plastic jacket	Over 2 conductors	7x30	.012	.220



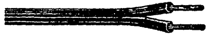
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8732	100'S 500'S	22-4	2	Tinned copper, flexible stranding; vinyl plastic insulation; color coded; conductors cabled in pairs; one pair unshielded and one pair tinned copper braid shield; over-all tubed brown vinyl plastic jacket	Over 1 pair	7x30	.015	.230

For Station-to-Terminal Wiring
(Unshielded)



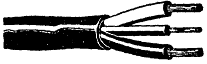
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8747	100'S	22-12	6	Tinned copper, flexible stranding, vinyl plastic insulation; color coded; conductors cabled in pairs; over-all brown cotton braid; lacquer coating	None	7x30	.010	.275
8748	100'S	22-18	9		None	7x30	.010	.335
8749	100'S	22-30	15		None	7x30	.010	.435
8750	100'S	22-54	27		None	7x30	.010	.565

Juke Box Speaker Cable



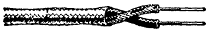
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8782	500'S 1000'S	24-2	Not paired	Bare copper, flexible stranding; parallel conductors; black vinyl plastic insulation	None	7x32	.015	.058X .115

Juke Box Control Cable

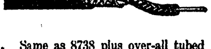


Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8783	500'S	16-2 20-1	Not paired	Tinned copper, flexible stranding, vinyl plastic insulation; color coded; conductors cabled; over-all tubed brown vinyl plastic jacket	None	26x30 10x30	.020	.240

broadcast audio cables



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8738	100'S 500'S	22- 2	1	Bare copper. solid; baked enamel film; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.135



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8739	100'S 500'S	22- 2	1	Same as 8738 plus over-all tubed brown vinyl plastic jacket	Over 2 conductors	solid		.175

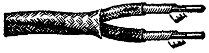
†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

BELDEN RADIO · TELEVISION WIRE

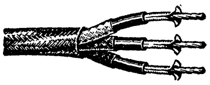
intercommunicating and sound system cables (Cont'd)

broadcast audio cables (cont'd)

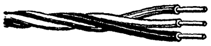
P.A. Cable Amplifier-to-Speaker
Broadcast Control Cable



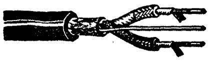
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8799	100'S 500'S	18-2	1	Bare copper, solid; baked enamel film; cotton wrap; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.165



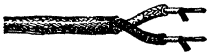
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8432	100'S 500'S	20-2	1	Tinned copper, flexible stranding; paper wrap; rubber insulation; cotton braid; lacquer coating; color coded; conductors cabled; tinned copper braid shield	Over-all	10x30	.015	.215
8433	100'S 500'S	20-3	Not paired		Over-all	10x30	.015	.230



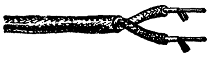
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8482	S-1000	19-2	1	Bare copper, solid; vinyl plastic insulation, color coded; conductors cabled	None	solid	.012	.105
8483	S-1000	19-3	Not paired		None	solid	.012	.120



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8437	100'S 500'S	22-2	1	Tinned copper, solid; baked enamel film; heavy cellulose acetate yarn wrap; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield; 22 A.W.G. tinned solid copper wire parallel to twisted pair under shield; tubed black vinyl plastic jacket	Over 2 conductors	solid		.210



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8438	100'S 500'S	20-2	1	Tinned copper, solid; baked enamel film; cotton wrap; cotton braid, waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.160



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8439	100'S 500'S	20-2	1	Tinned copper, solid; heavy cellulose acetate yarn wrap, cellulose acetate yarn braid; lacquer coating; color coded, conductors cabled; tinned copper braid shield	Over-all	solid		.160

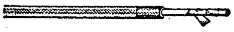
hook-up and lead wires

cellulose braid lacquered

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8941	25'CK 100'SK 1000'S	20	Tinned copper, solid; heavy cellulose acetate yarn wrap; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Brown, Green, Orange, Red, White, Yellow**	solid		.072	200	1000
8945	25'CK 100'SK 1000'S	18	Colors: **Black, Blue, Green, Red, White, Yellow**	solid		.080	200	1000

hook-up and lead wires (cont'd)

cellulose braid lacquered (Cont'd)



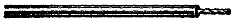
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8943	25'CK 100'SK 1000'S	20	Tinned copper, flexible stranding; heavy cellulose acetate yarn wrap; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Brown, Green, Orange, Red, White, Yellow**	10x30		.076	200	1000
8947	25'CK 100'SK 1000'S	18	Colors: **Black, Blue, Green, Red, White, Yellow**	16x30		.087	200	1000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8942	100'SK 1000'S	16	Colors: **Black, Green, Red**	26x30		.099	200	1000
8938	100'SK 500'S	14	Colors: **Black, Red**	41x30		.115	200	1000

thermoplastic insulated

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8901	100'SK 1000'S	20	Tinned copper, solid; vinyl plastic insulation. Colors: **Black, Blue, Green, Red, Yellow**	solid	.015	.066	5000	8000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8905	100'SK 1000'S	20	Tinned copper, flexible stranding; vinyl plastic insulation. Colors: **Black, Blue, Green, Red, Yellow**	10x30	.015	.073	5000	8000



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8913	100'SK 1000'S	20	Colors: **Black, Blue, Green, Red, Yellow**	10x30	.025	.091	5000	12000
8918	250'S 1000'S	18	Colors: **Black, Green, Red, Yellow**	16x30	.031	.112	5000	12000

R-F push-back wire CELLULOSE ACETATE BRAID WAXED

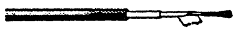
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8841	100'SK 1000'S	20	Tinned copper, solid; two cellulose acetate yarn braids; waxed. Colors: **Black, Blue, Green, Red,** all with White Tracer	solid		.067	1000	1000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8839	100'SK 1000'S	20	Tinned copper, flexible stranding; two cellulose acetate yarn braids; waxed. Colors: **Black, Blue, Green, Red,** all with White Tracer	10x30		.072	1000	1000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8844	100'SK 1000'S	18		16x30		.092	1000	1000

rubber-insulated push-back

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8837	100'SK 1000'S	20	Tinned copper, solid; cotton wrap; unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	solid	.010	.075	2000	2000



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8838	100'SK 1000'S	20	Tinned copper, flexible stranding; cotton wrap; unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	10x30	.010	.081	2000	2000

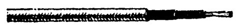
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8833	100'S 1000'S	18	Tinned copper, flexible stranding; paper wrap; rubber-insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	16x30	.031	.135	10000	8000

† CK—Coiled in carton   K—Carton   CR—Crate reel   S—Spool   C—Coil   SK—Spooled in carton

BELDEN RADIO · TELEVISION WIRE

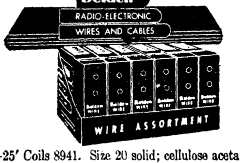
hook-up and lead wires (cont'd)

shielded hook-up wire



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8885	25'CK 100'SK 500'S	20	Tinned copper, flexible stranding; rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating; tinned copper braid shield	10x30	.015	.117	5000	4000

display Belden assortments

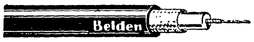


8864 Contents: 6—25' Coils 8941. Size 20 solid; cellulose acetate wrap and braid lacquered. One each **Black, Blue, Green, Red, White,** and **Yellow.**

8865 Contents: 6—25' Coils 8943. Size 20 flexible; cellulose acetate wrap and braid lacquered. One each **Black, Blue, Green, Red, White,** and **Yellow.**

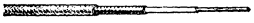
instrument and lead wires

photoelectric cell cable (sound projectors)

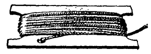


Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8221	100'S Black	25	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket	3x33 copper plus 4x33 steel	.240	20

phonograph pickup arm cable

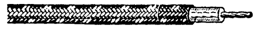


Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8431	*15' 100'S Brown	24	Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield; fine brown cotton braid	16x36	.015	.095

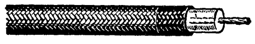


Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8014	*25' 500'SK Chrome	25	Tinned copper, flexible stranding; chrome vinyl plastic insulation *Packaged on card, 5 cards in carton	13x36	.010	.044

high-voltage and cathode-ray tube lead cable

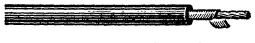


8869	100'S Red with Two White Tracers	20	Tinned copper, flexible stranding; flame retardant polyethylene plastic insulation, red cellulose acetate yarn braid with 2 white tracers; lacquer coating. Suggested Voltage Rating (volts) 10000	7x28	.035	.136

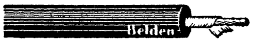


8868	100'S Red	20	Same as 8869 except heavier insulation and solid red braid. Suggested Voltage Rating (volts) 20000	7x28	.065	.198

test prod wire



8899	†† 14'CK 100'S 1000'S Black Red	18	Tinned copper, extra flexible stranding; cotton wrap; rubber insulation. Suggested Voltage Rating (volts) 5000	65x36	.043	.140

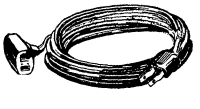


8898	100'S 500'S Black Red	18	Suggested Voltage Rating (volts) 10000 ††7' **Black** and 7' **Red**	65x36	.088	.230

† CK—Coiled in carton K—Carton CR—Crate reel

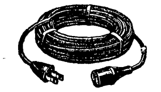
replacement and extension cords

Trade Number	†Package	Lengths & Color
1701	1 K	10 Ft Brown
1702	1 K	15 Ft Brown
1705	1 K	6 Ft Brown



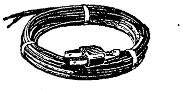
Extension Cord — Size 18. Type POSJ-64. Extra-flexible all-rubber parallel lamp cord. Both ends unbreakable rubber. Does not mar floors or furniture. Safe for use on table tops. Underwriters' Flag Type Blue Cord Set Label.

Trade Number	†Package	Lengths & Color
1751	1 K	20 Ft Black



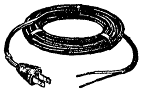
Extension Cord — Size 18, Type SV. All-rubber portable cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug. Underwriters' Flag Type Blue Cord Set Label.

Trade Number	†Package	Lengths & Color
1725	1 K	7 Ft 6 In. Brown



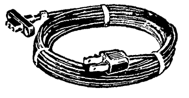
Replacement Cord — Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned — ready for easy attachment. Underwriters' Flag Type Green Power Supply Cord Label. For lamps, radios, small appliances.

Trade Number	†Package	Lengths & Color
1749	1 K	6 Ft 3 In. Black



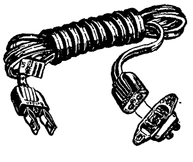
Replacement Cord — Size 18, Type SV. All-rubber portable cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned — ready for easy attachment. Underwriters' Flag Type Green Power Supply Cord Label. For amplifiers, test equipment, and small appliances.

Trade Number	†Package	Lengths & Color
8874	1 K	6 Ft Brown



Television Power Supply Connector Cord. Original equipment on most television sets. Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug. Underwriters' Flag Type Blue Cord Set Label.

Trade Number	†Package	Lengths & Color
1777	1 K	6 Ft Brown

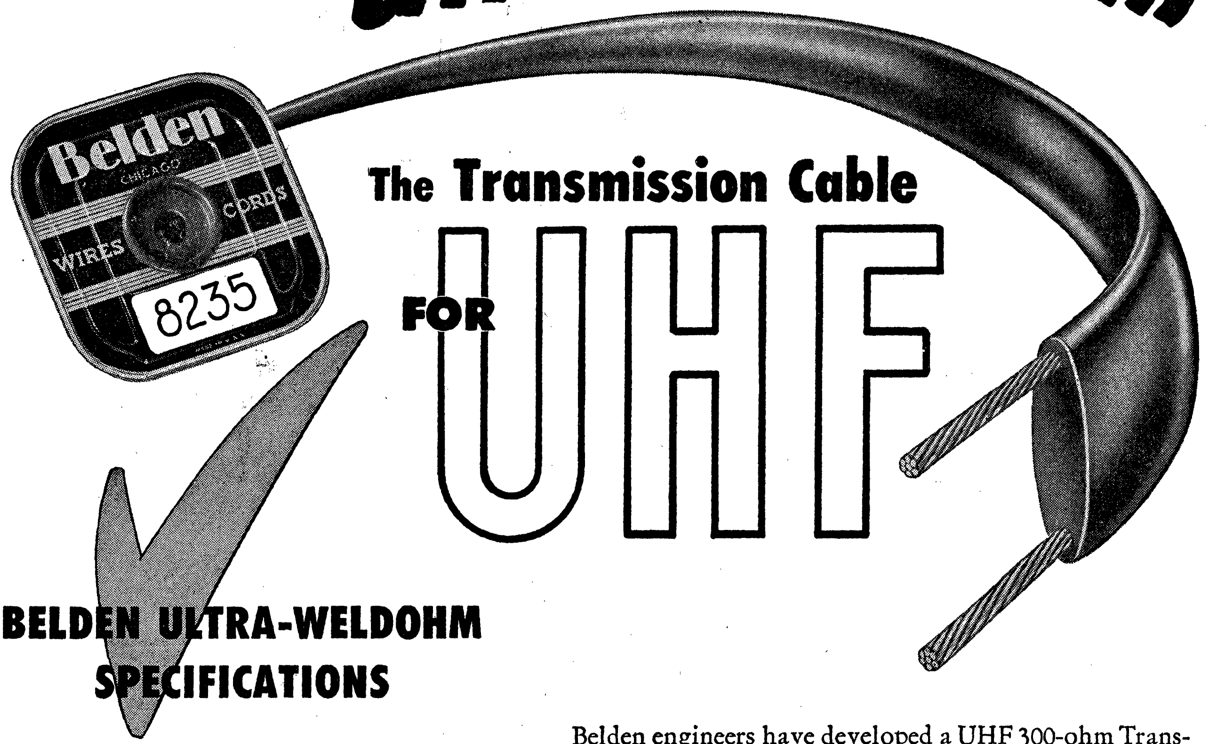


Connect-A-Cord. 6 Ft. Size 18, Type POSJ-64. All-rubber parallel lamp cord with Belden unbreakable soft rubber plug; opposite end, Belden rubber connector and flush mounting receptacle. Underwriters' Flag Type Blue Cord Set Label.

S—Spool C—Coil SK—Spooled in carton

See Page S-25 for BELDEN Prices

Belden *Ultra-Weldohm*

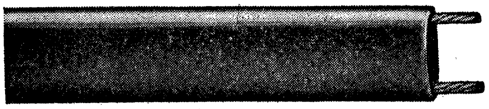


The Transmission Cable FOR UHF

BELDEN ULTRA-WELDOHM SPECIFICATIONS

A. W. G. & Stranding	20 Gauge 7 x 28			
General Construction and Application	"Weldohm" copper-coated steel wire, flexible stranding; conductors parallel; brown polyethylene plastic insulation.			
Nominal Diameter	.185 x .520			
Frequency (MC)	100	200	300	400
Attenuation per 100 ft (Decibels)	1.1	1.73	2.28	2.74
Impedance (Ohms)		300		
Velocity of Propagation (per cent)		77		
Capacitance per ft (mmf)		5.0		

No. 8235



ACTUAL SIZE

Belden engineers have developed a UHF 300-ohm Transmission Line Cable for TV installation. This 300-ohm cable has the following qualifications:

A cable that can be handled easily without destroying the electrical characteristics.

A cable that can be stripped down to the bare wire in seconds.

A cable that can be twisted, without distortion, to get the proper line balance.

And a cable that can withstand rain and snow—no wet-loss.

In addition, Belden Ultra-Weldohm No. 8235 Resists Wind—has more flexibility; Resists Breakage—has longer wire life; Resists Oxidation—has copper-sheathed, 20-gauge, stranded steel wire; Resists Sun—made with 100% virgin polyethylene web.

Specify Belden Ultra-Weldohm Cable, and get a better picture, too!

Belden
Radio **WIRE**

See Page S-25 for BELDEN Prices

BELDEN • Price List

Belden Trade Number	Unit Package and Length**	Suggested List Price Each
1701		1.95
1702		2.20
1705		1.80
1706		3.55
1709		3.90
1712		4.25
1715		4.70
1716		1.50
1717		1.65
1724		13.50
1725		.80
1728		1.45
1731		1.90
1735		.95
1736		1.35
1737		1.00
1744—pr.		1.60
1749		.90
1750		1.60
1751		2.40
1752		1.90
1754		1.20
8000	50′	1.15
8000	75′	1.70
8000	100′	2.15
8000	1000′	20.00
8002	50′	.83
8002	75′	1.15
8002	100′	1.45
8002	1000′	13.15
8008	100′	3.05
8008	200′	5.90
8008	500′	14.15
8009	100′	2.15
8009	500′	9.50
8011	100′	3.50
8012	100′	2.40
8013	100′	1.65
8014	25′	.40
8014	500′	.015′
8018	50′	1.40
8018	100′	2.50
8018	500′	12.50
8018	1000′	22.50
8127	10′	.35
8200	100′	.02′
8200	500′	.02′
8200	1000′	.02′
8204	500′	.05′
8204*	1000′	.05′
8205	500′	.035′
8205*	1000′	.035′
8206	250′	.05′
8208	500′	.11′
8208	1000′	.11′
8209	500′	.10′
8209	1000′	.10′
8221	100′	.11′
8222	100′	.025′
8222	500′	.025′
8224	100′	.035′
8224	500′	.035′
8225	100′	.045′
8225	500′	.045′
8225	1000′	.045′
8227	100′	.16′
8227	250′	.16′
8230	100′	.045′
8230	500′	.045′
8230	1000′	.045′
8235	100′	.095′
8235	500′	.095′
8401	25′	2.50
8401	50′	4.75
8401	100′	.095′
8401	500′	.095′
8410	25′	3.40
8410	50′	6.40
8410	100′	.12′
8410	500′	.12′
8411	25′	2.15
8411	100′	.075′
8411	500′	.075′
8412	25′	3.15
8412	50′	6.25
8412	100′	.125′
8412	500′	.125′
8422	25′	3.25
8422	50′	6.15
8422	100′	.12′
8422	500′	.12′
8423	50′	7.25
8423	250′	.14′
8423*	500′	.14′
8424	50′	8.40
8424	250′	.16′
8425	50′	9.50
8425	250′	.19′
8426*	50′	11.75
8426*	250′	.24′
8427*	50′	12.60
8427*	250′	.255′
8428	100′	.15′
8428	500′	.15′
8431	15′	.90
8431	100′	.045′
8431	500′	.045′
8432	100′	.085′
8432	500′	.085′
8433	1000′	.085′
8433	100′	.11′
8433	500′	.11′
8437	100′	.085′
8437	500′	.085′
8437	1000′	.085′
8438	100′	.06′
8438	500′	.06′
8438	1000′	.06′
8439	100′	.07′
8439	500′	.07′
8439	1000′	.07′
8440*	100′	.085′
8440*	500′	.085′
8440*	1000′	.085′
8443	100′	.04′
8443	500′	.04′
8444	100′	.05′
8444	500′	.05′
8445	100′	.06′
8445	500′	.06′
8446	100′	.095′
8446*	500′	.095′
8447	100′	.10′
8447*	500′	.10′
8448	100′	.11′
8448*	500′	.11′
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8449*	500′	.12′
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8452	500′	.07′
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8453	500′	.085′
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8454	500′	.10′
8455	100′	.11′
8455	250′	.11′
8462	100′	.045′
8462	250′	.045′
8464*	500′	.05′
8464	1000′	.05′
8472	250′	.105′
8482	1000′	.02′
8483	1000′	.03′
8484	500′	.055′
8484	1000′	.055′
8485	500′	.065′
8485	1000′	.065′
8488	500′	.08′
8488	1000′	.08′
8650	100′	.10′
8651	100′	.08′
8652	100′	.06′
8656	100′	.085′
8660	50′	.05′
8660	250′	.05′
8661	50′	.075′
8661	250′	.075′
8662	50′	.23′
8662	250′	.23′
8665	100′	.23′
8667	100′	.14′
8668	50′	.06′
8668	250′	.06′
8669	50′	.16′
8669	250′	.16′
8673	100′	.23′
8673*	500′	.23′
8675	100′	.175′
8675*	500′	.175′
8677	100′	.13′
8677*	500′	.13′
8732	100′	.09′
8732	500′	.09′
8734	100′	.10′
8734	500′	.10′
8735	100′	.105′
8735	500′	.105′
8737	100′	.08′
8737	500′	.08′
8738	100′	.045′
8738	500′	.045′
8738	1000′	.045′
8739	100′	.065′
8739	500′	.065′
8739	1000′	.065′
8740	100′	.035′
8740	500′	.035′
8740	1000′	.035′
8741	100′	.065′
8741	500′	.065′
8741	1000′	.065′
8742	100′	.09′
8742	500′	.09′
8742	1000′	.09′
8743	100′	.115′
8743	500′	.115′
8744	100′	.175′
8744	500′	.175′
8745	100′	.30′
8745	500′	.30′
8746	100′	.49′
8746	500′	.49′
8747	100′	.16′
8747*	500′	.16′
8748	100′	.23′
8748*	500′	.23′
8749	100′	.36′
8749*	500′	.36′
8750	100′	.61′
8750*	500′	.61′
8753*	100′	.23′
8753*	500′	.23′
8782	500′	.02′
8782	1000′	.02′
8783	500′	.10′
8799	100′	.065′
8799	500′	.065′
8799	1000′	.065′
8817	100′	.45
8833†	100′	.035′
8833†	1000′	.035′
8837†	100′	.03′
8837†	1000′	.03′
8838†	100′	.03′
8838†	1000′	.03′
8839†	100′	.03′
8839†	1000′	.03
8841†	100′	.03′
8841†	1000′	.03′
8844†	100′	.03′
8844†	1000′	.03′
8864		3.48
8865		3.72
8868	100′	.055
8869	100′	.03′
8874		.90
8885	25′	1.45
8885	100′	.045′
8885	500′	.045
8888	250′	.05′
8898†	100′	.055
8898†	500′	.055′
8899†	14′	.62
8899†	100′	.035′
8899†	500′	.035′
8899†	1000′	.035′
8901†	100′	.015′
8901†	1000′	.015′
8905†	100′	.015′
8905†	1000′	.015′
8913†	100′	.02′
8913†	1000′	.02′
8918†	250′	.02′
8918†	1000′	.02′
8938†	100′	.04′
8938†	500′	.04′
8941†	25′	.58
8941†	100′	.02′
8941†	1000′	.02′
8942†	100′	.03′
8942†	1000′	.03′
8943†	25′	.62
8943†	100′	.02′
8943†	1000′	.02′
8945†	25′	.70
8945†	100′	.025′
8945†	1000′	.025′
8947†	25′	.73
8947†	100′	.025′
8947†	1000′	.025′

†Specify Color. All prices subject to change without notice.

**Please indicate length desired, immediately following trade number, when more than one length is listed under the same trade number.

*New item.

BELDENAMEL MAGNET WIRE			SINGLE COTENAMEL MAGNET WIRE				SINGLE NYLTEX-ENAMEL MAGNET WIRE		HNC NYLCLAD	
Size	¼ lb. Spools List Price	½ lb. Spools List Price	Size	¼ lb. Spools List Price	½ lb. Spools List Price	1 lb. Spools List Price	Size	¼ lb. Spools List Price	Size	1 lb. Spools List Price
14	—	$1.03	14	—	$1.15	$2.18	14	—	14	$2.05
16	—	1.03	16	—	1.20	2.30	16	—	16	2.10
18	—	1.03	17	—	—	2.35	18	—	18	2.13
20	—	1.08	18	—	1.30	2.43	20	—	20	2.25
22	—	1.10	19	—	—	2.58	22	—	22	2.30
24	—	1.18	20	—	1.40	2.65	24	—	24	2.53
26	—	1.23	22	—	1.48	2.80	26	—	26	2.68
28	$.73	1.28	24	—	1.65	3.13	28	—	28	2.88
30	.75	1.33	25	—	—	3.35	32	—	30	3.08
32	.78	1.38	26	$.95	1.78	3.38	34	—	32	3.40
34	.83	1.48	28	1.05	1.98	3.80	36	—	34	3.40
36	1.00	1.80	30	1.20	2.25	4.30	38*	$4.05	36	3.85
38	1.23	—	32	1.43	2.63	—	39*	4.45	38	4.63
40	1.73	—	34	1.75	—	—	40*	5.55	40	6.15
			36	2.15	—	—				

Birnbach GOV'T. SPECIFICATION HOOKUP WIRE JAN-C-76 SRIR — SRIR SHIELDED — SRHV 105° C. UL APPROVED

TYPE SRIR — 1000-VOLT (Fungus Proof)

The following items meet all requirements of Army-Navy joint specifications JAN-C-76 Type SRIR for thermoplastic plain resin construction where highest resistance to fungus growth is required. Has high dielectric strength, high temperature stability, low temperature flexibility, low moisture absorption, high flame resistance; resists all common solvents.

STRANDED

SPEC. JAN-C-76

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Conductor Construction	Nom. Wall	Nom. DC Ins. Res/Ft - Megs	Nom. Breakdown Voltage 60 Cycles	O.D.
7024	1000'	24	2/5(16)-24	16/36	.015"	5000	8000	.054"
7024-1	100'	24	2/5(16)-24	16/36	.015"	5000	8000	.054"
7001	1000'	22	3/5(7)-22	7/30	.017"	5000	8000	.069"
7001-1	100'	22	3/5(7)-22	7/30	.017"	5000	8000	.069"
7003	1000'	20	1 (10)-20	10/30	.017"	5000	8000	.077"
7003-1	100'	20	1 (10)-20	10/30	.017"	5000	8000	.077"
7005	1000'	18	1-½(16)-18	16/30	.017"	5000	8000	.086"
7005-1	100'	18	1-½(16)-18	16/30	.017"	5000	8000	.086"
7007	1000'	16	2-½(26)-16	26/30	.017"	5000	8000	.098"
7007-1	100'	16	2-½(26)-16	26/30	.017"	5000	8000	.098"
7009	1000'	14	4 (41)-14	41/30	.033"	7500	12000	.148"
7009-1	100'	14	4 (41)-14	41/30	.033"	7500	12000	.148"
7011	1000'	12	6 (65)-12	65/30	.033"	7500	12000	.171"
7011-1	100'	12	6 (65)-12	65/30	.033"	7500	12000	.171"
7015-1	100'	8	17(133)-8	133/29	.051"	7500	12000	.239"

SOLID

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Conductor Construction	Nom. Wall	Nom. DC Ins. Res/Ft - Megs	Nom. Breakdown Voltage 60 Cycles	O.D.
7000	1000'	22	3/5(1)-22	.0253 Solid	.017"	5000	8000	.064"
7000-1	100'	22	3/5(1)-22	.0253 Solid	.017"	5000	8000	.064"
7002	1000'	20	1(1)-20	.032 Solid	.017"	5000	8000	.071"
7002-1	100'	20	1(1)-20	.032 Solid	.017"	5000	8000	.071"
7004	1000'	18	1-½(1)-18	.0403 Solid	.017"	5000	8000	.079"
7004-1	100'	18	1-½(1)-18	.0403 Solid	.017"	5000	8000	.079"

COLORS:
Black
Brown
Red
Orange
Yellow
Green
Blue
Violet (Purple)
Gray (Slate)
White
Dark Blue
Pink
Tan

In addition to the standard colors we can furnish #7001†, #7003† and #7005† in the following spiral Tracer Colors (Add "S" to Catalog Number):

Wh/Black Wh/red Wh/yellow Wh/blue Wh/gray
Wh/brown Wh/orange Wh/green Wh/purple

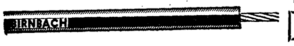
†Add $3.00 to List Price for Single Spiral Tracer Wire.

TYPE SRIR — SHIELDED — Spec. JAN-C-76

HOOK-UP WIRE SHIELDED (TINNED COPPER)

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Diam.
7074	1000'	24	2/5(16)-24	16/36	.015"	.076"
7072	1000'	22	3/5(7)-22	7/30	.017"	.089"
7070	1000'	20	1(10)-20	10/30	.017"	.097"
7068	1000'	18	1-½(16)-18	16/30	.017"	.106"
7067	1000'	16	2-½(26)-16	26/30	.017"	.118"

COLORS: Black White Red Yellow Brown Green Blue



TYPE SRHV (THERMOPLASTIC) HOOK-UP WIRE — Spec. JAN-C-76

COLORS: Black Brown Red Orange Yellow Green Blue Purple Gray White

STRANDED

SPEC. JAN-C-76

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Nom. DC Ins. Res. Meg/Ft	Nom. Breakdown Volt. 60 Cycles	Max. Diam. (Inches)
7322	1000'	22	3/5(7)-22	7/30	.033	7500	12000	.105
7322-1	100'	22	3/5(7)-22	7/30	.033	7500	12000	.105
7320	1000'	20	1(10)-20	10/30	.033	7500	12000	.113
7320-1	100'	20	1(10)-20	10/30	.033	7500	12000	.113
7318	1000'	18	1-½(16)-18	16/30	.033	7500	12000	.122
7318-1	100'	18	1-½(16)-18	16/30	.033	7500	12000	.122
7316	1000'	16	2-½(26)-16	26/30	.033	7500	12000	.134
7316-1	100'	16	2-½(26)-16	26/30	.033	7500	12000	.134
7314	1000'	14	4(41)-14	41/30	.033	7500	12000	.152
7314-1	100'	14	4(41)-14	41/30	.033	7500	12000	.152
7312	1000'	12	6(65)-12	65/30	.033	7500	12000	.172
7312-1	100'	12	6(65)-12	65/30	.033	7500	12000	.172

BIRNBACH THERMOPLASTIC INSULATED HOOK-UP WIRE

105°C. — 600-VOLT RATING UL APPROVED

Especially designed for the chassis, sub chassis wiring of radio and television receivers and transmitters inside or outside the chassis. UL approved for 105°C. (221°F.) operating temperature. Has high electrical characteristics. All wires are annealed tinned copper.

Cat. No.	Spool	AWG	Stranding	Nom. Wall	Volt. Breakdown	DC Ins. Res. Megs/Ft	Max. O.D. Inches
7201	1000'	22	7/30	.032	18000	5000	.100
7201-1	100'	22	7/30	.032	18000	5000	.100
7203	1000'	20	10/30	.032	18000	5000	.104
7203-1	100'	20	10/30	.032	18000	5000	.104
7205	1000'	18	16/30	.032	18000	5000	.112
7205-1	100'	18	16/30	.032	18000	5000	.112
7207	1000'	16	26/30	.032	18000	5000	.129
7207-1	100'	16	26/30	.032	18000	5000	.129
7202	1000'	22	Solid	.032	18000	5000	.095
7202-1	100'	22	Solid	.032	18000	5000	.095
7204	1000'	20	Solid	.032	18000	5000	.102
7204-1	100'	20	Solid	.032	18000	5000	.102

COLORS: Black Red Green Yellow Blue Brown White Orange Gray Purple

ALL PRICES SUBJECT TO CHANGE WITH THE COPPER MARKET

See Pages S-43 to S-45 for Birnbach Prices

Birnbach GOV'T. SPECIFICATION HOOKUP WIRE
JAN-C-76 WL NYLON JACKET GLASS BRAID
HIGH VOLTAGE CRT LEAD WIRE

JAN TYPE of DESIGNATION

*SAMPLE

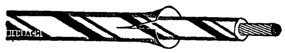
(For all Govt. Specification HOOKUP WIRES on this page and preceding page.)

3/5	(7)	22	90
SIZE (Approx. Cir. Mils)	MINIMUM STRANDS	AWG SIZE	COLOR CODE 1st Digit Represents Body 2nd Digit Represents Tracer

0. BLACK
1. BROWN
2. RED
3. ORANGE
4. YELLOW
5. GREEN
6. BLUE
7. VIOLET (purple)
8. GRAY (slate)
9. WHITE

Hookup Wire with no outer covering shall be designated by the letter "U".
Hookup Wire with an outer covering, either braid or jacket, shall be designated by the letter "C".

TYPE WL — EXTRUDED NYLON JACKET HOOK-UP WIRE (Fungus Proof)



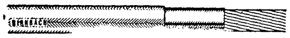
SPEC. JAN-C-76

Extensively used in electronic devices, aircraft instruments, lighting and power transmitters, radar, etc. Constructed of one conductor, copper tinned high heat vinyl insulation with an extruded Nylon jacket overall. This wire will not fray, crack or rot; it is non-combustible with extreme high chemical and abrasion resistance; extreme low moisture absorption and low dielectric leakage; extremely flexible over a wide temperature range it remains soft and pliable at reduced temperatures; it will absorb hard usage, frequent bending and twisting.

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Nom. DC Ins. Res. Meg/Ft	Nom. Breakdown Volt. 60 Cycles	Max. Diam. (Inches)
7224	1000'	24	2/5(16)-24	16/36	.012"	1000	5000	.067
7224-1	100'	24	2/5(16)-24	16/36	.012"	1000	5000	.067
7222	1000'	22	3/5(7)-22	7/30	.012"	1000	5000	.073
7222-1	100'	22	3/5(7)-22	7/30	.012"	1000	5000	.073
7220	1000'	20	1(7)-20	7/28	.012"	1000	5000	.081
7220-1	100'	20	1(7)-20	7/28	.012"	1000	5000	.081
7218	1000'	18	1½(7)-18	7/26	.013"	1000	5000	.092
7218-1	100'	18	1½(7)-18	7/26	.013"	1000	5000	.092
7216	1000'	16	2½(19)-16	19/29	.015"	1000	5000	.108
7216-1	100'	16	2½(19)-16	19/29	.015"	1000	5000	.108
7214	1000'	14	4(19)-14	19/27	.018"	1000	5000	.132
7214-1	100'	14	4(19)-14	19/27	.018"	1000	5000	.132
7212	1000'	12	6(19)-12	19/25	.018"	1000	5000	.152
7212-1	100'	12	6(19)-12	19/25	.018"	1000	5000	.152
7210	1000'	10	9(37)-10	37/26	.020"	1000	5000	.179
7210-1	100'	10	9(37)-10	37/26	.020"	1000	5000	.179

COLORS:
White
Black
Brown
Red
Orange
Yellow
Green
Blue
Purple
Gray
Wh/Black
Wh/Brown
Wh/Red
Wh/Orange
Wh/Yellow
Wh/Green
Wh/Blue
Wh/Purple
Wh/Gray
Wh/Blk/Red
Wh/Blk/Yellow
Wh/Blk/Blue
Wm/Blk/Green
Wh/Blk/Orange
Wh/Blk/Brown
Wh/Blk/Gray

IN ADDITION Sizes 7218, 7220, 7222 can be furnished in red/black and black/white.



SPEC. JAN-C-76

TYPE WL GLASS BRAID — 600-VOLT (Fungus Proof)

Extensively used on electronic devices, aircraft instruments, lighting and power, transmitters, radar, etc. Constructed of one conductor, stranded copper tinned, high heat vinyl insulation, glass braid with a heavily lacquered coating which is fungus proof and flame resistant.

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Nom. DC Ins. Res/Ft - Megs	Nom. Breakdown Voltage 60 Cycles	O.D.
7022	1000'	22	3/5(7)-22	7/30	.012"	1000	5000	.077"
7022-1	100'	22	3/5(7)-22	7/30	.012"	1000	5000	.077"
7020	1000'	20	1(10)-20	10/30	.012"	1000	5000	.085"
7020-1	100'	20	1(10)-20	10/30	.012"	1000	5000	.085"
7018	1000'	18	1-½(16)-18	16/30	.013"	1000	5000	.096"
7018-1	100'	18	1-½(16)-18	16/30	.013"	1000	5000	.096"
7016	1000'	16	2-½(26)-16	26/30	.015"	1000	5000	.112"
7016-1	100'	16	2-½(26)-16	26/30	.015"	1000	5000	.112"

COLORS:
White
Black
Brown
Red
Orange
Yellow
Green
Blue
Purple
Gray
White/Black
White/Brown
White/Red
White/Orange
White/Yellow
White/Green
White/Blue
White/Purple
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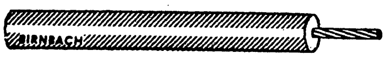
White/Black/Yellow
White/Black/Blue
White/Black/Green
White/Black/Orange
White/Black/Brown
White/Black/Gray



HIGH VOLTAGE & CATHODE-RAY TUBE LEAD CABLE

This High Voltage and Cathode Ray Tube Lead Wire is approved for 10,000, 20,000, and 40,000 volt applications. It is made of RULAN (flame retarding type Polyethylene) which is high heat resistant and moisture resistant. Approved by A.S.T.M. It has a dielectric constant of 2.7 and a power factor of .002. Available in white.

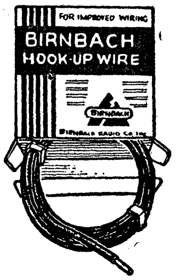
Cat. No.	Spool	Size	Stranding	Nom. Wall	Max. DC Voltage	Approx. O.D.
7402	1000'	20	10/30	.046"	10,000	.125
7402-1	100'	20	10/30	.046"	10,000	.125
7412	1000'	20	10/30	.068"	20,000	.169
7412-1	100'	20	10/30	.068"	20,000	.169
7418	1000'	18	16/30	.047"	10,000	.135
7418-1	100'	18	16/30	.047"	10,000	.135
7428	1000'	18	16/30	.069"	20,000	.179
7428-1	100'	18	16/30	.069"	20,000	.179
7448	1000'	18	16/30	.095"	40,000	.231
7448-1	100'	18	16/30	.095"	40,000	.231

ALL PRICES SUBJECT TO CHANGE WITH THE COPPER MARKET

See Pages S-43 to S-45 for Birnbach Prices

Birnbach

Hookup Wire • Test Lead • Lacquered Coaxial • Filament Wire



BIRNBACH BIRNTEX SLIPBACK WIRE

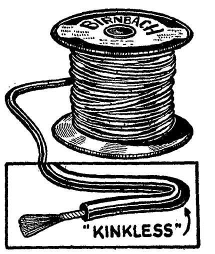
This wire is constructed of quality materials and carefully insulated with a cotton wrap over which a cotton braid is closely woven, and then saturated with paraffin. Pushes back easily.

COLORS: Black, Red, Blue, Yellow, Green, White, Brown, Yellow.

SOLID

Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 60 Cy. AC	O.D.
70	25 Coil	22	Solid	1500	.060
72	100 Spool	22	Solid	1500	.060
74	500 Spool	22	Solid	1500	.060
76	1000 Spool	22	Solid	1500	.060
80	25 Coil	20	Solid	1500	.065
84	100 Spool	20	Solid	1500	.065
88	500 Spool	20	Solid	1500	.065
92	1000 Spool	20	Solid	1500	.065
82	25 Coil	18	Solid	1500	.075
86	100 Spool	18	Solid	1500	.075
90	500 Spool	18	Solid	1500	.075
94	1000 Spool	18	Solid	1500	.075
STRANDED					
71	25 Coil	22	7/30	1500	.065
73	100 Spool	22	7/30	1500	.065
75	500 Spool	22	7/30	1500	.065
77	1000 Spool	22	7/30	1500	.065
81	25 Coil	20	10/30	1500	.070
85	100 Spool	20	10/30	1500	.070
89	500 Spool	20	10/30	1500	.070
93	1000 Spool	20	10/30	1500	.070
83	25 Coil	18	16/30	1500	.080
87	100 Spool	18	16/30	1500	.080
91	500 Spool	18	16/30	1500	.080
95	1000 Spool	18	16/30	1500	.080

BIRNBACH KINKLESS TEST LEAD WIRE

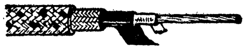


An extremely flexible wire with a wall of abrasion resisting live rubber that will not kink or break down in service under rough usage and repeated bendings. Has found wide use in laboratory test equipment, analyzers, oscillators, etc.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	Volt. Breakdown 60 Cycles	O.D.
61	100	20	41/36	3/64	12,000	.140
62	500	20	41/36	3/64	12,000	.140
66	100	18	66/36	3/64	12,000	.150
67	500	18	66/36	3/64	12,000	.150
High Voltage Kinkless Test Lead Wire						
68	100	18	66/36	5/64	16,500	.210
69	500	18	66/36	5/64	16,500	.210

COLORS: Red and Black

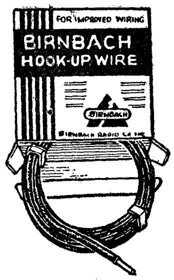
VARNISHED CAMBRIC WIRE



Widely used in automotive wiring because of oil and waterproof construction. Consists of tinned stranded conductor with two layers of varnished cambric over which a lacquered cotton braid is woven.

Cat. No.	Spool Ft.	Size	Stranding	Puncture V.	O.D.
3420	100	20	10/30	1000	.094
3418	100	18	16/30	1000	.097
3416	100	16	26/30	1000	.108

BIRNBACH RADEX SLIPBACK HOOKUP WIRE



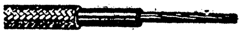
It has a cotton serve with double cotton braid overall, and dipped into paraffin. This construction will not cause the cotton insulation to fray or bunch up when pushed back. It has a high dielectric strength and will withstand all climatic changes without breakdown.

SOLID

Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 60 Cy. AC	O.D.
280	25 Coil	20	Solid	2000	.090
380	100 Spool	20	Solid	2000	.090
480	500 Spool	20	Solid	2000	.090
580	1000 Spool	20	Solid	2000	.090
282	25 Coil	18	Solid	2100	.098
382	100 Spool	18	Solid	2100	.098
482	500 Spool	18	Solid	2100	.098
582	1000 Spool	18	Solid	2100	.098
284	25 Coil	16	Solid	2100	.108
384	100 Spool	16	Solid	2100	.108
484	500 Spool	16	Solid	2100	.108
584	1000 Spool	16	Solid	2100	.108
286	25 Coil	14	Solid	2100	.122
386	100 Spool	14	Solid	2100	.122
486	500 Spool	14	Solid	2100	.122
586	1000 Spool	14	Solid	2100	.122
288	25 Coil	12	Solid	2200	.135
388	100 Spool	12	Solid	2200	.135
488	500 Spool	12	Solid	2200	.135
588	1000 Spool	12	Solid	2200	.135
STRANDED					
281	25 Coil	20	10/30	2100	.093
381	100 Spool	20	10/30	2100	.093
481	500 Spool	20	10/30	2100	.093
581	1000 Spool	20	10/30	2100	.093
283	25 Coil	18	16/30	2200	.103
383	100 Spool	18	16/30	2200	.103
483	500 Spool	18	16/30	2200	.103
583	1000 Spool	18	16/30	2200	.103
285	25 Coil	16	26/30	2200	.118
385	100 Spool	16	26/30	2200	.118
485	500 Spool	16	26/30	2200	.118
585	1000 Spool	16	26/30	2200	.118
287	25 Coil	14	41/30	2200	.135
387	100 Spool	14	41/30	2200	.135
487	500 Spool	14	41/30	2200	.135
587	1000 Spool	14	41/30	2200	.135
289	25 Coil	12	65/30	2300	.155
389	100 Spool	12	65/30	2300	.155
489	500 Spool	12	65/30	2300	.155
589	1000 Spool	12	65/30	2300	.155

COLORS: Black, Red, Blue, Yellow, Green, White, Brown, Orange.

RAYON BRAID LACQUERED WIRE

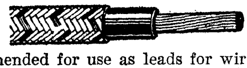


Constructed of stranded tinned copper with heavy wall of live rubber over which is woven a rayon braid and a high gloss lacquered finish over braid. Easy to solder and strip.

COLORS: Black, Red, Green, Yellow, Brown, Blue and White.

Cat. No.	Ft.	Size	Strand	Insul.	Punc. Volts	DC Ins. Res./Ft. Meg.	O.D.
3425	25	18	16/30	1/32	9000	460	.125
3450	50	18	16/30	1/32	9000	460	.125
3460	100	18	16/30	1/32	9000	460	.125
3600	500	18	16/30	1/32	9000	460	.125

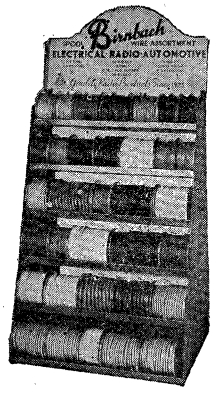
BIRNBACH HI VOLTAGE LACQUERED PRIMARY WIRE



Recommended for use as leads for wiring high voltage devices, auto head, tail, dashboard, lamps, horns, spotlight, instrument leads and for all primary voltage applications. Constructed of soft drawn, tinned copper, with a wall of rubber and covered with a highly lacquered cotton braid, making it oil, heat and moisture resistant.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	Puncture V.	O.D.
2818	100	18	16/30	1/32	9500	.125
2816	100	16	26/30	1/32	9500	.140
2814	100	14	41/30	1/32	9500	.170
2812	100	12	19/25	1/32	9500	.190
2810	100	10	19/23	1/32	9500	.208

BIRNBACH SPECIAL SPOOL ASSORTMENT

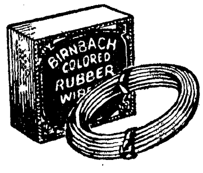


FREE DISPLAY

One Display is given with each initial order for 100 spools. Each Display made of strong, reinforced steel, mahogany crackle finish with attractive 3 color Display at top. Space provided to indicate YOUR resale price. Extra Display Racks available.

Cat. No.	Ft.	Size	Type
3000	65	22	Solid Pushback
3001	55	20	Solid Pushback
3002	45	18	Solid Pushback
3003	35	16	Solid Pushback
3004	30	14	Solid Pushback
3005	55	22	Stranded Pushback
3006	45	20	Stranded Pushback
3007	40	18	Stranded Pushback
3008	30	16	Stranded Pushback
3009	20	14	Stranded Pushback
3010	50	18	Colored Rubber
3011	35	16	Colored Rubber
3012	30	14	Stranded Leadin
3013	60	18	Solid Leadin
3014	65	18	Stranded Leadin
3015	35	18	Stranded Lacquered
3016	75		Brown & White AC-DC Wire
3017	30		Kinkless Wire
3018	20	18	Twisted Lamp Cord
3019	35	18	Single Fix. Wire
3020	20	18	Parallel Silk
3021	15	18	Blk, Wht, Brn Zip Cord
3022	100	18	Solid Tinned
3023	75	18	Bell Wire
3024	15	20	Phono Pickup Wire

STRANDED COLORED RUBBER WIRE



Annealed stranded tinned copper conductors with a cotton wrap, and insulated with a special grade of non-cracking live colored rubber compound. It strips readily.

Cat. No.	Ft.	Size	Wire Strand-ing	Current Carrying Capacity Amps.	Punct. Volt. 60 Cy. AC	O.D.
1225	1000	18-1/64	16/30	3	5500	.087
440	50	16-1/32	26/30	6	8000	.135
1440	100	16-1/32	26/30	6	8000	.135
2440	500	16-1/32	26/30	6	8000	.135

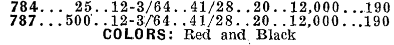
COLORS: Red, Black, White, Brown, Green

FILAMENT WIRE (High Amperage)

Cat. No.	Ft.	Size	Wire Strand-ing	Current Carrying Capacity Amps.	Punct. Volt. 60 Cy. AC	O.D.
782	25	14-1/32	26/28	15	8500	.145
786	500	14-1/32	26/28	15	8500	.145
784	25	12-3/64	41/28	20	12,000	.190
787	500	12-3/64	41/28	20	12,000	.190

COLORS: Red and Black

RG59/U—72 OHM COAXIAL CABLE



Low impedance assures efficient transfer of energy with negligible interference from local noise, auto ignition and other electrical disturbances.

Attenuation—D.B. per 100 ft.

10MC	30MC	100MC	300MC	400MC	3000MC
1.0	2.0	3.8	7.0	8.9	29

Nominal Impedance 72

Nominal Capacitance MMF/Ft. 21

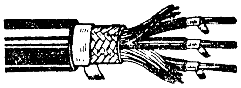
Cat. No.		St. Pkge.
907	100 ft. spool	10
908	250 ft. spool	4
909	500 ft. spool	4
910	1000 ft. reel	1

See Pages S-43 to S-45 for Birnbach Prices

Birnbach Multiple Conductor Cables • Mike Cable Speaker Cable • Diathermy Cable

BIRNBACH

BIRNBACH RUBBER SHIELDED MICROPHONE CABLE



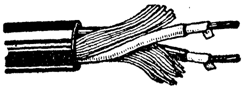
Used for indoor and outdoor crystal, carbon and condenser mikes and for all sound systems. Consists of extra flexible tinned copper conductors, each insulated with a wall of .022 low capacity rubber, color coded, twisted, cotton fillers, braided tinned copper shielding, cotton wrap with a tough weatherproof black rubber jacket overall which will withstand hard and rough usage.

Microphone Cable Color Coding Chart
1—Black; 2—White; 3—Red; 4—Green;
5—Yellow; 6—Blue; 7—Brown; 8—Orange

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	Cap. Bet. Shield and Cond. mmf	Cap. Bet. Cond. mmf	O.D.
772	100	2	20	26/34	50	40	280
1772	250	2	20	26/34	50	40	280
772/18	100	2	18	41/34	55	45	300
773	100	3	20	26/34	55	38	290
773/18	100	3	18	41/34	60	38	350
1773	250	3	20	26/34	55	38	290
774	100	4	20	26/34	60	35	300
1774	250	4	20	26/34	60	35	300
775	100	5	20	26/34	60	31	330
1775	250	5	20	26/34	60	31	330
776	100	6	20	26/34	60	30	350
1776	250	6	20	26/34	60	30	350
777	100	7	20	26/34	60	30	365
1777	250	7	20	26/34	60	30	365
778	100	8	20	26/34	60	30	390

LONGER LENGTHS AVAILABLE

BIRNBACH RUBBER MULTIPLE CONDUCTOR CABLES



(Not Shielded)

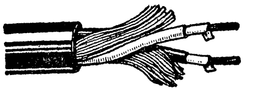
Used for permanent or portable PA systems, sound recording, indoor and outdoor speakers where it will stand up under all weather conditions and rough usage. Consists of No. 20 Stranded 26/34 flexible tinned copper cotton wrap, .022 low capacity rubber color coded, twisted, cotton filler, cotton wrap with a tough rubber jacket overall.

MULTIPLE CABLE COLOR CODING CHART
1—Black; 2—White; 3—Red; 4—Green;
5—Yellow; 6—Blue; 7—Brown; 8—Orange

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	Cap. Bet. Conds. mmf	O.D.
788	100	2	20	26/34	22	275
789	250	2	20	26/34	22	275
790	100	3	20	26/34	20	285
791	250	3	20	26/34	20	285
792	100	4	20	26/34	18	305
793	250	4	20	26/34	18	305
794	100	5	20	26/34	16	335
795	250	5	20	26/34	16	335
796	100	6	20	26/34	15	355
797	250	6	20	26/34	15	355
798	100	7	20	26/34	15	370
749	100	8	20	26/34	14	395

LONGER LENGTHS AVAILABLE

BIRNBACH RUBBER SERVICE CORD



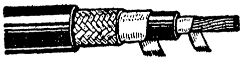
Heavy Duty U.L. Approved

For power line requirement where rough usage is indicated as for amplifiers, speakers, vacuum cleaners, tools, refrigerators, washing machines,, trouble lights, etc. All color coded. Underwriters approved.

Cat. No.	Spool Ft.	Cds	Size No.	Type		Amp. Rating	Volt Rating	O.D.
701	250	2	18	SV	41/34	7	300	.250
574	250	2	18	SJ	41/34	7	300	.300
578	250	2	16	SJ	65/34	10	300	.325
702	250	2	18	S	41/34	7	600	.390
703	250	2	16	S	65/34	10	600	.410
704	250	2	14	S	41/30	15	600	.540
705	250	2	12	S	65/30	20	600	.590

Longer lengths and additional conductors also available.

CRYSTAL MICROPHONE CABLE

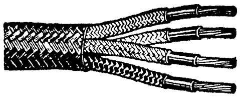


Used with crystal, dynamic, velocity, ribon microphones, and photoelectric cells. Birnbach No. 870 used widely for lapel microphones and phono pickups. Constructed of extra flexible, stranded, tinned copper, cotton serve—insulated with new low loss rubber compound, braided tinned copper shield cotton serve and covered with tough black rubber jacket.

Cat. No.	Spool Ft.	Cond.	Size No.	Stranding	Cap/ft.	O.D.
870	100	1	20	26/34	40 mmf	.175"
1870	250	1	20	26/34	40 mmf	.175"
872	100	1	20	26/34	30 mmf	.245"
1872	250	1	20	26/34	30 mmf	.245"

LONGER LENGTHS AVAILABLE

BIRNBACH MULTIPLE CONDUCTOR FLEXIBLE CABLE



(Cotton Braid Overall)

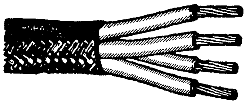
Constructed of individual 1/64 rubber wall No. 20 stranded, tinned cotton braid; color coded; conductors twisted and with a closely woven brown cotton braid overall. Used widely for P.A. systems, analyzers, remote control units, etc.

COLOR CODING CHART
1—Black, 2—White, 3—Red, 4—Green,
5—Orange, 6—Blue, 7—Brown,
8—Yellow, 9—White/Black Tracer
10—Red/Black Tracer,
11—Green/Black Tracer
12—Orange/Black Tracer

Cat. No.	Spool Ft.	Conds.	Size	Stranding	Rubber Insul.	O.D.
172	100	2	20	10/30	1/64	205
173	100	3	20	10/30	1/64	245
174	100	4	20	10/30	1/64	265
175	100	5	20	10/30	1/64	290
176	100	6	20	10/30	1/64	310
177	100	7	20	10/30	1/64	325
178	100	8	20	10/30	1/64	360
179	100	9	20	10/30	1/64	395
180	100	10	20	10/30	1/64	425
182	100	12	20	10/30	1/64	440

LONGER LENGTHS AVAILABLE

MULTIPLE CONDUCTOR THERMOPLASTIC CABLE



(Cotton Braid Overall)

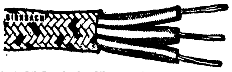
Constructed of individual No. 22 stranded tinned copper, 1/64 thermoplastic insulation, color coded; conductors twisted with brown cotton braid overall. Used widely for P.A. systems, remote control units, multiple circuit hookups and whenever a small diameter cable is indicated.

COLOR CODING CHART
1—Black, 2—White, 3—Red, 4—Green,
5—Orange, 6—Blue, 7—Brown,
8—Yellow, 9—Purple, 10—Pink,
11—Gray, 12—Dk. Blue.

Cat. No.	Spool Ft.	No. of Conds.	Size No.	Stranding	Thermoplastic Insul.	O.D.
263	100	3	22	7/30	1/64	165
264	100	4	22	7/30	1/64	175
265	100	5	22	7/30	1/64	200
266	100	6	22	7/30	1/64	215
267	100	7	22	7/30	1/64	235
268	100	8	22	7/30	1/64	250
269	100	9	22	7/30	1/64	265
270	100	10	22	7/30	1/64	300
272	100	12	22	7/30	1/64	330

LONGER LENGTHS AVAILABLE

BIRNBACH SHIELDED MULTI-CONDUCTOR CABLE

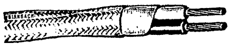


THERMOPLASTIC INSULATION
TINNED SHIELD OVERALL
500 FT. SPOOLS

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972S	2	20	10/30	1/64	50	28	170
973S	3	20	10/30	1/64	48	21	192
WAXED COTTON BRAID OVER SHIELD							
972B	2	20	10/30	1/64	50	28	180

LONGER LENGTHS AVAILABLE

BIRNBACH SHIELDED TWO WIRE SPEAKER CABLE



Used widely for master control sound systems, photo electric circuits, public address systems, etc. The No. 972A consists of 2 conductors twisted No. 18—16/30 tinned copper with a 1/32" wall of color coded low capacity rubber with paper wrap covering the two conductors and a closely woven tinned copper shield overall. The No. 1972A has same construction as the 972A with a waxed cotton braid over the shield.

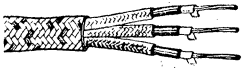
COLOR CODING CHART
1—Black; 2—Red

TINNED SHIELD OVERALL
500 FT. SPOOLS

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972A	2	18	16/30	1/32	65	23	250
Tinned Shield with Cotton Braid Overall							
1972A	2	18	16/30	1/32	65	23	275

LONGER LENGTHS AVAILABLE

BIRNBACH SHIELDED MULTI-CONDUCTOR CABLE



(Tinned Braid Overall)

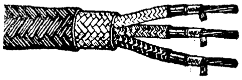
Consists of No. 20, 10/30 flexible tinned copper with 1/64" rubber wall, color coded cotton braid, twisted, with tinned copper shield woven over cable. Generally used indoors to prevent interference pickup on P.A. systems, recording equipment, photo electric circuits, etc. 100 Ft. Spools.

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972	2	20	10/30	1/64	60	32	215
973	3	20	10/30	1/64	55	30	220
974	4	20	10/30	1/64	48	26	250
975	5	20	10/30	1/64	45	23	280
976	6	20	10/30	1/64	40	23	290
977	7	20	10/30	1/64	40	20	315
978	8	20	10/30	1/64	35	20	350

LONGER LENGTHS AVAILABLE

COLOR CODING CHART
1—Black, 2—Red, 3—White, 4—Green,
5—Brown, 6—Yellow, 7—Blue, 8—Orange

SHIELDED MULTIPLE CONDUCTOR CABLE



(Cotton Braid Overall)

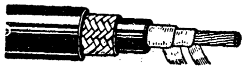
Constructed of individual tinned stranded copper with a 1/64" wall of rubber covered with a colored cotton braid. A tinned copper shield follows and a brown cotton braid covers this cable. 100 Ft. Spools.

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
1972	2	20	10/30	1/64	60	32	225
1973	3	20	10/30	1/64	55	30	230
1974	4	20	10/30	1/64	48	36	260
1975	5	20	10/30	1/64	45	23	290
1976	6	20	10/30	1/64	40	23	300

LONGER LENGTHS AVAILABLE

COLOR CODING CHART
1—Black, 2—Red, 3—White, 4—Green,
5—Brown, 6—Yellow, 7—Blue, 8—Orange

BIRNBACH DIATHERMY CABLE



Especially designed for use with electrotherapy apparatus, charging cable battery lead and underground cable. It is made of size No. 14 stranded double cotton braid and with an extremely flexible special grade of tough, live rubber jacket.

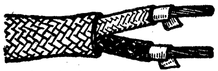
Cat. No.	Spool Ft.	No. Conds.	Size	Stranding	O.D.
756	100	1	14	104/34	300
757	1000	1	14	104/34	300

See Pages S-43 to S-45 for Birnbach Prices

Birnbach

Shielded Braid • Phono Pickup • Grid • Lead-in Twisted Pair • Cambric Shielded Line Cords Lamp Cord • Rotor Cables

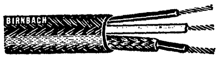
SHIELDED TWISTED PAIR CABLE



Consists of two conductors #24, 16/36 tinned copper, twisted with .015 vinyl insulation color coded and with tinned copper shield overall. For public address systems, phono pickups, sound recording and various electronic circuits. **COLOR CODE:** Red and Black.

Cat. No.	Spool Ft.	Conds.	Size	Stranding	Insul.	O.D.
826	1000	2	24	16/36	.015	.115

INTER-COM CABLE 3 CONDUCTORS

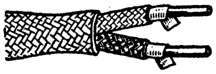


1 Shielded
2 Unshielded

Used for single shielded wire in station to station wiring in order to eliminate cross talk. Consists of 3 conductors #22 stranded tinned copper wire with vinyl insulation, color coded and twisted—one conductor with tinned copper shield, the other two unshielded; with cotton braid overall.

Cat. No.	Spool Ft.	Conds.	Size	Stranding	O.D.
923	500	3	22	7/30	.155

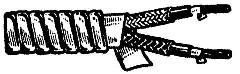
SHIELDED TWISTED PAIR



Cat. No. 822 and 824 are constructed of solid enameled wire with a cotton wrap, color coded cotton braid, twisted pair waxed and bare copper braid woven overall. Cat. No. 825 is composed of two conductors twisted #20 solid tinned copper enamel baked, cotton wrap waxed; color coded and twisted with a bare copper braid shield overall.

Cat. No.	Spool	Conds.	O.D.
822	500 Ft.	2 - 22 Solid	.125
824	500 Ft.	2 - 19 Solid	.145
825	500 Ft.	2 - 20 Solid	.135

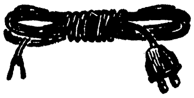
ARMORED SPEAKER CABLE



Constructed of 2 conductor parallel #18—16/30 stranded tinned copper 1/64″ wall rubber, color coded cotton braid lacquered, and spiral steel armor overall.

Cat. No.	Spool Ft.	Size	Stranding	O.D.
1111	250	18	16/30	.155 x .240
1112	500	18	16/30	.155 x .240
1113	1000	18	16/30	.155 x .240

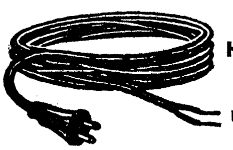
BIRNBACH SERVICE LINE CORD



Underwriters Approved

Constructed of all rubber parallel UL approved wire with rubber plug on one end and with the other end stripped, tinned and hanked ready for use. Available in black and brown.

Cat. No.	Ft.
816	6
817	7½
819	10



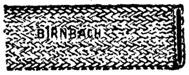
BIRNBACH HEAVY DUTY SERVICE CORD

UL APPROVED

A heavy rubber jacketed cable, Underwriters Approved for replacement in refrigerators, washing machines and electrical appliances. Cat. Nos. 309 and 312 consist of 2 No. 18 S.V. Stranded Conductors with a soft rubber plug at one end; the other end is stripped and tinned ready for use. Cat. No. 248 consists of 8 ft. 2 Cond. No. 16 S.J. all rubber hanked, stripped and tinned with all rubber plug.

Cat. No.	Conds.	Ft.	Type	Stranding	O.D.
348	2	8	SJ	65/34	.325
309	2	9	SV	41/34	.250
312	2	12	SV	41/34	.250

TINNED COPPER SHIELDING

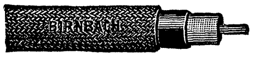


Very flexible, slides over wires and cables. For bonding, shielding, in aircraft, auto radio, etc. Size of wires #36 AWG.

Cat. No.	Inside Diam. Flattened	Spool
TINNED		
855	1/16″	50 ft.
858	1/8″	50 ft.
859	3/16″	50 ft.
863	1/4″	50 ft.
864	3/8″	50 ft.
868	1/2″	50 ft.
865	5/8″	50 ft.
857	25/32″	50 ft.
856	1″	50 ft.
BARE		
860	1/4″	50 ft.

LONGER LENGTHS AVAILABLE

7MM HIGH TENSION CABLE



UNSHIELDED

Useful in reducing interference from auto secondary circuits. Also used as photoelectric cell leads, high voltage leads in television receivers, cathode-ray tubes, etc. Single conductor #16 stranded rubber insulation with cotton braid and heavy coats of lacquer.

Cat. No.	Spool	Size	Stranding	O.D.
1600	100 Ft.	16	19/29	.275

LONGER LENGTHS AVAILABLE

7MM SHIELDED SECONDARY WIRE

Used for auto and aircraft ignition systems where grounding is necessary for effective elimination of interference. Same construction as #1600 with a shielded, tinned copper braid overall.

Cat. No.	Spool	Size	Stranding	O.D.
781	100 Ft.	16	19/29	.295

LONGER LENGTHS AVAILABLE

BIRNBACH PHONO PICKUP WIRE

EXTRA FLEXIBLE

Where small diameter, limpness and extreme flexibility is necessary as for use on phono pickup arms and grid wire. Constructed of #24 gauge flexible stranded copper wire with rubber insulation and a close tinned copper braid shield overall. No. 1825 and 1825M have same construction with fine brown cotton braid over shield.

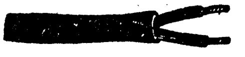
Cat. No.	Spool Ft.	Size	Stranding	Insul.	O.D.
1824	500	24	16/36	.015	.080
1824M	1000	24	16/36	.015	.080
1825	500	24	16/36	.015	.095
1825M	1000	24	16/36	.015	.095

PHONO PICKUP WIRE

Used on phono pickup arms and grid leads where extreme flexibility is not of paramount importance. Constructed of #22—7/30 tinned copper wire with 1/64 wall of vinyl plastic insulation and a closely woven tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	O.D.
1822	100	22	7/30	1/64	.090
1822B	500	22	7/30	1/64	.090
1822C	1000	22	7/30	1/64	.090

COMMERCIAL TYPE TWISTED PAIR



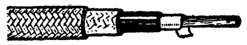
(Transmission Line)

Used for low loss transmission line between receiver and antenna as doublet lead-in wire and for intercom setup. Consists of two wires with 1/32″ wall rubber color coded with a cotton braided weather-proof finish overall.

Cat. No.	Spool Ft.	No. of Conds.	Gauge	Stranding	Insul.
951	100	2	22	7/30	1/32
952	500	2	22	7/30	1/32
919	500	2	18	16/30	1/32
920	1000	2	18	16/30	1/32

Cat. No.	Cap. Bet. Conds.	Freq. KC	O.D.
951	21.8 mmf	3.75	.200
952	21.8 mmf	3.75	.200
919	21.8 mmf	3.75	.225
920	21.8 mmf	3.75	.225

SHIELDED GRID LEAD WIRE

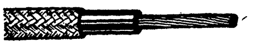


High insulation of this wire will reduce loss in shielded grid circuits. Tinned copper stranded wire with rubber insulation, lacquered cotton braid with closely woven tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Ins. Under-shield	Cap/Ft. mmfd.	O.D.
820	100	20	10/30	.085	70	.140
818	100	18	16/30	.085	75	.150

LONGER LENGTHS AVAILABLE

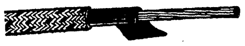
SHIELDED HOOK-UP AND LEAD-IN WIRE



Used to prevent and reduce interference caused by motors, high tension wires, X-ray machines and man-made static. Consists of stranded tinned copper, a wall of low loss live rubber over which is woven a tinned copper shield.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	Cap/Ft. mmfd	O.D.
810	500	20	10/30	1/64	105	.095
809	100	18	16/30	1/64	125	.125
803	250	18	16/30	1/64	125	.125
851	100	16	26/30	1/32	90	.145
802	250	16	26/30	1/32	90	.145
806	100	14	19/27	3/64	95	.185
801	250	14	19/27	3/64	95	.185

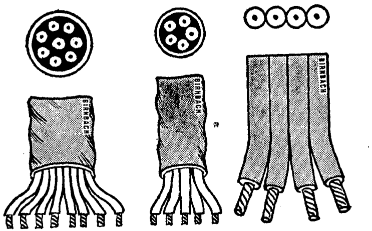
SHIELDED VARNISHED CAMBRIC WIRE



Used where an oil and water resistant wire with a shielded covering is required. Constructed of tinned stranded conductor with 2 layers of varnished cambric and a lacquered cotton braid with a tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Cap/Ft. mmfd	O.D.
1820	100	20	10/30	100	.125
1818	100	18	16/30	102	.131
1800	100	16	26/30	142	.145

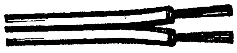
ANTENNA CONTROL ROTOR CABLE



Four Conductor has ribbed Polyethylene construction to facilitate making of connections in compact housings and control boxes. Separates like zip wire. Cable has one tinned conductor for coding identity. 4 conductors No. 7/28 stranded.
Five conductor is color coded and twisted with round plastic jacket overall. 5 cond. No. 20 - 7/28 stranded.
Eight Conductor is color coded and twisted with round plastic jacket overall as used widely for Radiart. 8 cond. No. 22 - 7/30 stranded.

Cat. No.	
1874A	— 500 ft. spool 4 cond. Flat Rotor Cable
1874	—1000 ft. spool 4 cond. Flat Rotor Cable
1875A	— 500 ft. spool 5 cond. Round Rotor Cable
1875	—1000 ft. spool 5 cond. Round Rotor Cable
1878A	— 500 ft. spool 8 cond. Round Rotor Cable
1878	—1000 ft. spool 8 cond. Round Rotor Cable

POSJ ALL RUBBER LAMP CORD



(Underwriters Approved)

An all purpose approved, very flexible rubber covered parallel cord which is easily separated by slit in jacket; has color coded cotton serve.

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	O.D.
570	100	2	18	41/34	.135 x .235
572	250	2	18	41/34	.135 x .235
573	500	2	18	41/34	.135 x .235

COLORS: Brown, Black, Ivory

See Pages S-43 to S-45 for Birnbach Prices

Birnbach Solid Tinned • Bare • Enamel • Bus • Magnet Wire Bronze • Stranded Bare and Tinned Copper Wire

BARE, TINNED and ENAMELED COPPER WIRE

Coil Lead, Jumper Cable

		Ft. Spool
1622	7/30 (22 B&S)	1000
1620	10/30 (20 B&S)	1000
1618	16/30 (18 B&S)	1000

Stranded Bare Copper Wire

Cat. No.		
7/20		
493	100 ft.	coil
7/22 (14 B&S)		
1640	75 ft.	coil
1670	100 ft.	coil
1639	1000 ft.	spool
7/23 (15 B&S)		
1643	75 ft.	coil
1673	100 ft.	coil
1634	1000 ft.	spool
7/24 (16 B&S)		
1646	75 ft.	coil
1680	100 ft.	coil
1647	1000 ft.	spool
7/26		
647	75 ft.	coil
681	100 ft.	coil
1648	1000 ft.	spool
7/27		
740	75 ft.	coil
700	100 ft.	coil
1741	1000 ft.	spool

Stranded Tinned Cop. Wire

Cat. No.		
7/20		
495	100 ft.	coil
7/22 (14 B&S)		
1641	75 ft.	coil
1671	100 ft.	coil
1638	1000 ft.	spool
7/23 (15 B&S)		
1644	75 ft.	coil
1674	100 ft.	coil
1633	1000 ft.	spool
7/24 (16 B&S)		
1697	75 ft.	coil
1696	100 ft.	coil
1628	1000 ft.	spool

Solid Tinned Copper Wire

SOFT DAWN

Cat. No.		
No. 8		
1433	100 ft.	coil
No. 10		
1401	50 ft.	coil
1402	100 ft.	coil
1403	1000 ft.	spool
No. 12		
1405	50 ft.	coil
1406	100 ft.	coil
1407	1000 ft.	spool
No. 14		
1409	50 ft.	coil
1410	100 ft.	coil
1411	1000 ft.	spool
No. 16		
1413	50 ft.	coil
1414	100 ft.	coil
1415	1000 ft.	spool
No. 18		
1417	50 ft.	coil
1418	100 ft.	coil
1419	1000 ft.	spool
No. 20		
1421	50 ft.	coil
1422	100 ft.	coil
1423	1000 ft.	spool
No. 22		
1434	1000 ft.	spool

Silicon Bronze

Twice the strength of copper. Used extensively on Master Antenna Systems, airports, ships, where strength and resistance to the elements are important.

Cat. No.	Ft.	Size	Tensile Strength
529	100	7/12	3670 lbs.
528	100	7/14	2140 lbs.
527	100	7/16	1600 lbs.
499	100	7/18	1000 lbs.
524	100	7/20	650 lbs.
526	100	7/22	420 lbs.

LONGER LENGTHS AVAILABLE

Stranded Enamel Copper Wire

Cat. No.		
7/22 (14 B&S)		
1642	75 ft.	coil
1672	100 ft.	coil
1637	1000 ft.	spool
7/23 (15 B&S)		
1645	75 ft.	coil
1675	100 ft.	coil
1631	1000 ft.	spool
7/24 (16 B&S)		
1683	75 ft.	coil
1682	100 ft.	coil
1627	1000 ft.	spool

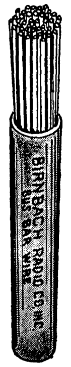
Solid Bare Copper Wire

SOFT DRAWN

Cat. No.		
No. 10		
1561	50 ft.	coil
1562	100 ft.	coil
1563	1000 ft.	spool
No. 12		
1565	50 ft.	coil
1566	100 ft.	coil
1567	1000 ft.	spool
No. 14		
1569	50 ft.	coil
1570	100 ft.	coil
1571	1000 ft.	spool
No. 16		
1573	50 ft.	coil
1574	100 ft.	coil
1575	1000 ft.	spool

Solid Enamel Copper Wire

Cat. No.		
No. 10		
697	50 ft.	coil
497	100 ft.	coil
1497	1000 ft.	spool
No. 12		
292	50 ft.	coil
492	100 ft.	coil
492-A	150 ft.	coil
492-B	200 ft.	coil
1492	1000 ft.	spool
No. 14		
290	50 ft.	coil
490	100 ft.	coil
490-A	150 ft.	coil
490-B	200 ft.	coil
1490	1000 ft.	spool



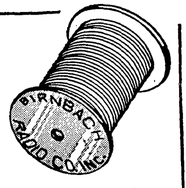
Birnbach Tinned Bus Bar Wire

For hooking up all types of transmitters, especially ultra short wave equipment. All Bus Wire is made of hard drawn copper, tinned, straightened, and cut 2 ft. lengths.

(100 to Std. Pkg.)

Cat. No.	
2010	10 Round
2012	12 Square
2013	12 Round
2014	14 Square
2015	14 Round
2016	16 Round

Birnbach MAGNET WIRE


BIRNBACH RADIO CO. INC.

PLAIN ENAMEL

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
10	8	16	32
12	12	25	50
14	20	40	80
16	32	63	126
18	50	100	201
20	80	160	320
22	127	254	508
24	201	403	806
26	320	640	1280
28	507	1015	2030
30	805	1610	3220
32	1282	2564	5128
34	2037	4075	8150
36	3221	6443	12887
38	5132	10246	20492
40	8143	16286	32573

DOUBLE COTTON

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
10	8	24	32
12	12	24	49
14	19	62	123
18	49	97	194
20	78	157	304
22	119	238	477
24	184	369	739
26	284	568	1136
28	435	871	1742
30	641	1284	2569
32	976	1953	3906
34	1365	2735	5470
36	1827	3654	7309
38	2738	5476	10952
40	3405	6811	13623

SOLID TINNED (Soft Drawn)

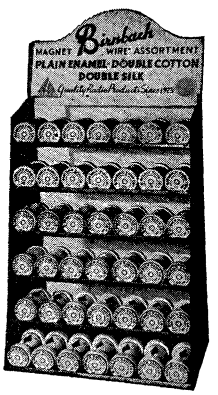
Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
10	8	16	32
12	12	25	50
14	20	40	80
16	32	63	126
18	50	100	201
20	80	160	320
22	127	254	508
24	201	403	806
26	320	640	1280
28	507	1015	2030
30	805	1610	3220
32	1282	2564	5128
34	2037	4075	8150
36	3221	6443	12887
38	5132	10246	20492
40	8143	16286	32573

DOUBLE SILK

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
12	12	24	49
14	19	39	78
16	31	62	125
18	49	99	198
20	78	157	314
22	123	247	495
24	195	390	781
26	303	606	1212
28	478	956	1912
30	739	1479	2958
32	1136	2272	4545
34	1712	3424	6849
36	2551	5102	10204
38	3770	7541	15082
40	5040	10080	20161

BIRNBACH MAGNET and TINNED WIRE SPECIAL SPOOLS

Attractive Spools, even sizes from 10 to 40 inclusive in Double Cotton, Plain Enamel, Double Silk and Solid Tinned. This display on the counter is a Silent Salesman bringing you real profits the year around.



FREE DISPLAY

One Display Given with each initial order of **100** spools. Display made of strong, reinforced steel. Mahogany crackle finish. 3-color display at top. Space for YOUR resale price. Extra Display Racks available.

Length of Wire of Special Spools

Size B&S	Plain Enamel Ft.	Double Cotton Ft.	Double Silk Ft.	Solid Tinned Ft.
10	11	—	—	11
12	15	9	—	15
14	26	20	11	26
16	34	34	19	34
18	56	44	23	56
20	86	56	29	86
22	112	75	37	112
24	184	97	56	184
26	244	116	71	244
28	401	131	90	401
30	525	158	112	525
32	675	180	124	675
34	900	195	131	900
36	1275	206	142	1275
38	1725	240	116	1725
40	1950	265	125	1950

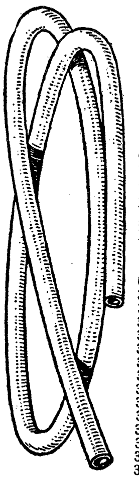
See Pages S-43 to S-45 for Birnbach Prices

Birnbach

Biraco Extruded • Varnished Tubing • Dial Cord
Copperweld Enamel • Guy • Aluminum Wire

BIRNBACH BIRACO TUBING

(Extruded Vinyl)



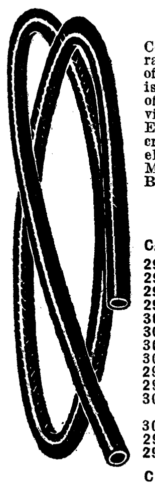
Synthetic plastic tubing especially designed for electronic and electrical insulation work. Extremely flexible and high resistance to abrasion. Has high dielectric strength, average 10,000 volts and high tensile strength. Will not support combustion, soften up to 257°F. or crack at —75°F. Its dielectric strength: 1100 volts per mil at room temperature when dry and 1000 volts per mil when wet. Impervious to water, oil, alkalies, alcohol, solvents, etc. Meets all ASTM specs.

(36″ Lengths)

Cat. No.	B&S Gauge Size No.	Approx. I.D.
313	20	.034
314	18	.042
315	16	.053
316	14	.066
317	12	.085
325	10	.106
318	8	.135
326	6	.166
319	4	.208
320	2	.263
321	5/16	.3125
322	3/8	.375
323	1/2	.500
324	5/8	.625

COLORS: Black, Red, Green, White, Yellow, Blue, Brown, Orange and Clear.

BIRNBACH VARNISHED TUBING



(Radio & Electronic Grade)

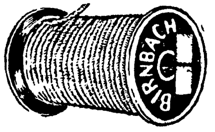
Constructed of high quality rayon braid with heavy coatings of varnish applied. The inside is also coated for easy insertion of stranded wires. It is impervious to oil, acid and water. Extremely flexible; it will not crack after aging. Average dielectric strength 5000 volts. Meets all ASTM and VTA No. B-1 Specifications.

(30″ Lengths)

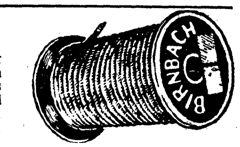
Cat. No.	B&S Gauge Size No.	Approx. I.D.
291	20	.034
293	18	.042
294	16	.053
295	14	.066
300	12	.085
307	10	.106
301	8	.133
302	6	.166
297	3/16	.208
298	1/4	.263
303	5/16	.3125
(36″ Lengths)		
304	3/8	.375
299	1/2	.500
296	5/8	.625

COLORS: Black, Red, Green, Yellow, Blue, Brown, Orange, White.

TUBING IN HANDY SPOOLS



Both the Biraco Extruded Vinyl Tubing and Varnished Tubing are now available on convenient spools, in special length spools and 100-ft. spools in a variety of assorted colors. It is a perfect item for servicemen, laboratories and for manufacturing purposes.



BIRNBACH BIRACO TUBING

(Extruded Vinyl)

Cat. No.	B&S Gauge Size No.	Approx. I.D.	Length Spool
313B	20	.034	25 Ft.
314B	18	.042	25 Ft.
315B	16	.053	25 Ft.
316B	14	.066	25 Ft.
317B	12	.085	25 Ft.
325B	10	.106	15 Ft.
318B	8	.135	15 Ft.
326B	6	.166	15 Ft.
319B	4	.208	10 Ft.
320B	2	.263	10 Ft.
313BC	20	.034	100 Ft.
314BC	18	.042	100 Ft.
315BC	16	.053	100 Ft.
316BC	14	.066	100 Ft.
317BC	12	.085	100 Ft.
325BC	10	.106	100 Ft.
318BC	8	.135	100 Ft.
326BC	6	.166	100 Ft.
319BC	4	.208	100 Ft.
320BC	2	.263	100 Ft.
321BC	5/16	.3125	100 Ft.
322BC	3/8	.375	100 Ft.
323BC	1/2	.500	100 Ft.
324BC	5/8	.625	100 Ft.

COLORS: Red, Black, Green, White, Yellow, Blue, Brown, Clear and Orange.

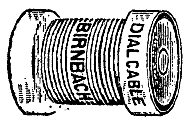
BIRNBACH VARNISHED TUBING

Radio and Electronic Grade

Cat. No.	B&S Gauge Size No.	Approx. I.D	Length Spool
291V	20	.034	25 Ft.
293V	18	.042	25 Ft.
294V	16	.053	25 Ft.
295V	14	.066	25 Ft.
300V	12	.085	25 Ft.
307V	10	.106	20 Ft.
301V	8	.135	15 Ft.
302V	6	.166	10 Ft.
305V	4	.208	10 Ft.
306V	2	.263	10 Ft.
291VC	20	.034	100 Ft.
293VC	18	.042	100 Ft.
294VC	16	.053	100 Ft.
295VC	14	.066	100 Ft.
300VC	12	.085	100 Ft.
307VC	10	.106	100 Ft.
301VC	8	.135	100 Ft.
302VC	6	.166	100 Ft.
305VC	4	.208	100 Ft.
306VC	2	.263	100 Ft.
303VC	5/16	.3125	100 Ft.
304VC	3/8	.375	100 Ft.
299VC	1/2	.500	100 Ft.
296VC	5/8	.625	100 Ft.

COLORS: Black, Red, Green, White, Yellow, Blue, Brown, and Orange.

BIRNBACH DIAL CABLE 42-STRAND PHOSPHOR BRONZE



Finest phosphor bronze wire over a linen thread center. Due to its high tensile strength, it will not stretch.

(.040 Diameter)

Cat. No.	
1025	25 ft. Spool
1050	50 ft. Spool
1051	100 ft. Spool
1052	1000 ft. Spool

BRAIDED PHOSPHOR BRONZE DIAL CABLE

(Light — .025 Diameter)

Cat. No.	
1053	25 ft. Spool
1054	50 ft. Spool
1055	100 ft. Spool
1056	1000 ft. Spool

All of the quality cables are constructed of the finest Nylon Braid, over a fibreglass core. They are pre-stretched and chemically treated to prevent stretching and slipping. Has maximum resistance to abrasion.

EXTRA THIN NYLON DIAL CABLE

(.025 Diameter)

Cat. No.	
4025	25 ft. Spool
4050	50 ft. Spool
4051	100 ft. Spool
4052	1000 ft. Spool

Used on Motorola, RCA, GE, etc. Is extra thin!

REGULAR THIN NYLON CORD

(.028 Diameter)

The most popular of all dial cords.

Cat. No.	
2025	25 ft. Spool
2050	50 ft. Spool
2051	100 ft. Spool
2052	1000 ft. Spool

LIGHT NYLON DIAL CORD

(.040 Diameter)

Used extensively in RCA, Philco, Majestic, Wells Gardner, etc.

Cat. No.	
3025	25 ft. Spool
3050	50 ft. Spool
3051	100 ft. Spool
3052	1000 ft. Spool

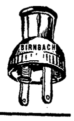
HEAVY DUTY NYLON DIAL CORD

(.062 Diameter)

Cat. No.	
1057	25 ft. Spool
1058	50 ft. Spool
1059	100 ft. Spool
1060	1000 ft. Spool

As used on models of Philco, Majestic, Brunswick, etc.

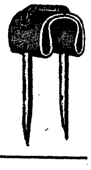
MALE RUBBER PLUGS



Brass prongs. Rated 15 amps at 125 Volts. ⅜″ hole.

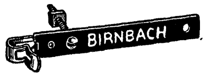
	St. Pkge.
814—Rubber Male Plug	100

INSULATED STAPLES



Essential for securing lead-in, ground, and other wires for installation.

Cat. No.	St. Pkge.
R100—Plain Staples, 100 to box	1000
D50—Plain Staples, 50 to box	1000

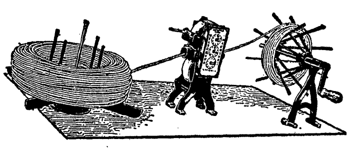


COPPER STRAP CLAMP

Will takes ⅜″ to 2″ pipe. Made of copper with Birnbach clip riveted and soldered to strap. Complete with nut and bolt.

Cat. No. 600 .... St. Pkge. 50

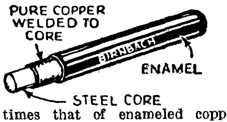
BIRNBACH WIRE WINDING and MEASURING OUTFIT



Consists of a Folding Reel, Measuring Machine, and a Wire Winder. This outfit is shipped complete, ready to assemble. It registers up to 1000 feet, and is accurate, simple to use, and time saving. Very compact, this unit can be easily set up on counter, table or bench.

Cat. No.		Shpg. Wt.
7401	Complete Outfit	23 lbs.
7401-M	Metric System Machine	25 lbs.

BIRNBACH COPPERWELD ENAMEL ANTENNA WIRE



Steel core covered with copper and heavily enameled. Will not elongate because of its high tensile strength . . . which is several times that of enameled copper wire. It has low R.F. resistance and is ideal for transmitting doublet and directional antenna systems as it will maintain the frequency characteristics of the antenna because of its stretchless qualities.

Cat. No.	Size B&S
710	10
712	12
714	14

Available in Following Footages:
100 ft. coils; 250 ft., 500 ft., 1000 ft., 2500 ft. spools
Specify Length Desired Next to Cat. No.

Size B&S	Ft. per Lb.	Tensile Strength
10	34½	1130 lbs.
12	54	720 lbs.
14	85	400 lbs.

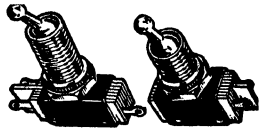
See Pages S-43 to S-45 for Birnbach Prices

Birnbach

Toggle • Push Button • Rotary • Knife • Power Slide Switches • Phono Plugs • Jacks

BIRNBACH

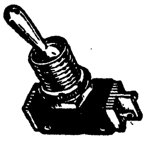
BIRNBACH TOGGLE SWITCHES



A very small, high grade UL approved switch. Well adapted for use on small motors, radio and electronic devices. Rated at 3 amps. at 125 volts. Mfd. by H. & H. for Birnbach. SPST Switches rated at 3 amps 250 volts, 6 amps 125 volts. Switches nickel plated and supplied with ring and mounting nut. Laminated type.

Cat. No.	Description	Shank Length	Std. Pkge.
6200	SPST	15/32"	25
6201	SPST	3/4"	25
6202	SPDT	15/32"	25
6203	SPDT	3/4"	25
6204	DPST	15/32"	25
6205	DPST	3/4"	25
6206	DPDT	15/32"	25
6207	DPDT	3/4"	25
6208	ON-OFF Toggle Switch Plates Only		10

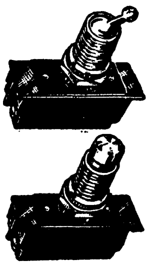
BIRNBACH BAT HANDLE TOGGLE SWITCHES



Available in nickel-plated finish and supplied with ring and mounting nut. Made by H. & H. for Birnbach. Rated at 3 amps 125 volts. SPST switches rated at 3 amps 250 volts, 6 amps 125 volts. Laminated type. UL approved.

Cat. No.	Description	Shank Length	Std. Pkge.
6220	SPST	15/32"	25
6221	SPDT	15/32"	25
6222	DPST	15/32"	25
6223	DPDT	15/32"	25

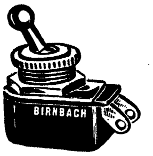
BIRNBACH POWER SWITCH



DPST switch rated at 12 amps at 125 volts per pole. When a single pole switch is required, the rating can be doubled. The push button power switch has the same rating. Primarily intended as a safety switch to be used as an interlock connection on doors of dangerous high voltage devices. Mfd. by H. & H. for Birnbach. UL approved.

Cat. No.	Description	Std. Pkge.
6225	Toggle Switch	25
6226	Push Button Switch	25

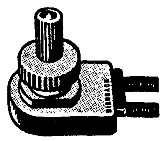
SMALL APPLIANCE SWITCH



Rated high—3 amps. at 250 volts; 6 amps. at 125 volts. Small molded compact switch 15/32" shank; brass nickel plated with solder lugs and complete with hex nut and ring. One hole mounting. UL approved.

Cat. No.	Descrip.	Std. Pkge.
6244	SPST	25

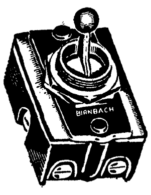
CANOPY SWITCH



Has a 3 amp., 125 volts; 1 amp., 250 volts rating. 6" leads. CSA approved.

Cat. No.	Description	Std. Pkge.
6249	Canopy Switch	50

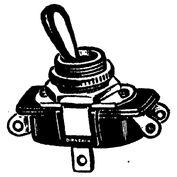
HEAVY DUTY POWER SWITCH



Recommended for use in transmitters, amplifiers, movie equipment and motors where heavy currents are carried. Made by H. & H. for Birnbach. Nickel plated and rated 10 amps., 125 volts. Neutral off in center position. Mounting sleeve diam. 3/4". UL approved.

Cat. No.	Description	Size	Std. Pkge.
6227	DPDT	2"x1¼"x 7/8"	25
6228	3PDT	2"x2¼"x1"	25
6229	4PDT	2"x2¼"x1"	10

BIRNBACH DPDT CENTER OFF SWITCH

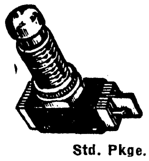


Rated at 1 amp., 125 volts. Has lug terminal with bat handle. 15/32" diam. shaft, nickel plated.

Cat. No.	Std. Pkg.
6243	25

BIRNBACH PUSH BUTTON SWITCH

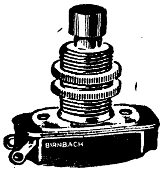
Momentary Contact



Made by H. & H. for Birnbach. Slow make and quick break. Laminated type with solder lugs. Has 9/16" slotted sleeve, 15/32" diam. Complete with 1 hex nut and one knurled nut. Rated 1 amp., 125 volts. UL approved. Nickel plated.

Cat. No.	Description	Std. Pkge.
6224	Two Circuit	25
6230	SPST Normally Closed, Push to Break	25
6231	DPST Normally Open, Push to Make	25
6232	Button Only, Red or Black	20

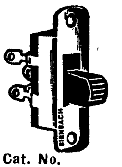
MOMENTARY PUSH BUTTON SWITCH



Molded momentary push button switch with solder lugs. Rated at 1 amp. ,125 volts. With 15/32" shank. Normally OFF—push to make. Nickel plated.

Cat. No.	Description	Std. Pkge.
6233	SPST	25
6234	SPDT	25
6235	DPST	25
6236	DPDT	25

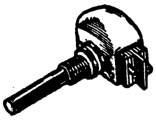
BIRNBACH SLIDE LEVER SWITCH



Popular for phonographs, tone controls, auto lights, test instruments. Rated at 4 amps., 125 volts A.C.; ½" wide by 1⅜" long. Mounting centers 1⅛".

Cat. No.	Description	Std. Pkge.
6245	SPST	25
6246	SPDT	25
6247	DPST	25
6248	DPDT	25

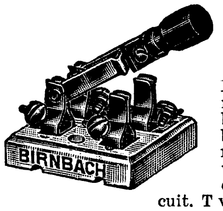
BIRNBACH ROTARY SWITCHES



Made by H. & H. for Birnbach. Rated at 1 amp., 250 volts; 3 amps., 125 volts. Nickel plated and supplied with mounting nut. UL approved.

Cat. No.	Description	Shank Length	Overall Length of Shaft Incl. Shank	Std. Pkg.
6210	SPST	⅜"	1½"	25
6211	SPST	1"	2½"	25
6212	SPDT	⅜"	1½"	25
6213	SPDT	1"	2½"	25
6214	DPST	⅜"	1½"	25
6215	DPST	1"	2½"	25
6216	DPDT	⅜"	1½"	25
6217	DPDT	1"	2½"	25

BIRNBACH KNIFE SWITCHES



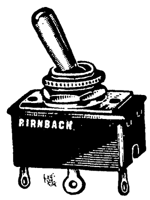
Made of special nickel-plated spring brass on a rugged base. Screw terminals located conveniently for easy connections in circuit. Two mounting holes.

Cat. No.	Description	St. Pkge.
6100	SPST	10
6102	SPDT	10
6103	DPST	10
6104	DPDT	10
6105	TPDT	10

BIRNBACH MOLDED BAT HANDLE TOGGLE SWITCHES

Meets Joint Army and Navy Specifications

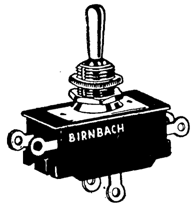
JAN-S-23



Made by H & H for Birnbach, they meet all Joint Army and Navy Specifications JAN-S-23. Molded with 15/32" Shank length they have back connected lugs and have a bat handle. Maintained contact.

Cat. No.	A.W.S. No.	Description	Shank Length	Std. Pkg.
6250	ST-12-A	SPST	15/32"	25
6251	ST-12-D	SPDT	15/32"	25
6252	ST-22-K	DPST	15/32"	25
6253	ST-22-N	DPDT	15/32"	25

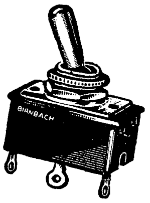
BAT HANDLE "CENTER-OFF" SWITCHES



Molded bakelite case, made by H & H, three-position center off. Solder lugs. Rated at 3 amps, 250 volts; 6 amps, 125 volts.

Cat. No.	Description	Shank Length	Std. Pkge.
6261	SPDT	15/32"	25
6263	DPDT	15/32"	25

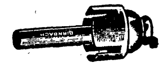
BAKELITE MOLDED MOMENTARY CONTACT SWITCH



Made by H. & H. for Birnbach. Rated at 3 amps., 250 volts; 6 amps, 125 volts. Molded with 15/32" diam., Has momentary contact bat handle. Circuit normally OFF. Used on intercoms. UL approved.

Cat. No.	Description	Shank Length	Std. Pkge.
6241	SPST	15/32"	25
6242	DPDT	15/32"	25

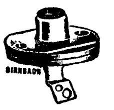
PHONO ATTACHMENT PLUG



To be used with recording and reproducing equipment, record players, etc. Large hole in cap for coaxial cable and extra long pin for new type jacks.

Cat. No.	Description	St. Pkge.
248	Phono Plug (Long Pin)	100
248S	Phono Plug (Short Pin)	100

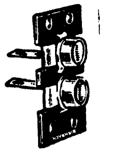
PHONO JACK



Designed to fit No. 248 Plug. Positive grip, single prong. Mounted on 1/16" bakelite. 11/16" mounting centers.

Cat. No.	Description	St. Pkge.
249	Phono Jack	100

DUAL PHONO JACK



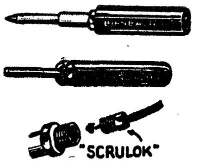
Used on phono players and recording units, etc., where dual application is needed.

Mounted on 1/16" bakelite. Double mounting holes are spaced ½" x 1 3/16". 9/16" center to center of jacks.

Cat. No.	Description	St. Pkge.
T250	Dual Phono Jack	100

See Pages S-43 to S-45 for Birnbach Prices

Birnbach Insulated Phone Tips • Plugs Jacks • Alligator Clips



BIRNBACH INSULATED PHONE TIP

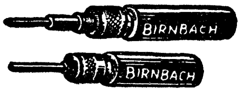
(SCRULOK)

1" long, 5/16" dia. Connection is made by threading wire through the Scrulok threaded bushing (see drawing).

COLORS: Red, Black, Green, Blue and Yellow.

Cat. No.	Std. Pkge.
412—Scrulok Pin Tip, 1-9/16" Long	50
419—Scrulok Pin Tip, 1-15/16" Long	50

INSULATED Solderless PHONE TIPS



They have insulated handles ⅜" dia. by 1" long fitted to solderless phone tips. The wire can be easily attached by threading through the hole in the handle and tightening the knurled nut.

COLORS: Red, Black, Green, Blue and Yellow.

Cat. No.	Std. Pkge.
409—Insulated Sr. Solderless Tip 2¼" Long	50
415—Insulated Jr. Solderless Tip 1-13/16" Long	50

No. 407 INSULATED TIP JACK

7/16" insulated top; mounts in a 5/16" dia. hole. The specially designed bronze springs hold the phone tip tight and straight.

COLORS: Red, Black, Yellow, Green.

Cat. No.	Std. Pkge.
407—Insulated Phone Tip Jack	100

No. 330 INSULATED NEEDLE POINT PLUG

The insulated sleeve is ¾" long. Positive contact is assured with the sharp needle point phone tip. Body of plug accommodates all standard banana type plugs; easily pierces insulation.

Available in Black or Red.

Cat. No.	Std. Pkge.
330—Insulated Needlepoint Plug	50

No. 331 INSULATED PHONE TIP PLUG

Plugs into all standard phone tip jacks. The ¾" long insulated sleeve is designed to accommodate all standard banana type plugs. Overall length 1½". Available in Black, Red, Yellow and Green.

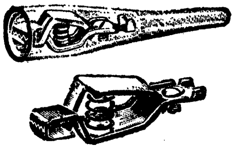
Cat. No.	Std. Pkge.
331 —Insulated Phone Tip Plug	50
331A—Tip Only	50

No. 332 INSULATED SPADE LUG

Sleeve measures ¾" long by ⅜" diameter. Barrel accommodates all standard banana type plugs. Available in Red or Black.

Cat. No.	Std. Pkge.
332 —Insulated Spade Lug	50
332A—Spade Only	50

TEST CLIPS



The No. 27-C is a solid copper clip with a brass screw designed for high frequency work.

Cat. No.	Length	Jaw Spread	Std. Pkg.
27—Pee Wee	1½"	⅜"	50
28—Midget	2"	9/16"	50
29—Medium	2⅞"	1"	50
30—Large	4"	1¼"	50
27C—Pee Wee Copper	1½"	⅜"	50
27R—Rubber Sleeve—Red or Black			50

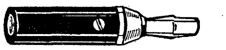
No. 404 INSULATED BANANA PLUG

It has the Scrulok solderless connection and the non-collapsible special alloy springs assembled on a pin preventing collapse of the plug spring. The handle is made of phenolic resin and is ⅜" wide by 1" long.

COLORS: Red, Black, Yellow, Blue and Green.

Cat. No. 404.................. Std. Pkg. 50

No. 404B SPRING BANANA PLUG

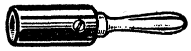


Same construction as No. 404 above except with small side screw for wire connection.

COLORS: Red, Black, Yellow, Blue and Green.

Cat. No. 404B..................Std. Pkg. 50

No. 604 BANANA PLUG

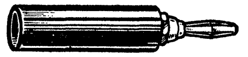


Solid brass nickel-plated, with the end slotted. Cast phenolic handle is 1" long by ⅜" dia. and is held on by the screw that secures wire to plug.

COLORS: Red, Black, Yellow, Green and Blue.

Cat. No. 604....................Std. Pkg. 50

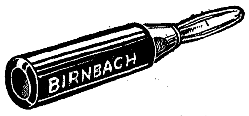
No. 341 INSULATED BANANA PLUG



This plug consists of our No. 404A plug with a larger handle 1⅞" long by ½" dia. Used on therapeutic apparatus and test equipment. Overall length 2⅝". **COLORS:** Red or Black.

Cat. No. 341....................Std. Pkg. 50

No. 392 INSULATED GIANT PLUG



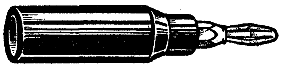
No projecting edges are exposed.

Connection is made by soldering into the hole at the end of the threaded shank of the plug. Handle is 1⅞" long by ⅝" dia.; length overall 3".

COLORS: Red or Black.

Cat. No. 392....................Std. Pkg. 50

No. 342 HARD RUBBER INSULATED GIANT PLUG

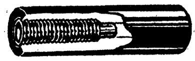


Designed for use with diathermy cables. It has a ⅝" dia. hole in the handle to take the largest cable. Polished black hard rubber. The handle is 3" long by ⅞" dia. Overall length is 4 13/16".

COLORS: Red or Black

Cat. No. 342....................Std. Pkg. 50

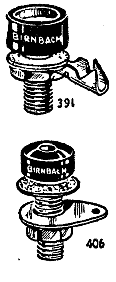
No. 605 HANDLE JACK



Consists of a banana jack inside an insulated sleeve. Connection is made by soldering to the end of the jack. Handle is made of cast phenolic resin ⅜" dia. by 1¼" long. **COLORS:** Red, Black, Yellow and Green.

Cat. No. 605....................Std. Pkg. 50

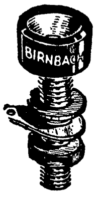
Nos. 391 and 406 INSULATED BANANA JACKS



½" dia. insulated head admits all of the exposed metal part of the metal plug when inserted. Mounts in a 5/16" dia. hole on a panel up to ⅜" thick. No. 406 Jack has a 7/16" dia. insulated top. It fits into 5/16" dia. hole and takes up to a ⅜" panel. Both with insulating shoulder washer, nut and lug.

Cat. No.	Std. Pkg.
391—Insulated Jack—Red, Black, Yellow, Green	50
406—Insulated Jack—Red, Black, Yellow, Blue, Green	50

No. 393 INSULATED GIANT JACK

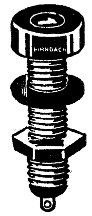


Designed to leave no metal part exposed on the panel. The ⅜-24 brass nickel plated sleeve has a 10-32 threaded hole at the end permitting a connection at the end of the jack or to the lug under the head. Either assembly available complete with nut, insulating shoulder washer, lock-washer and lug. Length overall 1⅜".

COLORS: Red or Black.

Cat. No.	Std. Pkg.
393 —Insulated Giant Jack lug under head	50
393A—Insulated Giant Jack lug at end	50

No. 333 INSULATED COMBINATION JACK



Accommodates all standard plugs of the phone tip or banana type construction. ¼" hole mounting in panels up to ½" thick. Overall length 1⅜". Supplied complete with insulating shoulder, washer and nut. Insulated head comes in following colors: Black, Red, Green or Yellow.

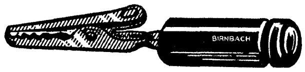
Cat. No. 333........Std. Pkg. 50

No. 310 INSULATED ALLIGATOR CLIP

Steel nickel plated. The insulated handle is ⅜" dia. and ¾" long and 2¼" overall and comes in Red or Black.

Cat. No. 310....................Std. Pkg. 50

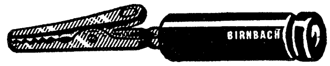
No. 334 ALLIGATOR CLIP WITH PHONE TIP JACK



1" long insulated handle houses a tip jack that accommodates all standard phone tip plugs. Overall length 2⅝". **COLORS:** Red or Black.

Cat. No. 334....................Std. Pkg. 50

No. 335 ALLIGATOR CLIP COMBINATION JACK



Insulated alligator clip is composed of a combination jack in rear for both standard phone tip plugs and banana plugs. 1-9/16" length of handle. Overall length 3". Available in Red or Black.

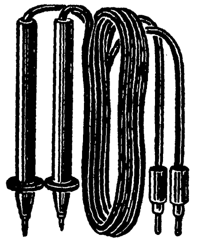
Cat. No. 335....................Std. Pkg. 50

See Pages S-43 to S-45 for Birnbach Prices

Birnbach Hi-Voltage Test Leads • Prods • Phone Tips Jacks • Plugs • Alligator Clips

BIRNBACH

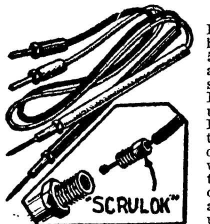
HEAVY DUTY HIGH VOLTAGE TEST LEADS



Safely tests up to 15,000 volts. High dielectric strength and lo leakage resistance. Has low voltage drop. Prods and tip handles are made of black and red bakelite with special tip for application. Cable constructed of No. 18 - 66/36 tinned copper with heavy duty rubber wall. Prods are 6" long and ½" dia. and have a protective rugged guard ring near the metal tip. The other end has 1¼"x½" dia. bakelite prods. All prods and cable color coded. The leads are 60" long.

Cat. No. **Std. Pkg.**
562—Heavy Duty High Voltage Test Leads....10

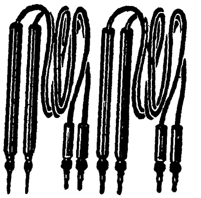
BAKELITE PENCIL TYPE TEST LEADS
(SCRULOK)



Red and black bakelite handles, 6" long and 5/16" in dia., and red and black bakelite insulated phone tips. Heavy kinkless wire is used together with the Birnbach Scrulok system of solderless wire connection. The Universal needle and phone tip prod have the same dimensions as the standard phone tip and are useful for piercing insulation without damage. Length overall 60".

Cat. No. **Std. Pkg.**
408—Bakelite Pencil Type Test Lead........10
439—Needlepoint Prod Tip for Replacement...10

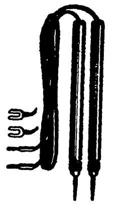
DELUXE TEST LEADS



Constructed with 5" long cast phenolic red and black handles with removable needlepoint chucks or solderless tips. Black and red heavy kinkless instrument 48" long is used to connect the prods with the insulated red and black cast phenolic solderless tips.

Cat. No. **Std. Pkg.**
560—Solderless Prod, Solderless Tip......25
561—Needlepoint Prod, Solderless Tip......25

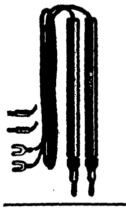
NEEDLEPOINT TEST LEADS



These test leads have 4" red and black insulated handles. A needlepoint chuck is fitted to the handle. Needles can be replaced when broken simply by loosening the knurled collar. Length overall 50".

Cat. No. **Std. Pkg.**
420—Needlepoint Phone Tip Test Leads 25
421—Needlepoint Spade Lug Test Leads 25

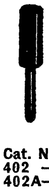
STANDARD TEST LEADS



A Sr. solderless phone tip is fitted to a red and black insulated handle 4" long. This permits replacement of wire when broken. The wire is secured by tightening the knurled nut. Length overall 50".

Cat. No. **Std. Pkg.**
422—Solderless Phone Tip Test Leads 25
423—Solderless Spade Lug Test Leads 25

PHONE TIPS

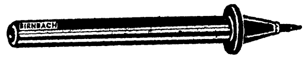


The 402 is 1" in overall length and fits all standard phone tip jacks. Hole is drilled for 7/64"; length of barrel is ½". Brass, nickel plated.

The 402A has a large drilled hole 5/32" I.D.; 7/16" barrel length; 1" overall. Made of brass with nickel plated finish.

Cat. No. **Std. Pkg.**
402 —Phone Tips 100
402A—Larger Diameter 100

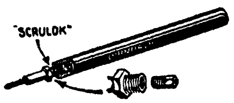
HEAVY DUTY HIGH VOLTAGE BAKELITE TEST PROD HANDLES



Same as used on No. 562. 6" long and ½" dia. with finger guard control. The rear of the prod can accommodate IN-34 crystal and condenser for use as an RF probe. Tips are heavy brass with nickel plating. Available in Red and Black.

Cat. No.	Handle Length	Handle Width	Overall Length
559	6"	½"	6-15/16"
558	1¼"	½"	2¼"

No. 411 BAKELITE PENCIL TEST PRODS

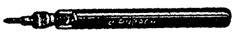


These prods have the Birnbach Scrulok solderless needlepoint tips. They are made of bakelite and are 6" long and 5/16" dia. The connection is made by threading the wire through the handle and securing to the needlepoint tip by locking the Scrulok. The tip is then screwed into the handle.

Available in Red or Black.

Cat. No. **Std. Pkg.**
411—Bakelite Pencil Test Prods............12

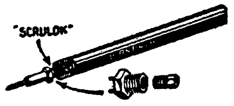
NEEDLEPOINT TEST PROD



A threaded shank needlepoint chuck is threaded into the end of handle. Made of highly polished cast phenolic handle. Available in Red or Black.

Cat. No. **Std. Pkg.**
344............4" Handle............50
345............5" Handle............50

SCRULOK NEEDLEPOINT TEST PROD

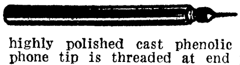


These insulated prods have the Scrulok solderless system of wire connection. Wire is easily attached without soldering. An extra heavy needle is fitted into the tip.

COLORS: Black or Red

Cat. No. **Std. Pkg.**
417............4" Handle............50
418............5" Handle............50

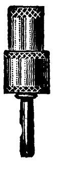
SOLDERLESS TEST PROD



Made of highly polished cast phenolic resin. A solderless phone tip is threaded at end permitting replacement of tip. Available in Red or Black.

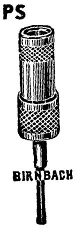
Cat. No. **Std. Pkg.**
410............4" Handle............50
343............5" Handle............50

SOLDERLESS PHONE TIPS

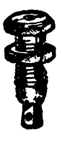


These phone tips are milled of solid brass and nickel plated. Designed for easy insertion of the wire.

Cat. No. **Std. Pkg.**
23—Junior 100
24—Senior 100



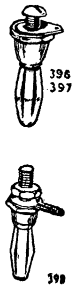
No. 26 PHONE TIP JACK



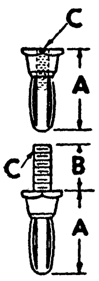
Milled of brass nickel plated. The bronze springs are made to hold the phone tip tight and straight. Mounts in a ¼" dia. hole.

Cat. No. 26...........Std. Pkg. 100

BIRNBACH GIANT PLUGS

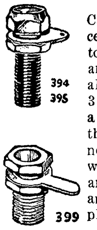


The Giant Plugs are intended for use where heavy current is used. They are rated at 25 amps. The long life nickel silver alloy spring is secured over a pin preventing a collapse of the spring and also maintaining the full spring action of the spring when inserted into the jack. The No. 398A plug has a hole in the thread shank to permit soldering to it. It is used extensively on diathermy electrode pad cables.

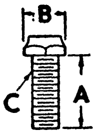


Cat. No.		Std. Pkg.	A	B	C
396	Plug	25	1-5/32	—	10-32
397	Plug	25	1-7/16	—	¼-20
398	Plug	25	1-5/32	⅝	¼-28
398A	Plug	25	1-5/32	⅝	¼-28

BIRNBACH GIANT JACKS

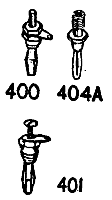


Carefuly milled with the central hole being reamed to size to insure a tight and wobble free fit with all Giant Plugs. The No. 394 and No. 399A have a 10-32 thread tapped at the end permitting connection to be made there with the use of a screw and lug. Made of brass and nickel-plated. Complete with nut and lug.



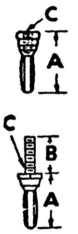
Cat. No.		Std. Pkg.	A	B	C
394	Jack	25	1-1/16	½	⅜-24
395	Jack	25	11/16	½	⅜-24
399	Jack	25	⅞	⅝	½-20
399A	Jack	25	1¼	⅝	½-20

BIRNBACH BANANA PLUGS



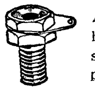
Large area of contact is one of the outstanding features of these jacks and plugs. The No. 400 series of plugs have a nickel silver contact spring secured over a full length central pin, making these plugs non-collapsible and assuring a low resistance contact.

Capacity 5 Amperes.



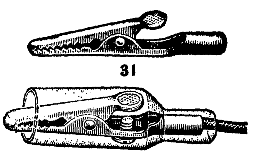
Cat. No.		Std. Pkg.	A	B	C
400	Plug	100	¾	½	6-32
401	Plug	100	31/32	—	6-32
404A	Plug	100	¾	⅜	¼-28

BIRNBACH No. 403 BANANA JACK



Accurately milled. Precision reamed hole helps maintain the tight and smooth action of the plug. Brass nickel plated. With nut and lug.

Cat. No.	Std. Pkg.	A	B	C
403	100	½	⅜	¼-28



No. 31 ALLIGATOR CLIP

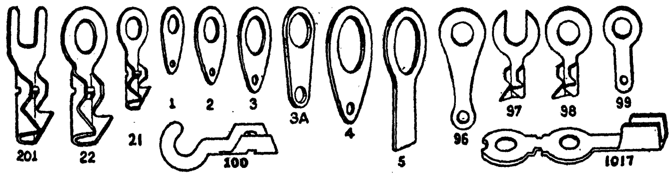
31-R
Nickel plated steel.

Cat. No.	Length	Std. Pkge.
31	2"	50
31-R	Insulators for #31, Red or Black	50

Birnbach

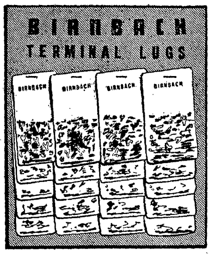
Tinned • Solderless • Locking Terminal Lugs Terminal Strips • Angle Brackets • Fuse Holders

BIRNBACH TINNED TERMINAL LUGS



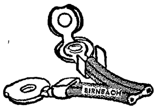
Cat. No.	Hole for Screw	Length In.	Std. Pkg.
1	6	17/32	1000
2	10	5/8	1000
3	1/4	5/8	1000
3A	1/4	13/16	1000
4	3/8	7/8	1000
5	1/2	1-3/16	1000
21	10	13/16	1000
22	1/4	1-1/8	1000
201	8	13/16	1000
96	6-8-10	7/8	1000
97	8	5/8	1000
98	6-8-10	11/16	1000
99	4-6-8	11/16	1000
100	10	7/8	1000
1017 (TV)	10	13/16	1000

BIRNBACH LUGS IN PACKAGES



Cat. No.	Quan. in Env.	Lug No.	Cat. No.	Quan. in Env.
1-50	50	1	1-100	100
2-50	50	2	2-100	100
3-50	50	3	3-100	100
21-35	35	21	21-100	100
22-15	15	22	22-100	100
201-35	35	201	201-100	100
96-40	40	96	96-100	100
97-40	40	97	97-100	100
98-35	35	98	98-100	100
99-35	35	99	99-100	100
100-20	20	100	100-100	100
1017-10	10	1017	1017-100	100

FOLD-OVER SOLDERLESS TERMINAL LUGS

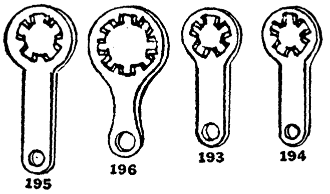


Use this lug for easy, positive vibration-proof terminal connections at antenna mast and for permanent connections at receiver. Simply lay bare wire into groove and fold over. No special tools necessary. For No. 10 hole.

Cat. No.	Quan. in Pkge.	St. Carton
1017-10	10 (Envelope)	25 Pkgs.
1017-50	50 (Envelope)	25 Pkgs.
1017-100	100 (Envelope)	12 Pkgs.
1017-1000	1000 (Box)	10 Pkgs.

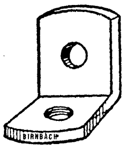
BIRNBACH LOCKING TYPE TERMINAL LUGS

Brass Electro Plated



Cat. No.	Hole for Screw	Thickness	Std. Pkg.
193	4	.020″	1000
194	6	.020″	1000
195	8	.020″	1000
196	¼″	.020″	1000

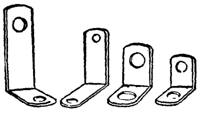
TAPPED ANGLE BRACKET



Steel cadmium plated. ½″ by ½″. One plain .165 hole and one 8/32 tapped hole.

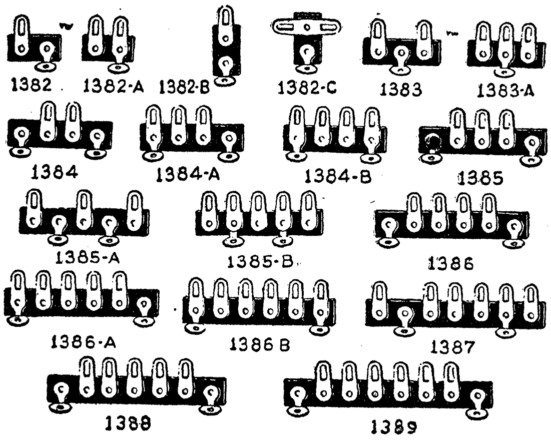
Cat. No.	Std. Pkg.
1120	100

BRASS AND STEEL ANGLES



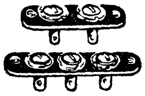
Cat. No.	Material	Size	Std. Pkg.
1121	Brass N.P.	½″x ½″	100
1122	Brass N.P.	⅝″x ⅝″	100
1123	Steel H.T.	¾″x ¾″	100
1124	Steel H.T.	⅝″x1⅛″	100

BIRNBACH LUG TERMINAL STRIPS



Cat. No.	Std. Pkg.
1382	100
1382A	100
1382B	100
1382C	100
1383	100
1383A	100
1384	100
1384A	100
1384B	100
1385	100
1385A	100
1385B	100
1386	100
1386A	100
1386B	100
1387	100
1388—5 Ter., 2 grds.	100
1389—6 Ter., 2 grds.	100

BIRNBACH BAKELITE TERMINAL STRIPS



Terminals are made of brass and cadmium plated. Terminals are mounted on 1/16″ bakelite. 7, 8, 9 and 10 terminals are mounted on 3/32″ bakelite. All terminals are space 7/16″ center to center.

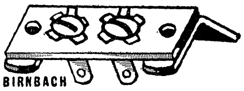
PLAIN

Cat. No.	Terminals	Mtg. Center
1372	2	1-$\frac{5}{16}$″
1373	3	1-¾″
1374	4	2-$\frac{3}{16}$″
1375	5	2-⅝″
1376	6	3-$\frac{1}{16}$″
1377	7	3-½″
1378	8	3-$\frac{15}{16}$″
1379	9	4-⅜″
1380	10	4-$\frac{13}{16}$″

MARKED

Cat. No.	Terminals Marked
1260	2; A-G
1261	2; Output
1262	2; Input
1263	3; 1-2-3
1264	4; 1-2-3-4
1265	5; 1-2-3-4-5
1266	6; 1-2-3-4-5-6

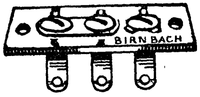
TERMINAL STRIPS 2 POST



Excellent mounting for twin lead transmission lines. Brass hot tiined lugs spaced $\frac{7}{16}$″ center to center. $\frac{1}{16}$″ bakelite. 1$\frac{15}{16}$″ mounting center.

Cat. No. T16....................St. Pkge. 50

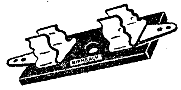
BIRNBACH 3 POST



A synchronizing lock strip for RCA type television receivers. Brass hot tinned lugs. Spaced $\frac{7}{16}$″ center to center. Mounting center 1¾″. $\frac{1}{16}$″ bakelite.

Cat. No. T16A..................St. Pkge. 50

FUSE MOUNT BASE



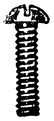
Protects high voltage and similar type circuits. Takes 3 AG auto fuse. ⅛″ bakelite.

T15.......St. Pkge. 50

See Pages S-43 to S-45 for Birnbach Prices

Birnbach

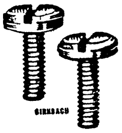
Machine • Wood • Self-Tapping • Binding Head Rack Screws • Tube Clamps • Nuts • Washers



ROUND HEAD MACHINE SCREWS

Standard Package 1000

STEEL NICKEL PLATED Cat. No.	Size	BRASS NICKEL PLATED Cat. No.	Size
6300	2-56 x 3/16	6400	4-36 x ¼
6301	2-56 x ⅜	6401	4-36 x ⅜
6302	2-56 x ½	6402	4-36 x ½
6303	3-48 x ¾	6403	4-36 x ¾
6304	4-36 x ¼	6404	4-36 x 1
6305	4-36 x ½	6312	4-40 x ¼
6306	4-36 x ¾	6313	4-40 x ⅜
6307	4-40 x ¼	6314	4-40 x ½
6308	4-40 x ½	6315	4-40 x ¾
6309	4-40 x ¾		
6420	6-32 x ¼		
6421	6-32 x ⅜	6405	6-32 x ¼
6422	6-32 x ½	6406	6-32 x ⅜
6423	6-32 x ⅝	6407	6-32 x ½
6424	6-32 x ¾	6408	6-32 x ⅝
6425	6-32 x 1	6409	6-32 x ¾
6426	8-32 x ¼	6410	6-32 x 1
6427	8-32 x ⅜	6411	6-32 x 1¼
6428	8-32 x ½	6412	6-32 x 1½
6429	8-32 x ⅝	6413	8-32 x ¼
6430	8-32 x ¾	6414	8-32 x ⅜
6431	8-32 x 1	6415	8-32 x ½
6432	8-32 x 1½	6416	8-32 x ⅝
6433	10-32 x ¼	6417	8-32 x ¾
6434	10-32 x ⅜	6418	8-32 x 1
6435	10-32 x ½		
6436	10-32 x ⅝		
6437	10-32 x ¾	6316	10-32 x ¼
6438	10-32 x 1	6317	10-32 x ⅜
6439	¼-20 x ½	6318	10-32 x ½
6310	¼-20 x 1¼	6319	10-32 x ¾
6311	¼-20 x 2½	6320	10-32 x 1

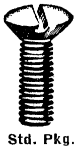


BINDING HEAD MACHINE SCREWS

Steel Nickel Plated

Cat. No.	Size	Std. Pkg.
6321	6-32 x ¼″	1000
6322	6-32 x ⅜″	1000
6323	6-32 x ½″	1000
6324	8-32 x ¼″	1000
6325	8-32 x ⅜″	1000
6326	8-32 x ½″	1000

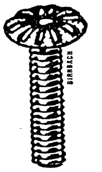
OVAL HEAD RACK SCREWS



Steel Nickel Plated

Widely used for mounting panels on racks and cabinets. Screws are nickel-plated brass.

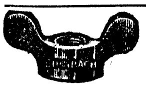
Cat. No.	Size	Std. Pkg.
6600	6-32 x ¼″	100
6601	6-32 x ½″	100
6602	6-32 x ¾″	100
6603	6-32 x 1″	100
6604	8-32 x ¼″	100
6605	8-32 x ½″	100
6606	8-32 x ¾″	100
6607	8-32 x 1″	100
6608	10-32 x ¼″	100
6609	10-32 x ½″	100
6610	10-32 x ⅝″	100
6611	10-32 x ¾″	100
6611-A	10-32 x 1″	100



ORNAMENTAL HEAD SCREWS

Steel—Statuary Bronze Finish

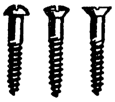
Cat. No.	Size	Std. Pkg.
6327	6-32 x ¾″	1000
6328	6-32 x 1″	1000
6329	8-32 x 1¼″	1000



WING NUTS

High quality brass nickel plated wing nut used extensively on portable and test instruments.

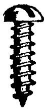
Cat. No.	Thread	Std. Pkg.
6	6-32	100
8	8-32	100
10	10-32	100
11	¼-20	100



BRASS AND STEEL WOOD SCREWS

Round, Flat and Oval Heads

BRASS NICKEL PLATED Cat. No.	Size	Std. Pkg.	STEEL NICKEL PLATED Cat. No.	Size	Std. Pkg.
6460	⅜ x #4	144	6470	⅜ x #4	144
6461	½ x #4	144	6471	½ x #4	144
6462	⅝ x #5	144	6472	⅝ x #5	144
6463	¾ x #5	144	6473	¾ x #5	144
6464	1 x #5	144	6474	1 x #5	144
6465	1¼ x #6	144	6477	1 x #6	144
6466	1½ x #6	144	6475	1¼ x #6	144
			6476	1½ x #6	144
			6478	¾ x #8	144

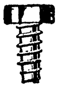


BIRNBACH SHEET METAL SELF TAPPING SCREWS

Steel Cadmium Plated

TYPE A — SHARP POINT

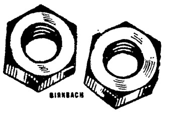
Cat. No.	Size	Std. Pkg.
6500	#4 x ½	144
6501	#6 x ¼	144
6502	#6 x ⅜	144
6503	#6 x ½	144
6504	#6 x ¾	144
6540	#8 x ⅜	144
6541	#8 x ½	144
6505	#8 x 1	144
6542	#10 x ⅜	144
6543	#10 x ½	144
6506	#10 x ¾	144
6507	#10 x 1	144



BIRNBACH HEX HEAD SELF TAPPING SCREWS

TYPE B — BLUNT POINT SLOTTED
Steel Cadmium Plated

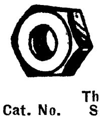
Cat. No.	Size	Std. Pkg.	Cat. No.	Size	Std. Pkg.
6510	#6 x ⅜	144	6515	#8 x ½	144
6511	#6 x ½	144	6516	#8 x ¾	144
6512	#6 x ¾	144	6517	#8 x 1	144
6513	#8 x ¼	144	6518	#10 x ½	144
6514	#8 x ⅜	144	6519	#10 x 1	144



HEXAGON STEEL MACHINE SCREW NUTS

Nickel Plated

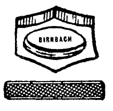
Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6330	2-56	3/16″	1/16″	1000
6331	3-48	3/16″	1/16″	1000
6332	4-36	1/4″	3/32″	1000
6333	4-40	1/4″	3/32″	1000
6448	6-32	1/4″	3/32″	1000
6449	6-32	5/16″	7/64″	1000
6334	8-32	1/4″	3/32″	1000
6450	8-32	5/16″	7/64″	1000
6335	10-32	3/8″	1/8″	1000
6336	¼-20	7/16″	3/16″	1000



HEXAGON MACHINE SCREW NUTS

BRASS—NICKEL PLATED

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6440	4-36	1/4″	3/32″	1000
6442	4-40	1/4″	3/32″	1000
6441	6-32	1/4″	5/64″	1000
6443	6-32	5/16″	7/64″	1000
6444	8-32	11/32″	1/8″	1000
6445	10-32	5/16″	7/64″	1000
6446	10-32	3/8″	1/8″	1000
6447	¼-20	7/16″	1/8″	1000

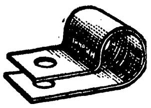


BIRNBACH VOLUME CONTROL & TOGGLE NUTS

BRASS—NICKEL PLATED

No.	Type	Size	Std. Pkg.
6337	Volume Control	⅜-32x½x3/32	1000
6338	Toggle Switch	15-32x9/16x5/64	1000
6339	Toggle Ring Nut	15-32x⅝x1/16	1000

BIRNBACH TUBE CLAMPS

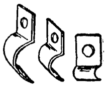


Desirable when mounting resonant lines or elements of directive beam antennas. Made of hard drawn aluminum. The 5/16″, ⅜″ and ½″ have holes for No. 10 screw and the ¾″ and 1″ dia. clamps have holes for ¼″ bolts.

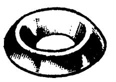
Cat. No.	To Fit Tube	Std. Pkg.
51—Clamp	¼″ Dia.	100
52—Clamp	5/16″ Dia.	100
53—Clamp	⅜″ Dia.	100
54—Clamp	½″ Dia.	100
55—Clamp	¾″ Dia.	50
57—Clamp	⅞″ Dia.	50
56—Clamp	1″ Dia.	50

BIRNBACH CABLE CLAMPS

Standard Package of 100



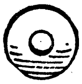
Cat. No.	To fit Cable	L.	W.	Hole
1153	⅛″	7/16″	¼″	4
1154	3/16″	⅝″	⅜″	6
1155	⅜″	11/16″	⅜″	6
1156	½″	15/16″	⅜″	6
1157	⅞″	1¼″	⅜″	10



FINISHING RACK WASHERS

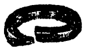
Brass Nickel Plated

Cat. No.	Size	Std. Pkg.
6612	6-32 Cup Washer	100
6613	8-32 Cup Washer	100
6614	10-32 Cup Washer	100



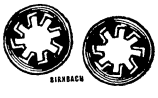
BIRNBACH BRASS NICKEL PLATED FLAT WASHERS

Cat. No.	Fits Screw No.	Hole Size	O.D.	Thickness	Std. Pkg.
6479	4	.118″	9/32″	.025″	1000
6480A	6	.145″	5/16″	.025″	1000
6480	6	.145″	3/8″	.025″	1000
6481	8	.172″	3/8″	.032″	1000
6482	10	.203″	7/16″	.036″	1000
6483	¼-20	.265″	9/16″	.040″	1000



STEEL KANTLINK LOCKWASHERS

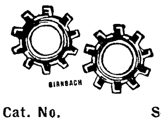
Cat. No.	Screw Size	O.D.	Thickness	Std. Pkg.
6484	4	3/16″	1/32″	1000
6485	6	15/64″	1/32″	1000
6486	8	15/64″	.025″	1000
6487	10	5/16″	.050″	1000
6488	¼	7/16″	5/64″	1000



SHAKEPROOF LOCKWASHERS

INTERNAL TEETH

Cat. No.	Screw Size	Std. Pkg.
6355	2	1000
6356	3	1000
6357	4	1000
6490	6	1000
6491	8	1000
6492	10	1000
6493	¼	1000
6494	⅜	1000



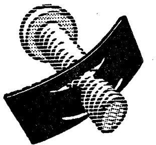
SHAKEPROOF LOCKWASHERS

EXTERNAL TEETH

Cat. No.	Screw Size	Std. Pkg.
6358	4	1000
6359	6	1000
6360	8	1000
6361	10	1000
6362	¼	1000
6363	⅜	1000

See Pages S-43 to S-45 for Birnbach Prices

Birnbach Airplane Insulators • Tube Sockets • Couplings Spacers • Speed Nuts • Tool Kits

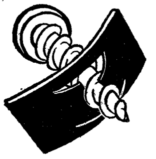


BIRNBACH SPEED NUTS

TEMPERED STEEL PARKERIZED

These speed nuts are self locking and help reduce assembly time. They prevent loosening from vibration, eliminate need of washers and stand up under abuse. For use with machine screws.

Cat. No.	Thread Size	Length	Width	Thickness	Std. Pkg.
6350	4-36	3/8"	1/4"	.012"	1000
6351	6-32	7/16"	9/16"	.017"	1000
6352	8-32	1/2"	5/16"	.017"	1000
6353	10-24	5/8"	3/8"	.022"	1000
6354	¼-20	3/4"	1/2"	.025"	1000



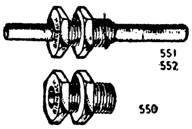
BIRNBACH SPEED NUTS

TEMPERED STEEL PARKERIZED

For use with sheet metal screws.

Cat. No.	Thread Size	Length	Width	Thickness	Std. Pkg.
6350A	4A	3/8"	1/4"	.022"	1000
6351A	6A	1/2"	5/16"	.025"	1000
6352A	8A	5/8"	13/32"	.028"	1000
6353A	10A	3/4"	1/2"	.031"	1000
6354A	14A	7/8"	9/16"	.037"	1000

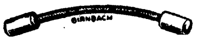
BIRNBACH FRONT PANEL BEARING



Cadmium plated brass for panels up to ⅜" in thickness and for ¼" dia. shafts. The No. 551 and No. 552 are complete assemblies of the No. 550 and ¼" dia. brass shaft cadmium plated.

Cat. No.		Std. Pkg.
550	Front Panel Bearing	50
551	Front Panel Bearing, ¼" shaft, 3" long	50
552	Front Panel Bearing, ¼" shaft, 6" long	25

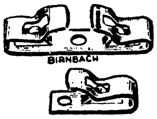
BIRNBACH FLEXIBLE SHAFTS



With couplings and these flexible shafts, locations can be made with ease on an offset and angles up to 90 degrees. The flexible shafts are made of phosphor bronze and fitted into ¼" dia. hubs.

Cat. No.		Std. Pkg.
553	Flexible Shaft 3" long	25
554	Flexible Shaft 6" long	25

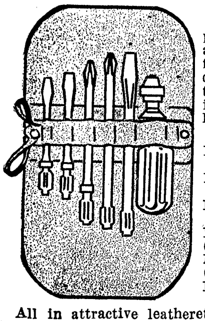
BIRNBACH SPRING WIRE CLIPS



They will hold a wire up to No. 10 B&S Gauge in a secure contact. All clips are brass nickel plated.

Cat. No.		Length	Width	Mtg. Hole	Std. Pkg.
32A	Spring Clip	¾"	5/16"	6	100
32	Spring Clip	1"	⅜"	10	100
33	Twin Clip	1¾"	⅜"	10	50

6 PIECE SCREW DRIVER SET



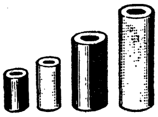
Unbreakable, shock-proof, non-inflammable amber handle, with flange aluminum screw chuck. Blades hardened, tempered and fully polished. For most TV and Radio work.

	Blade Size
1—Cabinet Blade	⅛ x 3¼
1—Cabinet Blade	3/16 x 3½
1—Mechanic Blade	¼ x 5½
1—Recessed Head (#1) Blade	3/16 x 4¼
1—Recessed Head (#2) Blade	¼ x 4¼
1—Amber Handle with Chuck	

All in attractive leatherette case. Wt. 5 lbs.

Cat. No. 3618..................Std. Pkg. 12

BRASS BUSHING AND SPACERS

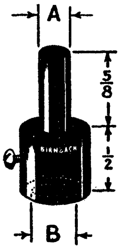


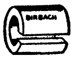
For raising sub panels, chassis, condensers, transformers, etc. Hole will accommodate a No. 6 or No. 8 screw.

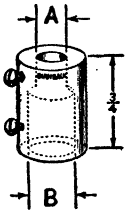
For No. 6 Cat. No.	For No. 6 Std. Pkg.	Length	For No. 8 Cat. No.	For No. 8 Std. Pkg.
		¼" O.D.		
1125	100	¼"	1130	100
1126	100	⅜"	1131	100
1127	100	½"	1132	100
1128	100	¾"	1133	100
1129	100	1"	1134	100
		⅜" O.D.		
1135	100	¼"	1140	100
1136	100	⅜"	1141	100
1137	100	½"	1142	100
1138	100	¾"	1143	100
1139	100	1"	1144	100

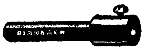
INSULATED BUSHINGS & SPACERS

For No. 6 Cat. No.	For No. 6 Std. Pkg.	¼" O.D. Length	For No. 8 Cat. No.	For No. 8 Std. Pkg.
1145	100	¼"	1149	100
1146	100	⅜"	1150	100
1147	100	½"	1151	100
1148	100	¾"	115?	100









SHAFT COUPLINGS, REDUCERS AND EXTENDERS

By the use of these units all ¼" and ⅜" dia. shafts and knobs can be assembled together. The insulated units are for use where electrical isolation is desired. Furnished complete with set screws shown.

SHAFT COUPLINGS

Brass No.	Insul. No.	Shaft A	Hole B
534	634	¼"	¼"
535	635	¼"	⅜"
536	636	⅜"	¼"

537—Reducer for ⅜" dia. hole to ¼" dia. shaft

COUPLINGS

Brass No.	Insul. No.	Shaft A	Hole B
531	631	¼"	¼"
532	632	¼"	⅜"
533	633	⅜"	⅜"

EXTENDERS

	538 Brass	539 Insul.
Length	1¾"	1¾"
Hole I.D.	¼"	¼"
Shaft O.D.	¼"	¼"

BRASS SHAFTING

No.	Dia.	Length
540	¼"	6"
541	¼"	12"
542	⅜"	8"

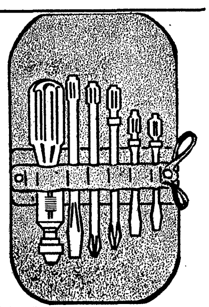
FIBRE SHAFTING

No.	Dia.	Length
543	¼"	6"
544	¼"	12"
545	⅜"	8"

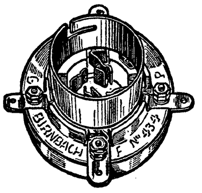
RATCHET HANDLE SCREW DRIVER SET

6 piece set. Same as above but with ratchet amber handle. (3 way: left, right and rigid). Weight: 5 lbs.

Cat. No.	Std. Pkg.
3619	12



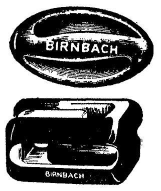
TRANSMITTING TUBE SOCKETS



50-Watt socket has extra heavy side wiping phosphor bronze contact spring with the filament spring having a double contact to safely carry the heavy current.

	Std. Pkg.
434—50 Watt	25
435—10 Watt	25

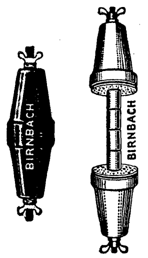
AIRPLANE INSULATORS



Used on mobile and aircraft and also with guy wire on TV installations. Shaped for the least air resistance; have very high tensile strength and low loss. Nos. 473 and 474 made of white glazed low absorption porcelain. No. 472 made of wetprocess glazed brown

Cat. No.		St. Pkge.
472—2¼"	(brown)	25
473—2"	(white)	100
474—1½"	(white)	100

LEADIN INSULATORS

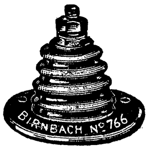


Each cone 2¾" high, made of low absorption, vitrified glazed porcelain. The Nos. 4237 and 4238 have insulating bushings to insulate rod that goes through the wall. 2 bushings are included, ¼" and ½" long, allowing complete insulation of the threaded rod of any length in multiples of ¼". Complete with brass nickel plated hardware and lead and cork washers to permit water-tight seal.

Cat. No.	Description	Std. Pkg.
4235	10" Rod	10
4236	15" Rod	10
4237	10" Rod with bushings	10
4238	15" Rod with bushings	10

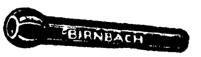
Individually Boxed

BEE-HIVE STANDOFF



Base measures 2" dia. with 3 holes on a 1⅝" circle, for No. 6 screws. Complete with 12-24 nickel plated brass screw and nuts. No. 766J has a No. 403 Jack. Available white or brown glaze.

Cat. No.	Hardware	Std. Pkg.
766	Standoff Insulator, 12-24 Screw	10
766J	Jack Type, No. 403 Jack	10



PORCELAIN TUBES

To bring a lead-in into a building. ¾" diameter hole required.

Cat. No.	Std. Pkg.
42—2"	100
43—3"	100
44—4"	100
46—6"	100
48—8"	100

BIRNBACH THREADED RODS

These brass nickel plated threaded rods are standard parts of our insulator assemblies.

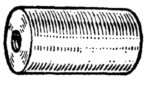
Cat. No.	Length	Thread	Std. Pkg.
16	4"	¼-20	1000
17	5½"	¼-20	1000
18	10"	¼-20	1000
113	15"	¼-20	1000
114	1⅜"	10-32	1000
115	1⅝"	10-32	1000
116	2¼"	10-32	1000
117	8"	10-32	1000
118	8"	8-32	1000
119	8"	6-32	1000
15	2"	6-32	1000

See Pages S-43 to S-45 for Birnbach Prices

Birnbach Ceramic • Lucite • Steatite Insulators • Standoff Pillar • Cone • Feedthru • Button • Antenna

BIRNBACH STEATITE PILLARS

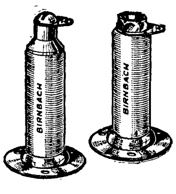
(Without Hardware)

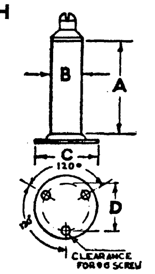


In many constructions, these unmounted threaded steatite pillars will facilitate assembly because of the one hole mounting and parallel mounting surfaces. They are made of glazed Steatite with threaded holes on both sides.

Cat. No.	Height	Dia.	Threaded Hole	Std. Pkg.
443	½	½	6-32	100
444	¾	½	6-32	100
445	1	½	6-32	100
446	1½	½	6-32	100
447	2½	½	6-32	100
448	2½	¾	¼-20	50
449	4	¾	¼-20	50

BIRNBACH STEATITE PILLARS

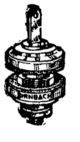




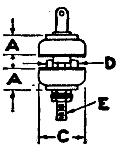
Have great tensile strength with extremely low losses at very high frequencies. Tapped on both ends; supplied with nickel plated mounting base and top hardware.

Cat. No.	Height A	Std. Pkg.	Dimen. B	Base C	Dia. D	Hardware
450	1″	10	½″	1⅛″	⅞″	6-32
450J	1″	10	½″	1⅛″	⅞″	403 Jack
451	1½″	10	½″	1⅛″	⅞″	6-32
451J	1½″	10	½″	1⅛″	⅞″	403 Jack
452	2½″	10	½″	1⅛″	⅞″	6-32
452J	2½″	10	½″	1⅛″	⅞″	403 Jack
453	2½″	5	¾″	1 9/16″	1 3/16″	¼-20
453J	2½″	5	¾″	1 9/16″	1 3/16″	395 Jack
454	4″	5	¾″	1 9/16″	1 3/16″	¼-20
454J	4″	5	¾″	1 9/16″	1 3/16″	395 Jack

BIRNBACH STEATITE BUTTON



This specially designed steatite button is intended for use to simplify wiring and to be used as a binding post or a binding post insulator, or as a standoff insulator. Attention is called to the uniqueness of the design which prevents either section of the insulator from turning in respect to the special screw. The specially designed screw locks both sections.

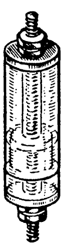


Cat. No.	Std. Pkg.
457—Steatite Button	25

Dimensions

A	C	D	E
5/16″	¾″	½″	6-32

"LUCITE" FEEDTHRU INSULATORS

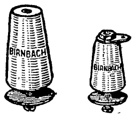


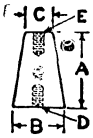
These feedthru insulators are ideal for bringing high frequency leads thru a panel. They are made of genuine DuPont Lucite. Because of its low loss at high frequency, it is well adapted to insulated elements of high frequency circuits. The ½″ dia. insulators have brass nickel plated 6-32 hardware and the ¾″ dia. insulators, 10-32 hardware.

Cat. No.	Height Above Panel	Insulator Dia.	Mtg. Hole	Bottom Height	Std. Pkg.
377	¼″	½″	5/16″	¼″	25
378	½″	½″	5/16″	¼″	25
379	1″	½″	5/16″	¼″	25
475	1½″	¾″	7/16″	½″	25
476	2″	¾″	7/16″	½″	25

CONE STANDOFF INSULATORS

(STEATITE)



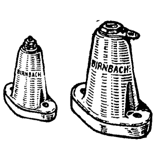


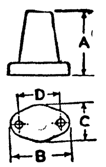
All heights except the No. 430 are available with a Jack or a threaded hole top. Complete with screws, metal and cork washers.

Cat. No.	Height A	Std. Pkg.	Base Dimensions B	C	Threaded Holes D	E
430	⅝″	100	⅝″	7/16″	6-32	6-32
431	1″	50	11/16″	½″	8-32	8-32
431J	1″	50	11/16″	½″	8-32	403 Jack
432	1½″	50	⅞″	⅝″	10-32	10-32
432J	1½″	50	⅞″	⅝″	10-32	403 Jack
433	2¾″	25	1¼″	¾″	¼-20	¼-20
433J	2¾″	25	1¼″	¾″	¼-20	395 Jack

Mounting Hole: No. 430—5/32″; 431 & 431J—3/16″; 432 & 432J—7/32″; 433 & 433J—9/32″.

BIRNBACH STANDOFF INSULATORS



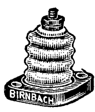


Highly vitrified low absorption glazed porcelain. No washers are necessary for mounting except No. 405 and No. 966. All brass nickel plated hardware is supplied.

Cat. No.	Height A	Std. Pkg.	Base Dimensions B	C	D	Mtg. Holes
405	⅝″	100	1″	17/32″	11/16″	5/32″
965	1″	50	1¼″	¾″	13/16″	5/32″
966	1″	50	1⅜″	⅞″	1″	5/32″
966J	1″	50	1⅜″	⅞″	1″	5/32″
866	1½″	25	1¾″	1⅛″	1¼″	5/32″
866J	1½″	25	1¾″	1⅛″	1¼″	5/16″
866SJ	1½″	10	1¾″	1⅛″	1¼″	5/32″
4275	2¾″	10	2¾″	2″	2⅛″	¼″
4275J	2¾″	10	2¾″	2″	2⅛″	¼″
4450	4½″	5	3⅝″	2½″	2⅝″	9/32″
4450J	4½″	5	3⅝″	2½″	2⅝″	9/32″

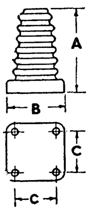
Hardware: No. 405—6-32; 965 & 966—8-32; 966J & 866J—No. 403 Jack; 866—10-32; 866SJ, 4275J & 4450J—No. 399 Jack; 4275 & 4450—¼-20.

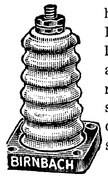
BIRNBACH METAL BASE INSULATORS



No. 867

Extremely long leakage paths due to the corrugated surface is one of the important characteristics. Made from high tensile strength low absorption porcelain smoothly glazed all over. Supplied with nickel plated brass screws and nuts and cadmium plated drawn steel bases.



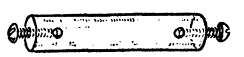


No. 4176

Cat. No.	Height A	Std. Pkg.	Base Dimension B	C	Mounting Screw D
867	1⅜″	25	1⅞x1 5/16″	1½″	2 #8
867J	1⅜″	25	1⅞x1 5/16″	1½″	2 #8
4176	2¾″	10	1¾x1¾″	1⅜″	4 #10
4176J	2¾″	10	1¾x1¾″	1⅜″	4 #10
4451	4½″	5	2¼x2¼″	1¾″	4 #10
4451J	4½″	5	2¼x2¼″	1¾″	4 #10

Hardware: No. 867—10-32; 867J—No. 403 Jack; 4176 & 4451—¼-20; 4176J & 4451J—No. 395 Jack.

BIRNBACH LUCITE SPEADERS



DuPont Lucite rod which has a very low loss at radio frequencies. Very low water absorption. Holes are drilled to take a No. 12 wire. A screw at the end of the spreader locks the wire in position.

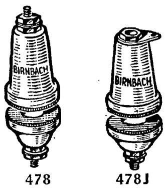
Cat. No.	Wire-Spacing	Std. Pkg.
466	2″	25
437	4″	25
438	6″	25

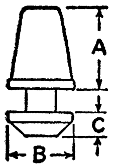
BIRNBACH LUCITE RODS

Cat. No.	Length	Dia.	Cat. No.	Length
455	12″	¼″	455A	48″
459	12″	⅜″	459A	48″
460	12″	½″	460A	48″
461	12″	¾″	461A	48″

BIRNBACH FEEDTHRU INSULATORS

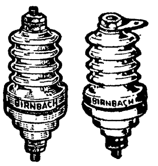
Made of highly vitrified, low absorption porcelain smoothly glazed. Long insulating sleeves on the lower part of the insulator. Brass nickel plated hardware.

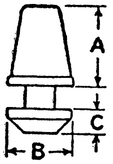




Cat. No.	Height A	Std. Pkg.	Dimensions B	C	Mtg. Hole	Hardware
458	⅝″	50	11/16″	¼″	5/16″	6-32
478	1″	25	13/16″	5/16″	7/16″	10-32
478J	1″	25	13/16″	5/16″	7/16″	403 Jack
4125	1¼″	25	⅞″	⅜″	7/16″	10-32
4125J	1¼″	25	⅞″	⅜″	7/16″	403 Jack
4234	2¾″	10	2″	1″	¾″	¼-20
4175	2¾″	10	1¼″	¾″	⅝″	¼-20
4175J	2¾″	10	1¼″	¾″	⅝″	394 Jack

BIRNBACH CORRUGATED FEEDTHRU INSULATORS

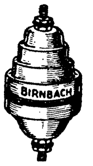




Have more than twice the leakage path of the straight type because of increased surface of the corrugations. Brass nickel plated hardware and cork mounting washers supplied.

Cat. No.	Height A	Std. Pkg.	Dimensions B	C	Mtg. Hole	Hardware
479	1⅜″	25	1¼″	11/16″	9/16″	10-32
479J	1⅜″	25	1¼″	11/16″	9/16″	403 Jack
4276	2¾″	10	1⅝″	1″	¾″	¼-20
4276J	2¾″	10	1⅝″	1″	¾″	394 Jack
4452	4½″	5	2⅛″	1½″	1″	¼-20
4452J	4½″	5	2⅛″	1½″	1″	394 Jack

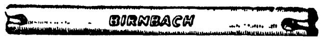
BIRNBACH HIGH VOLTAGE FEEDTHRU INSULATOR



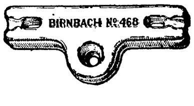
High dielectric and mechanical strength. The extra long leakage path is made possible by the corrugations on the top insulator. The bottom sleeve tapers from a base dia. of 1-3/16″.

Cat. No.	H.	Std. Pkg.	Base Dia.	Mtg. Hole	Hardware
4233	1⅝″	10	2″	1¼″	¼-20

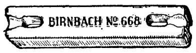
BIRNBACH ANTENNA INSULATORS



470—7 inch 471—12 inch

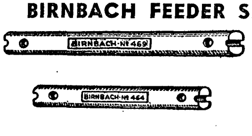


Low moisture absorption. The leakage path is long and the cross section is small. White glaze overall.



Cat. No.	Std. Pkg.
Center Insulator	
468—4½″ long	10
668—4¼″ long	25
470—7″ long	10
471—12″ long	5

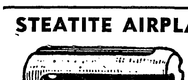
BIRNBACH FEEDER SPREADERS



⅜″ x ½″. Vitrified, low absorption, high tensile strength porcelain with smooth white glaze overall.

Cat. No.	Std. Pkg.
462—Spreader, 2″ long	25
464—Spreader, 4″ long	25
469—Spreader, 6″ long	25

STEATITE AIRPLANE INSULATORS



It is 1½″ long and ½″ diameter.

463.....Std. Pkg. 25

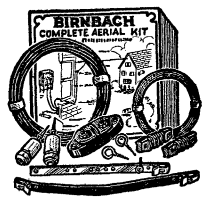
See Pages S-43 to S-45 for Birnbach Prices

Birnbach

Antenna • All Wave Kits • Ignition Filters Resistance, Phone Cords

BIRNBACH

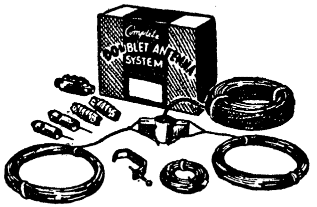
BIRNBACH ANTENNA KITS



Cat. No. 503 — AERIAL KIT

75 ft. 7/24 Copper Wire
35 ft. R.C. Lead-in Wire
1—No. 650 Lightning Arrestor
1—No. 600 Ground Clamp
1—No. 611 Lead-in Strip
2—No. 666 Porcelain Insulators
2—No. 669 Glazed Nailit Knobs
2—No. 665 Galvanized Screw Eyes
Std. Pkg. 24 Weight 65 lbs.

UNIVERSAL ALL WAVE KIT



The No. 149 All Wave Antenna Kit is designed for efficient operation with all types of receivers.

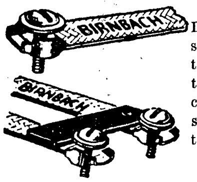
List of Parts:

2—30 ft. coils 7/24 bare copper aerial wire
1—50 ft. coil Stranded Transmission Cable
1—Transfer unit
2—Porcelain Insulators
2—All Wave Lead-in Strip
1—Ground Clamp
2—Glazed Nailit Knobs

The above completely assembled for simple installation.

Cat. No.	Std. Pkg.
149—Universal All Wave Kit	24

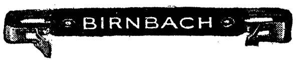
SCREW TERMINAL LEAD-IN STRIP



Locks wire together with strip in a secure connection assuring perfect contact. Has weather-proof covering over a copper strip with cadmium plated terminals. White or Black.

Cat. No.	Std. Pkg.
617—Lead-in Strip	50
2617—Doublet Lead-in Strip	25

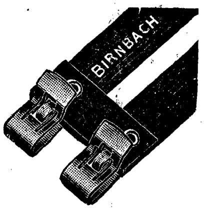
BIRNBACH LEAD-IN STRIPS



Covered with a heavy cotton braid and weatherproofed, with numerous coats of lacquer. Clips are riveted and soldered at both ends.

Cat. No.	Std. Pkg.
611—Black 12" long	50
613—White 12" long	50

DOUBLET LEAD-IN STRIPS



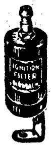
Consists of two strips held parallel by a piece of bakelite. This assembly prevents the strips from moving back and forth.

Cat. No.	Std. Pkg.
2611	25

Black or White

BIRNBACH IGNITION FILTERS

Completely eliminate all ignition and high tension circuit interference. Copper wound inductance accounts for the low resistance of 120 ohms for the Ignition Filter. Due to the low resistance of these filters, less gasoline is consumed than when high resistance filters are used.



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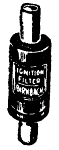

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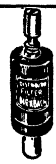
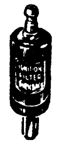
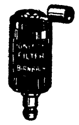


352



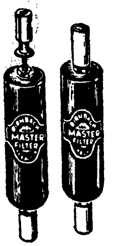
353



359

Cat. No.	Std. Pkg.
350—Ignition Filter (Bracket Type)	25
351—Ignition Filter (Cable Type)	25
352—Distributor Filter	10
353—Ignition Filter (Screw Type)	25
359—Ignition Filter (Slip-on Type)	25

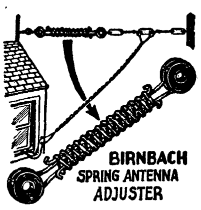
BIRNBACH MASTER FILTER



Eliminates all ignition interference, does away with necessity of having filter for each spark plug. Distributor type for easy insertion into distributor head. Cable type to be placed into the distributor lead where impossible to insert into distributor head.

Cat. No.	Std. Pkg.
354—Cable or Distributor Type	12

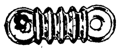
AERIAL SPRING ADJUSTER



Corrects excessive sag of doublet antennas. Prevents swinging and swaying, eliminates resultant fading of signals. Consists of two hooks with porcelain rings, powerful compression spring. Cadmium plated thruout.

Cat. No.
765—Birnbach Aerial Spring Adjuster

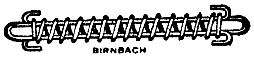
BIRNBACH GLASS INSULATORS



Made of crystal clear glass and have a smooth surface which prevents dirt or ice from collecting.

Cat. No. 00—3" Std. Pkg. 100

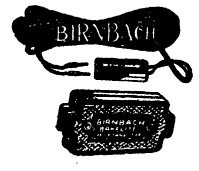
BIRNBACH AIRPLANE SPRING



Rust-proof steel, cadmium plated thruout. Compact compression spring for taking up slack in guy wire due to pull or strain on antenna.

Cat. No.	Std. Pkg.
764—Airplane Spring	100

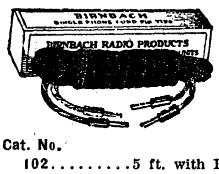
SPEAKER EXTENSION CORDS



These extension cords are constructed of stranded annealed copper wire insulated with rubber over which a brown mercerized cotton braid is closely woven. Complete with easily attached bakelite connector.

Cat. No.	
166	10 ft. Cord
120	20 ft. Cord
151	Bakelite Extension Cord Connector Only

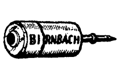
SPEAKER CORDS



Stranded wire, insulated with rubber, with closely woven brown mercerized cotton overall.

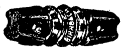
Cat. No.	
102	5 ft. with Pin Tips on both ends
103	5 ft. with Pin and Spade Tips
106	5 ft. with Pin and Eye Tips
413	10 ft. with Pin and Eye Tips

BIRNBACH NAIL-IT KNOBS



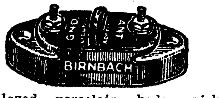
Cat. No.	Std. Pkg.
669—Glazed	100

BIRNBACH PORCELAIN INSULATORS



Cat. No.	Std. Pkg.
666—White	100

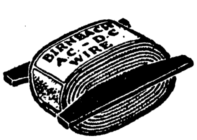
BIRNBACH LIGHTNING ARRESTOR



Glazed porcelain body, nickel-plated hardware. Outdoor or indoor use. Mounting screws and instructions.

Cat. No.	Std. Pkg.
650—Lightning Arrestor	50

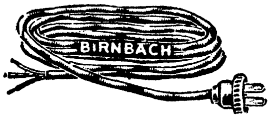
AC-DC ANTENNA WIRE



Low cost, flexible, stranded cotton braided wire ideal as an indoor antenna for AC-DC Universal Receivers. Colors Brown or White.

Cat. No.	Ft.
2125	25 Ft. Hank
2100	100 Ft. Spool
2500	500 Ft. Spool
2000	1000 Ft. Spool

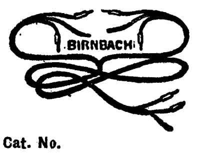
AC-DC RESISTANCE CORDS



Consists of a line cord into which a third element has been incorporated. The voltage dropping resistor reduces the voltage to that needed for the filament of the tubes. The 135, 160, 180 and 200-ohm cords can also be used for single light 20 and 15-watt fluorescent fixtures. All 6-ft. long, color coded with tinned leads and all rubber plugs. All individually boxed.

Cat. No.	Cord Rating	Sets Having Following Tubes:
35	135 ohm	25Z5-43-4 (6.3 volt tubes)
36	160 ohm	25Z5-43-3 (6.3 volt tubes)
34	180 ohm	12Z3-43-4 (6.3 volt tubes)
49	200 ohm	25Z5-43-2 (6.3 volt tubes)
37	220 ohm	12Z3-43-3 (6.3 volt tubes)
41	250 ohm	12Z3-43-2 (6.3 volt tubes) 25Z5 -3 (6.3 volt tubes)
38	290 ohm	12Z3 -3 (6.3 volt tubes)
45	300 ohm	
39	330 ohm	-4 (6.3 volt tubes) 12Z3 -2 (6.3 volt tubes)
40	350 ohm	12Z3 -1 (6.3 volt tubes)
47	390 ohm	-2 (6.3 volt tubes)
58	560 ohm	For 3-way portables, AC-DC battery sets
59	960 ohm	Wherever 45Z3 rectifier is used (All pocket type radios)
125	220-110 volt	Step down reducing cords with Continental Plug

HEADSET PHONE CORDS



These cords are closely woven and are very durable and strong. Standard cords listed match practically all headsets manufactured.

Cat. No.	
104	5 ft. with Pin Tips on both ends
105	5 ft. with Pin and Spade Tips
107	5 ft. with Pin and Eye Tips
108	8 ft. with Pin and Eye Tips
109	10 ft. with Pin and Eye Tips

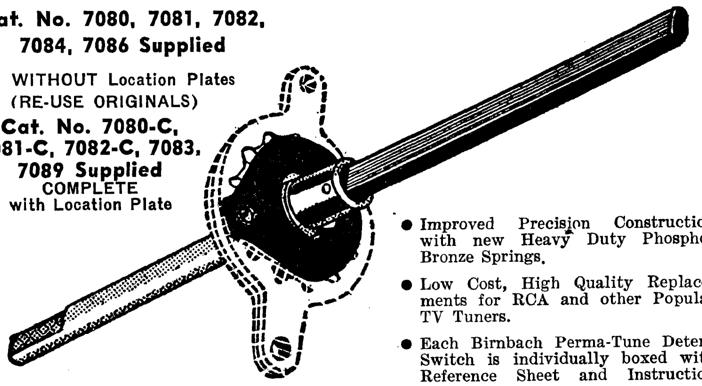
See Pages S-43 to S-45 for Birnbach Prices

Birnbach

Perma-Tune Detent Switch Controls
TV Antenna Accessories

Cat. No. 7080, 7081, 7082, 7084, 7086 Supplied
WITHOUT Location Plates
(RE-USE ORIGINALS)

Cat. No. 7080-C, 7081-C, 7082-C, 7083, 7089 Supplied
COMPLETE
with Location Plate



- Improved Precision Construction with new Heavy Duty Phosphor Bronze Springs.
- Low Cost, High Quality Replacements for RCA and other Popular TV Tuners.
- Each Birnbach Perma-Tune Detent Switch is individually boxed with Reference Sheet and Instruction Sheet.

*CAT. No. 7080 Without Location Plate (Short Shaft)
CAT. No. 7080-C, COMPLETE with Location Plate

Replaces RCA Part No. 71463 (Short Shaft)

621TS 648PV 8PCS41
630TS 648PTK 8TCS41C
641TV 8TV41

CAT. No. 7081 Without Location Plate (Long Shaft)
CAT. No. 7081-C, COMPLETE with Location Plate

Replaces RCA Part No. 72743 (Long Shaft)

RCA CHASSIS NUMBERS:
721TS 721TCS 730TCS 730TV2 8TS30

CAT. No. 7082 Without Location Plate (Extra Long Shaft)
CAT. No. 7082-C, COMPLETE with Location Plate

Replaces Admiral Part No. 76B14 (Extra Long Shaft)

As used in late series Admiral chassis Models 30A and 8C. Some early model Admirals use short shaft—Admiral Part No. A158294A5. The Birnbach replacement for this is Cat. No. 7080.

Also replaces Capehart Part No. 461-P12
Also replaces RCA Part No. 71531

REPLACEMENT DETENTS FOR TELETONE

Some Teletone models use detents with either 3/16″ or ¼″ shaft diameters.

Chassis numbers do not indicate which size shaft was used, so check shaft diameter before ordering.

Cat. No. 7084 (without location plate)—Replaces ¼″ diam. brass shaft detent.

Cat. No. 7086 (without location plate)—Replaces $\frac{3}{16}$″ brass shaft detent. (Thin)

CAT. No. 7088—(Magnavox)

Replaces Magnavox Part No. 633722-1

CAT. No. 7089—(All Phenolic Shaft)

Replaces RCA Part No. 75162
(COMPLETE)

For use with RCA Chassis Numbers:

2T51 6T54 6T74 6T79 6T87
2T60 6T65 6T76 6T84 9T57
2T81 6T71 6T77 6T86 9T89

CAT. No. 7083—BIRNBACH PERMA-TUNE DETENT SWITCH

COMPLETE ALL-PHENOLIC SHAFT — RCA Part No. 73440 Replacement

This complete All-Phenolic Shaft Detent No. 7083 is designed for use with RCA TV Tuner Type No. 74941, 73435, and 74571.

The following is a list of RCA Chassis Models using the Birnbach Detent No. 7083 and its corresponding RCA TV Tuner Numbers:

RCA TV Tuner Type No. 73435 Chassis Numbers:				RCA TV Tuner Type No. 74941 Chassis Numbers:			RCA TV Tuner Type No. 74571 Chassis Numbers:
T120	8TR29	8TV321	9TC247	S1000	TC168	9TC240	9T246
T121	8TK29	8TV323	9TC249	T164	8TC270	9TC270	9T256
TC124	8T241	9T240	9TW309	TC165	8TC271	9TC272	T100
TC125	8T243	9T240K	9TW333	TC166	8TK320	9TC275	
TC127	8T244	9TC245		TC167	9TW390		

*Other TV Sets Using BIRNBACH CAT. No. 7080 DETENT Replacement for RCA Part No. 71463:

AIRKING
A1000
A1001
A2000
A2001
A2002

DE WALD
BT100
CT101
CT102
CT103
CT104

CORONADO
94TV2-43-8970
94TV2-43-8971
94TV2-43-8985
94TV2-43-8986

CAPEHART
610P
651P
661P
501P
502P
504P
461P

EMERSON
545
585
608
617
618

FADA
TV30
930
899
880
799

GAROD
920
940
1020
1030
1120
1130
1220
1230

OLYMPIC
TV104
TV105
TV106
TV922
TV923
TV-928
TV944
TV945
TV946

PACKARD BELL
894
1091
1291
1391
3191
3192
3193
3194
3381
4580
4691

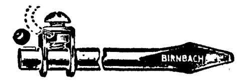
PHILMORE
PC030

REGAL
1030
1031
1230
1631

TECH-MASTER
930
1530
1630

TRUETONE
D1991
D1993
D1994

US TELEVISION
T10823
T10925
T12823
T15823
T15925
CFM15925
KRF15933

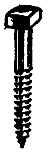


BIRNBACH GROUND RODS

Highly efficient. For FM and TV antennas.

Cat. No.	St. Pkge.
616—4 ft.	12
618—6 ft.	12
619—8 ft.	12

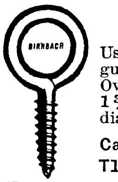
BIRNBACH LAG BOLTS



Galvanized steel. Screws easily into wood, brick, etc. For permanently holding brackets, etc., in place. Available in four sizes—1″, 1½″, 2″, 3″. Specify size.

Cat. No.	St. Pkge.
7043—1″	100
7043—1½″	100
7043—2″	100
7043—3″	100

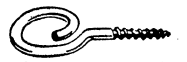
SCREW EYE BOLT



Use this sturdy, steel eye-bolt for guy wire on TV mast installation. Overall length 2½″. Shank length 1⅜″. Thread length 1$\frac{1}{16}$″. Inside diameter $\frac{23}{32}$″.

Cat. No.	St. Pkge.
T10	100

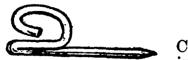
BRIDLE RING



Ruggedly constructed. Will stand up under maximum strain. Made of galvanized steel.

Cat. No.	St. Pkge.
7037	100

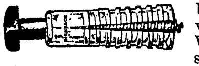
DRIVE RING



Can be used for securing guy wire. Made of steel galvanized. When hammered in at an angle will remain secure under any condition.

Cat. No.	St. Pkge.
7036	100

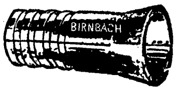
LAG SCREW EXPANSION SHIELDS



Used widely in television installations. Will fit ¼″ lag screws. Completely rust-proofed. Provides greater load strength and the outside corrugations add additional strength on masonry. T17 is used with the Birnbach No. 7043—(1″). T18 is used with No. 7043—(1½″) lag screw.

Cat. No.	St. Pkge.
T17—1″ x ½″ O.D.	100
T18—1½″ x ½″ O.D.	100

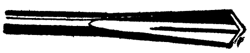
BIRNBACH LEAD ANCHORS
FOR WOOD SCREWS



Small installation holes can be made with these anchors. Very popular for wood screws. Takes No. 10-12-14 wood screw and are $\frac{5}{16}$″ O.D. Will fit ¼″ and $\frac{5}{16}$″ holes.

Cat. No.	St. Pkge.
T19—(¾″ long)	100
T19—(1″ long)	100
T19—(1½″ long)	100

BIRNBACH STAR DRILLS



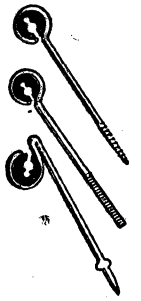
Made of hand tempered and hand forged high grade tool steel for hand drilling in brick, stone and concrete.

Cat. No.	St. Pkge.
7049A—¼″—12″ long	12
7049B—$\frac{5}{16}$″—12″ long	12
7049 —⅜″—12″ long	12
7050 —½″—12″ long	12

See Pages S-43 to S-45 for Birnbach Prices

Birnbach TV Standoffs • Strap Clamps • Couplers • Knobs Porcelain Tubes • Winding Machine

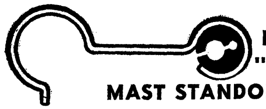
BIRNBACH



UNIVERSAL SCREW EYE STANDOFFS

Insulated twin lead standoff constructed of low loss polyethylene and universal for both 300 ohm line and RC59U cable. Completely weatherproofed. No. 1965—3½" machine screw standoff designed for mounting in metal mast—uses a 10-32 thread. No. 1968 — 3½" Drivin Insulators.

Cat. No.	St. Pkge.
1963—3½"	100
1964—7½"	100
1967—12½"	100
1965—3½" M.S.	100
1968—3½" Drive-in	100



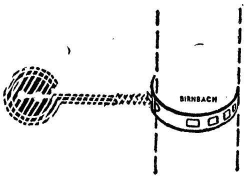
BIRNBACH "SNAP-ON" MAST STANDOFF CLAMP

Snaps on masts in a jiffy. One piece construction for added strength; has universal polyethylene insert for both twin lead and coax cable. Constructed of .120 spring alloy music wire, heavily zinc plated for preventing rust.

Cat. No.	St. Pkge.
T100—to fit 1" masts 4 5/16" long	100
T101—to fit 1¼" masts 4 7/16" long	100
T102—to fit 1½" masts 4 7/16" long	100

BIRNBACH STRAP CLAMP

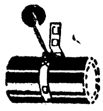
For Standoff Insulator



Just bend this clamp around a mast or vent pipe and screw in any wood screw standoff to tighten. No tools required. Adjustable ⅜" to 2" diam.

Cat. No.	St. Pkge.
629	100

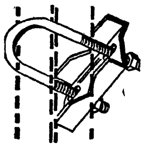
MAST STAND-OFF ASSEMBLY



For fast mounting of twin lead or coaxial cable. Complete with polyethylene universal insert. Fits all size masts from ⅜" to 2" pipes. Fully weatherproofed.

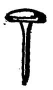
Cat. No. 628.............................St. Pkge. 50

U-BOLT MAST COUPLER



Galvanized steel bracket couples mast securely. Will take two masts. Also permits fast and secure attachment of crossarms to masts up to 1½".

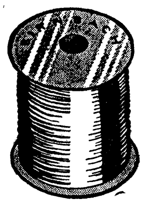
Cat. No. T8....St. Pkge. 50



INSULATED WIRING NAILS

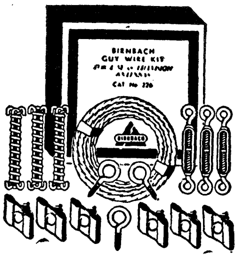
Perfected for twin lead indoors. Low capacity effect. Fully insulated.
Cat No. T42—White or Brown (100 to box) - (1000 to carton)

ALUMINUM GROUND WIRE



Approved method for grounding. (Soft drawn). Size No. 8 (⅛" O.D.) Recommended for use by National Electric Code. For grounding mast to ventpipes, gutters, ground rods, etc. against lightning and electrical disturbances.

Cat. No.	
7061	50 ft. coil
7062	100 ft. coil
7063	500 ft. spool
7064	1000 ft. spool

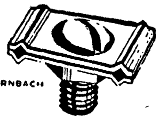


BIRNBACH TV-FM GUY WIRE KIT

Simple and complete directions with each individually boxed kit. Contains 50 ft. 6 strands heavy No. 20 Guy Wire—3 Birnbach No. 764 Springs — 6 Birnbach Vibration-proof No. 762 Clamps, and Guy Wire Ring.

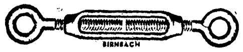
Cat. No.	St. Pkge.
226	24

VIBRATION-PROOF GUY WIRE CABLE CLAMP



For positive grip on guy wire. Weatherproofed.
762—Guy Wire Clamp....St. Pkge. 100

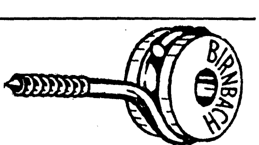
BIRNBACH TURNBUCKLES



Constructed of rust-proofed, galvanized steel. Used to take up any slack guy wire. Convenient, durable, dependable.

Cat. No.	Sizes of Turnbuckles	St. Pkge.
763—3	3½"	100
763—5	5½"	100
763—7	7½"	50

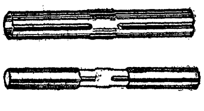
BIRNBACH SCREW EYES



Porcelain screw eye handles up to 300 ohm line. Bakelite screw eye can take any size coaxial cable.

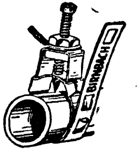
Cat. No.	St. Pkge.
PORCELAIN EYES	
663— 3"	100
664— 7"	50
667—12"	25
BAKELITE EYES	
963— 3"	100
964— 7"	50
967—12"	25

MAST COUPLERS



Will join 2 sections of mast easily, quickly and permanently, allowing an additional mast to be added without any trouble. Takes 1¼" Masts.

Cat. No. T103—Mast Coupler.......St. Pkge. 25

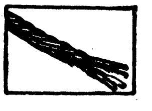


SADDLE GROUND CLAMPS

Have hard pointed screw which digs through rust and makes a positive contact. Fits ⅜" to 2" pipe.

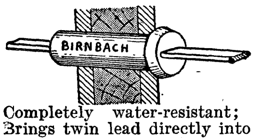
Cat. No. 625.....St. Pkge. 50

ECONOMY BRAND GUY WIRE



4 strands of No. 20 high tensile twisted steel galvanized wire. Fully weather-proofed. 225 lbs. tensile strength.

Cat. No.		Cat. No.	
20A	50 ft.	220A	500 ft.
221A	100 ft.	1220A	1000 ft.

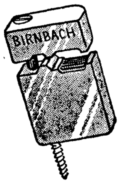


TWIN LEAD PORCELAIN TUBE

Completely water-resistant; fits ¾" hole. Brings twin lead directly into house. Lengths specified are from underhead.

Cat. No.	St. Pkge.
T44—4"	100
T46—6"	100
T48—8"	50

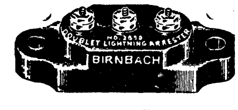
TV PORCELAIN SCREW TWIN-LEAD KNOB



Use this standoff insulator for keeping line away from wall and to anchor the end of the line. Complete with screw.

Cat. No.	St. Pkge.
T669—Screw Twin-Lead Knob	100

DOUBLET LIGHTNING ARRRESTOR

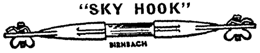


Air gap type, accepted means of protecting doublet antennas from lightning. Complete with mounting screws. Instructions printed on box.

Cat. No. 2650....................St. Pkge. 25

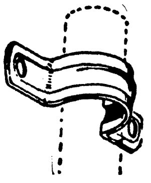
ANTENNA STABILIZER

"SKY HOOK"



Used on conical antennas to take the chatter and wow from the vibrating elements. Superior rigid universal construction handles various sized elements; prevents loosening and breakage of dipoles.

Cat. No. T104—Antenna Stabilizer...St. Pkge. 50

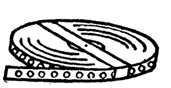


PIPE HANGERS

Galvanized steel. Can be used for fastening poles, masts to walls, roofs, gables, etc. Two sizes: 1", 1¼"; specify size.

Cat. No.	St. Pkge.
7038	100

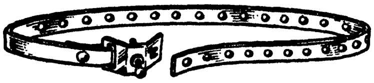
PERFORATED HANGER STRAPPING



For mounting Antenna Masts to various odd shaped objects such as chimneys, towers, etc. Made of ¾" x .023 galvanized steel strap. Tough but flexible.

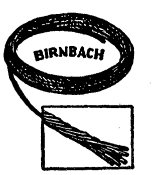
7032— 12 ft. Coil—Strapping.....St. Pkge. 25
7033—100 ft. Coil—Strapping.....St. Pkge. 8

VENT PIPE MOUNTING STRAP



For securing poles of television or mast antennas to vent pipes. Cadmium plated steel, 24" long.

Cat. No. 626....................St. Pkg. 25



GUY WIRE

Galvanized steel stranded twisted wire. Made of 6 strands No. 20. Fully weather-proofed. 450 lbs. tensile strength.

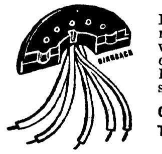
Cat. No.	
19	25 ft. coil
20	50 ft. coil
221	100 ft. coil
220	500 ft. spool
1220	1000 ft. spool

See Pages S-43 to S-45 for Birnbach Prices

Birnbach TV Accessories • Twin Lead • Loom Microphone Connectors

BIRNBACH

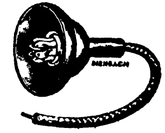
HALF-MOON DUO-DECAL SOCKET



For CR Television tubes. Solid moulded black bakelite provides 100% insulation around clip and lead. Multi-colored lead-in wires. 19" leads supplied.

Cat. No. **St. Pkge.**
T20—Duo-Decal Socket...25

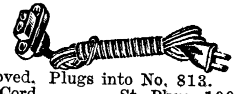
Hi-Voltage Anode Cap with Lead



Dependable protection from high voltages found on cathode ray tubes. Supplied with 18" lead.

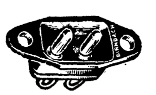
Cat. No. **St. Pkge.**
T14—Hi-Volt Anode Cap with Lead..... 25
For RCA, G.E., and Sylvania Tubes.

TELEVISION SAFETY CORD



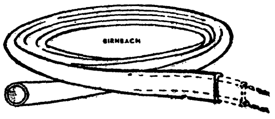
6 Ft. UL approved. Plugs into No. 813.
815—TV Safety Cord..............St. Pkge. 100

MALE AC INTERLOCK PLUG



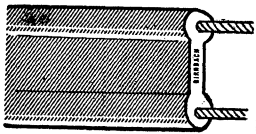
Designed to mount on TV receiver cabinet and serves as socket for Safety Cord No. 815.
813—AC Interlock Plug St. Pkge. 100

CLEAR VINYL TUBING FOR TV



For 300 ohm line. Protects it from grounding when going over corners and eaves of buildings. Waterproofs line and eliminates loss of signal.

Cat. No. **St. Pkge.**
321BC................100 ft. coils..................8

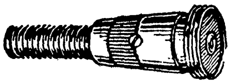


TWIN-LEAD 300 OHM TRANS-MISSION LINE

FM - Television

Smooth Polyethylene insulation resists water, alkalies, oil, acids and abrasions—superior in resistance to sunlight and moisture.

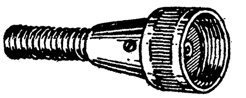
Cat. No.		St. Pkge.
7028—	50 ft. coils	25
7029—	100 ft. coils	12
7030—	1000 ft. spool	8



No. 231-MC Microphone Connector

Made of milled brass and chrome plated. Wire secured by threading thru coiled spring and bending shield back on spring and soldering. Center conductor of cable is threaded thru eyelet of bakelite insulator and soldered. Set screw then tightened completing connection.

Cat. No. **Std. Pkg.**
231-MC—Microphone Connector 100



No. 232-FC Microphone Connector

Milled from brass, chromium plated. Fits all standard male fittings having ⅝-27 thread.

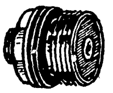
Cat. No. **Std. Pkg.**
232-FC—Female Connector 100

BIRNBACH TELEVISION LOOM

⅜" Non-Metallic Loom used for the protection of Twin Lead and Coax Cable on television installations.

Cat. No.	Spool
1013	25 ft.
1014	50 ft.
1015	100 ft.

No. 233-CC CHASSIS CONNECTOR

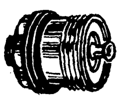


Milled of solid brass. Mounts in .385" dia. hole to ground shell directly to chassis. Mounts in ½" hole when insulation from panel is required. Supplied with shoulder and flat fibre and metal washers and hex lock nut.

Cat. No. **Std. Pkg.**
233-CC—Chassis Connector 100

No. 234-CLC CHASSIS CONNECTOR

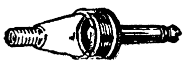
CLOSED CIRCUIT



Circuit is closed before cable circuit breaks. Prevents open grid circuit howls. Milled of solid brass, complete with shoulder and flat fibre and metal washers and lock nut.

Cat. No. **Std. Pkg.**
234-CLC—Closed Circuit Jack 100

No. 235 PHONE PLUG ADAPTER



⅝-27 thread; screws into coupling ring of No. 232-FC Connector permitting cable to be plugged into standard phone jack. Made of brass and nickel-plated.

Cat. No. **Std. Pkg.**
235-PC 50

Birnbach PRICE LIST

NUMERICALLY ARRANGED BY CATALOG NUMBER See BIRNBACH Pages S-26 thru S-43

Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	No. Cat.	Price List
00	$11.00/C	32	$2.50/C	76	$21.50/Ea.	108	$1.90/Ea.	220-A	$6.75/Ea.	280	$ .80/Ea.	303-VC	$25.00/Ea.
1-50	.60/Ea.	32-A	2.25/C	77	24.25/Ea.	109	2.75/Ea.	221	1.80/Ea.	281	.90/Ea.	304 (36")	.90/Ea.
1-100	1.20/Ea.	33	10.50/C	80	.70/Ea.	113	1.10/Ea.	221-A	1.40/Ea.	282	.90/Ea.	304-VC	30.00/Ea.
1-1000	9.75/M	34	1.40/Ea.	81	.77/Ea.	114	10.00/C	226	4.00/Ea.	283	1.00/Ea.	305-V	1.50/Ea.
2-50	.60/Ea.	35	1.40/Ea.	82	.85/Ea.	115	11.00/C	231-MC	60.00/C	284	1.10/Ea.	305-VC	14.00/Ea.
2-100	1.20/Ea.	36	1.40/Ea.	83	.90/Ea.	116	12.00/C	232-FC	65.00/C	285	1.25/Ea.	306-V	1.60/Ea.
2-1000	9.75/M	37	1.40/Ea.	84	2.75/Ea.	117	25.00/C	233-CC	50.00/C	286	1.50/Ea.	306-VC	15.00/Ea.
3-50	.60/Ea.	38	1.40/Ea.	85	3.05/Ea.	118	22.50/C	234-CLC	60.00/C	287	1.80/Ea.	307	.30/Ea.
3-100	1.20/Ea.	39	1.40/Ea.	86	3.30/Ea.	119	20.00/C	235-PC	60.00/C	288	2.25/Ea.	307-V	1.80/Ea.
3-1000	9.75/M	40	1.40/Ea.	87	3.60/Ea.	120	2.75/Ea.	236-FC1	5.50/Ea.	289	2.50/Ea.	307-VC	9.00/Ea.
4-1000	37.50/M	41	1.40/Ea.	88	13.75/Ea.	125	2.50/Ea.	237-FC1	9.25/Ea.	290	1.55/Ea.	309	1.70/Ea.
5-1000	50.00/M	42	7.00/C	89	15.50/Ea.	149	7.50/Ea.	238-FC1	15.40/Ea.	291	.19/Ea.	310	25.00/C
6	12.00/C	43	8.00/C	90	15.70/Ea.	151	.60/Ea.	239-FC2	6.20/Ea.	291-V	1.70/Ea.	312	1.90/Ea.
8	12.50/C	44	10.00/C	91	17.60/Ea.	154	7.00/Ea.	240-FC2	9.75/Ea.	291-VC	6.00/Ea.	313	.17/Ea.
10	12.50/C	45	1.40/Ea.	92	24.20/Ea.	155	7.00/Ea.	241-FC2	16.00/Ea.	292	2.65/Ea.	313-B	.75/Ea.
11	17.50/C	46	14.00/C	93	27.00/Ea.	156	4.50/Ea.	242-MC1	5.50/Ea.	293	.19/Ea.	313-BC	2.75/Ea.
15	7.00/C	47	1.40/Ea.	94	29.50/Ea.	157	4.50/Ea.	243-MC1	9.25/Ea.	293-V	1.70/Ea.	314	.17/Ea.
16	.25/Ea.	48	32.50/C	95	33.00/Ea.	158	12.00/Ea.	244-MC1	15.40/Ea.	293-VC	6.00/Ea.	314-B	.75/Ea.
17	.55/Ea.	49	1.40/Ea.	96-40	.60/Ea.	160	4.25/Ea.	245-MFC	6.20/Ea.	294	.19/Ea.	314-BC	2.75/Ea.
18	1.00/Ea.	51	.25/Ea.	96-100	1.15/Ea.	161	4.65/Ea.	246-MFC	9.25/Ea.	294-V	1.70/Ea.	315	.18/Ea.
19	.45/Ea.	52	.25/Ea.	96-1000	10.75/M	164	.40/Ea.	247-MFC	16.70/Ea.	294-VC	6.00/Ea.	315-B	.75/Ea.
20	.90/Ea.	53	.25/Ea.	97-40	.60/Ea.	166	2.00/Ea.	248	10.00/C	295	.19/Ea.	315-BC	2.75/Ea.
20-A	.75/Ea.	54	.25/Ea.	97-100	1.20/Ea.	172	10.50/Ea.	248-S	10.00/C	295-V	1.70/Ea.	316	.19/Ea.
21-35	.60/Ea.	55	.40/Ea.	97-1000	10.75/M	173	14.25/Ea.	249	14.00/C	295-VC	6.75/Ea.	316-B	.80/Ea.
21-100	1.50/Ea.	56	.50/Ea.	98-35	.60/Ea.	174	17.80/Ea.	249-A	18.00/C	296 (36")	1.50/Ea.	316-BC	3.00/Ea.
21-1000	12.50/M	57	.50/Ea.			175	22.00/Ea.	250	4.60/Ea.	296-VC	42.50/Ea.	317	.19/Ea.
22-15	.60/Ea.	58	1.50/Ea.	98-100	1.50/Ea.	176	26.00/Ea.	251	8.00/Ea.	297	.45/Ea.	317-B	.80/Ea.
22-100	3.20/Ea.	59	1.80/Ea.	98-1000	12.50/M	177	31.00/Ea.	252	12.85/Ea.	298	.50/Ea.	317-BC	3.00/Ea.
22-1000	29.50/M	61	4.90/Ea.	99-35	.60/Ea.	178	37.00/Ea.	255	4.25/Ea.	299 (36")	1.45/Ea.	318	.40/Ea.
23	15.00/C	62	24.00/Ea.	99-100	1.40/Ea.	179	45.00/Ea.	256	7.25/Ea.	299-VC	39.50/Ea.	318-B	.75/Ea.
24	15.00/C	66	6.00/Ea.	99-1000	12.50/M	180	53.00/Ea.	257	12.50/Ea.	300	.19/Ea.	318-BC	4.70/Ea.
26	15.00/C	67	27.50/Ea.	100-20	.60/Ea.	182	61.00/Ea.	263	8.50/Ea.	300-V	1.75/Ea.	319	.45/Ea.
27	.11/Ea.	68	7.75/Ea.	100-100	2.25/Ea.	193	14.00/M	264	11.00/Ea.	300-VC	7.00/Ea.	319-B	.75/Ea.
27-C	.21/Ea.	69	38.00/Ea.	100-1000	20.00/M	194	14.00/M	265	13.25/Ea.	301	.35/Ea.	319-BC	6.75/Ea.
27-R	.195/Ea.	70	.60/Ea.	102	.90/Ea.	195	14.00/M	266	15.50/Ea.	301-V	1.75/Ea.	320	.50/Ea.
28	.11/Ea.	71	.70/Ea.	103	.90/Ea.	196	18.00/M	267	17.50/Ea.	301-VC	10.00/Ea.	320-B	.75/Ea.
29	16.75/C	72	2.36/Ea.	104	1.50/Ea.	201-35	.60/Ea.	268	19.50/Ea.	302	.35/Ea.	320-BC	6.75/Ea.
30	.30/Ea.	73	2.75/Ea.	105	1.50/Ea.	201-100	1.40/Ea.	269	22.50/Ea.	302-V	1.25/Ea.	321	.60/Ea.
31	.15/Ea.	74	11.55/Ea.	106	.90/Ea.	201-1000	12.50/M	270	25.00/Ea.	302-VC	11.00/Ea.	321-BC	8.50/Ea.
31-R	.22/Ea.	75	14.00/Ea.	107	1.50/Ea.	220	8.50/Ea.	272	31.00/Ea.	303	.65/Ea.	322	.65/Ea.

Birnbach PRICE LIST NUMERICALLY ARRANGED BY CATALOG NUMBER (Cont'd)

Cat. No.	List Price
322-BC	$14.00/Ea.
323	1.00/Ea.
323-BC	22.50/Ea.
324	1.10/Ea.
324-BC	27.50/Ea.
325	.35/Ea.
325-B	.75/Ea.
325-BC	4.40/Ea.
326	.40/Ea.
326-B	.75/Ea.
326-BC	5.00/Ea.
330	25.00/C
331	25.00/C
331-A	13.00/C
332	18.00/C
332-A	20.00/M
333	25.00/C
334	50.00/C
335	60.00/C
340	11.00/C
341	.60/Ea.
342	2.50/Ea.
343	.55/Ea.
344	.50/Ea.
345	.55/Ea.
348	2.00/Ea.
350	1.10/Ea.
351	1.10/Ea.
352	1.10/Ea.
353	1.10/Ea.
354	3.50/Ea.
359	1.10/Ea.
365	.40/Ea.
366	12.00/C
367	20.00/C
368	2.00/C
369	2.00/C
370	4.50/C
371	2.50/C
372	2.00/C
373	6.00/C
377	.45/Ea.
378	.60/Ea.
379	.65/Ea.
380	3.15/Ea.
381	3.50/Ea.
382	3.50/Ea.
383	3.85/Ea.
384	4.30/Ea.
385	4.75/Ea.
386	5.80/Ea.
387	6.90/Ea.
388	9.35/Ea.
389	9.90/Ea.
391	.22/Ea.
392	.56/Ea.
393	.50/Ea.
393-A	.50/Ea.
394	.35/Ea.
395	.30/Ea.
396	.35/Ea.
397	.40/Ea.
398	.35/Ea.
398-A	.35/Ea.
399	.35/Ea.
399-A	.40/Ea.
400	.20/Ea.
401	.20/Ea.
402	4.00/C
402-A	5.00/C
403	.15/Ea.
404	.30/Ea.
404-A	.27/Ea.
404-B	.40/Ea.
405	.14/Ea.
406	.20/Ea.
407	.20/Ea.
408	3.00/Ea.
409	.23/Ea.
410	.50/Ea.
411	1.20/Ea.
412	.30/Ea.
413	1.50/Ea.
415	.23/Ea.
417	.50/Ea.
418	.55/Ea.
419	.35/Ea.
420	1.30/Ea.
421	1.30/Ea.
422	1.30/Ea.
423	1.30/Ea.
430	.23/Ea.
431	.35/Ea.
431-J	.40/Ea.
432	.62/Ea.

Cat. No.	List Price
432-J	$ .85/Ea.
433	1.15/Ea.
433-J	1.40/Ea.
434	2.10/Ea.
435	1.60/Ea.
436	.60/Ea.
437	.65/Ea.
438	.75/Ea.
439	.35/Ea.
440	2.35/Ea.
443	.18/Ea.
444	.20/Ea.
445	.30/Ea.
446	.35/Ea.
447	.40/Ea.
448	.55/Ea.
449	.75/Ea.
450	.56/Ea.
450-J	.67/Ea.
451	.67/Ea.
451-J	.72/Ea.
452	.72/Ea.
452-J	.95/Ea.
453	1.30/Ea.
453-J	1.50/Ea.
454	1.70/Ea.
454-J	1.75/Ea.
455	1.00/Ea.
455-A	4.00/Ea.
457	.35/Ea.
458	.25/Ea.
459	1.50/Ea.
459-A	6.00/Ea.
460	2.00/Ea.
460-A	8.00/Ea.
461	3.75/Ea.
461-A	15.00/Ea.
462	.25/Ea.
463	.40/Ea.
464	.35/Ea.
468	.45/Ea.
469	.45/Ea.
470	1.00/Ea.
471	1.40/Ea.
472	.45/Ea.
473	.20/Ea.
474	.16/Ea.
475	1.40/Ea.
476	1.05/Ea.
478	.35/Ea.
478-J	.42/Ea.
479	.62/Ea.
479-J	.75/Ea.
480	15.50/Ea.
481	17.40/Ea.
482	17.40/Ea.
483	19.25/Ea.
484	21.50/Ea.
485	23.65/Ea.
486	26.40/Ea.
487	27.50/Ea.
488	44.00/Ea.
489	48.50/Ea.
490	2.75/Ea.
490-A	4.13/Ea.
490-B	5.50/Ea.
492	4.30/Ea.
492-A	6.45/Ea.
492-B	8.60/Ea.
493	4.15/Ea.
495	5.35/Ea.
497	6.60/Ea.
499	11.80/Ea.
501	3.60/Ea.
503	3.35/Ea.
505	2.90/Ea.
516	2.00/Ea.
518	17.50/Ea.
519	3.80/Ea.
520	2.25/Ea.
522	4.25/Ea.
523	20.00/Ea.
524	6.95/Ea.
526	6.65/Ea.
527	16.65/Ea.
528	22.50/Ea.
529	34.25/Ea.
531	.25/Ea.
532	.25/Ea.
533	.25/Ea.
534	.25/Ea.
535	.25/Ea.
536	.25/Ea.
537	.25/Ea.
538	.30/Ea.

Cat. No.	List Price
539	$ .30/Ea.
540	.30/Ea.
541	.60/Ea.
542	.45/Ea.
543	.25/Ea.
544	.50/Ea.
545	.60/Ea.
550	.25/Ea.
551	.50/Ea.
552	.60/Ea.
553	.90/Ea.
554	1.30/Ea.
555	2.20/Ea.
558	.85/Ea.
559	1.30/Ea.
560	2.25/Ea.
561	2.25/Ea.
562	6.00/Ea.
566	40.00/Ea.
568	30.00/Ea.
570	6.25/Ea.
572	15.50/Ea.
573	28.00/Ea.
574	31.50/Ea.
578	37.50/Ea.
580	29.00/Ea.
581	32.00/Ea.
582	33.60/Ea.
583	36.00/Ea.
584	38.50/Ea.
585	44.00/Ea.
586	48.50/Ea.
587	55.00/Ea.
588	87.00/Ea.
589	96.50/Ea.
600	.11/Ea.
604	.25/Ea.
605	.35/Ea.
611	.14/Ea.
613	.15/Ea.
616	1.40/Ea.
617	.20/Ea.
618	2.25/Ea.
619	2.80/Ea.
625	.23/Ea.
626	.56/Ea.
628	.28/Ea.
629	8.50/C
631	.25/Ea.
632	.25/Ea.
633	.25/Ea.
634	.25/Ea.
635	.25/Ea.
636	.25/Ea.
647	.88/Ea.
650	.50/Ea.
663	14.00/C
664	19.50/C
666	11.00/C
667	45.00/C
668	.35/Ea.
669	11.00/C
681	1.10/Ea.
697	3.95/Ea.
700	1.10/Ea.
701	28.00/Ea.
702	32.00/Ea.
703	59.00/Ea.
704-250′	112.50/Ea.
705-250′	150.00/Ea.
710-100	6.50/Ea.
710-250	16.00/Ea.
710-500	31.50/Ea.
710-1000	61.25/Ea.
710-2500	150.00/Ea.
712-100	4.50/Ea.
712-250	10.90/Ea.
712-500	21.80/Ea.
712-1000	42.50/Ea.
712-2500	105.50/Ea.
714-100	2.75/Ea.
714-250	6.75/Ea.
714-500	13.50/Ea.
714-1000	26.25/Ea.
714-2500	64.50/Ea.
740	.88/Ea.
749	35.00/Ea.
756	21.00/Ea.
757	187.50/Ea.
762	.20/Ea.
763-3	.30/Ea.
763-5	.38/Ea.
763-7	.85/Ea.
764	.35/Ea.
765	.90/Ea.

Cat. No.	List Price
766	$ .50/Ea.
766-J	.75/Ea.
768	.70/Ea.
769	1.40/Ea.
770	2.50/Ea.
771	16.75/Ea.
772	16.75/Ea.
772/18	21.00/Ea.
773	21.75/Ea.
733/18	27.00/Ea.
774	24.00/Ea.
775	27.50/Ea.
776	32.00/Ea.
777	35.00/Ea.
778	45.00/Ea.
781	20.00/Ea.
782	1.40/Ea.
784	1.95/Ea.
786	27.50/Ea.
787	38.50/Ea.
788	13.00/Ea.
789	31.75/Ea.
790	15.50/Ea.
791	37.50/Ea.
792	18.75/Ea.
793	45.75/Ea.
794	22.00/Ea.
795	55.00/Ea.
796	27.50/Ea.
797	65.00/Ea.
798	29.00/Ea.
799	20.00/Ea.
800	27.50/Ea.
801	35.00/Ea.
802	24.00/Ea.
803	18.25/Ea.
806	15.00/Ea.
809	8.00/Ea.
810	35.00/Ea.
813	20.00/C
814	15.00/C
815	.80/Ea.
816	.55/Ea.
817	.70/Ea.
818	12.00/Ea.
819	.75/Ea.
820	10.50/Ea.
822	40.00/Ea.
824	47.50/Ea.
825	45.00/Ea.
826	75.00/Ea.
851	9.50/Ea.
855-50′	3.50/Ea.
856-50′	20.00/Ea.
857-50′	17.50/Ea.
858-50′	3.50/Ea.
859-50′	3.75/Ea.
860-50′	4.00/Ea.
863-50′	4.75/Ea.
864-50′	6.75/Ea.
865-50′	10.75/Ea.
866	.23/Ea.
866-J	.30/Ea.
866-SJ	.70/Ea.
867	.35/Ea.
867-J	.45/Ea.
868-50′	10.75/Ea.
870	11.25/Ea.
872	13.50/Ea.
907	14.00/Ea.
908	32.00/Ea.
909	63.20/Ea.
910	125.00/Ea.
919	50.00/Ea.
920	100.00/Ea.
923	59.25/Ea.
951	6.65/Ea.
952	32.50/Ea.
953	140.00/Ea.
954	70.00/Ea.
955	35.00/Ea.
956	14.00/Ea.
963	14.00/C
964	19.50/C
965	.17/Ea.
966	.17/Ea.
966-J	.23/Ea.
967	45.00/C
968	.10/Ea.
972	14.30/Ea.
972-A	77.00/Ea.
972-B	66.00/Ea.
972-S	55.00/Ea.
973	16.50/Ea.
973-S	66.00/Ea.

Cat. No.	List Price
974	$20.65/Ea.
975	27.50/Ea.
976	32.50/Ea.
977	38.50/Ea.
978	44.00/Ea.
1013	2.75/Ea.
1014	5.25/Ea.
1015	10.00/Ea.
1017	35.00/M
1017-10	.60/Ea.
1017-50	1.95/Ea.
1017-100	3.85/Ea.
1017-1000	35.00/M
1025	1.35/Ea.
1050	2.50/Ea.
1051	4.50/Ea.
1052	37.00/Ea.
1053	.75/Ea.
1054	1.40/Ea.
1055	2.75/Ea.
1056	21.00/Ea.
1057	1.45/Ea.
1058	2.80/Ea.
1059	5.00/Ea.
1060	40.00/Ea.
1101	4.20/Ea.
1111	30.00/Ea.
1112	57.50/Ea.
1113	115.00/Ea.
1120	5.00/C
1121	2.80/C
1122	5.50/C
1123	2.20/C
1124	2.20/C
1125	5.00/C
1126	6.50/C
1127	8.00/C
1128	9.50/C
1129	11.00/C
1130	5.00/C
1131	6.50/C
1132	8.00/C
1133	9.50/C
1134	11.00/C
1135	8.00/C
1136	9.50/C
1137	11.00/C
1138	12.50/C
1139	14.00/C
1140	8.00/C
1141	9.50/C
1142	11.00/C
1143	12.50/C
1144	14.00/C
1145	6.00/C
1146	6.75/C
1147	7.00/C
1148	9.00/C
1149	6.00/C
1150	6.75/C
1151	7.00/C
1152	9.00/C
1153	1.50/C
1154	1.80/C
1155	2.00/C
1156	2.25/C
1157	2.50/C
1220	17.00/Ea.
1220-A	12.50/Ea.
1225	25.00/Ea.
1260	.23/Ea.
1261	.23/Ea.
1262	.23/Ea.
1263	.40/Ea.
1264	.45/Ea.
1265	.56/Ea.
1266	.62/Ea.
1372	.15/Ea.
1373	.21/Ea.
1374	.26/Ea.
1375	.32/Ea.
1376	.37/Ea.
1377	.42/Ea.
1378	.47/Ea.
1379	.52/Ea.
1380	.57/Ea.
1382	3.50/C
1382-A	4.00/C
1382-B	4.00/C
1382-C	4.00/C
1383	5.00/C
1383-A	5.60/C
1384	6.75/C
1384-A	7.25/C
1384-B	8.10/C

Cat. No.	List Price
1385	$8.50/C
1385-A	8.50/C
1385-B	9.75/C
1386	10.00/C
1386-A	11.00/C
1386-B	11.50/C
1387	12.50/C
1388	12.75/C
1389	12.75/C
1401	3.15/Ea.
1402	6.15/Ea.
1403	56.65/Ea.
1405	2.00/Ea.
1406	3.75/Ea.
1407	34.10/Ea.
1409	1.40/Ea.
1410	2.50/Ea.
1411	24.50/Ea.
1413	1.15/Ea.
1414	2.00/Ea.
1415	19.00/Ea.
1417	.85/Ea.
1418	1.55/Ea.
1419	15.30/Ea.
1421	.70/Ea.
1422	1.40/Ea.
1423	9.90/Ea.
1433	15.40/Ea.
1434	6.25/Ea.
1440	4.70/Ea.
1490	27.50/Ea.
1492	42.90/Ea.
1497	67.10/Ea.
1516	28.50/Ea.
1518	1.20/Ea.
1519	2.30/Ea.
1520	11.00/Ea.
1526	1.40/Ea.
1527	2.70/Ea.
1528	13.00/Ea.
1542	12.50/Ea.
1543	4.25/Ea.
1544	20.00/Ea.
1545	25.00/Ea.
1548	22.50/Ea.
1549	18.00/Ea.
1550	3.75/Ea.
1553	25.00/Ea.
1561	3.35/Ea.
1562	6.60/Ea.
1563	60.50/Ea.
1565	2.00/Ea.
1566	4.00/Ea.
1567	36.75/Ea.
1569	1.45/Ea.
1570	2.70/Ea.
1571	26.50/Ea.
1573	.95/Ea.
1574	1.60/Ea.
1575	14.80/Ea.
1600	15.40/Ea.
1618	15.40/Ea.
1620	9.90/Ea.
1622	7.70/Ea.
1627	19.85/Ea.
1628	18.30/Ea.
1631	24.40/Ea.
1633	22.95/Ea.
1634	19.00/Ea.
1637	29.80/Ea.
1638	26.25/Ea.
1639	23.70/Ea.
1640	1.80/Ea.
1641	2.25/Ea.
1642	2.42/Ea.
1643	1.48/Ea.
1644	1.70/Ea.
1645	1.90/Ea.
1646	1.20/Ea.
1647	15.50/Ea.
1648	10.75/Ea.
1670	2.42/Ea.
1671	2.70/Ea.
1672	3.15/Ea.
1673	1.92/Ea.
1674	2.30/Ea.
1675	2.42/Ea.
1680	1.60/Ea.
1682	2.00/Ea.
1683	1.60/Ea.
1696	1.82/Ea.
1697	1.50/Ea.
1716	42.00/Ea.
1741	11.00/Ea.
1772	40.00/Ea.

Cat. No.	List Price
1773	$50.00/Ea.
1774	56.00/Ea.
1775	67.50/Ea.
1776	80.00/Ea.
1777	87.50/Ea.
1800	13.25/Ea.
1818	11.90/Ea.
1820	11.00/Ea.
1822	6.75/Ea.
1822-B	30.00/Ea.
1822-C	56.00/Ea.
1824	30.00/Ea.
1824-M	57.50/Ea.
1825	31.00/Ea.
1825-M	61.00/Ea.
1870	28.00/Ea.
1872	33.00/Ea.
1874	75.00/Ea.
1874-A	40.00/Ea.
1875	110.00/Ea.
1875-A	57.50/Ea.
1878	165.00/Ea.
1878-A	85.00/Ea.
1963	.06/Ea.
1964	.10/Ea.
1965	.10/Ea.
1967	.20/Ea.
1968	.10/Ea.
1972	17.60/Ea.
1972-A	82.50/Ea.
1973	20.35/Ea.
1974	23.65/Ea.
1975	30.00/Ea.
1976	35.00/Ea.
2000	14.00/Ea.
2010	12.10/Ea.
2012	9.90/Ea.
2013	8.55/Ea.
2014	7.70/Ea.
2015	6.35/Ea.
2016	5.25/Ea.
2025	1.45/Ea.
2050	2.80/Ea.
2051	5.00/Ea.
2052	40.00/Ea.
2100	1.60/Ea.
2125	.42/Ea.
2330	15.00/Ea.
2331	3.25/Ea.
2440	19.00/Ea.
2500	7.00/Ea.
2611	.30/Ea.
2617	.40/Ea.
2650	.56/Ea.
2810	14.50/Ea.
2812	9.65/Ea.
2814	6.60/Ea.
2816	5.50/Ea.
2818	4.85/Ea.
3000 to 3024	1.55/Ea.
3025	1.35/Ea.
3050	2.50/Ea.
3051	4.50/Ea.
3052	28.00/Ea.
3416	10.00/Ea.
3418	7.50/Ea.
3420	6.00/Ea.
3425	1.25/Ea.
3450	2.50/Ea.
3460	5.00/Ea.
3600	22.50/Ea.
3618	2.35/Ea.
3619	2.75/Ea.
4000 to 4006	9.00/M
4007 to 4013	10.00/M
4014	11.25/M
4015 to 4019	12.25/M
4020-21	13.50/M
4022-23	28.00/M
4025	.85/Ea.
4050	1.60/Ea.
4051	2.80/Ea.
4052	25.00/Ea.
4125	.40/Ea.
4125-J	.45/Ea.
4175	.90/Ea.
4175-J	1.30/Ea.
4176	.62/Ea.
4176-J	.80/Ea.
4233	.90/Ea.
4234	1.00/Ea.

Birnbach PRICE LIST NUMERICALLY ARRANGED BY CATALOG NUMBER

Cat. No.	List Price
4235	$2.25/Ea.
4236	2.50/Ea.
4237	2.75/Ea.
4238	3.50/Ea.
4275	.60/Ea.
4275-J	1.00/Ea.
4276	1.15/Ea.
4276-J	1.35/Ea.
4450	1.15/Ea.
4450-J	1.50/Ea.
4451	.92/Ea.
4451-J	1.30/Ea.
4452	1.70/Ea.
4452-J	2.00/Ea.
5000	1.10/Ea.
5002	1.35/Ea.
5003	1.70/Ea.
5004	.90/Ea.
5005	1.05/Ea.
5006	1.35/Ea.
5007	1.05/Ea.
5008	1.45/Ea.
5009	1.70/Ea.
5010	3.30/Ea.
5011	3.30/Ea.
5012	4.75/Ea.
5013	4.75/Ea.
5015-5016	.75/Ea.
5017-5018	.75/Ea.
5040	.23/Ea.
5041	.23/Ea.
5042	.24/Ea.
5043	.24/Ea.
5044	.24/Ea.
5045	.24/Ea.
5046	.24/Ea.
5047	.23/Ea.
5050	.45/Ea.
5051	.45/Ea.
5052	.35/Ea.
5053	.30/Ea.
5060 to 5063	.17/Ea.
5070	.23/Ea.
5071	.30/Ea.
5075	.30/Ea.
5076	.30/Ea.
5080	.30/Ea.
5081	.35/Ea.
5085	.30/Ea.
5086	.35/Ea.
5090	.30/Ea.
5091	.32/Ea.
5095	.36/Ea.
5096	.35/Ea.
5105	.35/Ea.
5106	.40/Ea.
5110-5111	.40/Ea.
5115	.60/Ea.
5130 to 5134	.30/Ea.
5140	.30/Ea.
5141	.35/Ea.
5142	.35/Ea.
5143	.40/Ea.
5160	.23/Ea.
5161	.25/Ea.
5165-66	.30/Ea.
5170	.30/Ea.
5171	.30/Ea.
5180	.25/Ea.
5181	.30/Ea.
5185	.30/Ea.
5190	.17/Ea.
5191	.17/Ea.
5195	.30/Ea.
5200	.25/Ea.
5201	.25/Ea.
6000	4.90/Ea.
6100	.50/Ea.
6102	.60/Ea.
6103	.85/Ea.
6104	.85/Ea.
6105	3.00/Ea.
6200	.75/Ea.
6201	1.00/Ea.
6202	1.00/Ea.
6203	1.20/Ea.
6204	1.40/Ea.
6205	1.60/Ea.
6206	1.60/Ea.
6207	1.85/Ea.
6208	5.50/C
6210	1.00/Ea.
6211	1.15/Ea.
6212	1.20/Ea.
6213	1.35/Ea.
6214	1.50/Ea.
6215	1.65/Ea.
6216	1.85/Ea.
6217	2.00/Ea.
6220	$ .75/Ea.
6221	1.00/Ea.
6222	1.40/Ea.
6223	1.60/Ea.
6224	1.40/Ea.
6225	2.10/Ea.
6226	3.75/Ea.
6627	6.25/Ea.
6228	8.25/Ea.
6229	12.00/Ea.
6230	.90/Ea.
6231	2.25/Ea.
6232	.35/Ea.
6233	.80/Ea.
6234	.85/Ea.
6235	.90/Ea.
6236	1.30/Ea.
6241	1.60/Ea.
6242	2.50/Ea.
6243	1.45/Ea.
6244	.75/Ea.
6245	.20/Ea.
6246	.21/Ea.
6247	.34/Ea.
6248	.35/Ea.
6249	.45/Ea.
6250	1.65/Ea.
6251	1.90/Ea.
6252	2.35/Ea.
6253	2.60/Ea.
6261	1.90/Ea.
6263	2.35/Ea.
6300	5.25/M
6301	5.30/M
6302	5.35/M
6303	7.00/M
6304	5.80/M
6305	5.80/M
6306	5.80/M
6307	6.40/M
6308	6.40/M
6309	7.40/M
6310	29.05/M
6311	49.50/M
6312	8.50/M
6313	9.00/M
6314	9.75/M
6315	12.00/M
6316	19.00/M
6317	22.50/M
6318	24.00/M
6319	30.00/M
6320	36.00/M
6321	6.50/M
6322	7.00/M
6323	7.50/M
6324	8.50/M
6325	8.95/M
6326	9.60/M
6327	9.30/M
6328	9.90/M
6329	11.70/M
6330	8.20/M
6331	8.20/M
6332	7.80/M
6333	7.80/M
6334	8.70/M
6335	9.60/M
6336	22.80/M
6337	27.50/M
6338	35.00/M
6339	35.00/M
6350	10.00/M
6350-A	10.00/M
6351	10.00/M
6351-A	10.00/M
6352	10.00/M
6352-A	10.00/M
6353	11.00/M
6353-A	11.00/M
6354	13.50/M
6354-A	13.50/M
6355	8.25/M
6356	7.70/M
6357	7.70/M
6358	5.50/M
6359	5.50/M
6360	5.75/M
6361	5.75/M
6362	7.15/M
6363	12.65/M
6400	7.50/M
6401	8.10/M
6402	10.50/M
6403	11.50/M
6404	13.00/M
6405	10.30/M
6406	11.90/M
6407	13.50/M
6408	16.20/M
6409	$19.80/M
6410	20.00/M
6411	23.00/M
6412	26.50/M
6413	14.70/M
6414	16.60/M
6415	18.60/M
6416	20.30/M
6417	22.90/M
6418	27.10/M
6420	6.50/M
6421	7.00/M
6422	7.50/M
6423	8.00/M
6424	8.75/M
6425	9.75/M
6426	8.30/M
6427	8.75/M
6428	9.60/M
6429	10.00/M
6430	11.00/M
6431	12.65/M
6432	14.65/M
6433	10.85/M
6434	11.00/M
6435	11.20/M
6436	12.50/M
6437	13.25/M
6438	15.00/M
6439	19.15/M
6440	10.30/M
6441	14.70/M
6442	10.30/M
6443	16.05/M
6444	17.05/M
6445	17.10/M
6446	18.10/M
6447	35.00/M
6448	7.80/M
6449	8.65/M
6450	9.60/M
6460	3.35/Gr.
6461	3.60/Gr.
6462	4.45/Gr.
6463	5.00/Gr.
6464	6.95/Gr.
6465	7.75/Gr.
6466	8.55/Gr.
6470	2.75/Gr.
6471	2.95/Gr.
6472	3.10/Gr.
6473	3.25/Gr.
6474	3.40/Gr.
6475	3.60/Gr.
6476	4.00/Gr.
6477	4.35/Gr.
6478	3.60/Gr.
6479	5.50/M
6480	5.50/M
6480-A	5.50/M
6481	6.75/M
6482	7.50/M
6483	25.00/M
6484	4.95/M
6485	4.65/M
6486	5.20/M
6487	5.20/M
6488	7.50/M
6491	5.50/M
6490	5.50/M
6492	5.75/M
6493	7.15/M
6494	12.65/M
6500	1.70/Gr.
6501	1.85/Gr.
6502	1.70/Gr.
6503	1.80/Gr.
6504	2.00/Gr.
6505	2.80/Gr.
6506	2.90/Gr.
6507	3.25/Gr.
6510	1.70/Gr.
6511	1.80/Gr.
6512	2.00/Gr.
6513	2.00/Gr.
6514	2.00/Gr.
6515	2.15/Gr.
6516	2.65/Gr.
6517	2.80/Gr.
6518	2.60/Gr.
6519	3.25/Gr.
6525 to 6534	1.55/C
6540	2.00/Gr.
6541	2.15/Gr.
6542	2.50/Gr.
6543	2.60/Gr.
6600	1.05/C
6601	1.40/C
6602	1.60/C
6603	$1.80/C
6604	1.45/C
6605	1.85/C
6606	2.30/C
6607	2.70/C
6608	1.85/C
6609	2.40/C
6610	2.65/C
6611	3.00/C
6611-A	3.60/C
6612	1.10/C
6613	1.25/C
6614	1.40/C
7000	13.75/Ea.
7000-1	1.50/Ea.
7001	17.00/Ea.
7001S	20.00/M
7001-1	1.85/Ea.
7001-1S	2.15/Ea.
7002	16.75/Ea.
7002-1	1.80/Ea.
7003	21.50/Ea.
7003S	24.50/M
7003-1	2.30/Ea.
7003-1S	2.60/Ea.
7004	21.25/Ea.
7004-1	2.25/Ea.
7005	26.00/Ea.
7005-1	2.75/Ea.
7005-S	(1000') 29.00
7005-1S	(100') 3.05
7007	37.50/Ea.
7007-1	3.90/Ea.
7009	56.50/Ea.
7009-1	5.80/Ea.
7011	100.00/Ea.
7011-1	10.15/Ea.
7015-1	30.00/Ea.
7016	55.00/Ea.
7016-1	5.70/Ea.
7018	44.55/Ea.
7018-1	4.65/Ea.
7020	37.50/Ea.
7020-1	3.90/Ea.
7022	32.00/Ea.
7022-1	3.35/Ea.
7024	17.25/Ea.
7024-1	1.85/Ea.
7026-FM	2.75/Ea.
7027	3.50/Ea.
7027-HF	2.50/Ea.
7028	5.00/Ea.
7029	10.00/Ea.
7030	85.00/Ea.
7031	5.00/Ea.
7032	.95/Ea.
7033	5.95/Ea.
7034	.15/Ea.
7035	.25/Ea.
7036	10.00/C
7037	10.00/C
7038	9.00/C
7039	11.00/C
7040	20.00/C
7041	15.00/C
7042	22.50/C
7043-1"	7.50/C
7043-1½"	7.50/C
7043-2"	8.00/C
7043-3"	10.00/C
7044	18.00/C
7045	28.00/C
7046	4.75/Ea.
7047	2.25/Ea.
7048	25.00/C
7049	.85/Ea.
7049-A	.85/Ea.
7049-B	.85/Ea.
7050	.90/Ea
7052	1.10/Ea.
7053	1.50/Ea.
7054	2.75/Ea.
7055	3.00/Ea.
7061	1.55/Ea.
7062	3.00/Ea.
7063	14.00/Ea.
7064	25.00/Ea.
7065	1.25/Ea.
7066	1.50/Ea.
7067	110.00/Ea.
7068	70.00/Ea.
7070	62.50/Ea.
7072	56.00/Ea.
7074	50.00/Ea.
7080	1.68/Ea.
7080-C	2.80/Ea.
7081	1.68/Ea.
7081-C	3.15/Ea.
7082	2.10/Ea.
7082-C	4.15/Ea.
7083	4.75/Ea.
7084	$2.10/Ea.
7085	2.70/Ea.
7086	2.10/Ea.
7087	2.70/Ea.
7088	2.10/Ea.
7089	4.09/Ea.
7201	22.50/Ea.
7201-1	2.60/Ea.
7202	21.50/Ea.
7202-1	2.50/Ea.
7203	25.50/Ea.
7203-1	3.00/Ea.
7204	22.50/Ea.
7204-1	2.60/Ea.
7205	34.00/Ea.
7205-1	3.80/Ea.
7207	47.50/Ea.
7207-1	5.50/Ea.
7210	160.00/M
7210-1	18.00/Ea.
7212	90.00/M
7212-1	10.00/Ea.
7214	65.00/M
7214-1	7.50/Ea.
7216	52.50/M
7216-1	6.00/Ea.
7218	37.50/M
7218-1	4.25/Ea.
7220	28.00/M
7220-1	3.25/Ea.
7222	26.00/M
7222-1	3.00/Ea.
7224	27.00/M
7224-1	3.25/Ea.
7312	107.50/M
7312-1	11.50/Ea.
7314	62.50/M
7314-1	6.75/Ea.
7316	52.50/M
7316-1	5.75/Ea.
7318	38.00/M
7318-1	4.20/Ea.
7320	30.00/M
7320-1	3.25/Ea.
7322	25.00/M
7322-1	2.75/Ea.
7400	199.50/Ea.
7401	138.90/Ea.
7401-M	188.90/Ea.
7402	40.00/M
7402-1	4.50/Ea.
7412	54.00/M
7412-1	6.00/Ea.
7418	55.00/M
7418-1	6.10/Ea.
7428	85.00/M
7428-1	9.00/Ea.
7448	129.50/M
7448-1	13.50/Ea.
D-50	4.50/M
R-100	4.50/M
T-6	.20/Ea.
T-7	.50/Ea.
T-8	.40/Ea.
T-9	.15/Ea.
T-10	.08/Ea.
T-11	.30/Ea.
T-12	.15/Ea.
T-14	.70/Ea.
T-14A	.80/Ea.
T-15	.25/Ea.
T-16	.25/Ea.
T-16A	.25/Ea.
T-17	20.00/C
T-18	20.00/C
T-19-¾	9.50/C
T-19-1	9.50/C
T-19-1½	13.50/C
T-20	.80/Ea.
T-42	7.00/M
T-44	18.00/C
T-46	28.00/C
T-48	48.00/C
T-100-1"	.08/Ea.
T-101-1¼"	.08/Ea.
T-102-1½"	.10/Ea.
T-103	.84/Ea.
T-104	.55/Ea.
T-105-14	9.45/Ea.
T-105-16	11.25/Ea.
T-105-16R	11.95/Ea.
T-105-17	12.95/Ea.
T-105-19R	18.50/Ea.
T-105-20	18.85/Ea.
T-105-21	20.00/Ea.
T-110	1.25/Ea.
T-250	20.00/C
T-250-A	22.00/C
T-669	17.00/C

SPECIAL SPOOLS

Cat. No.	List Price
Magnet Wire	$ .84/Ea.
Solid Tinned	.84/Ea.

PLAIN ENAMEL MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
10	8	$ .70
12	12	.73
14	20	.78
16	32	.78
18	50	.81
20	80	.86
22	127	.89
24	201	.89
26	320	.98
28	507	1.00
30	805	1.05
32	1282	1.17
34	2037	1.32
36	3221	1.54
38	5132	1.75
40	8143	2.65

½ Lb. Spools

Size	Ft.	List Price
10	16	$1.35
12	25	1.35
14	40	1.40
16	63	1.40
18	100	1.44
20	160	1.47
22	254	1.50
24	403	1.55
26	640	1.65
28	1015	1.72
30	1610	1.93
32	2564	2.07
34	4075	2.38
36	6443	2.79
38	10246	3.24
40	16286	4.85

1 Lb. Spools

Size	Ft.	List Price
10	32	$2.20
12	50	2.20
14	80	2.25
16	126	2.29
18	201	2.35
20	320	2.50
22	508	2.55
24	806	2.60
26	1280	3.05
28	2030	3.07
30	3220	3.50
32	5128	3.82
34	8150	4.78
36	12887	5.22
38	20492	6.08
40	32573	9.20

DOUBLE COTTON MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
10	8	$ .84
12	12	.84
14	19	.86
16	31	.91
18	48	.98
20	78	1.12
22	119	1.25
24	184	1.38
26	284	1.55
28	435	1.80
30	641	2.20
32	976	2.65
34	1365	3.90
36	1827	4.55
38	2738	8.00
40	3405	11.50

½ Lb. Spools

Size	Ft.	List Price
10	16	$1.45
12	24	1.45
14	49	1.50
16	62	1.55
18	97	1.67
20	157	1.95
22	238	2.20
24	369	2.35
26	568	2.75
28	871	3.50
30	1284	4.20
32	1953	5.00
34	2735	7.25
36	3654	8.72
38	5476	13.09
40	6811	19.60

1 Lb. Spools

Size	Ft.	List Price
10	32	$2.55
12	49	2.55
14	78	2.75
16	123	3.00
18	104	3.25
20	304	3.70
22	477	4.15
24	739	4.60
26	1136	5.25
28	1742	6.50
30	2569	7.75
32	3906	9.50
34	5470	13.50
36	7309	16.37
38	10952	24.50
40	13623	36.40

DOUBLE SILK MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
12	12	$1.10
14	19	1.15
16	31	1.30
18	49	1.40
20	78	1.60
22	123	1.85
24	195	2.00
26	303	2.40
28	478	2.60
30	739	3.10
32	1136	3.90
34	1712	5.40
36	2551	9.00
38	3770	12.50
40	5040	22.20

½ Lb. Spools

Size	Ft.	List Price
12	24	$2.10
14	39	2.15
16	62	2.40
18	99	2.65
20	157	3.05
22	247	3.40
24	390	3.80
26	606	4.60
28	956	5.00
30	1479	5.90
32	2272	7.50
34	3424	10.60
36	5102	17.50
38	7541	24.25
40	10080	42.50

1 Lb. Spools

Size	Ft.	List Price
12	49	$4.00
14	78	4.10
16	125	4.25
18	198	4.65
20	314	5.50
22	495	6.00
24	781	7.50
26	1212	9.25
28	1912	10.00
30	2958	11.50
32	4545	14.88
34	6849	20.80
36	10204	34.00
38	15082	46.50
40	20161	82.00

SOLID TINNED (SOFT DRAWN)

¼ Lb. Spools

Size	Ft.	List Price
10	8	$ .65
12	12	.66
14	20	.69
16	32	.70
18	50	.75
20	80	.81
22	127	.83
24	201	.85
26	320	.92
28	507	.97
30	805	1.05
32	1282	1.17
34	2037	1.32
36	3221	1.54
38	8143	1.75
40	5132	2.65

½ Lb. Spools

Size	Ft.	List Price
10	16	$1.22
12	25	1.22
14	40	1.25
16	63	1.29
18	100	1.30
20	160	1.35
22	254	1.40
24	403	1.50
26	640	1.62
28	1015	1.70
30	1610	1.93
32	2564	2.07
34	4075	2.38
36	6443	2.79
38	10246	3.24
40	16286	4.85

1 Lb. Spools

Size	Ft.	List Price
10	32	$2.10
12	50	2.10
14	80	2.15
16	126	2.20
18	201	2.28
20	320	2.35
22	508	2.50
24	806	2.60
26	1280	2.90
28	2030	3.07
30	3220	3.50
32	5128	3.82
34	8150	4.78
36	12887	5.22
38	20492	6.08
40	32573	9.20

Where wire is shipped on returnable spools or reels a deposit covering same will be required. No credit will be allowed for returnable reels and spools unless returned prepaid within 12 months from date of shipment. All deposit spools and reels are billed separately on invoice and not included in price of materials sold. ***ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE***

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

TURBO® *Products*

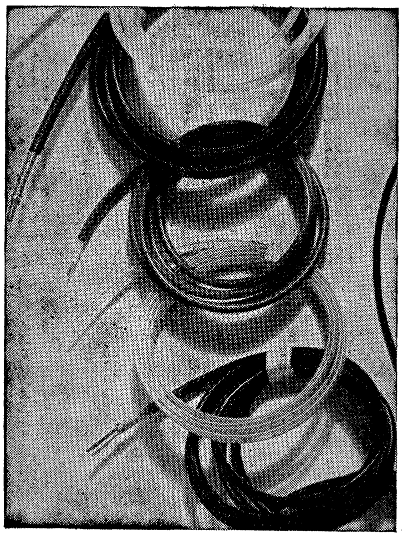
SPECIAL PURPOSE INSULATED WIRE

THE WILLIAM BRAND AND CO., INC., WILLIMANTIC, CONN.

MINIATURIZATION WIRE

Specially developed for use in electronic equipment within the range of −55°C to +105°C, and maximum operating voltage of 600 volts rms. This wire is ideal for use in miniaturized equipment as both hook-up wire and lead wire for transformers, chokes and other components, where space is at a premium and operating temperatures are high. Available in both standard and flexible . . . in solid colors or candy striped with 1, 2 or 3 tracers.

The primary insulation is Turbo 540, an extruded polyvinyl chloride compound that is resistant to the effects of water, oils, aircraft engine fuels, hydraulic fluids, ethylene glycol, alcohol, dilute acids, alkalies and fungus. Over the primary insulation there is an extruded jacket of nylon to give added mechanical protection and abrasion resistance.



Brand Part No.	Approx. AWG	Stranding	Nom. Cir. Mil Area	Pri. Ins. Min. Wall	Nylon Min. Wall	Max. O.D.	Nom. lbs./M'
MM300607N	30	7/38	110	0.006	0.002	0.035	0.8
MM270607N	27	7/35	221	0.006	0.002	0.040	1.1
MO2606N	26	Solid	254	0.006	0.002	0.040	1.6
MO2406N	24	Solid	404	0.006	0.002	0.048	2.0
MM240619N	24	19/36	475	0.006	0.002	0.048	2.2
MM240607N	24	7/32	442	0.006	0.002	0.048	2.1
MO2207N	22	Solid	642	0.007	0.003	0.058	2.9
MM220719N	22	19/34	754	0.007	0.003	0.058	3.3
MM220707N	22	7/30	707	0.007	0.003	0.058	3.2
MO2007N	20	Solid	1020	0.007	0.003	0.068	4.3
MM200719N	20	19/32	1200	0.007	0.003	0.068	5.0
MM200707N	20	7/28	1120	0.007	0.003	0.068	4.7
MO1807N	18	Solid	1620	0.007	0.003	0.079	6.5
MM180719N	18	19/30	1920	0.007	0.003	0.079	7.5
MM180707N	18	7/26	1780	0.007	0.003	0.079	7.1
MO1607N	16	Solid	2580	0.007	0.003	0.088	9.7
MM160719N	16	19/29	2410	0.007	0.003	0.088	9.4
MO1408N	14	Solid	4110	0.008	0.003	0.103	14.0
MM140819N	14	19/27	3840	0.008	0.003	0.103	14.5
MM120819N	12	19/25	6080	0.008	0.004	0.126	22.5

LOW TENSION AIRCRAFT WIRE & CABLE

The conductor consists of a stranded tinned copper wire. The primary insulation is an extruded polyvinyl chloride compound that is resistant to the effects of water, oils, aircraft engine fuels, hydraulic fluids, ethylene glycol, alchohol, dilute acids, alkalies and fungus. This wire has excellent electrical properties and has a rated working voltage of 600 volts rms. This wire has an outer protective nylon jacket, with or without shield.

For general use. Low tension construction has excellent electrical and physical characteristics, light weight, and low space factor.

Made To MIL-W-5086 & MIL-C-7078 Specifications

BULLETIN A-4662 GIVES MORE INFORMATION ABOUT TURBO INSULATION. COPIES AVAILABLE ON REQUEST.

Brand Part No.							
No Shield MIL-W-5086	With Shield MIL-C-7078	Type	Wire Size	Stranding	Nom. Ins. Thickness	Max. O.D. MIL-W-5086	Nom. Lbs./M ft. MIL-W-5086
6622AN19N	6622AN19NS	AN-22	22	19/34	.015	.076	6.3
6620AN19N	6620AN19NS	AN-20	20	19/32	.015	.086	8.4
6618AN19N	6618AN19NS	AN-18	18	19/30	.015	.096	11.6
6616AN19N	6616AN19NS	AN-16	16	19/29	.015	.109	14.3
6614AN19N	6614AN19NS	AN-14	14	19/27	.015	.124	21.0
6612AN19N	6612AN19NS	AN-12	12	19/25	.015	.144	32.0

TURBO® *Products*

GENERAL PURPOSE HOOK-UP WIRE

THE WILLIAM **BRAND** AND CO., INC., WILLIMANTIC, CONN.

TURBOTHERM "60" Radio and Instrument Hook-Up Wire to Specification JAN-C-76

The conductor can be furnished in either solid or stranded tinned copper wire. The primary insulation is an extruded polyvinyl chloride compound that is resistant to the effects of water, oils, aircraft engine fuels, hydraulic fluids, ethylene glycol, alcohol, dilute acids, alkalies and fungus. This wire has excellent electrical properties.

Type WL wire is designed for general purpose applications at 600 Volts rms or less. It is normally furnished with an extruded nylon jacket over the primary insulation.

Type SRIR is designed for general purpose applications at 1000 Volts rms or less. It is normally furnished without an outer covering.

Type SRHV is designed for general purpose applications at 2500 Volts rms or less. It is normally furnished without an outer covering.

These wires can be furnished in all solid colors of vinyl insulation or up to 3 colored spiral tracers on a white background. Other colors with spiral tracers can be furnished but their use is not recommended.

		TYPE WL			TYPE SRIR			TYPE SRHV		
		With Nylon Jacket			Without Covering			Without Covering		
Approx. AWG	Stranding	Max. O.D.	Nom. Lbs./M'	Brand Part No.	Nom. O.D.	Nom. Lbs./M'	Brand Part No.	Nom. O.D.	Nom. Lbs./M'	Brand Part No.
24	Solid	0.064	2.33	602412N	0.055	2.35	602417	0.086	4.47	602433
24	7/32	0.068	2.66	66241207N	0.058	2.64	66241707	0.090	4.8	66243307
24	16/36	0.068	2.53	66241216N	0.058	2.6	66241716	0.090	4.67	66243316
22	Solid	0.069	3.24	602212N	0.060	3.3	602217	0.092	5.59	602233
22	7/30	0.075	3.71	66221207N	0.065	3.71	66221707	0.097	6.13	66223307
22	16/34	0.075	3.5	66221216N	0.065	3.5	66221716	0.097	5.92	66223316
20	Solid	0.076	4.61	602012N	0.067	4.66	602017	0.098	7.07	602033
20	7/28	0.082	5.22	66201207N	0.073	5.28	66201707	0.105	7.91	66203307
20	19/32	0.084	5.66	66201219N	0.074	5.6	66201719	0.107	8.31	66203319
18	Solid	0.084	6.67	601812N	0.076	6.81	601817	0.107	9.48	601833
18	7/26	0.092	7.6	66181207N	0.083	7.67	66181707	0.115	10.65	66183307
18	19/30	0.094	8.2	66181219N	0.086	8.2	66181719	0.118	11.13	66183319
16	Solid	0.097	10.01	601613N	0.087	10.17	601617	0.118	13.07	601633
16	19/29	0.101	9.98	66161319N	0.093	10.01	66161719	0.124	13.19	66163319
16	26/30	0.104	10.69	66161226N	0.098	10.93	66161726	0.128	13.94	66163326
14	Solid	0.111	15.21	601414N	0.103	15.38	601417	0.132	18.47	601433
14	19/27	0.118	15.27	66141419N	0.110	15.37	66141719	0.138	18.28	66143319
14	41/30	0.124	16.1	66141441N	0.118	16.74	66141741	0.144	19.59	66143341
12	19/25	0.138	23.16	66121419N	0.131	23.52	66121719	0.157	26.5	66123319
12	65/30	0.141	24.28	66121265N	0.140	25.52	66121765	0.163	28.17	66123365

TUBING

"TURBO 117"

A flexible silicone rubber, bonded to a glass braid. Temperature Range –100°F to +500°F. NEMA — Class "H" Rating. Available in the following grades.

		Dielectric Strength			
		50% Relative Humidity		96% Relative Humidity	
Grade	NEMA Designation	Average	Minimum	Average	Minimum
A-1	H-A-1	7000	5000	2800	2000
B-1	H-B-1	4000	2500	2000	1250
C-1	H-C-1	2500	1500	—	—
C-2	H-C-2	1500	800	—	—
C-3	H-C-3	—	—	—	—

"TURBOTUF"

A flexible vinyl coated glass braid. Temperature range –45°C to +125°C. NEMA — Class "B" Rating. Available in the following grades.

		Dielectric Strength			
		50% Relative Humidity		96% Relative Humidity	
Grade	NEMA Designation	Average	Minimum	Average	Minimum
A-1	B-A-1	7000	5000	2800	2000
B-1	B-B-1	4000	2500	2000	1250
C-1	B-C-1	2500	1500	—	—

TURBO® Products

GENERAL PURPOSE HOOK-UP WIRE

THE WILLIAM BRAND AND CO., INC., WILLIMANTIC, CONN.

HOOK-UP WIRE FOR RADIO & TELEVISION INDUSTRY

Except as noted, the following wires are approved by Underwriters' Laboratories, Inc., for operation at indicated temperatures.

Typical strandings are shown. Others are available on special order.

* Underwriters' Approved only with cotton, rayon or glass overbraid. See NOTE.

** Not covered by Underwriters' Standards.

*** Underwriters Approved only with glass overbraid. See NOTE.

Approx. AWG Size	Stranding	Min. Ave. Ins. Thickness	Nom. Plastic O.D.	80°C Brand Pt. No.	90°C Brand Pt. No.	105°C Brand Pt. No.
26	Solid	0.016	0.050	802616	902616*	502616***
26	10/36	0.016	0.052	88261610	99261610*	55261610***
24	Solid	0.016	0.054	802416	902416*	502416***
24	7/32	0.016	0.057	88241607	99241607*	55241607***
22	Solid	0.016	0.059	802216	902216*	502216***
22	7/30	0.016	0.065	88221607	99221607*	55221607***
20	Solid	0.016	0.067	802016	902016*	502016***
20	10/30	0.016	0.071	88201610	99201610*	55201610***
18	Solid	0.016	0.074	801816	901816*	501816***
18	16/30	0.016	0.080	88181616	99181616*	55181616***
16	Solid	0.016	0.086	801616	901616*	501616***
16	26/30	0.016	0.095	88161626	99161626*	55161626***
14	41/30	0.016	0.112	88141641**	99141641**	55141641**
26	Solid	0.031	0.080	802631	902631	502631
26	10/36	0.031	0.084	88263110	99263110	55263110
24	Solid	0.031	0.084	802431	902431	502431
24	7/32	0.031	0.088	88243107	99243107	55243107
22	Solid	0.031	0.089	802231	902231	502231
22	7/30	0.031	0.094	88223107	99223107	55223107
20	Solid	0.031	0.096	802031	902031	502031
20	10/30	0.031	0.102	88203110	99203110	55203110
18	Solid	0.031	0.104	801831	901831	501831
18	16/30	0.031	0.111	88183116	99183116	55183116
16	Solid	0.031	0.115	801631	901631	501631
16	26/30	0.031	0.126	88163126	99163126	55163126
14	Solid	0.031	0.129	801431	901431	501431
14	41/30	0.031	0.142	88143141	99143141	55143141
12	65/30	0.031	0.162	88123165	99123165	55123165

NOTE — All wire available with an overbraid. Add suffix to Part No. to indicate required overbraid.

Overbraid	Suffix	Approximate O.D. Increase
Cotton	"C"	0.030
Rayon	"R"	0.015
Glass	"G"	0.015

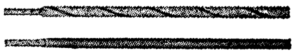
OTHER FAMOUS TURBO® INSULATING PRODUCTS

1. **TURBOZONE** — Low temperature plastic tubing
2. **TURBOLEX** — General purpose plastic tubing
3. **TURBO "PE"** — High frequency plastic tubing
4. **TURBOTHERM 105** — High temperature (105°C) plastic tubing
5. **TURBOTRANS 105** — Special high temperature (105°C) plastic tubing
6. **PLASBRAID** — Overbraided polyvinyl tubing
7. **TURBOSIL** — High temperature (200°C) silicone varnish impregnated glass-braid tubing
8. **TURBO MARKERS** — Long-life slip-on identification markers for electrical uses
9. **TURBO INSULATED WIRES**
10. **TURBO WIRE MARKERS**
11. **TURBO EXTRUDED TUBING**
12. **TURBO GLASS SLEEVING AND TUBING**
13. **TURBO VARNISHED SATURATED SLEEVING & TUBING**
14. **TURBO CAMBRIC CLOTHS, TAPES, PAPERS**
15. **TURBO MICA**

Military Types . . . . A ROME CABLE PRODUCT

THERMOPLASTIC INSULATED MILITARY TYPE HOOK-UP WIRE

Comply to Joint Army-Navy Specification JAN-C-76 and manufactured under specific approval of the Armed Services Electro Standards Agency (ASESA). Impervious to oils, acids, alkalies, moisture and flame and possessing unusually high dielectric strength.



ALL OTHER SIZES CAN BE SUPPLIED PER JAN-C-76 SPECIFICATIONS

TYPE SRIR

PER JAN-C-76 SPECIFICATIONS

CAT. No.	JAN-C-76 TYPE DESIGNATION	SIZE	STRANDING	LENGTH	INSULATION THICKNESS	DIAMETER (INCHES) No Outer Covering	DIAMETER (INCHES) Lacquered Glass Braid	LIST PRICE EACH
707	SRIR-3/5(1)-22	No. 22	Solid	1000 ft. spool	.017″	.066	.081	$ 9.75
717	SRIR-1(1)-20	No. 20	Solid	1000 ft. spool	.017″	.073	.088	10.35
727	SRIR-1½(1)-18	No. 18	Solid	1000 ft. spool	.017″	.081	.096	14.65
737	SRIR-3/5(7)-22	No. 22	7x30	1000 ft. spool	.017″	.071	.086	10.25
747	SRIR-1(7)-20	No. 20	10x30	1000 ft. spooi	0.17″	.079	.094	12.45
757	SRIR-1½(7)-18	No. 18	16x30	1000 ft. spool	0.17″	.088	.103	15.45

TYPE SRHV

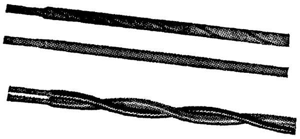
PER JAN-C-76 SPECIFICATIONS

CAT. No.	JAN-C-76 TYPE DESIGNATION	SIZE	STRANDING	LENGTH	INSULATION THICKNESS	DIAMETER (INCHES) No Outer Covering	DIAMETER (INCHES) Lacquered Glass Braid	LIST PRICE EACH
637	SRHV-3/5(1)-22	No. 22	Solid	1000 ft. spool	.033	.100	.115	$13.30
642	SRHV-1(1)-20	No. 20	Solid	1000 ft. spool	.033	.107	.122	15.35
647	SRHV-1½(1)-18	No. 18	Solid	1000 ft. spool	.033	.115	.130	20.00
667	SRHV-3/5(7)-22	No. 22	7x.30	1000 ft. spool	.033	.105	.120	15.75
672	SRHV-1(7)-20	No. 20	10x.30	1000 ft. spool	.033	.113	.128	17.50
677	SRHV-1½(7)-18	No. 18	16x.30	1000 ft. spool	.033	.122	.137	21.60

COLORS: Black, Brown, Dark Blue, Green, Light Blue, Orange, Pink, Purple, Red, Slate, Tan, White, Yellow.

Rome Synthinol . . . . A ROME CABLE PRODUCT

THERMOPLASTIC INSULATED HOOK-UP WIRE



U/L Voltage Rating—300 Volts Max.
Single and Two-Conductor Twisted Cable: Color Coded

Rome Synthinol is a polyvinyl chloride type of thermoplastic insulation impervious to oils, acids, alkalies, moisture and flame, and possessing unusually high dielectric strength. Colors are of gem-like permanency.

Approved by Underwriters' Laboratories where exposed to temperatures not exceeding 80° Centigrade or where exposed to oil at temperatures not exceeding 60° Centigrade with ratings at 300 and 600 volts as indicated below. The Underwriters' approval seal appears on every factory length reel of Rome Synthinol.

Rome Synthinol is specially designed for the chassis and sub-chassis wiring of radio and television receivers and transmitters as well as all other types of electronic equipment. It has physical and electrical characteristics of unusual permanency.

SPECIFICATIONS

Conductors: Annealed tinned solid or stranded copper conforming to A.S.T.M. Specification B 33 and/or Underwriters' Standards.

In order to provide maximum flexibility and prevent unraveling of the strands, a short lay stranding is used as follows:

No. 22 Awg. .33 inch max. No. 20 Awg. .50 inch max.

Insulation: Rome Synthinol—Approved by and conforming to Underwriters' requirements and the performance specifications of A.S.T.M. D 734. Available in solid colors or with a surface applied contrasting colored spiral stripe.

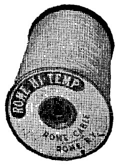
Typical Test Results

Breakdown Voltage (1/64″ Synthinol)....................................over 10000 volts
Breakdown Voltage (1/32″ Synthinol)....................................over 18000 volts
Insulation Resistance (1/32″ Synthinol)......................over 5000 megohms feet

Cat. No.	No. Size Condr.	Stranding No.	Length	Insulation Thickness	Diameter	List Price Each
801	22	Solid	25 ft. carton	.032″	.062″	$0.44
803	22	Solid	100 ft. carton	.020″		1.65
805	22	Solid	500 ft. spool	.020″		6.56
807	22	Solid	1000 ft. spool	.020″		12.70
811	20	Solid	25 ft. carton	.020″	.092″	.50
813	20	Solid	100 ft. carton	.020″		1.79
815	20	Solid	500 ft. spool	.020″		7.40
817	20	Solid	1000 ft. spool	.020″		14.30
821	22	7 x 30	25 ft. carton	.020″	.064″	.50
823	22	7 x 30	100 ft. carton	.020″		1.79
825	22	7 x 30	500 ft. spool	.020″		7.40
827	22	7 x 30	1000 ft. spool	.020″		14.30
831	20	10 x 30	25 ft. carton	.020″	.095″	.62
833	20	10 x 30	100 ft. carton	.020″		2.04
835	20	10 x 30	500 ft. spool	.020″		9.07
837	20	10 x 30	1000 ft. spool	.020″		16.95
881	20-2	10 x 30	100 ft. coil	.025″	.125″	4.29
882	20-2	10 x 30	500 ft. spool	.025″	.125″	19.82
883	20-2	10 x 30	1000 ft. spool	.025″	.125″	41.40

Rome Hi-Temp . . . . A ROME CABLE PRODUCT

RUBBER INSULATED HOOK-UP WIRE



Underwriters' approved and labeled* for 75°C.—300 volts

The result of extensive laboratory development and proved by a decade of service—Rome Hi-Temp is offered for radio and electronic circuits where resistance to moisture and heat is required.

SPECIFICATIONS

Conductors: Annealed tinned, solid or stranded copper conforming to A.S.T.M. Specification B 33 and/or Underwriters' Standards.

In order to provide maximum flexibility and prevent unraveling of the strands a short lay stranding is used as follows:

No. 22 Awg. .33 inch max.
No. 20 Awg. .50 inch. max.

Insulation: Rome Hi-Temp—a high quality, free-stripping heat-resistant rubber insulation approved by Underwriters' Laboratories.

Typical Test Results

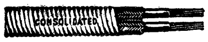
Breakdown Voltage (1/32″ Hi-Temp)...10500 volts
Insulation Resistance..Over 10000 megohms feet

*Only factory length reels are furnished with U/L's labels.

Cat. No.	Size No.	Stranding No.	Length	Insulation Thickness	Diameter	List Price Each
901	22	Solid	25 ft. carton	1/32″	.075″	$0.44
903	22	Solid	100 ft. carton	1/32″		1.65
905	22	Solid	500 ft. spool	1/32″		6.56
907	22	Solid	1000 ft. spool	1/32″		12.70
911	20	Solid	25 ft. carton	1/32″	.086″	.50
913	20	Solid	100 ft. carton	1/32″		1.79
915	20	Solid	500 ft. spool	1/32″		7.40
917	20	Solid	1000 ft. spool	1/32″		14.30
921	22	7 x 30	25 ft. carton	1/32″	.085″	.50
923	22	7 x 30	100 ft. carton	1/32″		1.79
925	22	7 x 30	500 ft. spool	1/32″		7.40
927	22	7 x 30	1000 ft. spool	1/32″		14.30
931	20	10 x 30	25 ft. carton	1/32″	.090″	.62
933	20	10 x 30	100 ft. carton	1/32″		2.04
935	20	10 x 30	500 ft. spool	1/32″		9.07
937	20	10 x 30	1000 ft. spool	1/32″		16.95

U/L Voltage Rating—300 Volts Maximum

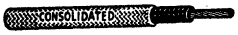
Colors: Black, Blue, Brown, Green, Orange, Pink, Red, Slate, White, Yellow



ARMORED SPEAKER CABLE — For severe use, chafing, etc.

SPECIFICATIONS: Flexible copper conductors mounted parallel each covered with cotton serve and 1/64 wall of live rubber; overall wrap of galvanized steel armor

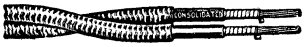
TYPE NO.		LENGTH	SIZE	STRANDING	INSULATION THICKNESS	FINISHED O.D. (Inches)	LIST PRICE EACH
1458	2 Conductors	100 ft.	18	16 x 30	1/64	.235 x .155	$9.00



PHONOGRAPH PICK-UP-ARM CABLE

SPECIFICATIONS: Tinned copper; flexible stranding; vinylite plastic insulation—SHIELDED.

TYPE No.	LENGTH	SIZE	STRANDING	INSULATION THICKNESS	FINISHED O.D. (Inches)	LIST PRICE EACH
1470	100 ft.	23	20 x .005	.010	.070	$3.60



TELEPHONE AND COMMUNICATION CABLE

INTERIOR TYPE—Dry Braid

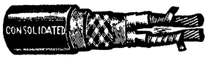
Consists of solid twisted pair, copper wire, with one wire coded for identification, covered with special rubber insulation and with an overall dry braid covering. Designed for interior use in telephone service, on inter-communicating systems of all kinds, etc.

2 CONDUCTOR No.	List Price Each	3 CONDUCTOR No.	List Price Each
3875— 100 ft. coil........	$ 5.40	3878— 100 ft. coil........	$ 8.35
3876— 500 ft. coil........	26.30	3879— 500 ft. coil........	37.00
3877—1000 ft. coil........	50.00	3880—1000 ft. coil........	71.80

EXTERIOR TYPE—Black Finish

Consists of Solid Copper Coded ire with special cotton serve, rubber insulation and with an overall covering of black weather-proofed braid. Designed for exterior use in intercommunicating and telephone service of all kinds.

2 CONDUCTOR No.	List Price Each	3 CONDUCTOR No.	List Price Each
3881— 100 ft. coil........	$ 5.00	3884— 100 ft. coil........	$ 8.10
3882— 500 ft. coil........	24.20	3885— 500 ft. coil........	36.40
3883—1000 ft. coil........	45.50	3886--1000 ft. coil........	68.00

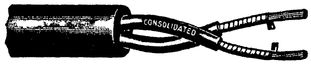


MICROPHONE CABLE

On 100 ft. spools—Conductor color chart: 1—Black; 2—White; 3—Red; 4—Green; 5—Yellow; 6—Blue; 7—Brown.

SHIELDED; Weatherproof rubber jacket for all microphone or weatherproof extension work. (Longer continuous lengths if desired.)

TYPE No.	TYPE	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O.D. (Inches)	NOMINAL CAPACITY per ft. (mmf)	LIST PRICE
1459	1 conductor	20	Lapel microphone	Tinned copper wire; covered with cotton serve and wall of live colored rubber insulation, then covered with second cotton serve, closely woven tinned copper shield, another cotton serve, and a heavy live rubber overall jacket.	26 x 34	.175	40.	$10.15 each
1460	1 conductor	20	Crystal microphone	Tinned copper, glass yarn serve; wall of live rubber; tinned copper braid shield; rubber jacket overall.	26 x 34	.240	33.	10.50 each
1462	2 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.280	63.	11.35 each
1463	3 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.290	.54	12.75 each
1464	4 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.300	.33	16.85 each
1465	5 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.340	.32	19.00 each
1466	6 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.350	.32	24.70 each
1467	7 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.370	.30	25.90 each



See color chart shown above for coding.

All rubber covered; highly flexible; easy to handle for extensions, etc.; practically wear-proof.

1496	2 conductor	18		Tinned copper wire; heavy live rubber insulating color; color coded.	16 x 30	.280		$ 7.40 each
1497	3 conductor	18		Same as 1496	16 x 30	.325		12.40 each
1498	4 conductor	18		Same as 1496	16 x 30	.325		14.30 each

CATHODE-RAY TUBE LEAD CABLE

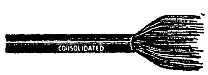
Flame Retardant Polyethylene Plastic Insulation

For high voltage leads to cathode-ray tubes in television receivers, oscilloscopes, power supplies and other uses requiring a high-voltage cable. Special features: minimum surface leakage, corona resistance and high dielectric strength.

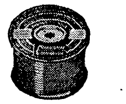
No.	Length Package & Color	Size	Specifications	Stranding	Insulation Thickness (Inches)	Finished O.D. (Inches)	List Price Each
4601	100 ft. Spool Red with two white tracers	20	Extra flexible tinned copper wire; red cellulose acetate yarn braid with 2 white tracers; lacquer coating.	7 x 28	.035	.136	$2.80
4611	100 ft. Spool Red	20	Same as No. 4601 except heavier insulation; solid red braid.	7 x 28	.065	.198	$4.80

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

PHONOGRAPH MULTIPLE CABLE



TYPE No.	LENGTH	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O.D. (Inches)	LIST PRICE EACH
5130	500 ft.	2-16 28-22	Connections between commercial electric phonographs (juke boxes) and record selectors.	1 condr. No. 16 gauge bare copper wire with 1/64" black vinylite insulation. 1 condr. No. 16 gauge solid bare copper wire with 1/64" red vinylite insulation. 14 condrs. No. 22 gauge solid bare copper wire with .010" vinylite insulation, all individually color coded. 14 condrs. No. 22 gauge tinned copper wire with a .010" vinylite insulation, all individually color coded. All condrs. grouped into cable form with a tight, spiral cotton wrapping and with a heavy black vinylite jacket over-all.	Solid		$382.00
5103	1,000 ft.	3-22	Connections for commercial electric phonographs and record selectors.	3 condrs. No. 22 with 1/64" thermoplastic insulation, all individually color coded. All conductors grouped into cable form with a treated cotton braid overall lacquered.	7 x 30	.125	44.25
5113	1,000 ft.	2-16 1-18	Connections for commercial electric phonographs and record selectors.	2 condrs. No. 16 1/32" thermoplastic insulation. 1 condr. No. 18 1/32" thermoplastic insulation, all individually color coded. All conductors grouped into cable form with a treated brown cotton braid overall lacquered.	2-26 x 30 1-16 x 30	.165	105.70



MULTI-COLOR CABLES . . . for intercom and p.a. systems

CONDUCTOR COLOR CHART (colored rubber): 1st—Red; 2nd—Black; 3rd—Blue; 4th—Green; 5th—Brown; 6th—Yellow; 7th—White; 8th—Tan; 9th—Pink; 10th—Gray; 11th—Purple; 12th—Orange.

CONSOLIDATED

FLEXIBLE COTTON BRAIDED

For speakers, testers, battery hook-up, etc. (longer continuous lengths if desired).

SPECIFICATION: Tinned flexible copper; cotton sleeve; live colored rubber insulation; bunched individual conductors; heavy brown cotton braid over-all; color coded.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D (Inches)	LIST PRICE EACH
1481	1 conductor	100 ft.	20	10 x 30	1/64	.150	$ 4.15
1482	2 conductor	100 ft.	20	10 x 30	1/64	.175	5.60
1483	3 conductor	100 ft.	20	10 x 30	1/64	.200	7.75
1484	4 conductor	100 ft.	20	10 x 30	1/64	.275	9.65
1485	5 conductor	100 ft.	20	10 x 30	1/64	.250	11.60
1486	6 conductor	100 ft.	20	10 x 30	1/64	.260	14.45
1487	7 conductor	100 ft.	20	10 x 30	1/64	.275	16.60
1488	8 conductor	100 ft.	20	10 x 30	1/64	.300	22.45
1489	9 conductor	100 ft.	20	10 x 30	1/64	.310	23.25
1490	10 conductor	100 ft.	20	10 x 30	1/64	.325	25.30
1494	11 conductor	100 ft.	20	10 x 30	1/64	.335	27.20
1495	12 conductor	100 ft.	20	10 x 30	1/64	.350	33.80

ANALYZER CABLE

SPECIFICATIONS: Extra flexible tinned capper; rubber covered; color coded; Brown cotton braid overall.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1456	8 conductors	100 ft.	2-14 6-18	41 x 30 16 x 30	1/64	.300	$26.30
1457	9 conductors	100 ft.	2-14 7-18	41 x 30 16 x 30	1/64	.320	27.50

CONSOLIDATED

TINNED COPPER SHIELDED

For radio, auto and electrical work.

SPECIFICATIONS: Extra flexible; tinned copper stranded; cotton serve; live color-coded rubber insulation; cotton serve over all conductors; tinned shielded overall braid.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1471	1 conductor	100 ft.	18	16 x 30	1/64	.110	$ 6.60
1472	2 conductors	100 ft.	20	10 x 30	1/64	.190	8.50
1473	3 conductors	100 ft.	20	10 x 30	1/64	.200	11.00
1474	4 conductors	100 ft.	20	10 x 30	1/64	.220	14.45
1475	5 conductors	100 ft.	20	10 x 30	1/64	.235	17.05
1476	6 conductors	100 ft.	20	10 x 30	1/64	.250	21.00
1477	7 conductors	100 ft.	20	10 x 30	1/64	.265	25.30

CONSOLIDATED

CONTROL PANEL INTERCOM CABLE

SPECIFICATIONS: Tinned copper; vinylite plastic insulation; wires twisted together; closely woven braided tinned copper shield.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1468	2 conductors	100 ft.	22	Solid	.010	.110	$ 5.25
1469	3 conductors	100 ft.	22	Solid	.010	.145	6.70

CONSOLIDATED

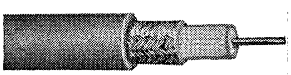
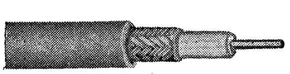
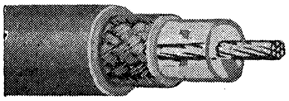
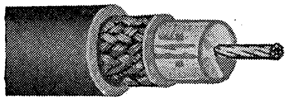
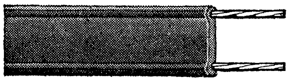
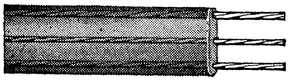
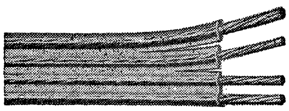
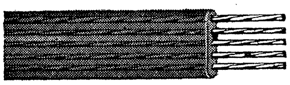
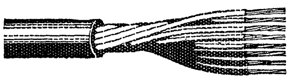
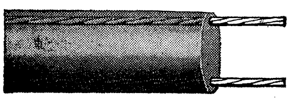
LEAD COVERED CABLE

For freedom from interference, corrosion and dampness.

SPECIFICATIONS: Tinned copper wire; heavy rubber insulation and cotton braid; heavy lead sheath.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1453	2 conductors	100 ft.	18	Solid	1/32	.240 x .200	$21.50
1454	3 conductors	100 ft.	18	Solid	1/32	.420	37.50

TELEVISION CABLE . . . Transmission Cables

No.	Type	Length	Size & Strand-ing	Specifications and General Applications	Nom-inal Diam. (in.)	NOMINAL ELECTRICAL PROPERTIES Fre-quency (mc)	Atten-uation Per 100 ft.	Imped-ance (ohms)	Velocity of Propa-gation (%)	Capaci-tance Per Ft. (mmf)	List Price Each
4401	1 condr.	100 ft. Spool	22 solid	Bare copper, solid; black vinyl plastic jacket; bare copper braid shield; polyethylene plastic insulation.	.242	100 200 300 400	3.75 5.60 7.10 8.30	73	66	21.0	$ 7.65
4403	1 condr.	500 ft. Spool	22 solid	Same as 4401	.242	Same as 4401	Same as 4401	73	66	21.0	71.50
4405	1 condr.	100 ft. Spool	20 solid	Bare copper, solid; black vinyl plastic jacket; tinned copper braid shield; polyethylene plastic insulation.	.195	100 200 300 400	4.10 6.20 8.00 9.50	53.5	66	28.5	7.35
4407	1 condr.	500 ft. Spool	20 solid	Same as 4405	.195	Same as 4405	Same as 4405	53.5	66	28.5	59.35
4415	1 condr.	100 ft. Spool	13 7x21	Bare copper; flexible stranding; black vinyl plastic jacket; bare copper braid shield; polyethylene plastic insulation.	.405	100 200 300 400	2.10 3.30 4.10 4.50	52	66	29.5	18.50
4417	1 condr.	500 ft. Spool	13 7x21	Same as 4415	.405	Same as 4415	Same as 4415	52	66	29.5	173.75
4419	1 condr.	100 ft. Spool	18 7x26	Tinned copper; flexible stranding; bare copper braid shield; black vinyl plastic jacket; polyethylene plastic insulation.	.405	100 200 300 400	1.90 2.85 3.60 4.35	75	66	20.5	17.35
4421	1 condr.	500 ft. Spool	18 7x26	Same as 4419	.405	Same as 4419	Same as 4419	75	66	20.5	163.75
4500	2 condr.	500 ft. Spool	22 7x30	Same as 4523	.055 x .350	Same as 4503	Same as 4503	300	85	4.6	82.00
4503	2 condr.	500 ft. Spool	20 7x28	Both conductors bare copper; flexible stranding; conductors parallel; insulated with polyethylene. **USE: Receiving antenna at high frequencies.**	.072 x .400	50 100 200 300 400 500	.72 1.1 1.7 2.2 2.7 3.1	300	85	4.6	28.50
4507	3 condr.	500 ft. Spool	20 7x28	Two bare, one tinned copper conductor; flexible stranding; conductors parallel; polyethylene insulation. **USE: Same as 4501, but third conductor may be used for ground or other purposes.**	.072 x .400	Same as 4503	Same as 4503	300	85	4.6	32.25
4509	4 condr.	500 ft. Spool	20 7x28	Same as 4501 except three conductors bare copper, one conductor tinned. Amber polyethylene plastic insulation overall is semi-transparent for easy conductor identification and is grooved between conductors for ease of separation and stripping. **USE: Rotor Aerials.**	.072 x .400	Same as 4503	Same as 4503	300	85	4.6	33.00
4517	5 condr.	500 ft. Spool	20 7x28	Same as 4509 except four conductors bare copper, one conductor tinned copper. **USE: Rotor Aerials.**	.090 x .400						44.00
4521	8 condr.	500 ft. Spool	22 7x30	Tinned copper conductors. .010 thermoplastic insulation over each conductor with jacket overall. **USE: Rotor Aerials.**	.235						61.50
4523	2 condr. Heavy	500 ft. Spool	18 7x26	Conductors bare copper; flexible stranding; conductors run parallel; polyethylene insulation. **USE: TV and FM receiving antenna. Especially designed for use in TV fringe areas. Also adapted to use with low-power transmitting antenna.**	.200 x .520	50 100 200 300 400 500	.70 1.10 1.73 2.28 2.74 3.18	300	82	5.0	82.00

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

FORMVAR WIRE—No. 2000

Covered with the new, tough, abrasion-resisting film. Takes up less space. Has these imporant qualities: No danger from stretching and bending during assembly. Tough at higher temperature. Resists abrasion better. Stable under heat aging. Does not fail after 2 hours at 105° C. Completely insoluble to petroleum solvents. Adequate acid and alkali resistance. Constant dialectric properties. Infinite resistance to water and moisture.

Use Single Formvar for low voltage coils, Heavy Formvar to replace Enamel Paper, Enamel Cotton, Enamel Silk, Double Cotton and Double Silk.

ON PROTECTA-SLEEVE SPOOLS.

Single Formvar Magnet Wire				Heavy Formvar Magnet Wire			
Size	¼ Lb.	½ Lb.	1 Lb.	Size	¼ Lb.	½ Lb.	1 Lb.
14	$0.66	$1.12	$2.07	14	$0.73	$1.24	$2.27
15	.66	1.20	2.10	15	.73	1.34	2.33
16	.75	1.25	2.14	16	.84	1.39	2.35
17	.75	1.30	2.15	17	.84	1.44	2.37
18	.75	1.34	2.17	18	.84	1.47	2.39
19	.83	1.39	2.23	19	.92	1.52	2.45
20	.83	1.40	2.25	20	.92	1.54	2.51
21	.83	1.42	2.37	21	.92	1.55	2.61
22	.83	1.45	2.56	22	.92	1.60	2.80
23	.89	1.49	2.62	23	.97	1.64	2.87
24	.90	1.50	2.80	24	1.00	1.65	3.07
25	.97	1.65	2.92	25	1.15	1.97	3.50
26	.99	1.65	3.05	26	1.19	1.98	3.64
27	1.05	1.74	3.20	27	1.25	2.07	3.84
28	1.10	1.80	3.37	28	1.34	2.15	4.04
29	1.14	1.87	3.46	29	1.37	2.24	4.14
30	1.20	1.95	3.52	30	1.44	2.34	4.22
31	1.34	2.02	3.67	31	1.67	2.52	4.58
32	1.35	2.10	3.75	32	1.69	2.63	4.67
33	1.42	2.25	3.95	33	1.77	2.81	4.94
34	1.50	2.55	4.12	34	1.87	3.19	5.16
35	1.64	2.81	4.70	35	2.04	3.46	5.88
36	1.92	3.00	5.26	36	2.39	3.75	6.58
37	2.17	3.37	6.00	37	2.72	4.20	7.50
38	2.55	3.75	6.76	38	3.17	4.69	8.45
39	2.80	4.50	7.50	39	3.50	5.64	9.38
40	3.75	5.64	9.00	40	4.69	7.04	11.27

BARE COPPER WIRE—No. 2000

ON PROTECTA-SLEEVE SPOOLS

Handy convenient way to stock small quantities of wire. Prevents wire from matting or tangling. Supplied on spools as shown and in heavier weights.

Bare Copper Wire				Tinned Copper Wire			
Size	¼ Lb.	½ Lb.	1 Lb.	Size	¼ Lb.	½ Lb.	1 Lb.
14	$0.53	$0.97	$1.54	14	$0.67	$1.13	$1.75
15	.57	1.00	1.60	15	.73	1.27	1.92
16	.60	1.10	1.83	16	.80	1.40	2.00
17	.52	1.12	1.87	17	.84	1.44	2.03
18	.63	1.14	1.90	18	.87	1.47	2.08
19	.65	1.17	1.95	19	.90	1.50	2.12
20	.67	1.20	2.00	20	.94	1.53	2.17
21	.68	1.22	2.07	21	.95	1.53	2.24
22	.70	1.24	2.14	22	.97	1.57	2.30
23	.70	1.27	2.17	23	.98	1.58	2.34
24	.70	1.30	2.20	24	1.00	1.60	2.37
25	.72	1.30	2.20	25	1.00	1.60	2.37
26	.73	1.34	2.27	26	1.00	1.60	2.37
27	.75	1.37	2.30	27	1.05	1.67	2.64
28	.77	1.40	2.40	28	1.10	1.75	2.90
29	.77	1.42	2.47	29	1.13	1.84	2.94
30	.77	1.42	2.47	30	1.17	1.92	2.97
31	.77	1.44	2.53	31	1.20	2.00	3.04
32	.77	1.44	2.60	32	1.24	2.09	3.10
33	.78	1.47	2.68	33	1.27	2.17	3.19
34	.80	1.50	2.77	34	1.30	2.25	3.27
35	.82	1.55	2.90	35	1.32	2.30	3.40
36	.84	1.60	3.04	36	1.34	2.34	3.54
37	.92	1.75	3.22	37	1.36	2.42	3.72
38	1.00	1.90	3.40	38	1.38	2.50	3.90
39	1.02	1.97	3.45	39	1.39	2.59	3.95
40	1.04	2.04	3.50	40	1.40	2.67	4.00

MAGNET WIRE

Popular, profitable specialty wire packaged for easy selling in radio - electrical, department, specialty and hardware stores.

Wide variety of sizes and insulations.

Keeps stock in perfect order, always saleable. For all wire pages 16, 17, 18.

Supplied on Spool as Shown and in Heavier Weights.

Here is a handy and convenient way to stock small quantities of wire. It prevents wire from matting or tangling. The sleeve is accurately made and can be readily slipped out of the way when any length of wire is desired.

PROTECTA-SLEEVE SPOOLS

DOUBLE COTTON COVERED				PLAIN ENAMEL				SINGLE COTTON ENAMEL				SINGLE SILK ENAMEL			
Size	¼ lb.	½ lb.	1 lb.	Size	¼ lb.	½ lb.	1 lb.	Size	¼ lb.	½ lb.	1 lb.	Size	¼ lb.	½ lb.	1 lb.
14	$0.55	$0.95	$1.87	14	$0.45	$0.75	$1.39	14	$0.57	$1.10	$1.95	14			
15	.58	.98	1.90	15	.45	.80	1.40	15	.58	1.10	2.00	15			
16	.60	1.00	1.95	16	.50	.84	1.42	16	.60	1.15	2.05	16	$0.84	$1.35	$2.50
17	.60	1.05	2.00	17	.50	.87	1.44	17	.63	1.18	2.09	17	.85	1.45	2.75
18	.60	1.10	2.05	18	.50	.89	1.45	18	.65	1.25	2.10	18	.88	1.50	2.89
19	.65	1.15	2.28	19	.55	.92	1.49	19	.67	1.28	2.14	19	.90	1.60	3.00
20	.65	1.25	2.34	20	.55	.94	1.50	20	.68	1.34	2.19	20	.94	1.65	3.14
21	.77	1.34	2.50	21	.55	.95	1.59	21	.70	1.39	2.20	21	.96	1.70	3.25
22	.82	1.39	2.64	22	.55	.97	1.70	22	.73	1.43	2.30	22	1.00	1.75	3.39
23	.88	1.50	2.75	23	.58	.99	1.75	23	.78	1.50	2.38	23	1.05	1.87	3.50
24	.94	1.60	3.00	24	.60	1.00	1.87	24	.84	1.55	2.50	24	1.10	1.90	3.64
25	.95	1.65	3.14	25	.65	1.10	1.95	25	.85	1.63	2.63	25	1.18	2.00	3.75
26	1.00	1.75	3.39	26	.65	1.10	2.03	26	.90	1.70	2.75	26	1.20	2.20	4.14
27	1.15	1.89	3.64	27	.70	1.15	2.14	27	1.00	1.75	2.89	27	1.30	2.39	4.50
28	1.20	2.14	4.00	28	.73	1.20	2.25	28	1.05	1.80	3.00	28	1.40	2.50	4.67
29	1.30	2.39	4.50	29	.75	1.25	2.30	29	1.10	1.95	3.14	29	1.54	2.89	5.25
30	1.32	2.50	4.75	30	.80	1.30	2.35	30	1.15	2.04	3.39	30	1.65	3.05	5.90
31	1.50	2.75	5.00	31	.89	1.35	2.45	31	1.25	2.25	3.64	31	1.87	3.39	6.65
32	1.75	3.00	5.64	32	.90	1.40	2.50	32	1.39	2.50	4.00	32	2.20	4.00	7.25
33	1.89	3.37	6.25	33	.95	1.50	2.65	33	1.60	3.00	4.50	33	2.50	4.39	8.25
34	2.14	3.89	7.00	34	1.00	1.70	2.75	34	1.80	3.14	5.00	34	2.70	4.89	9.25
35	2.39	4.25	7.50	35	1.09	1.84	3.14	35	2.14	3.64	5.64	35	2.80	5.25	10.00
36	2.75	4.89	8.65	36	1.29	2.00	3.50	36	2.40	4.14	6.50	36	3.14	5.90	11.40
37	2.25	6.25	11.40	37	1.45	2.25	4.00	37	3.20	5.64	10.25	37	3.75	7.15	14.00
38	4.75	8.65	16.50	38	1.70	2.50	4.50	38	4.00	7.25	12.00	38	4.39	8.65	16.00
39	6.00	11.50	20.00	39	1.87	3.00	5.00	39	5.00	8.75	15.25	39	5.39	10.25	20.00
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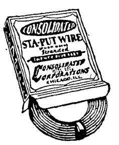


STA-PUT PUSHBACK HOOK-UP WIRE

STRIPS AND REMAINS BACK FOR CLEAN TERMINAL

Seven colors for each: Black, blue, brown, green, red, yellow, white. **Be sure to specify color when ordering.**

Every unit packaged in handsome 3-color display carton for easy merchandising by dealer.

SPECIFICATIONS: Tinned copper conductor; cotton serve and cotton braid through paraffin impregnation.

TYPE No.	SIZE	LENGTH	STRANDING	FINISHED O.D.	LIST PRICE
1048	18	25 ft. carton	16 x 30	.072	$0.55 each
1049	18	100 ft. carton	16 x 30	.072	1.90 each
1050	18	1000 ft. spool	16 x 30	.072	19.00 each
1091	22	25 ft. carton	7 x 30	.066	.38 each
1092	22	100 ft. carton	7 x 30	.066	1.20 each
1093	22	1000 ft. spool	7 x 30	.066	11.20 each
1101	20	25 ft. carton	10 x 30	.068	.48 each
1102	20	100 ft. carton	10 x 30	.068	1.67 each
1103	20	1000 ft. spool	10 x 30	.068	13.70 each
1045	18	25 ft. carton	Solid	.070	.47 each
1046	18	100 ft. carton	Solid	.070	1.67 each
1047	18	1000 ft. spool	Solid	.070	16.50 each
1096	22	25 ft. carton	Solid	.065	.37 each
1097	22	100 ft. carton	Solid	.065	1.15 each
1098	22	1000 ft. spool	Solid	.065	10.50 each
1106	20	25 ft. carton	Solid	.067	.45 each
1107	20	100 ft. carton	Solid	.067	1.65 each
1108	20	1000 ft. spool	Solid	.067	12.50 each

HI-Q LO-LOSS PUSHBACK HOOK-UP WIRE

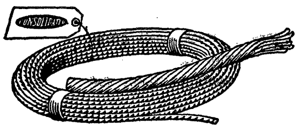
High efficiency wire ideal for use where high conductivity with negligible loss is essential. 3-color display carton. Real pushback — insulation will not creep. R.M.A. color coded.

SPECIFICATIONS: Tinned pure copper serve of cellulose acetate yarn; cotton braid overall with high gloss lacquer.

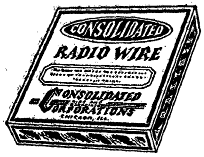
TYPE No.	SIZE	LENGTH	STRANDING	FINISHED O.D.	LIST PRICE
1051	22	25 ft. carton	7 x 30	.065	$1.05 each
1052	22	100 ft. carton	7 x 30	.065	2.75 each
1053	22	1000 ft. spool	7 x 30	.065	12.00 each
1056	20	25 ft. carton	10 x 30	.066	1.07 each
1057	20	100 ft. carton	10 x 30	.066	2.90 each
1058	20	1000 ft. spool	10 x 30	.066	23.65 each
1061	22	25 ft. carton	Solid	.064	.70 each
1062	22	100 ft. carton	Solid	.064	2.47 each
1063	22	1000 ft. spool	Solid	.064	18.40 each
1066	20	25 ft. carton	Solid	.065	.94 each
1067	20	100 ft. carton	Solid	.065	3.20 each
1068	20	1000 ft. spool	Solid	.065	23.50 each

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

AERIAL WIRE . . . Copper and Bronze



Special, attractive three-color cartons help to make this wire easier for customers to buy, easier for your dealers to sell. Supplied at slight additional cost.



SOLID ENAMELED

No. 3851.	50 ft. coil,	14 Solid Enamel
No. 3852.	75 ft. coil,	14 Solid Enamel
No. 3853.	100 ft. coil,	14 Solid Enamel
No. 3854.	1000 ft. coil,	14 Solid Enamel
No. 3861.	50 ft. coil,	12 Solid Enamel
No. 3862.	75 ft. coil,	12 Solid Enamel
No. 3863.	100 ft. coil,	12 Solid Enamel
No. 3864.	1000 ft. spool,	12 Solid Enamel
No. 3871.	50 ft. coil,	10 Solid Enamel
No. 3872.	75 ft. coil,	10 Solid Enamel
No. 3873.	100 ft. coil,	10 Solid Enamel
No. 3874.	1000 ft. spool,	10 Solid Enamel

AERIAL AND BUS BAR SOLID TINNED

No. 3821.	50 ft. coil,	14 Solid Tinned
No. 3822.	75 ft. coil,	14 Solid Tinned
No. 3823.	100 ft. coil,	14 Solid Tinned
No. 3824.	1000 ft. spool,	14 Solid Tinned
No. 3831.	50 ft. coil,	12 Solid Tinned
No. 3832.	75 ft. coil,	12 Solid Tinned
No. 3833.	100 ft. coil,	12 Solid Tinned
No. 3834.	1000 ft. spool,	12 Solid Tinned
No. 3841.	50 ft. coil,	10 Solid Tinned
No. 3842.	75 ft. coil,	10 Solid Tinned
No. 3843.	100 ft. coil,	10 Solid Tinned
No. 3844.	1000 ft. spool,	10 Solid Tinned

SOLID BAR

No. 3801.	50 ft. coil,	15 Solid Bare
No. 3802.	75 ft. coil,	15 Solid Bare
No. 3803.	100 ft. coil,	15 Solid Bare
No. 3804.	1000 ft. spool,	15 Solid Bare
No. 3811.	50 ft. coil,	14 Solid Bare
No. 3812.	75 ft. coil,	14 Solid Bare
No. 3813.	100 ft. coil,	14 Solid Bare
No. 3814.	1000 ft. spool,	14 Solid Bare

BARE STRANDED

No. 3501.	50 ft. coil,	7x26 Bare
No. 3502.	75 ft. coil,	7x26 Bare
No. 3503.	100 ft. coil,	7x26 Bare
No. 3504.	1000 ft. spool,	7x26 Bare
No. 3511.	50 ft. coil,	7x25 Bare
No. 3512.	75 ft. coil,	7x25 Bare
No. 3513.	100 ft. coil,	7x25 Bare
No. 3514.	1000 ft. spool,	7x25 Bare
No. 3521.	50 ft. coil,	7x24 Bare
No. 3522.	75 ft. coil,	7x24 Bare
No. 3523.	100 ft. coil,	7x25 Bare
No. 3524.	1000 ft. spool,	7x25 Bare
No. 3531.	50 ft. coil,	7x23 Bare
No. 3532.	75 ft. coil,	7x23 Bare
No. 3533.	100 ft. coil,	7x23 Bare
No. 3534.	1000 ft. spool,	7x23 Bare
No. 3541.	50 ft. coil,	7x0242 Bare
No. 3542.	75 ft. coil,	7x0242 Bare
No. 3543.	100 ft. coil,	7x0242 Bare
No. 3544.	1000 ft. spool,	7x0242 Bare
No. 3551.	50 ft. coil,	7x22 Bare
No. 3552.	75 ft. coil,	7x22 Bare
No. 3553.	100 ft. coil,	7x22 Bare
No. 3554.	1000 ft. spool,	7x22 Bare
No. 3561.	50 ft. coil,	7x20 Bare
No. 3562.	75 ft. coil,	7x20 Bare
No. 3563.	100 ft. coil,	7x20 Bare
No. 3564.	1000 ft. spool,	7x20 Bare

TINNED STRANDED

No. 3601.	50 ft. coli,	7x26 Tinned
No. 3602.	75 ft. coil,	7x26 Tinned
No. 3603.	100 ft. coil,	7x26 Tinned
No. 3604.	1000 ft. spool,	7x26 Tinned
No. 3611.	50 ft. coil,	7x25 Tinned
No. 3612.	75 ft coil,	7x25 Tinned
No. 3613.	100 ft. coil,	7x25 Tinned
No. 3614.	1000 ft. spool,	7x25 Tinned
No. 3621.	50 ft. coil,	7x24 Tinned
No. 3622.	75 ft. coil,	7x24 Tinned
No. 3623.	100 ft. coil,	7x24 Tinned
No. 3624.	1000 ft. spool,	7x24 Tinned
No. 3631.	50 ft. coil,	7x23 Tinned
No. 3632.	75 ft. coil,	7x23 Tinned
No. 3633.	100 ft. coil,	7x23 Tinned
No. 3634.	1000 ft. spool,	7x23 Tinned
No. 3641.	50 ft. coil,	7x0242 Tinned
No. 3642.	75 ft. coil,	7x0242 Tinned
No. 3643.	100 ft. coil,	7x0242 Tinned
No. 3644.	1000 ft. spool,	7x0242 Tinned
No. 3651.	50 ft. coil,	7x22 Tinned
No. 3652.	75 ft. coil,	7x22 Tinned
No. 3653.	100 ft. coil,	7x22 Tinned
No. 3654.	1000 ft. spool,	7x22 Tinned
No. 3661.	50 ft. coil,	7x20 Tinned
No. 3662.	75 ft. coil,	7x20 Tinned
No. 3663.	100 ft. coil,	7x20 Tinned
No. 3664.	1000 ft. coil,	7x20 Tinned

AERIAL WIRE . . . Phosphor Bronze

Recommended for short wave and transmitting aerials
Tested and used by Army and Navy
Amazing improvement for reception and transmission

No. 3401	50 ft.	coil,	7x26 Phosphor Bronze
No. 3402	75 ft.	coli,	7x26 Phosphor Bronze
No. 3403	100 ft.	coil,	7x26 Phosphor Bronze
No. 3404	1000 ft.	spool,	7x26 Phosphor Bronze
No. 3421	50 ft.	coli,	7x24 Phosphor Bronze
No. 3422	75 ft.	coil,	7x24 Phosphor Bronze
No. 3423	100 ft.	coil,	7x24 Phosphor Bronze
No. 3424	1000 ft.	spool,	7x24 Phosphor Bronze

Phosphor bronze is recognized as the most efficient, practical wire obtainable for short wave and transmitting aerials. It will not stretch or sag and is super-inductive.

No. 3451	50 ft.	coil,	7x22 Phosphor Bronze
No. 3452	75 ft.	coil,	7x22 Phosphor Bronze
No. 3453	100 ft.	coil,	7x22 Phosphor Bronze
No. 3454	1000 ft.	spool,	7x22 Phosphor Bronze
No. 3461	50 ft.	coil,	7x20 Phosphor Bronze
No. 3462	75 ft.	coil,	7x20 Phosphor Bronze
No. 3463	100 ft.	coil,	7x20 Phosphor Bronze
No. 3464	1000 ft.	spool,	7x20 Phosphor Bronze

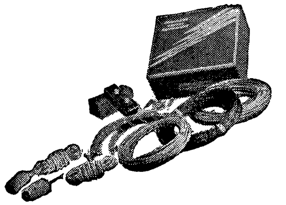
TEST PROD WIRE

CONSOLIDATED

A specially constructed high grade wire for use on laboratory test equipment, bench analyzers, etc.

No.	Length Package & Color	Size	Specifications	Stranding	Insulation Thickness (Inches)	Finished O.D. (Inches)	List Price Each
1001	100 ft. Spool Black Red	20	Extra flexible tinned copper wire with red or black live rubber insulation	41x36	.043	.130	$ 2.25
1002	250 ft. Spool Black Red	20	Same as No. 1001	41x36	.043	.130	5.60
1003	1000 ft. Spool Black Red	20	Same as No. 1001	41x36	.043	.130	21.00

No.	Length Package & Color	Size	Specifications	Stranding	Insulation Thickness (Inches)	Finished O.D. (Inches)	List Price Each
1006	100 ft. Spool Black Red	18	Same as No. 1001	65x36	.088	.230	4.30
1007	250 ft. Spool Black Red	18	Same as No. 1001	65x36	.088	.230	10.75
1008	500 ft. Spool Black Red	18	Same as No. 1001	65x36	.088	.230	20.00
1009	1000 ft. Spool Black Red	18	Same as No. 1001	65x36	.088	.230	40.00



AERIAL KITS for Every Radio Receiver

Consolidated Aerial Kits are made up with the same painstaking care that has always featured our assemblies. All materials and parts are of highest standard and are guaranteed as to Length, Weight, Size and Count as Specified. If your needs are not answered in the stock listings below, write us regarding your special requirements.

50 FOOT SERIES

No. 506—THE PRICE LEADER	50 feet 7x26 Bare Copper Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in Strip; Installation Instructions.	$1.37 each
No. 507	—Contains 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 506.	1.72 each
No. 501—A SUPER VALUE	50 feet 7x26 Bare Copper Aerial Wire; 35 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in- Strip; Installation Instructions.	1.44 each
No. 502	—Contains 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 501.	1.78 each
No. 512—DE LUXE AERIAL	50 feet 7x22 Enamel Aerial Wire; 35 feet No. 16 Rubber Covered Lead-in Wire; 1 Underwriter Approved Lightning Arrestor; 2 Large Glass Insulators; 1 Shur Grip Ground Clamp; 1 Duco Window Lead-in Strip; 2 Porcelain Nail Knobs; Installation Instructions.	2.62 each

60 FOOT SERIES

No. 516—PRICE KIT	—Contains 60 feet 7x26 Bare Copper Aerial Wire, otherwise same as No. 501.	1.57 each
No. 517	—Contains 60 feet 7x26 Bare Copper Aerial Wire, 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 501.	1.94 each
No. 518 AERIAL	—Contains 60 feet 7x22 Enamel Aerial Wire, otherwise same as No. 512.	2.87 each

75 FOOT SERIES

No. 531—75 FOOT SPECIAL	75 feet 7x26 Bare Copper Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in Strip; Installation Instructions.	1.72 each
No. 532	—Contains 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 531.	2.07 each
No. 522—SUPERFINE AERIAL	75 feet 7x24 Enameled Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Underwriter Approved Lightning Arrestor; 2 Large Glass Insulators; 1 Shur Grip Gound Clamp; 1 Duco Window Lead-in Strip; 2 Porcelain Nail Knobs; Installation Instructions.	2.82 each

100 FOOT SERIES

No. 541—EXTRA VALUE	100 feet 7x26 Bare Copper Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in Strip; Installation Instructions.	1.87 each
No. 542	—Contains Underwriter Approved Lightning Arrestor, otherwise same as No. 541.	2.22 each
No. 551	—Contains 100 feet 7x24 Copper Aerial Wire, otherwise same as No. 541.	2.03 each
No. 552	—Contains 100 feet 7x24 Aerial Wire; 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 541.	3.20 each

CONSOLIDATED

RESISTANCE LINE CORDS for AC-DC Radio Sets

The cords have a wide market for replacement on AC-DC radios with worn out cords; also on those formerly having hot resistance. Consists of a 6 foot cord with red and black rubber covered line cord wires and an asbestos covered resistance having separate terminal braid. Consolidated cords have an exclusive tinned copper terminal on the resistance cord that can be soldered. Colored cotton tracer designates ohmage.

VOLTAGE DATA

The table and example below indicate tube voltages and how to determine proper cord. Check the voltages of each tube in the voltage table. Add all voltages together, allowing 10% variation, plus or minus.

TUBE VOLTAGES

6.3 volt tubes: 36, 37, 38, 39, 77, 78, 6B7, KR1, 6D6, 6C6, 6A7, 6F7.

12 volt tubes: 12Z3, 12A5.

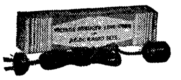
25 volt tubes: 25Z5, 43.

EXAMPLE:
Radio Contains

1 77 tube—voltage	6.3
1 78 tube—voltage	6.3
1 43 tube—voltage	25.
1 25Z5 tube—voltage	25.
Total voltage	62.6

Radio uses 160 ohm cord.

		List Price
No. 2401	135 ohms—Blue	$ 1.05 ea.
No. 2413	150 ohms—Blue and Red—Cross tracer	1.05 ea.
No. 2402	160 ohms—Red	1.05 ea.
No. 2412	180 ohms—Blue and White—Cross tracer	1.05 ea.
No. 2411	200 ohms—Red and White—Cross tracer	1.05 ea.
No. 2403	220 ohms—Grey	1.05 ea.
No. 2410	250 ohms—Red and Green—Cross tracer	1.05 ea.
No. 2409	280 ohms—White and Green—Cross tracer	1.05 ea.
No. 2404	290 ohms—White	1.05 ea.
No. 2408	310 ohms—Yellow and Green—Cross tracer	1.05 ea.
No. 2405	330 ohms—Yellow	1.05 ea.
No. 2407	350 ohms—Yellow and Red—Cross tracer	1.05 ea.
No. 2406	360 ohms—Green	1.05 ea.
No. 2414	525 ohms—Grey and White—Cross tracer	1.05 ea.
No. 2415	30 ohms Per Ft.—100 Ft. Spools	13.75
No. 2421	60 ohms Per Ft.—100 Ft. Spools	13.75



VOLTAGE REDUCER CORD SETS

No. 2451

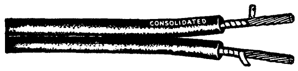
The Consolidated Voltage Reducer Cord Set can be used anywhere that it is necessary to reduce line voltage from 220 volts to 110 volts for radios, electric clocks, household appliances, electric dry shavers, etc. It has a special built-in resistor which reduces 220 volts AC or DC to 110 volts without any additional devices. It comes as a 6 foot cord with dark brown glazed cotton covering. Packed in attractive two-color box.

No. 2451	—American male plug with American female receptacle	$1.90
No. 2452	—English male plug with American female receptacle	2.40
No. 2453	—French male plug with American female receptacle	2.40

ELECTRICAL CORDAGES

HANDYCORD CENTERSTRIP

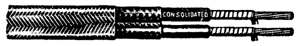
The perfect Lamp and Utility Cord.



Colors: Black, Brown, White.

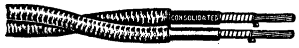
No. 4071	No. 18 1/64 ft. Spools	$37.50M
No. 4072	250 ft. Spools	35.00M

APPROVED PARALLEL SILK CORD



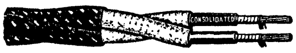
No. 4066	No. 18 1/64 100 ft. Spools	$37.50M
No. 4067	No. 18 1/64 250 ft. Spools	35.00M

HEATER CORD



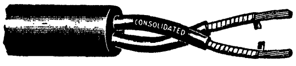
No. 4086	No. 16 100 ft. Spools	$73.65M
No. 4087	No. 16 250 ft. Spools	69.75M
No. 4091	No. 18 100 ft. Spools	63.50M
No. 4092	No. 18 250 ft. Spools	59.25M

TWISTED COTTON CORD



No. 4101	No. 20 1/64 Black 100 ft. Spools	$35.75M
No. 4102	No. 20 1/64 Black 250 ft. Spools	32.90M
No. 4106	No. 18 1/64 Black 100 ft. Spools	41.00M
No. 4107	No. 18 1/64 Black 250 ft. Spools	37.90M
No. 4111	No. 18 1/32 Black 100 ft. Spools	54.35M
No. 4112	No. 18 1/32 Black 250 ft. Spools	51.00M
No. 4116	No. 18 1/64 Gr. & Yel. 100 ft. Spools	41.00M
No. 4117	No. 18 1/64 Gr. & Yel. 250 ft. Spools	37.90M
No. 4121	No. 18 1/32 Gr. & Yel. 100 ft. Spools	54.35M
No. 4122	No. 18 1/32 Gr. & Yel. 250 ft. Spools	51.00M

ALL RUBBER SERVICE CORD

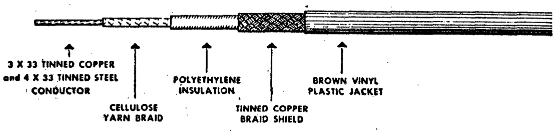


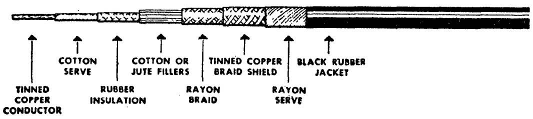
No. 4151	280 O.D. No. 18-2 Cond. 100 ft. Spools	$57.00M
No. 4152	280 O.D. No. 18-2 Cond. 250 ft. Spools	55.00M
No. 4156	380 O.D. No. 18-2 Cond. 100 ft. Spools	71.50M
No. 4157	380 O.D. No. 18-2 Cond. 250 ft. Spools	68.00M
No. 4161	380 O.D. No. 16-2 Cond. 100 ft. Spools	76.50M
No. 4162	380 O.D. No. 16-2 Cond. 250 ft. Spools	73.50M

CORNISH Radio & TV Wire Products

microphone cables

Cornish Microphone Cables are available in plastic and rubber insulations. Plastic cables utilize polyethylene insulation on the conductor with outer vinyl plastic jacket. They are designed for low capacitance, high insulation resistance, low attenuation; and withstand severe service under all operating conditions.


3 X 33 TINNED COPPER and 4 X 33 TINNED STEEL CONDUCTOR
CELLULOSE YARN BRAID
POLYETHYLENE INSULATION
TINNED COPPER BRAID SHIELD
BROWN VINYL PLASTIC JACKET

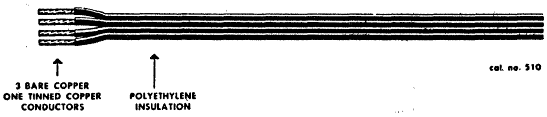

TINNED COPPER CONDUCTOR
COTTON SERVE
RUBBER INSULATION
COTTON OR JUTE FILLERS
RAYON BRAID
TINNED COPPER BRAID SHIELD
RAYON SERVE
BLACK RUBBER JACKET

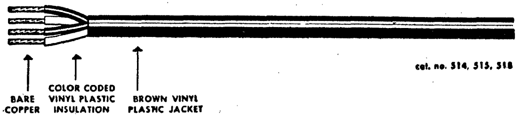
Catalog Number	AWG Size	Number of Strands	Nominal Outside Diameter Inches	Nominal Capacitance Per Ft. MMF	Standard Put-Up	Standard Shipping Pkg.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
PLASTIC MICROPHONE CABLE								
2411	25/1	7/33	.144	37	500' Spool	1 Spool	15	61.00
2401	25/1	7/33	.200	25	500' Spool	1 Spool	25	83.20
RUBBER MICROPHONE CABLE								
2101	20/1	26/34	.260	32*	500' Spool	1 Spool	49	88.00
2152	20/2	26/34	.280	68*	500' Spool	1 Spool	54	114.90
2153	20/3	26/34	.280	85*	500' Spool	1 Spool	59	127.40
2154	20/4	26/34	.305	95*	500' Spool	1 Spool	72	146.80
2182	18/2	41/34	.295	80*	250' Spool	4 Spools	60	137.40
2160	20/1	26/34	.175	34*	500' Spool	1 Spool	25	80.00

*Between one conductor and remaining conductors connected to shield

antenna control cables

Cornish Antenna Control Cables are available in polyethylene and vinyl plastic insulations in a varied range of conductors to adequately meet all installation problems encountered. Flat and round constructions are furnished in brown colored outer insulation.

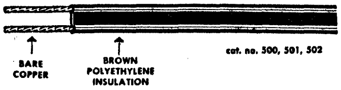

3 BARE COPPER ONE TINNED COPPER CONDUCTORS
POLYETHYLENE INSULATION
cat. no. 510

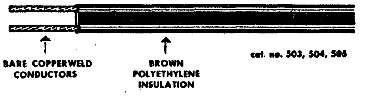

BARE COPPER
COLOR CODED VINYL PLASTIC INSULATION
BROWN VINYL PLASTIC JACKET
cat. no. 514, 515, 518

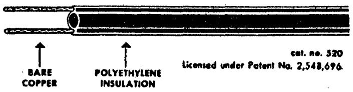
Catalog Number	AWG Size	Number of Strands	Thickness Conductor Insulation Inch	Nominal Outside Dimension Inch	Standard Put-Up	Standard Shipping Pkg.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
510	20/4	7/28	—	.075x.350	1000' Spool	1 Spool	20	42.70
514	20/4	7/28	.010	.170	1000' Spool	1 Spool	24	50.00
515	20/5	7/28	.010	.180	1000' Spool	1 Spool	30	57.80
518	22/8	7/30	.015	.205	1000' Spool	1 Spool	34	77.80

t-v lead-in cables

Cornish TV Lead-in Cables are furnished only in pure virgin polyethylene insulation to insure long life under severe operating conditions and are designed so that only exceptionally low losses at high frequencies are experienced. They are available with pure copper or copperweld conductors. Copperweld 300 Ohm lead-in cable has 1½ times the tensile strength of copper and has approximately 2½ times greater flexing life. It insures long service life in TV aerial installations requiring long runs.

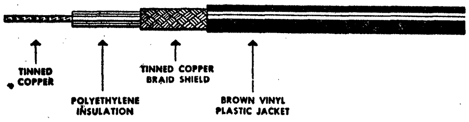

BARE COPPER
BROWN POLYETHYLENE INSULATION
cat. no. 500, 501, 502


BARE COPPERWELD CONDUCTORS
BROWN POLYETHYLENE INSULATION
cat. no. 503, 504, 505


BARE COPPER
POLYETHYLENE INSULATION
cat. no. 520
Licensed under Patent No. 2,543,696.

Catalog Number	AWG Size	Number of Strands	Nominal Outside Diameter Inch	Frequency (MC)	Attenuation Per 100 Ft. (Decibels)	Impedance (Ohms)	Capacitance Per Ft. (MMF)	Standard Put-Up Pkge.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
500	20/2	7/28	.052 x .400	100 200 300 400	1.1 1.7 2.2 2.7	300	4.6	1000' Spool	17	28.10
501	20/2	7/28	.072 x .400			300	4.6	1000' Spool	18	31.70
502	20/2	7/28	.100 x .400			300	4.6	1000' Spool	20	38.90
503	20/2	7/28	.052 x .400	100 200 300 400	1.1 1.7 2.2 2.7	300	4.6	1000' Spool	17	*
504	20/2	7/28	.072 x .400			300	4.6	1000' Spool	18	*
505	20/2	7/28	.100 x .400			300	4.6	1000' Spool	20	*
520	20/2	7/28	.320 x .460	100	1.25	300	4.65	500' Spool	28	65.10

RG/U coaxial transmission cables


TINNED COPPER
POLYETHYLENE INSULATION
TINNED COPPER BRAID SHIELD
BROWN VINYL PLASTIC JACKET

Cornish RG/U Coaxial Transmission Cables are available in two basic constructions, namely RG-11/U, Catalog No. 522 and RG-59/U, Catalog No. 521. They are designed for use as communication cables and television antenna lead-in cable. These cables are available, normally, from factory stock. Other special RG/U constructions can be furnished to special order providing quantities required constitute an economical manufacturing run.

Catalog Number	AWG Size	Number of Strands	Nom. Outside Diam. Inch	Frequency (MMC)	Atten. per 100 Ft. (Decibels)	Impedance (Ohms)	Capacitance per M Ft. (MMF)	Standard Put-Up	Standard Shipping Pkge.	Approx. Wght. Per M Ft. Lbs.	
521 RG-59/U	22/1	Solid	.245	100 200 400	3.75 5.60 8.30	73	21	500 Ft. Spool	1 Spool	43	*
522 RG-11/U	18/1	7/26	.405	100 200 400	1.90 2.85 4.35	75	20.5	500 Ft. Spool	1 Spool	98	*

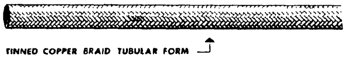
*Temporarily unavailable

Note: All Cornish Wire and Cable is available in put-ups other than those listed, ask for current price schedule.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

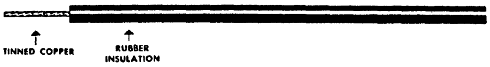
Radio & TV Wire Products

braided tinned copper tubular shielding


TINNED COPPER BRAID TUBULAR FORM

Catalog Number	Number of Strands	Nom. Outside Diameter Inch	Standard Put-Up	Standard Shipping Pkg.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
1110	144 x 33	.250	250' Spool	4 Spools	19	53.40

test lead wire

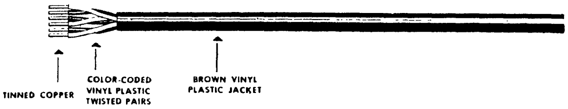

TINNED COPPER
RUBBER INSULATION

Catalog Number	AWG Size	Number of Strands	Jacket Insulation Inch	Nominal Outside Diameter Inch	Suggested Voltage Rating	Available Standard Put-Up	Standard Shipping Pkgs.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
1142	18	65/36	.044	.140	5000	100' Spool	4 Spools	15	33.60
1142	18	65/36	.044	.140	5000	500' Spool	4 Spools	15	29.30
1142	18	65/36	.044	.140	5000	1000' Spool	4 Spools	15	28.00

STANDARD COLORS:—Red and Black

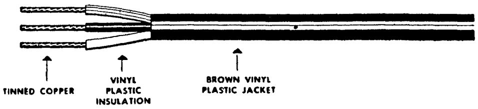
intercommunication cable

Cornish Intercommunication and Sound Cables are made in various constructions utilizing plastic insulation for both conductors and jacket. Where installation conditions dictate, Cornish shielded cables are recommended.


TINNED COPPER
COLOR-CODED VINYL PLASTIC TWISTED PAIRS
BROWN VINYL PLASTIC JACKET

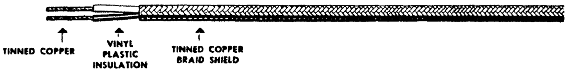
Catalog Number	AWG Size	Number of Strands	Number of Pairs	Thick. Conductor Insulation Inch	Thickness Jacket Insulation Inch	Nominal Outside Diameter Inch	Standard Put-Up	Standard Shipping Pkg.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
1240	22/2	Solid	1	.015	.015	.145	500' Spool	4 Spools	14	33.40
1241	22/4	Solid	2	.015	.015	.205	500' Spool	4 Spools	22	60.00
1242	22/6	Solid	3	.015	.015	.230	500' Spool	4 Spools	29	85.60
1243	22/12	Solid	6	.015	.015	.265	500' Spool	1 Spool	42	106.70
1244	22/18	Solid	9	.015	.015	.320	500' Spool	1 Spool	68	166.70
1245	22/30	Solid	15	.015	.015	.380	500' Coil	1 Coil	105	266.70

plastic insulated cable


TINNED COPPER
VINYL PLASTIC INSULATION
BROWN VINYL PLASTIC JACKET

Catalog Number	AWG Size	Number of Strands	Thick. Conductor Insulation Inch	Thickness Jacket Insulation Inch	Nominal Outside Diameter Inch	Standard Put-Up	Standard Shipping Pkg.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
1223	22/3	7/30	.015	.015	.140	500' Spool	4 Spools	14	35.60
1224	22/4	7/30	.015	.015	.160	500' Spool	4 Spools	20	44.50
1832	18/2	Solid	.015	No Jacket	.115	500' Spool	4 Spools	13	21.70
1833	18/3	Solid	.015	No Jacket	.135	500' Spool	4 Spools	20	32.50

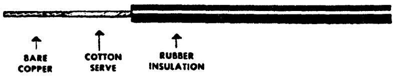
shielded intercommunication cable


TINNED COPPER
VINYL PLASTIC INSULATION
TINNED COPPER BRAID SHIELD

Catalog Number	AWG Size	Number of Strands	Thickness Conductor Insulation Inch	Tinned Copper Shielding	Nominal Outside Diameter Inch	Standard Put-Up	Standard Shipping Pkg.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
1230	20/2	10/30	.015	#34	.163	1000 ft.	2	22	57.80
1238	18/2	16/30	.015	#34	.228	1000 ft.	2	35	62.20
1233	20/3	10/30	.015	#34	.230	500 ft.	2	42	86.70

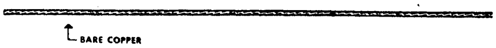
lead-in wire

Cornish Lead-in wire is recommended for use from the outdoor antenna to the radio set.


BARE COPPER
COTTON SERVE
RUBBER INSULATION

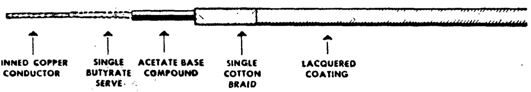
Catalog Number	AWG Size	Number of Strands	Thickness Conductor Insulation Inch	Nominal Outside Diameter Inch	Standard Put-Up	Standard Shipping Package	Approx. Weight Lbs./M Ft.	List Price Per M Ft.
303	18/1	16/30	1/32	.115	1000' Spool	4 Spools	8	12.90
304	16/1	26/30	1/32	.130	1000' Spool	4 Spools	12	19.00

aerial wire


BARE COPPER

Catalog Number	AWG Size	Number of Strands	Jacket Insulation Inch	Nominal Outside Diameter Inch	Suggested Voltage Rating	Available Standard Put-Up	Standard Shipping Packages	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
42A	16	7/24	Bare	.060	—	75' Coil	50	8.5	1,000.00

noflame-cor hook-up wire


TINNED COPPER CONDUCTOR
SINGLE BUTYRATE SERVE
ACETATE BASE COMPOUND
SINGLE COTTON BRAID
LACQUERED COATING

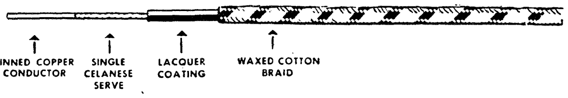
Catalog Number	AWG Size	Number of Strands	Nominal Outside Diameter Inches	Voltage Break-Down Nominal Volts	Available Standard Put-Ups	*Standard Shipping Package	Approx. Weight Lbs./M Ft.	List Price Per M Ft.
1084	18	16/30	.110	7400	100' Spool 1000' Spool	10 4	9	34.40 31.60
1085	20	10/30	.102	7400	100' Spool 1000' Spool	10 4	7	28.60 25.80
1086	22	7/30	.091	7400	100' Spool 1000' Spool	10 4	6	24.80 22.00
1079	18	Solid	.103	7400	100' Spool 1000' Spool	10 4	9	31.90 29.10
1080	20	Solid	.095	7400	100' Spool 1000' Spool	10 4	6	26.10 23.30
1081	22	Solid	.091	7400	100' Spool 1000' Spool	10 4	5	23.20 20.40

STANDARD COLORS:—Black, Red, Green, Yellow, Blue, Brown, Orange, Slate, White and tracer combinations of base colors.

Note: All Cornish Wire and Cable is available in put-ups other than those listed, ask for current price schedule.

CORNISH Radio & TV Wire Products

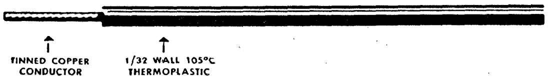
cor-lac push back wire


TINNED COPPER CONDUCTOR
SINGLE CELANESE SERVE
LACQUER COATING
WAXED COTTON BRAID

Catalog Number	AWG Size	Number of Strands	Nominal Outside Diameter Inches	Voltage Break-Down Nominal Volts	Available Standard Put-Ups	*Standard Shipping Package	Approx. Weight Lbs./M Ft.	List Price Per M Ft.
648	18	16/30	.092	3100	100' Spool 1000' Spool	10 4	9	22.80 20.00
649	20	10/30	.072	3100	100' Spool 1000' Spool	10 4	6	18.30 15.50
650	22	7/30	.062	3100	100' Spool 1000' Spool	10 4	4	15.50 12.70
642	18	Solid	.092	3100	100' Spool 1000' Spool	10 4	8	20.40 17.60
644	20	Solid	.071	3100	100' Spool 1000' Spool	10 4	5	16.70 13.90
645	22	Solid	.061	3100	100' Spool 1000' Spool	10 4	4	14.00 11.20

STANDARD COLORS:—Black, Red, Green, Yellow, Blue, Brown, Orange, Slate, White and tracer combinations of base colors.

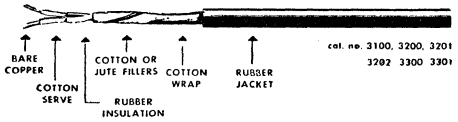
plastic-cor hook-up wire

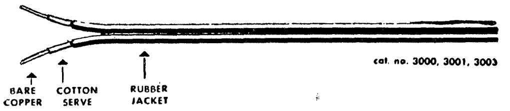

TINNED COPPER CONDUCTOR
1/32 WALL 105°C THERMOPLASTIC

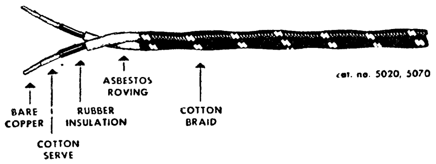
Catalog Number	AWG Size	Number of Strands	Nominal Outside Diameter Inches	Voltage Break-Down Nominal Volts	Available Standard Put-Ups	*Standard Shipping Package	Approx. Weight Lbs./M Ft.	List Price Per M Ft.
1307	18	16/30	.108	22,000	100' Spool 1000' Spool	10 4	11	23.20 20.50
1308	20	10/30	.097	22,000	100' Spool 1000' Spool	10 4	10	19.30 16.60
1309	22	7/30	.092	22,000	100' Spool 1000' Spool	10 4	9	17.60 14.80
1301	18	Solid	.105	22,000	100' Spool 1000' Spool	10 4	11	21.60 18.80
1302	20	Solid	.094	22,000	100' Spool 1000' Spool	10 4	10	17.30 14.50
1303	22	Solid	.089	22,000	100' Spool 1000' Spool	10 4	9	14.80 12.00

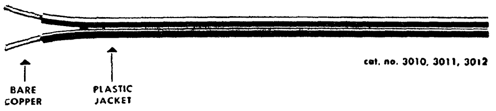
STANDARD COLORS:—Black, Red, Green, Yellow, Brown, Tan, Blue, Orange and White.

flexible and portable cords


BARE COPPER
COTTON SERVE
COTTON OR JUTE FILLERS
RUBBER INSULATION
COTTON WRAP
RUBBER JACKET
cat. no. 3100, 3200, 3201 3202 3300 3301


BARE COPPER
COTTON SERVE
RUBBER JACKET
cat. no. 3000, 3001, 3003


BARE COPPER
COTTON SERVE
RUBBER INSULATION
ASBESTOS ROVING
COTTON BRAID
cat. no. 5020, 5070


BARE COPPER
PLASTIC JACKET
cat. no. 3010, 3011, 3012

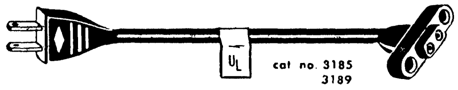
Catalog Number	AWG Size	UL Type	Number of Strands	Insulation Cond. In.	Thickness Jacket In.	Nominal Outside Diameter Inch	Current Carrying Capacity Amp.	Standard Put-Up	Standard Shipping Pkg.	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
3000	18/2	SP-1	41/34	2/64	—	.120x225	7	250' Spool	4 Spools	22	32.20
3001	18/2	SP-2	41/34	3/64	—	.150x285	7	250' Spool	4 Spools	36	50.00
3003	16/2	SP-2	65/34	3/64	—	.170x320	10	250' Spool	4 Spools	50	70.00
3010	18/2	SPT-1	41/34	2/64	—	.120x225	7	250' Spool	4 Spools	23	28.90
3011	18/2	SPT-2	41/34	3/64	—	.150x285	7	250' Spool	4 Spools	33	50.00
3012	16/2	SPT-2	65/34	3/64	—	.170x320	10	250' Spool	4 Spools	45	70.00
3100	18/2	SV	41/34	1/64	2/64	.250	7	250' Spool	4 Spools	42	64.00
3200	18/2	SJ	41/34	2/64	2/64	.305	7	250' Spool	4 Spools	54	71.70
3201	18/3	SJ	41/34	2/64	2/64	.345	7	250' Spool	4 Spools	73	104.00
3202	18/4	SJ	41/34	2/64	2/64	.360	5.6	250' Spool	1 Spool	96	144.70
3300	18/2	SJ	16/30	2/64	2/64	.305	7	250' Spool	4 Spools	54	67.10
3301	18/3	SJ	16/30	2/64	2/64	.345	7	250' Spool	4 Spools	73	99.10
5020	18/2	HPD	41/34	2/64	—	.274	10	250' Spool	4 Spools	32	62.90
5070	16/2	HPD	65/34	2/64	—	.301	15	250' Spool	4 Spools	42	78.20

Note: All Cornish Wire and Cable is available in put-ups other than those listed, ask for current price schedule.

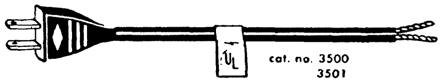
CORNISH Radio & TV Wire Products

replacement and extension cord sets

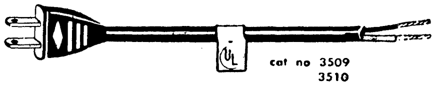
DESCRIPTION
18/2 SP-I Brown with Cornish Molded-On Male Plug and Molded-On #185TV Connector UL Flag Label.
SUGGESTED USE
Television Power Supply Cord for use on original equipment or as a replacement cord set.



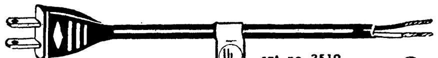
DESCRIPTION
18/2 SP-I Brown with Cornish Molded-On Male Plug, Appliance end slit 2 inches Conductor stripped 1 inch. Hanked UL Flag Label.
SUGGESTED USE
Replacement Cord-set for radios, record players, lamps and small appliances.



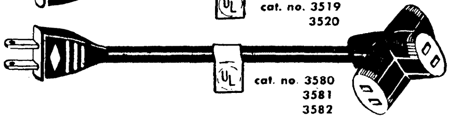
DESCRIPTION
18/2 SV Black with Cornish Molded-On Male Plug. Appliance end jacket removed 2 inches. Conductors stripped 1 inch. Hanked UL Flag Label.
SUGGESTED USE
Replacement Cord-set for food mixers, test equipment and small appliances.



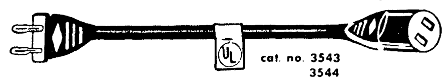
DESCRIPTION
18/2 16/30 SJ Black with Cornish Molded-On Plug Appliance end jacket removed 2 inches. Conductors stripped 1 inch. Hanked UL Flag Label.
SUGGESTED USE
Replacement Cord set for electric tools, small motors and general use.



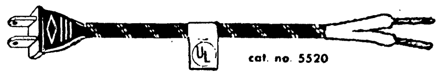
DESCRIPTION
18/2 SP-I Brown with Cornish Molded-On Plug and soft molded rubber cube tap. UL Blue Flag Label.
SUGGESTED USE
Extension Cord set for office and household use.



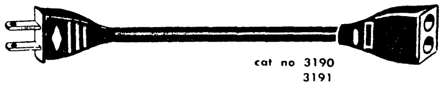
DESCRIPTION
18/2 16/30 SJ Black with Cornish Molded-On Male Plug and Cornish Molded-On Female Connector Coiled and boxed
SUGGESTED USE
Extension Cord set for outdoor and heavy duty use.



DESCRIPTION
16/2 Glazed Cotton HPD Replacement Heater Cord with Cornish Molded-On Plug and with crotch and conductors wrapped 3 inches with asbestos thread and conductors bared ½ inch. Hanked, Green Flag Label.
SUGGESTED USE
For electric irons and other heating devices.

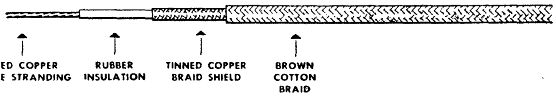


DESCRIPTION
18/2 SP-I Brown with Cornish Molded-On Male Plug and Molded-On #190 Connector.
*Not UL Approved.
SUGGESTED USE
Television Power Supply "Cheater" Cord for sale to and use by authorized television servicemen



Catalog Number	Length	Standard Put-Up	Standard Shipping Pkg.	Wght. Standard Shipping Pkg.	List Price Per M Cords	Catalog Number	Length	Standard Put-Up	Standard Shipping Pkg.	Wght. Standard Shipping Pkg.	List Price Per M Cords
3185	6 Feet	100	100	19	532.20	3580	6 Feet	100	100	24	733.30
3189	9 Feet	100	100	25	665.60	3581	9 Feet	100	100	32	838.90
3500	6 Feet	100	100	18	333.40	3582	12 Feet	100	100	38	1,022.20
3501	10 Feet	100	100	26	466.70	5520	7 Feet	100	100	30	1,722.20
3509	6 Feet	100	100	28	705.50	3543	15 Feet	1	20	23	2,400.00
3510	10 Feet	50	50	23	912.20	3544	25 Feet	1	20	33	951.10
3519	6 Feet	50	50	19	725.50	3190*	6 Feet	100	100	19	533.30
3520	10 Feet	50	50	28	955.50	3191*	9 Feet	100	100	25	633.30

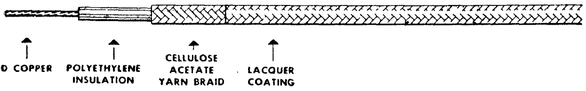
phonograph pick-up arm cable



This cable is designed specifically for use as phonograph pick-up arm cable. The conductor, being stranded from #36 AWG wire, is very flexible. The overall diameter of the wire is quite small and cable is devoid of stiffness.

Catalog Number	AWG Size	Number of Strands	Thick. Conductor Insulation Inch	Tinned Copper Shielding	Nom. Outside Diameter Inch	Outer Braid	Standard Put-Up	Standard Shipping Package	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
1250	24/1	16/36	.015	#36	.095	Overall	100' Spool	6 Spools	7	46.70
1251	24/1	16/36	.015	#36	.080	None	100' Spool	6 Spools	6	40.00

high voltage and cathode-ray tube lead wire



This cable is designed for high voltage applications such as leads to cathode-ray tubes in television receivers and oscilloscopes. It has a high dielectric strength, corona resistance, and minimum surface leakage.

Catalog Number	AWG Size	Number of Strands	Nominal Outside Diameter Inch	Suggested Voltage Rating	Color Outer Braid	Available Standard Put-Ups	Standard Shipping Package	Approx. Wght. Lbs./M Ft.	List Price Per M Ft.
1248	20/1	10/30	.136	10,000	Red with 2 White Tracers	100' Spool 1000' Spool	10 Spools 4 Spools	14	51.10 47.80
1249	20/1	10/30	.198	20,000	Solid Red	100' Spool 1000' Spool	10 Spools 4 Spools	24	68.90 64.50

Note: All Cornish Wire and Cable is available in put-ups other than those listed, ask for current price schedule.

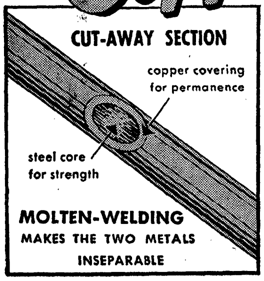
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

PROVED DEPENDABILITY

Copperweld TRADE MARK NON-RUSTING

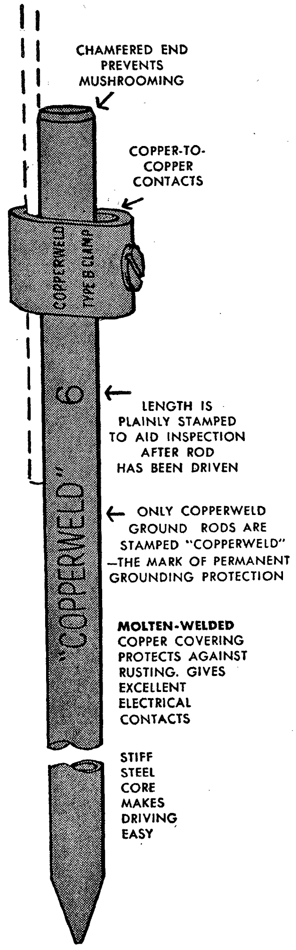
GROUND RODS and CLAMPS

FOR RADIO AND TELEVISION

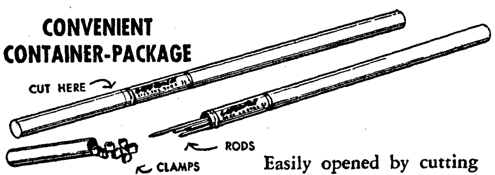

CUT-AWAY SECTION
copper covering for permanence
steel core for strength
MOLTEN-WELDING MAKES THE TWO METALS INSEPARABLE

Copperweld Ground Rods and Clamps provide the reliable grounding protection necessary for successful performance, elimination of interference and safe operation of radio and television equipment. The rugged steel core gives the stiffness you need for easy driving. High conductance and lasting protection against corrosion are provided by the heavy molten-welded copper covering.

Millions of Copperweld Ground Rods are rendering permanent grounding protection. You're SAFE when you use Copperweld—the only Molten-Welded Ground Rods. They give you PROVED dependability—PROVED economy—PROVED longer service.


CHAMFERED END PREVENTS MUSHROOMING
COPPER-TO-COPPER CONTACTS
COPPERWELD TYPE B CLAMP
"COPPERWELD" 6
LENGTH IS PLAINLY STAMPED TO AID INSPECTION AFTER ROD HAS BEEN DRIVEN
ONLY COPPERWELD GROUND RODS ARE STAMPED "COPPERWELD"—THE MARK OF PERMANENT GROUNDING PROTECTION
MOLTEN-WELDED COPPER COVERING PROTECTS AGAINST RUSTING. GIVES EXCELLENT ELECTRICAL CONTACTS
STIFF STEEL CORE MAKES DRIVING EASY

CONVENIENT CONTAINER-PACKAGE

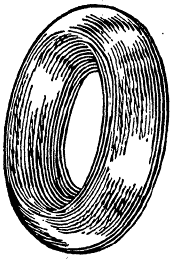

CUT HERE
RODS
CLAMPS

Easily opened by cutting the heavy fiber tube. This creates a bin for the rods and a convenient container for the clamps.

SPECIFICATIONS

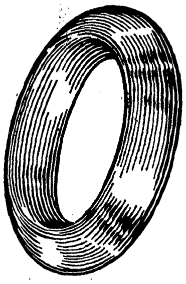
Catalog Number	Size	Pounds Per 100 Pcs.	Pcs. Per Package
RT 34	3/8″x 4′	142	25
RT 36	3/8″x 6′	212	25
RT 38	3/8″x 8′	277	20
RT 45	1/2″x 5′	320	10
RT 46	1/2″x 6′	385	10
RT 48	1/2″x 8′	505	10

Above weights include clamps.



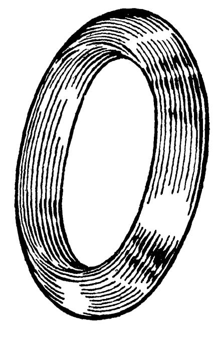
COPPERWELD GUY STRAND

Ideal for guying radio and television antenna masts and towers. It provides greater safety, permanent high strength and rust proof construction for the life of the antenna. Furnished in two sizes, 3 No. 18 (breaking strength 550 Lbs.) and 3 No. 14 (breaking strength 1000 Lbs). Lengths of 100′, 200′, 250′, 500′ and 1000′ are available.



COPPERWELD ANTENNA WIRE

Preferred for many years by professionals and amateurs. Because of its high strength, it maintains a fixed length. Furnished in 4 sizes, No. 10 Awg, No. 12 Awg, No. 14 Awg, and No. 18 Awg, in coil lengths of 100, 250, 500, 1000 and 3000 feet — bare and insulated.



COPPERWELD GROUNDING WIRE

Used to connect antenna mast to ground rod. Annealed for easy handling. Available in two sizes, No. 8 Awg and No. 10 Awg. Coils are furnished in various lengths ranging from 50 to 500 ft.

Copperweld is also used for television twin-lead wire, coaxial cable, resistor and condenser pigtails, radio tube parts and various allied components manufactured and sold by other companies.
Additional information available upon request.

COPPERWELD STEEL COMPANY
GLASSPORT, PA.

TV Lead-in Cables by *Federal*

Transmission Lines for Every Television Application — by America's Leading Manufacturer of Solid Dielectric HF Cables

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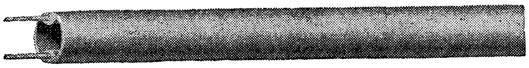
TV-1185 All-Channel Tubular TV Line — 300 ohms

"Pipeline" of the Air



For the Finest VHF, UHF

TV-1185 is amazingly tough and efficient. Repels sunlight, fights heat, resists moisture and salt spray and other deposits. Dirt and dust tumble off its smooth, tubular surface. Keeps the energy field inside the weather-proof "silver" polyethylene sheath . . . providing low loss, more constant impedance . . . a better TV picture regardless of area or length of lead. Easy to handle.

Federal Code No.	Nominal Impedance Ohms	Nominal Attenuation DB per 100 feet							List Price per ft.
		10 Mc	50 Mc	100 Mc	200 Mc	400 Mc	500 Mc	1000 Mc	
TV-1185	300	0.50	0.95	1.15	1.7	2.6	3.0	4.6	$0.08

Federal's "BIG 5" of Community TV

K-14 Ultra Low-Loss 72-Ohm Cable

Shielded cable for use as main transmission line in community TV and other distribution systems. Outstanding for lowest line loss, long cable runs and fewer amplifiers required.

RG-11/U Coaxial 75-Ohm Low-Loss TV Lead-In Cable

Community system secondary lead-in. Also used with unbalanced input TV receivers in low signal strength areas.

RG-59/U Coaxial 73-Ohm TV Lead-In Cable

Community system tap-off lead-in. Also used with unbalanced input TV receivers where top-quality installation is essential.

Non-radiating TV Cables (Used with K-14)

K-125 Coaxial 72-Ohm TV Lead-In Cable

(Formerly SP-75)

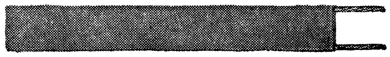
Double-shielded and double-jacketed to protect community TV systems from signal leakage. Where radiation exists, Federal's K-125 alternates for Federal's RG-11/U as secondary lead-in.

K-126 Coaxial 73-Ohm TV Lead-In Cable

(Formerly SP-76)

Double-shielded and double-jacketed. Where radiation exists, K-126 alternates for Federal's RG-59/U as tap-off lead-in.

Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.			List Price per ft.
		50 Mc	100 Mc	200 Mc	
K-14	72	.57	.90	1.42	$1.01
RG-11/U	75	1.5	2.15	3.2	.22
RG-59/U	73	2.7	4.0	5.7	.11
K-125	72	1.5	2.15	3.2	.38
K-126	73	2.7	4.0	5.7	.21
TV-1182	300	.84	1.2	1.8	.05
K-111	300	2.4	3.4	4.6	.21
RG-8/U	52	1.35	2.1	3.1	.21



TV-1182 "Silver" Heavy-Duty TV Line 300-Ohms

Insulated with Federal's "Silver" polyethylene — the revolutionary development that provides greater resistance to weather, heat and sunlight. Unchanging electrical and physical characteristics assure long, trouble-free service.

K-111 Shielded 300-Ohm TV Lead-In

Shielded and balanced TV lead-in that minimizes "snow," "ghosts" and electrical noise due to transmission line pick-up. For use in high signal strength, high noise level areas.

RG-8/U Coaxial 52-Ohm TV Lead-In Cable

Characteristics and quality proved in every installation where this type low-loss cable is indicated. For special applications and experimental work.

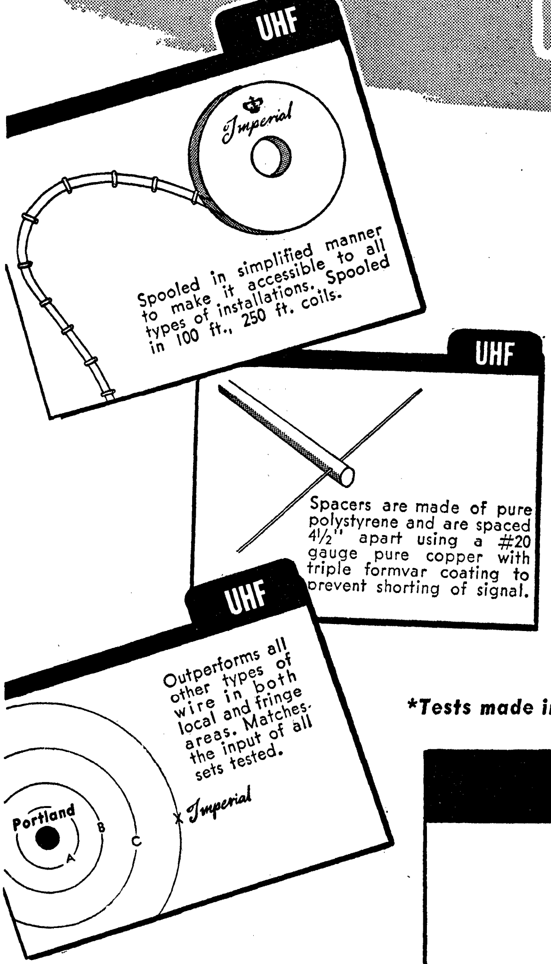
RG Type	Impedance Ohms ZO	Capacitance per ft. Micro-Micro Farads	ATTENUATION DB/100 ft.				Jacket O.D. Mils	Weight per M ft. (Lbs.)	Inner Conductor		List Price per ft
			50 Mc	100 Mc	200 Mc	400 Mc			Mat.	Strands	
6/U	76	20	1.8	2.9	4.3	6.5	339	74	CuW	1	$0.36
17/U	52	29.5	.60	.90	1.5	2.4	885	446	Cu	1	1.02
58/U	53.5	28.5	3.5	5.3	8.3	11.5	200	24	Cu	1	.11
63/U	125	10.0	1.4	2.0	2.9	4.1	415	78	CuW	1	.20
71/U	93	13.5	1.9	2.7	3.9	5.8	238	37	CuW	1	.21

Intelin* H-F Cables, manufactured by Federal Telephone and Radio Corporation, are available in a complete line for all electronic requirements.

Consult your local Federal Distributor or write to Federal direct

*Trade Mark

Here is the Answer... Imperial's 250-275 open line tested and proved under all UHF operating conditions*



Spooled in simplified manner to make it accessible to all types of installations. Spooled in 100 ft., 250 ft. coils.

Spacers are made of pure polystyrene and are spaced 4½" apart using a #20 gauge pure copper with triple formvar coating to prevent shorting of signal.

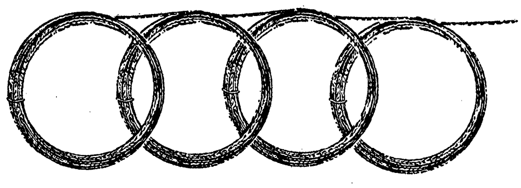
Outperforms all other types of wire in both local and fringe areas. Matches the input of all sets tested.

Imperial Radar and Wire Corp., largest manufacturers of Hi-Gain, Lo-Loss products ***introduces a new transmission line*** specifically designed for ***U. H. F.*** This carefully tested ***250-275 ohm*** open lead wire is manufactured of ***pure copper*** and features a heavy ***triple coating of formvar*** which prevents corrosion, shorting out of signal or breakage due to climatic conditions (in most cases). Easy to install. The wire, ***designed*** and ***manufactured*** especially by Imperial, has a maximum stretch of only 15%.

Studies of the product by our engineers in a variety of test areas, including parts of the country with the highest percentage of salt air, show four times more gain than standard wire for both UHF and VHF on all bands. Note that the insulators on this transmission line are spaced for efficient performance on both UHF and VHF.

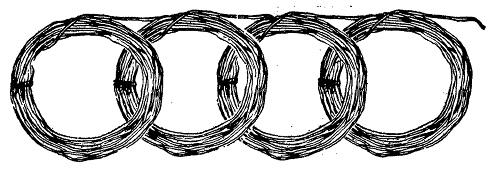
****Tests made in many areas including the Portland, Oregon territory.***

NOW... Imperial QUALITY GUY WIRE



Manufactured in **100 ft. continuous coils.** Made of **6 strands** of prime **galvanized** basic wire with a high coat finished, soft **easy** to work with, packaged in 1000 ft. cartons with each 100 ft. coil tied and continued (exclusive with Imperial). Will not rust nor unravel.

ALUMINUM GROUND WIRE



Made of special metal including materials by Aluminum Co. of America and Reynolds E. C. H. 19, #8 gauge. It is designed especially for grounding purposes. Packaged in 100 ft. continuous coils, (a new feature). Packaged 1000 ft. cartons individually, (also a new feature).

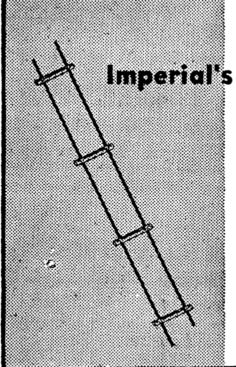
QUALITY

Imperial
RADAR AND WIRE
CORPORATION

4342 BRONX BOULEVARD
NEW YORK 66, N. Y.

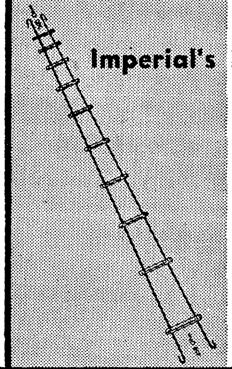
OTHER QUALITY TV ACCESSORIES BY *Imperial* RADAR AND WIRE CORPORATION

4342 BRONX BOULEVARD • NEW YORK 66, N. Y.



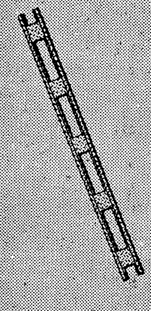
Imperial's 450 Ohm Open Lead Wire

Made either of 30%-40% copperweld or pure copper with triple formvar coating. Made of #18 gauge wire either in the copperweld or the pure copper. 100, 250, 500 ft. spools.



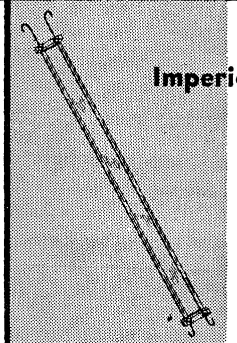
Imperial's Matching Stub Transformer

Engineered to bring your line from 300 ohm to 450 ohm at the antenna, then to rematch your line from 450 to 300 ohm at the set, transposing with a minimum amount of signal loss. Comes complete with connector.



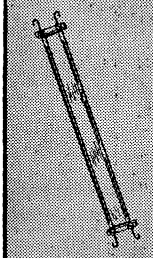
Imperial's Perforated Wire

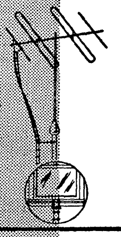
Featuring a hi-gain, lo-loss 300 ohm wire made of pure virgin polyethelene and 7 strand copper wire. Perforations spaced for hi-gain performance in windy and fringe areas. 1000 ft. continuous spool.



Imperial's Window Feed Through

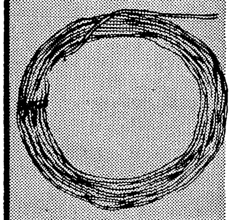
15" long, 450 ohm spaced. An insulated pure white poly-vinyl chloride complete with simplified connectors on each end. Requires no drilling or defacing of window sills.





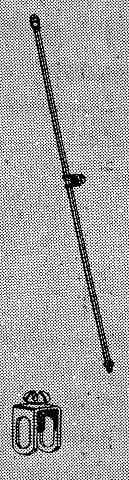
Imperial's Rotator Lead Wire

For the first time allows the use of rotators with 450 ohm open spaced wire. Eliminates all possibility of shorting out signal while rotator is turning. 6 ft. strip of insulated poly-vinyl chloride spaced to 450 ohms.



Imperial's Messenger Cables

Made of basic fine steel galvanized for community installation and heavy guying problems. This wire has a bright galvanized finish. Comes in 9.32 and 8/32 diameter. Either annealed or 1/2 annealed. Packaged 750 ft. coils or as required.

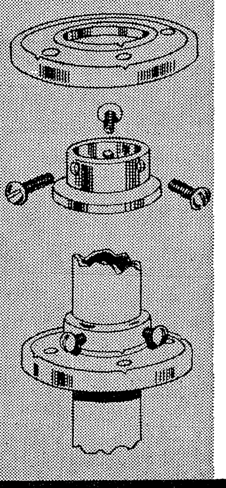


Imperial's Aluminum Ground Rods

Made of special aluminum alloy by Aluminum Company of America will not bend, rust or deteriorate. It has electrical conductivity for wattage dissapation, for correct grounding of lightning, electrical storms, etc. Comes in 4 ft. and 6 ft. lengths. Made of 3/8" solid stock with clip of all aluminum and special safety nut. Packaged 25 to carton.

Imperial's Steel Ground Rods

Made of basic fine steel with a copper coating, hi flash of pure copper and steel base. Comes in 3/8 diameter with ground point and simplified connector for easy installation. Copper Coated Steel Based Ground Rods. Packaged 25 to a carton. Low priced.



Imperial's Aluminum Floating Guy Ring

A 2 section floating guy ring made of aluminum casting of hard alloy. Will rotate freely. Comes in holes large enough to fit all thimbles. In 3 holes, 4 holes or 6 holes as required. Packaged 15 to carton, will fit all masts up to and including 1½".

For additional information on these and other Hi-Gain, Lo-Loss products, see your representative or write for brochure.

NATIONAL

WIRE & CABLE CORPORATION

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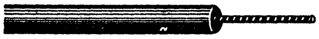
"*JAN-spec*" *WIRES*

WIRES TO GOVERNMENT SPECIFICATION

ARMY • NAVY • AIR FORCE

JAN-C-76 — MIL — ANJ-C-48A

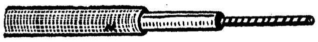


TYPE SRIR HOOK-UP WIRE

Construction: Tinned copper-stranded or solid. Nominal insulation thickness, .015" Thermoplastic. Rating 1000 VOLTS (working). Temperatures –40C to +60C.

Sizes: 28 to 6. Colors: all NEMA standard colors. Tracers on solid colors also available.

Catalog No. 100.

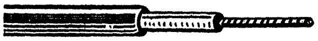


TYPE SRIR GLASS BRAID

Construction: Tinned copper with thermoplastic insulation and braided glass and flame resisting lacquer finish over all. Temperature rating, –40C to +60C.

Sizes: 28 to 6. All standard NEMA color coding and also available with tracers on solid colors.

Catalog No. 101.

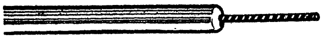


TYPE WL — NYLON — HOOK-UP WIRE

Construction: Tinned copper stranded or solid. Nominal insulation thickness .010" Thermoplastic with .005" extruded nylon. Rating 600 VOLTS (working). Temperature rating —40C to +60C.

Sizes: 28 to 6. Colors: bright standard NEMA colors, also tracers on solid colors.

Catalog No. 102.

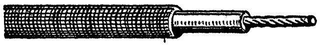


TYPE SRHV HOOK-UP WIRE

Construction: Tinned copper, stranded or solid. Nominal insulation .031" Thermoplastic Rating 2500 VOLTS (working). Temperature rating, –40C to +60C.

Sizes: 28 to 6. Colors: all standard NEMA colors, also available tracers on solid colors.

Catalog No. 103.

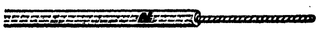


TYPE SRHV GLASS BRAID

Construction: Tinned copper, stranded or solid. Nominal insulation .031" Thermoplastic, with Braided glass and Flame Resisting Lacquer over plastic insulation. Rating 2500 VOLTS (working). Temperature rating, –40C to +60C.

Sizes: 28 to 6. Colors: all standard NEMA colors, also available tracers on solid colors.

Catalog No. 104.



TYPE SRRF HOOK-UP WIRE R. F. INSULATED

Construction: Tinned copper stranded, polyethylene insulated with or without glass braid. Rating 1000 VOLTS (working).

Sizes: 24 to 6. Colors: all NEMA standard colors, also tracer on solid colors. For use in radio frequency circuits.

Catalog No. 105.

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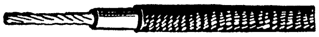
AIRCRAFT WIRE

TYPE ANJC — 48-A — Aircraft power and lighting cable

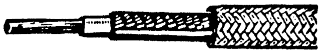


Construction: Flexible tinned copper, vinyl insulation with cotton braid with fungicidal treatment. Flame resisting lacquer finish. Low Tension: 600 VOLTS (working).

Sizes: 22 to 4/0. Colors: White.

Catalog No. 200.

TYPE AN-C-168

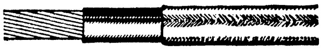


Construction: Flexible tinned copper, vinyl insulation with cotton braid with fungicidal treatment. Flame resisting lacquer finish. Tinned copper braid shield. Low Tension: 600 VOLTS (working).

Sizes: 22 to 4/0. Colors: White.

Catalog No. 201.

TYPE MIL-W 5086 & MIL-W 5274A AIRCRAFT, power and lighting cables. TYPE 1

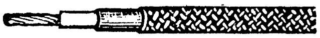


Construction: Tinned copper stranded, synthetic resin insulation with nylon jacket. Rating 600 VOLTS (working).

Sizes: all standard gauges. Color: White.

Catalog No. 202.

TYPE MIL-C-7078

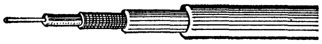


Construction: Tinned copper stranded, synthetic resin insulation with nylon jacket and tinned copper shield. Rating 600 VOLTS (working).

Sizes: all standard gauges. Color: White.

Catalog No. 203.

TYPE 2

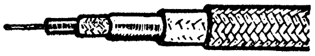


Construction: Tinned copper stranded, synthetic resin insulation plus glass braid, plus synthetic insulation with overall nylon jacket. Rating 600 VOLTS (working).

Sizes: all standard gauges. Colors: White.

Catalog No. 204.

TYPE MIL-C-7078



Construction: Tinned copper stranded, synthetic resin insulation plus glass braid, plus synthetic insulation with overall nylon jacket and tinned copper shield. Rating 600 VOLTS (working).

Sizes: all standard gauges. Colors: White.

Catalog No. 205.

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MICROPHONE CABLE AND INTERCOM CABLE

PLASTIC JACKETED MICROPHONE CABLE — one conductor

Construction: General purpose, low loss, poly insulated, tinned copper shield, stranded one conductor, overall poly jacket, nominal capacitance per foot: 32 mmf.

Size: Outside diameter .130".

Catalog No. 600/1.

PLASTIC JACKETED MICROPHONE CABLE — two conductor

Construction: General purpose, low loss, poly insulated, tinned copper shield. Stranded, twisted two conductor with filler. Nominal capacitance per foot between conductors 18 mmf.

Size: Outside diameter .225".

Catalog No. 601/2.

RUBBER JACKETED MICROPHONE CABLE

Construction: Extra flexible stranded tinned copper conductors, cotton serve between conductor and insulation and between shield and outer jacket. Braided tinned copper shield, covered with tough rubber outer jacket. For use indoor and outdoor.

Sizes: 20 gauge stranded tinned copper, available from one conductor to eight conductors.

Catalog No. 603/1-8.

SHIELDED AUDIO TRANSMISSION LINE

Construction: Solid two conductor thermoplastic insulated twisted pair, color coded with braided shield with thermoplastic jacket overall.

Catalog No. 604.

INTERCOM CABLE

Construction: Twisted pairs, one to fifty-one pairs, twenty-two gauge solid copper, thermoplastic insulation, overall thermoplastic jacket or overall treated cotton braid.

Catalog No. 605.

NATIONAL — LARGEST ELECTRONICS AND AIRCRAFT WIRE AND CABLE INVENTORY WEST OF CHICAGO!

NATIONAL

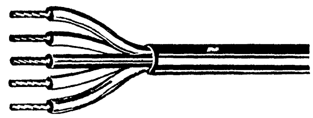
WIRE & CABLE CORPORATION

136 SAN FERNANDO ROAD, LOS ANGELES • PHONE CApitol 1-2171

GENERAL PURPOSE MULTI CONDUCTOR CONTROL CABLES

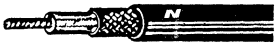
MICROPHONE CABLE AND INTERCOM CABLE (Continued)

MULTI CONDUCTOR CONTROL CABLE



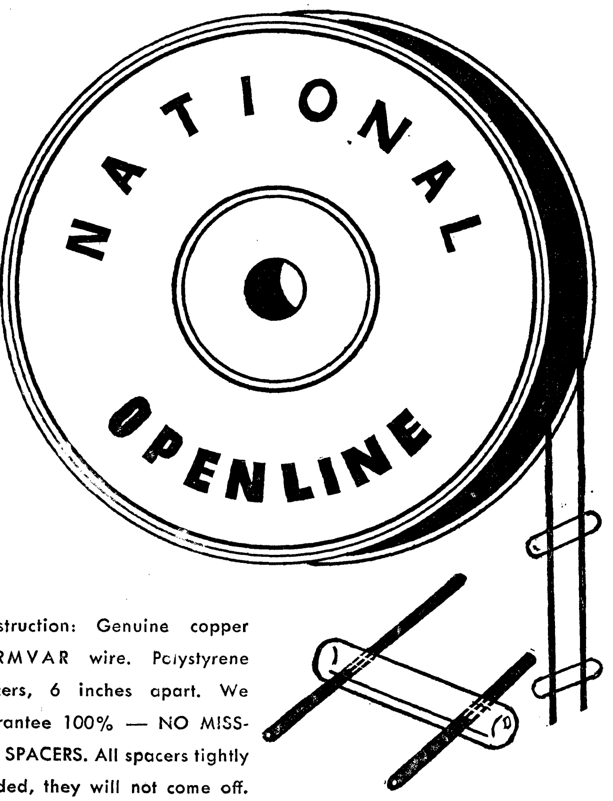
General purpose control cable, up to thirty or more conductor, with or without shielded members, or overall shield, etc., with plastic or tough rubber overall jacket.

CO-AXIAL CABLES



Standard co-axial cables carried in stock RG 7/U, 8/U, 9/AU, 11/U, 17/U, 34/U, 58/U, 58/AU, 59/U, 62/U, etc.

NATIONAL OPENLINE



Construction: Genuine copper FORMVAR wire. Polystyrene spacers, 6 inches apart. We guarantee 100% — NO MISSING SPACERS. All spacers tightly bonded, they will not come off.

POSITIVELY THE FINEST OPEN-LINE MANUFACTURED!

Scientifically engineered to overcome the many problems existent in other previous types. Available for immediate shipment. Lengths: 500′, 250′, 100′, 75′, 60′, 50′.

Both wide and narrow spaced lines available.

SPECIAL NO CHARGE SPOOLS FOR EASE IN HANDLING!

100% GUARANTEE

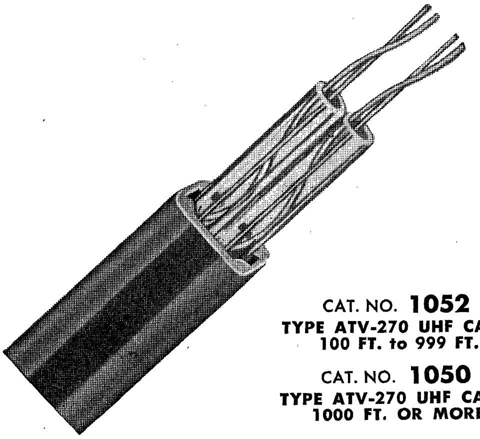
Write today
for complete
information on
NATIONAL OPENLINE

NATIONAL — LARGEST ELECTRONICS AND AIRCRAFT WIRE AND CABLE INVENTORY WEST OF CHICAGO!

Columbia

ANACONDA
Radio and Television Wire and Cables

Depend on Columbia for all your television wire and cable needs. Remember Columbia service and Anaconda quality mean complete satisfaction.



CAT. NO. **1052**
TYPE ATV-270 UHF CABLE
100 FT. to 999 FT.

CAT. NO. **1050**
TYPE ATV-270 UHF CABLE
1000 FT. OR MORE

ANACONDA UHF CABLE

Developed and designed in cooperation with the UHF Engineers of one of the largest producers of UHF equipment in the country. Unique inner construction of jacket allows polyethylene tubes to literally float in air. Polyethylene thread centers high strength copperweld conductors assuring constant spacing at all times. This cable has been tested in pioneer ultra high frequency areas and has been found equally reliable over the entire range of VHF and UHF channels with lowest losses under adverse weather conditions. Characteristic impedance is 270 ohms. Attenuation in D/B is 3.6 at 500 MC and 4.8 D/B at 900 M/C. Both figures are per hundred feet. For best results sealing kit and insulator described below should be used in all installations. Size of cable is approximately ½" x ⅜".

---

300 OHM UNSHIELDED TWIN LINE

For TV and FM antenna installations. ANACONDA twin lead will serve all requirements that demand HIGHEST QUALITY TIME TESTED twin lines. Pure Polyethylene low loss insulation and rigid inspection assures maximum possible signal at all times. Available in medium, heavy and extra heavy duty types.

TYPE 300M TELEVISION TWIN LINE 20 Ga. 7/28
Medium duty—.055x .385

CAT. NO.

1025 .... **100 FT. COIL**
1026 ....**1000 FT. SPOOL**

TYPE 300R TELEVISION TWIN LINE 20 Ga. 7/28
Heavy duty—.070 x .390

CAT. NO.

1035 .... **100 FT. COIL**
1036 ....**1000 FT. SPOOL**

TYPE 300H TELEVISION TWIN LINE 18 Ga. 7/26
Extra heavy duty—.130 x .530 —
High Strength

CAT. NO.

1045 .... **100 FT. COIL**
1046 ....**1000 FT. SPOOL**

PLASTIC MICROPHONE CABLE

Here are two types of microphone cable that are always in demand from jobbers stock. Tough plastic insulation provides resistance to abrasion, moisture and aging. Excellent for other uses requiring small diameter shielded flexible cables.

LAPEL MICROPHONE CABLE

CAT. NO.
1316 **22 GA. Stranded .130 O.D. Black Plastic Jacket** .... **250 FT. SPOOL**

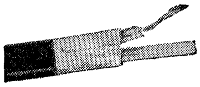
CRYSTAL MICROPHONE CABLE

1318 **22 GA. Stranded .180 O.D. Black Plastic Jacket** .... **250 FT. SPOOL**

ATV-225 SHIELDED TELEVISION LINES

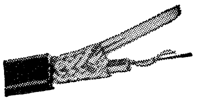
The finest in low loss shielded line. Patented construction assures high signal to noise ratio. Will far outlast all other types of television lines. Perfect for use where interference and atmospheric conditions are a serious problem. Available with foil shield for average use or braided T/C shield for electrical characteristics. Attenuation is 3.2 DB. At 100 MC.

TYPE ATV-225 FOIL SHIELD TV LINE



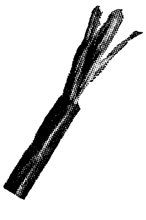
CAT. NO.
1223 ....**100 FT. to 1000 FT.**
1224 ....**1000 FT. or more**

TYPE ATV-225 BRAID SHIELD TV LINE



1225 ....**100 FT. to 1000 FT.**
1226 ....**1000 FT. or more**

MULTI PAIRED INTERCOM CABLES



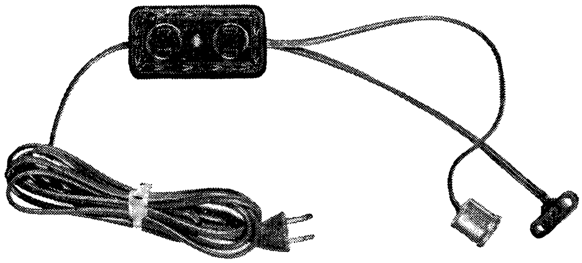
For use in Intercom Systems as station to station wiring, the cables listed below will handle most installations. Each conductor is 22 ga. solid soft drawn copper and has an .010 wall of durable color coded plastic. Each pair is individually twisted and pairs are covered overall with an adequate plastic jacket.

CAT. NO.			
4012	**3 PAIR**	**PLASTIC INTERCOM CABLE**	**100 FT.**
4014	**3 PAIR**	**PLASTIC INTERCOM CABLE**	**500 FT.**
4016	**7 PAIR**	**PLASTIC INTERCOM CABLE**	**100 FT.**
4018	**7 PAIR**	**PLASTIC INTERCOM CABLE**	**500 FT.**
4020	**11 PAIR**	**PLASTIC INTERCOM CABLE**	**100 FT.**
4022	**11 PAIR**	**PLASTIC INTERCOM CABLE**	**500 FT.**
4024	**15 PAIR**	**PLASTIC INTERCOM CABLE**	**100 FT.**
4026	**15 PAIR**	**PLASTIC INTERCOM CABLE**	**500 FT.**
4028	**25 PAIR**	**PLASTIC INTERCOM CABLE**	**100 FT.**
4030	**25 PAIR**	**PLASTIC INTERCOM CABLE**	**500 FT.**

NOTE: Longer lengths of this cable are available. Please specify length desired when ordering.

WRITE FOR COPY OF OUR COMPLETELY ILLUSTRATED CATALOG!

Columbia



All Purpose TELEVISION SERVICE CORD

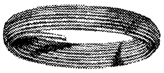
Now only one cord is needed to service most television receivers. No more separate cords for each call. This one sturdily constructed compact unit includes all necessary connectors. Has six feet of cord into service outlet and one foot cords from outlet to set. Available with standard male plug for baseboard connection or with special male connector shown at left to plug into female connector on original cord.

- **Handy two-way convenience outlet for soldering iron, Columbia's TV portable light, etc.**
- **Television connector for all Zenith sets.**
- **Standard TV Connector of unbreakable plastic for all other television sets.**

STEEL GUY WIRE

Columbia offers a complete line of galvanized steel guy wire for all antenna installations. This wire has high tensile strength and is weatherproof. Rustproof and stretch proof.

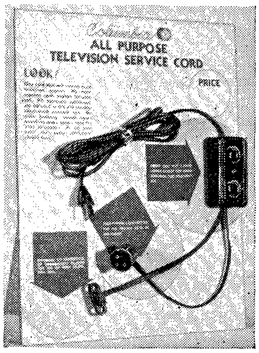
CAT. NO.	
1222	**4/20 GALVANIZED STEEL WIRE** **1 DOZEN 50 FT. INTERCONNECTED COILS**
1232	**1000 FOOT SPOOLS**
1220	**6/20 GALVANIZED STEEL WIRE** **1 DOZEN 50 FT. INTERCONNECTED COILS**
1230	**1000 FOOT SPOOLS**
1208	**6/18 GALVANIZED STEEL WIRE** **1 DOZEN 50 FT. INTERCONNECTED COILS**
1210	**500 FOOT SPOOLS**



ALUMINUM GROUND WIRE

Light strong solid wire now being used as a grounding wire in television. Amateur and many other antenna installations. This aluminum wire can also be used as antenna wire replacing solid copper wire with excellent results.

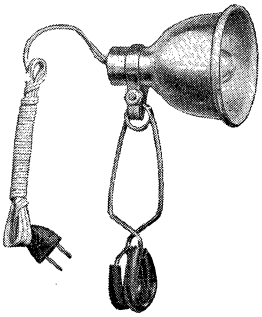
CAT. NO.		
1264	**100 FT. COIL**	**14 GA. SOLID ALUMINUM WIRE**
1266	**500 FT. COIL**	**14 GA. SOLID ALUMINUM WIRE**
1268	**1000 FT. COIL**	**14 GA. SOLID ALUMINUM WIRE**
1270	**100 FT. COIL**	**10 GA. SOLID ALUMINUM WIRE**
1272	**500 FT. COIL**	**10 GA. SOLID ALUMINUM WIRE**
1274	**1000 FT. COIL**	**10 GA. SOLID ALUMINUM WIRE**
1276	**100 FT. COIL**	**8 GA. SOLID ALUMINUM WIRE**
1278	**500 FT. COIL**	**8 GA. SOLID ALUMINUM WIRE**
1280	**1000 FT. COIL**	**8 GA. SOLID ALUFINUM WIRE**



FREE DISPLAY CARD

This attractive easeled back display card included with every order for 50 or more television service cords. Ideal for counter or window display. Attracts sales at actual point of purchase.

CAT. NO.	
180	**All purpose television service cord, standard male plug.**
192	**All purpose television service cord, special male connector, and adapter cord for Zenith sets.**

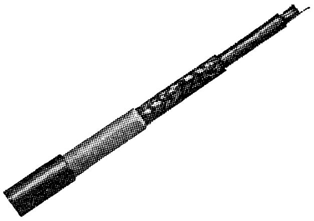


DELUXE TELEVISION SERVICE LITE

This newly designed service lite is one of the finest items in our entire line of television service accessories. Has a 2¼ inch highly polished aluminum reflector and wide opening spring clamp that will permit this lite to be attached almost anywhere inside the television cabinet leaving both hands free to work. Lower part of clamp has rubber covering that will hold firmly wherever it is placed. Comes complete with 7½ watt 110 Volt bulb and six foot parallel plastic cord with unbreakable male plug for attaching to baseboard or into service block on our all purpose Television Service Cord. Display card furnished with orders for 25 or more lites.

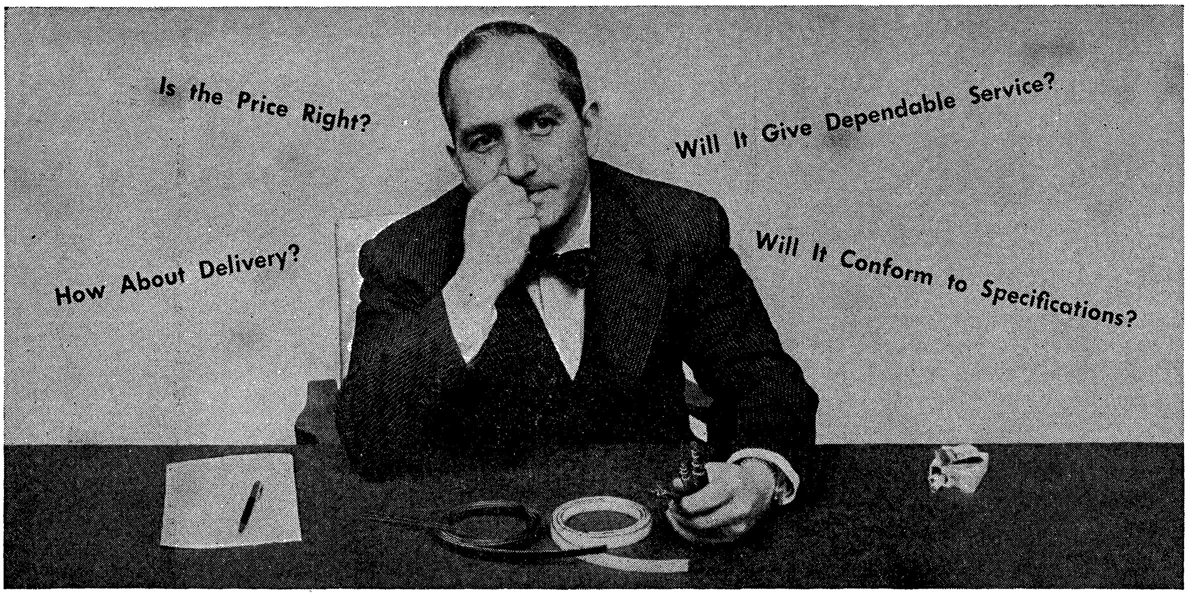
CAT. NO.	
185	**DELUXE TELEVISION SERVICE LITE**

MICROPHONE CABLE



Single and multi-conductor microphone cables for crystal and ribbon microphones, photo-electric cells, public address systems etc. All cable made with low loss compounds and extra flexible copper conductors. Closely woven T/C shield under tough wear resistant jacket. Low capacitance between shield and conductor.

CAT. NO.				APPROX. O D
1300	**1 CONDUCTOR**	**SHIELDED**	**100 FT. SPOOL**	**.260**
1302	**2 CONDUCTOR**	**SHIELDED**	**100 FT. SPOOL**	**.280**
1304	**3 CONDUCTOR**	**SHIELDED**	**100 FT. SPOOL**	**.285**
1306	**4 CONDUCTOR**	**SHIELDED**	**100 FT. SPOOL**	**.300**
1308	**5 CONDUCTOR**	**SHIELDED**	**100 FT. SPOOL**	**.330**
1310	**6 CONDUCTOR**	**SHIELDED**	**100 FT. SPOOL**	**.350**
1312	**7 CONDUCTOR**	**SHIELDED**	**100 FT. SPOOL**	**.365**


Is the Price Right?
Will It Give Dependable Service?
How About Delivery?
Will It Conform to Specifications?

CHOOSE SYNKOTE CABLE AND WIRE

for Value — for Service — for Dependability

ASK YOUR WHOLESALER FOR LATEST *PLASTOID* CATALOG . . .

For quantity orders or special wire problems write us or contact your nearest PLASTOID representative.

1. Choose for Dependable Construction

You want to be sure that the wire you buy will give dependable service. SYNKOTE wire is *warranted by Plastoid* to be made of the finest materials, and will meet all applicable specifications.

2. Choose for Engineering Know-How

Possibly, you may know what general characteristics you desire, but not how to put these into wire. Plastoid's large staff of engineers can transform your generalized requirements into a finished wire or cable. Simply give us your electrical and physical requirements — we'll design the cable.

3. Choose for Rapid Delivery

Plastoid's modern manufacturing facilities mean faster production . . . more rapid deliveries to you.

4. Choose for Friendly Service

You'll find everyone at Plastoid — executive, salesman or engineer — friendly, warm and informal . . . pleasant to work with and eager to do business with you.

5. Choose for Reasonable Cost

Remember, "bargains" seldom save you money. In the long run, it pays to pay a fair price and get dependable wire. For true wire economy specify SYNKOTE — manufactured only by Plastoid Corporation, Long Island City, New York

Synkote®
DEPENDABLE
Wire and Cable

"Manufactured by the mile - tested by the inch"

PLASTOID Corporation
42-61 24th St., Long Island City, N.Y.

When You Want Unquestioned Dependability . . .

A
B
C
D
E
F
G
H
I
J
K
L
M
Synkote

SPECIFY

Synkote®

DEPENDABLE INSULATED WIRE

"manufactured by the mile—
tested by the inch"

HOOK-UP WIRE
(JAN-C-76 approved)

A. WL-600V—braided or nylon jacketed
B. SRIR-1000V—with or without covering
C. SRHV-2500V—with or without covering
D. SRRF-1000V—High frequency-low capacitance

APPLIANCE WIRE—105°C.
(Underwriters approved)

E. 600V—Synkote insulated, 1/64"—nylon jacketed or glass braided
F. 600V—Synkote insulated 2/64"—with or without nylon jacket

TV CABLES

G. 300μ twin leads
H. Rotary antenna cable
I. Coaxial cable—low loss
J. **MICROPHONE CABLE**
K. **INTERCOMMUNICATION CABLE**
L. **AIRCRAFT WIRE**
Will operate at 300° C. without deterioration; excellent abrasion resistance; not affected by oil, hydraulic fluids, acids or moisture; non-inflammable.

M. MULTI-CONDUCTOR CABLES

Many standard constructions as well as cables made to your specifications or special installation requirements.

All standard constructions in stock; for special wire-cable problems, our engineering department welcomes the opportunity to work with you in solving your problems.

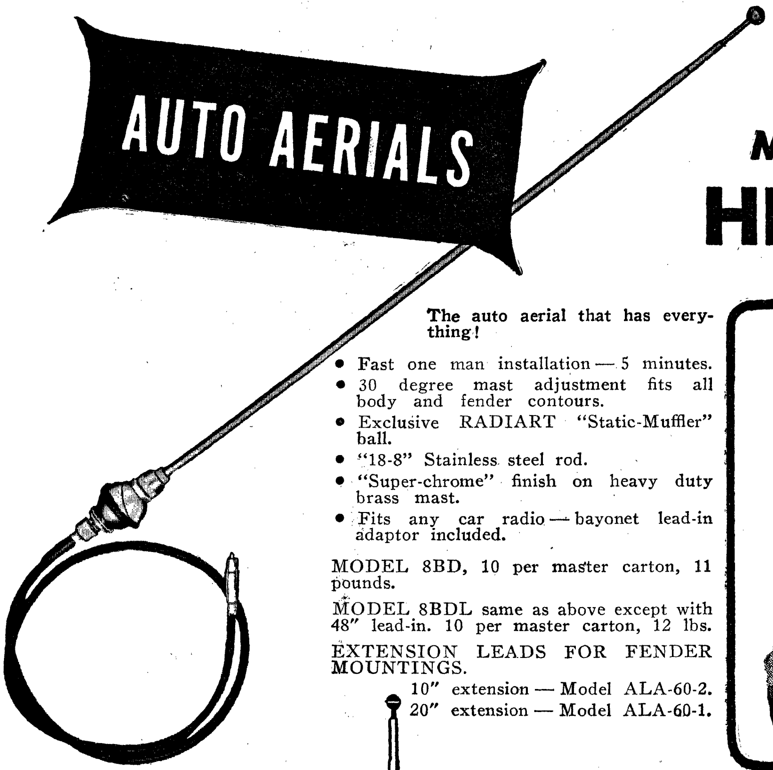
PLASTOID Corporation

42-61 24th Street Long Island City 1, N. Y.

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION
CLEVELAND 2, OHIO

AUTO AERIALS



Model 8BD
HI•BALL

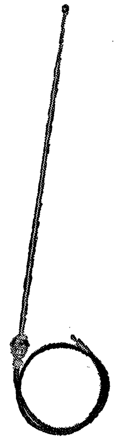
The auto aerial that has everything!

- Fast one man installation — 5 minutes.
- 30 degree mast adjustment fits all body and fender contours.
- Exclusive RADIART "Static-Muffler" ball.
- "18-8" Stainless steel rod.
- "Super-chrome" finish on heavy duty brass mast.
- Fits any car radio — bayonet lead-in adaptor included.

MODEL 8BD, 10 per master carton, 11 pounds.

MODEL 8BDL same as above except with 48" lead-in. 10 per master carton, 12 lbs.

EXTENSION LEADS FOR FENDER MOUNTINGS.
10" extension — Model ALA-60-2.
20" extension — Model ALA-60-1.



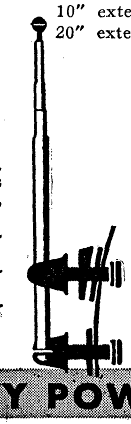
DELUXE MODEL 4BX3

Three section design extends to 59½".

- Brilliant long lasting chrome finished mast and spacer cap
- Full length quality 36" polyethylene waterproof lead-in
- Only one half inch mounting hole required

SUPERIOR STANDARD MODEL 4BX2

Two section design extends to 43".



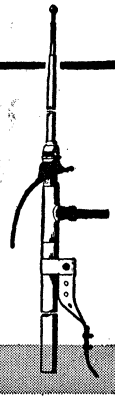
TWO INSULATOR SIDE MOUNT TYPES

Sturdy high quality construction throughout. Brilliant chromed brass masts with stainless steel rods. Wedge type adaptor furnished, with 36" polyethylene lead-in.

MODEL 2S, 43" extended, 2 sections. 10 per master carton, 9 pounds

MODEL 3S, 63" extended, 3 sections. 10 per master carton, 13¼ pounds

MODEL 4S, 92" extended, 3 sections. 10 per master carton, 17½ pounds



DISAPPEARING MOUNT

A handsome addition to any car collapses to 6 inches and extends to 60 inches. Fits either fender or cowl and features the exclusive "O" ring seal around the mast that prevents water from entering inside the aerial. Only one 7/16" mounting hole required.

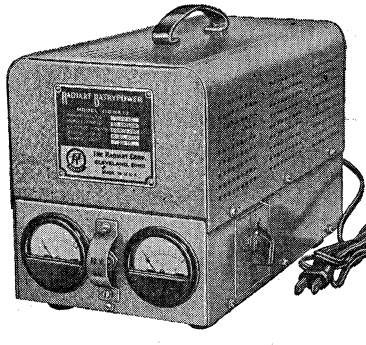
MODEL 3D, 60" extended. 3 sections, 2 pounds each

10 per master carton weighing 19 pounds.

BATRY POWER

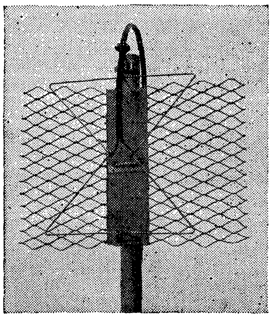
Here is the ideal, compact, efficient unit for testing or demonstrating auto radios. SMOOTH DC POWER, 6 or 12 volts from the 110 volt 60 cycle AC line.

Model No.	Output	Watts	Size	Wt. Lbs.
6BE10	6V DC @ 10A	60	8¼ x 7¼ x 7	14½
110BA12	6V DC @ 20A 12V DC @ 10A	120	7⅝ x 13 x 8½	24½



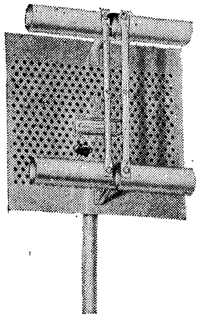
THE RADIART CORPORATION
CLEVELAND 2, OHIO

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES



The UW-2 UHF TV Antenna

An advanced design TV antenna for UHF channels. Completely free of insulators and their offending results, allowing maximum performance under any weather conditions. A completely balanced broad band antenna with excellent directivity.

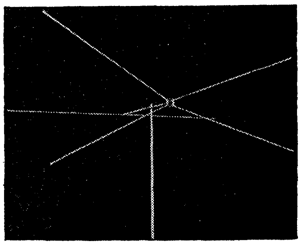


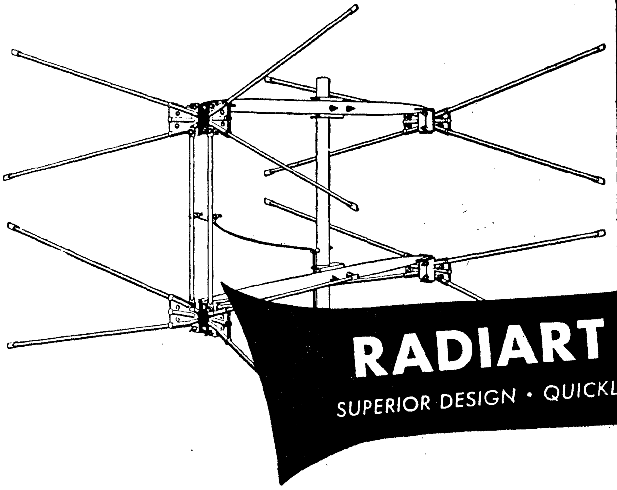
Tested and proven UHF TV ANTENNAS

A stable operating broad band antenna of uniform gain covering the entire UHF spectrum, with a very low standing wave ratio. Completely factory pre-assembled.

The "Superior" CONICAL TV Antenna

An all aluminum antenna featuring quality construction at a low price! Designed for speedy installation, it may be double or four stacked . . . mounts on mast up to 1½" O.D., broad-band reception. Model S-6.



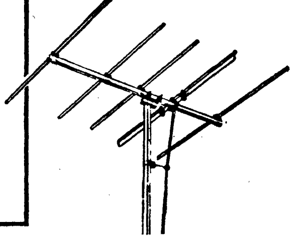


RADIART TV ANTENNAS

SUPERIOR DESIGN · QUICKLY INSTALLED · TROUBLE-FREE PERFORMANCE

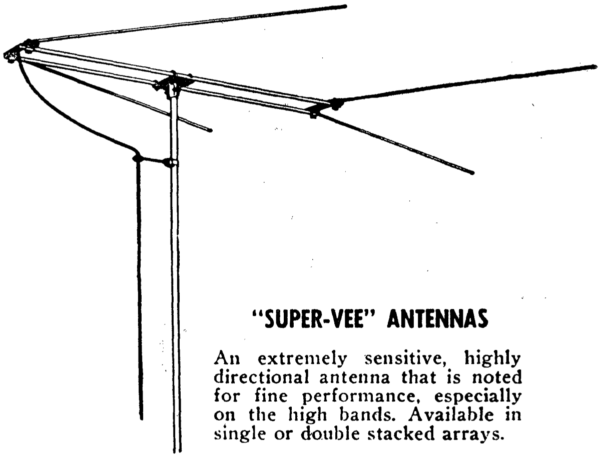
"LAZY X" CONICALS

A complete group of conical-type antennas in assortments for single bays, double-stacked and quadruple-stacked arrays. The ideal "all-channel" antenna.



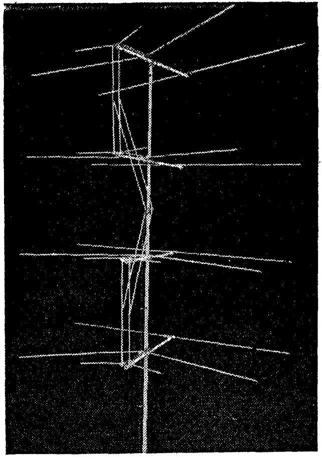
"YAGI" TV ANTENNAS

The perfect answer to the demand for maximum signal pick-up in FRINGE areas. Each YAGI is cut for a specific channel . . . in pre-assembled QUICK-FOLD-OUT design for fast installations.



"SUPER-VEE" ANTENNAS

An extremely sensitive, highly directional antenna that is noted for fine performance, especially on the high bands. Available in single or double stacked arrays.

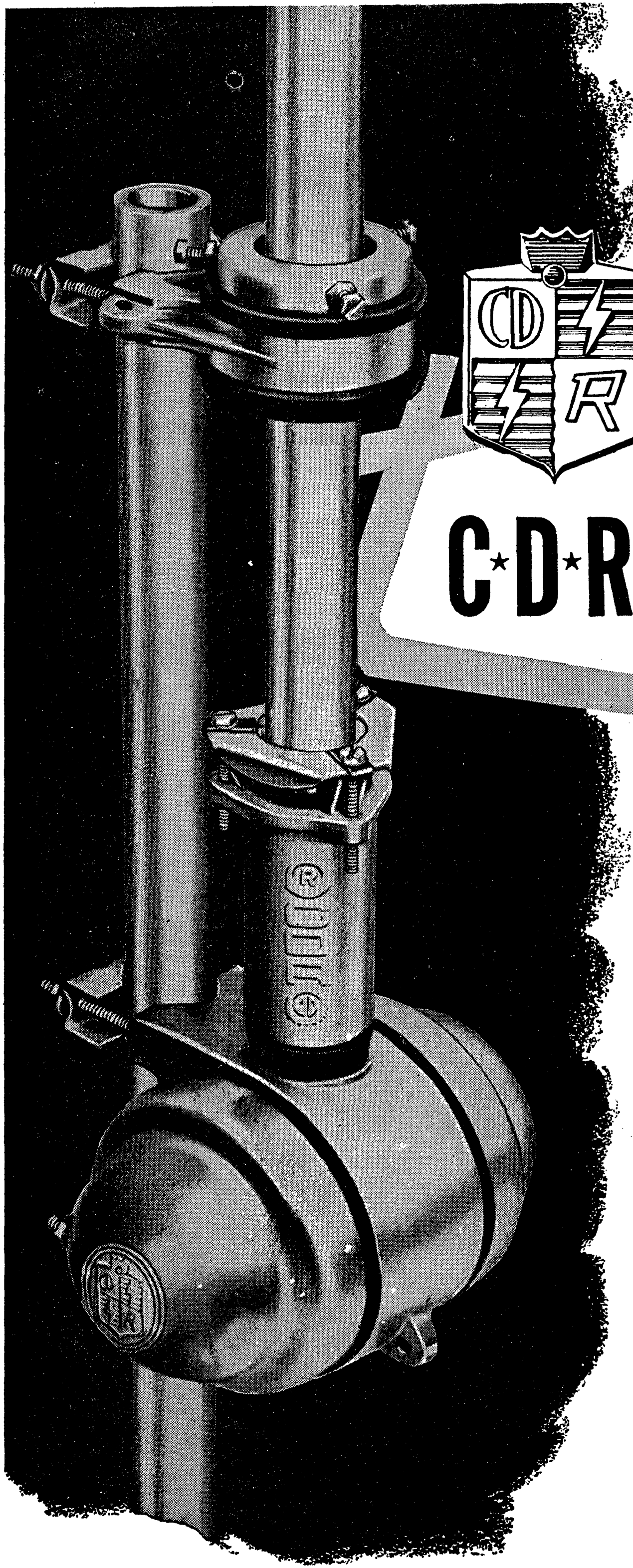


the ultimate in Fringe Area reception . . . the V-8 TV Antenna

A new design that offers the ULTIMATE in signal gain . . . with all channel range. Quick fold-out design for speedy instalation.

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE **RADIART** CORPORATION
CLEVELAND 2, OHIO



In a Class by Itself

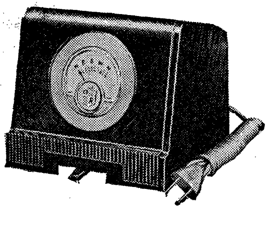
the C★D★R Rotor

Speedy Installation... the servicemen's dream come true! No loose parts to assemble... no kits with loose washers, nuts and bolts... quick mounting antenna mast collet plus four wire cable hookups!

Dependable... experience has proven that once a CDR ROTOR is up .. it's THERE TO STAY! No costly call-backs! Completely weather-sealed and streamlined... it's the outstanding value in the field!

Powerful... sturdy in design to support and TURN ANY TV ANTENNA array... never a worry about the CDR rotor working! Locking instantly it will not drift! Instantly reversible.. makes a complete revolution in 45 seconds!

MODEL TR-12 A special combination value consisting of complete rotor including thrust bearing... handsome modern design plastic cabinet with meter control dial, only $47.95



MODEL TA-6 Thrust bearing accessory, separately.... $4.95

MODEL TR-11 Same as TR-12 without thrust bearing.. $44.95

for Heavy Duty Applications

The most

Powerful

TV ROTOR

on the market

TR-2

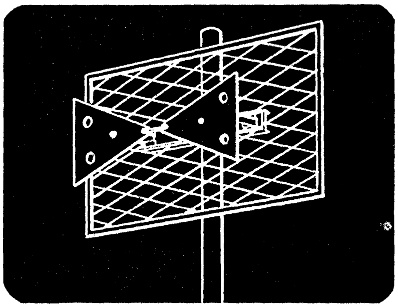
Power When and Where You Need It . . . To Turn ANY TV Antenna Array Under All Weather Conditions—

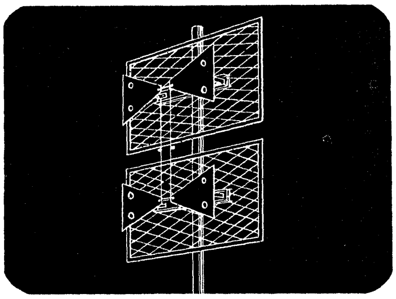
Complete rotor with "COMPASS CONTROL" cabinet having illuminated "perfect pattern" dial (uses 8 wire cable) $49.95

THE RADIART CORPORATION
CLEVELAND 13, OHIO

UHF ANTENNA SYSTEMS by VEE-D-X

VEE-D-X BR-U BOW TIE AND SCREEN REFLECTOR





EASIEST TO INSTALL

Thanks to the VEE-D-X exclusive FLEX-CLAMP, it is amazingly fast and easy to mount the BT-U, especially when adding to existing installations at rooftop. No fumbling or fussing with U-Bolts—just one screw to tighten and FLEX-CLAMP holds the antenna with a vise-like grip. FLEX-CLAMP also facilitates probing—just loosen the screw and move the antenna up or down or around the mast.

MODEL BT-U

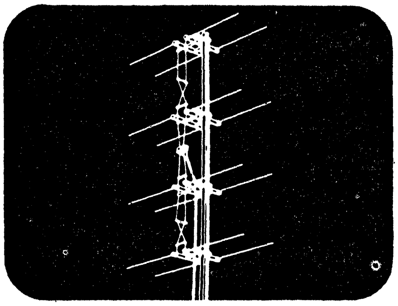
STACKING HARNESS BTH-U

Here is the finest, easiest to install Bow Tie ever made, yet costs no more than ordinary Bow Tie antennas. It is precision built and engineered for the performance-proven power for which VEE-D-X is so famous. No expense has been spared to meet the most rigid mechanical requirements so essential to good UHF reception. Look at the features . . . compare—and you will agree that here is the Aristocrat of bow ties.

FEATURES OF THE VEE-D-X BT-U

- 8 db gain across the entire UHF band. 50% additional gain on stacked arrays.
- Grounded driven element especially engineered to eliminate noise pick-up—no fragile insulators.
- Engineered for super sharp picture reception from 470 to 890 mcs.
- Four easy steps to assemble —takes less than a minute.
- All zinc-plated, weather resistant steel construction. Reinforced screen reflector.
- Rugged construction and exclusive FLEX-CLAMP holds antenna rigid. Greatly reduces antenna movement in wind—the cause of picture flicker.
- Compact packaging — only 12" by 20" by 1½" deep.

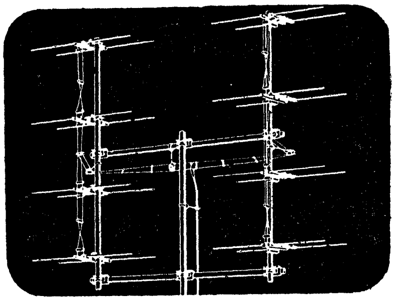
THE VEE-D-X UHF COLINEAR



COLINEAR ALL-CHANNEL FRINGE

Engineered and developed principally for use in fringe areas where gain is the number one consideration. Each of the four bays of the Colinear consist of a full wave, radiator and reflector. The critical adjustments of harness spacing are designed for optimum gain at the desired channel. The Colinear's rugged four-bay construction of solid aluminum elements with Fiberglas cross-arms assures long life.

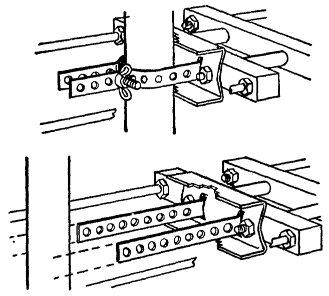
Model CA-U..........List **$11.10**



SIDE-BY-SIDE STACKED COLINEAR

The VEE-D-X stacked Colinear has been described by a leading TV receiver manufacturer as "The most powerful antenna developed for UHF reception." The two Colinears may be stacked by using the VEE-D-X Stacking Kit, Model CA-U-SSH, which consists of two masts, two booms and a stacking harness. The additional gain assures powerful, long distance reception.

Model CA-U-SSH..........List **$13.20**



Exclusive New Colinear MAST CLAMP

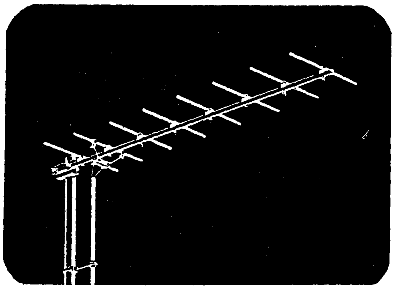
Simplifies — Speeds Installation

The diagrams above show the new improved mast clamps on each bay of the Colinear. This method eliminates sliding U-Bolts over the mast—a feature welcome to installation men when installing on present VHF mast at rooftop. This new clamp is faster, easier to install—facilitates moving the bays up or down when probing. A single screw tightens the clamp with a vise-like grip.

La Pointe ELECTRONICS, INC. ROCKVILLE, CONNECTICUT

UHF ANTENNA SYSTEMS by VEE-D-X

VEE-D-X UHF LONG JOHN For Primary and Fringe Areas

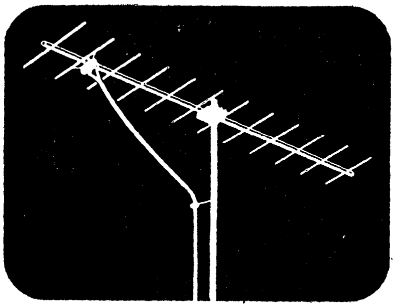


MODEL LJ-U—A powerful, single channel, 8-element Yagi for both primary and fringe UHF areas. Its novel spring-loaded pre-assembled construction makes it a snap to assemble and install with a single U-Bolt. Antenna folds compactly, yet is quickly made ready for installation by turning the elements which automatically snap into position in the special "V' shaped plastic jaws. All-aluminum boom and elements. Has new VEE-D-X Delta Match construction for perfect match to 300 ohm line. Attached to mast with single U-Bolt.

Model LJ-U.......List **$6.15**

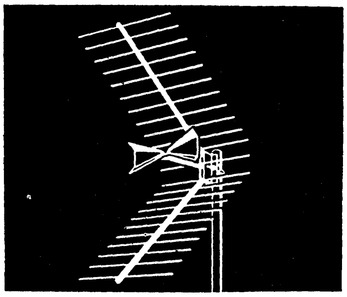
VEE-D-X UHF LONG LONG JOHN

For Super Power Fringe Area Single Channel Reception



The most powerful of all single channel antennas for fringe area UHF. Extremely compact in design, this rugged 12-element Yagi delivers over 14 db gain with unusual band width of 60 mc. Shipped completely assembled, solid aluminum elements with tough-as-steel fiberglas boom. Has new VEE-D-X Delta Match construction shown at right.

Model LLJ-U.......List **$7.65**

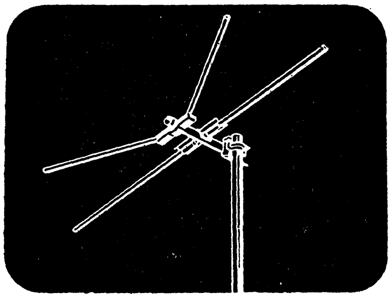


NEW UHF CORNER REFLECTOR

Highest gain broad band UHF antenna. 40% higher gain than a single Bow Tie. Excellent directivity with high front-to-back ratio. Minimizes probing. Finest construction, uses Fiberglas boom and solid aluminum elements that are ice-resistant. Pre-assembled—ready for installation in 30 seconds.

Model COR-U.......List **$13.50**

THE VEE-D-X "V" Type Multi-Channel UHF Antenna



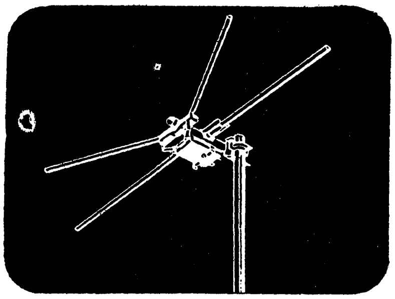
Model VR-U

An excellent, low cost multi-channel UHF antenna for primary areas. Simple in design, neat in appearance, and easy to install with a single U-Bolt. The critical angle of the "V" type antenna is designed to have an upper frequency limit of 1,000 mc. with excellent gain and directivity over the entire UHF range. Supplied plain, as shown at left.

Model VR-U.......List only **$2.75**

Also supplied with the famous VEE-D-X Mighty Match for use in combination with a present VHF antenna permitting the use of a single transmission line.

Model VR-MM-30.......List **$6.75**

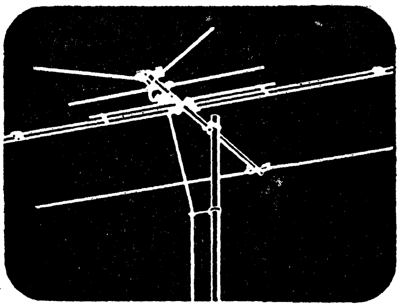


Model VRR-MM-30

La Pointe **ELECTRONICS, INC.** ROCKVILLE, CONNECTICUT

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

VEE-D-X COMBINATION ALL CHANNEL VHF-UHF ANTENNAS

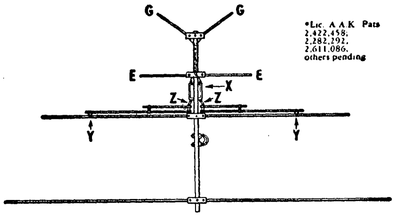


Model UQT

ULTRA Q-TEE FOR PRIMARY AREAS

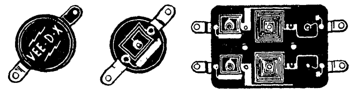
The Ultra Q-Tee provides brilliant performance on all VHF and UHF (2-83) channels. It has solved one of TV's biggest problems by combining both VHF and UHF into a single antenna employing a *single transmission line*. It thereby replaces the need for two or more antennas and additional transmission line and switches. The Ultra Q-Tee employs eight unique, patented* printed circuit band reject filters that isolate the VHF and UHF portions of the antenna. Its ease of installation is due to VEE-D-X ruggedized pre-assembled construction. Can be stacked for additional gain.

Model UQT..List **$14.25**



*Lic. A A K Pats 2,422,458; 2,282,292, 2,611,086, others pending

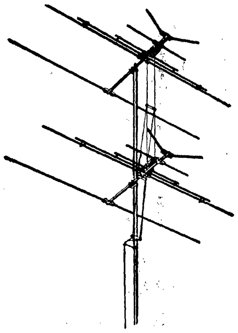
Figure 1



Y Y X

Note patented eight band filter isolation circuits and location on Ultra Q-Tee antenna.

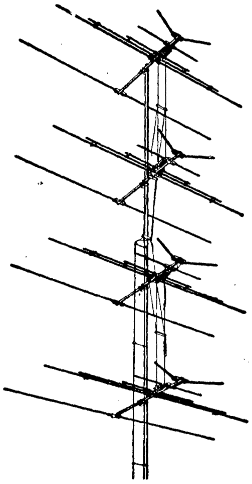
*Lic. A.A.K. Pats. 2,422,458; 2,282,292; 2,611,086; others pending.



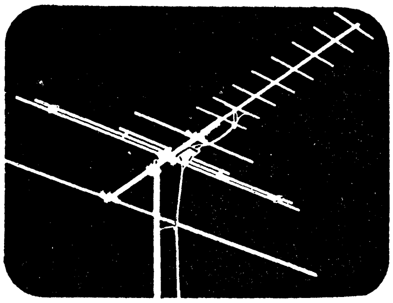
STACKED ARRAYS

For additional gain in fringe and difficult areas, the Ultra Q-Tee is available in 2 stack (double) and 4 stack (quad) arrays.

Model UQT Double..............................List **$29.55**



Model UQT Quad List **$61.40**



THE ULTRA Q-TEE-S FOR FRINGE AREAS

Employing the same eight patented* printed circuit channel separators as the Ultra Q-Tee, the Ultra Q-Tee-S is designed for all-channel VHF and *fringe area UHF*. A powerful high gain, broad band 8-element yagi replaces the "V" front section and is designed for the specific area in which it is to be used. When ordering, specify UHF channel desired. For example, if ordering for channel 27, order Model UQT-S-27.

Model UQT-S..List **$17.00**

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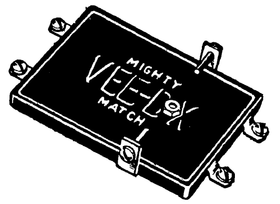
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

VEE-D-X THE WORLD'S MOST POWERFUL ANTENNA SYSTEMS

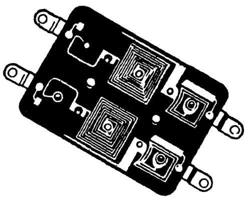
THE VEE-D-X MIGHTY MATCH

For *Single Line* Transmission of VHF and UHF



This important contribution to simple VHF-UHF installation *automatically* separates all channels (2-83). The answer lies in its newly developed and revolutionary printed circuits which eliminate the need for two transmission lines. The patented* VEE-D-X Mighty Match (MM-30) has a double barreled application (1) at the antenna; and (2) at the terminals on the TV set or converter. It is the only practical device yet perfected to make single transmission line VHF-UHF possible.

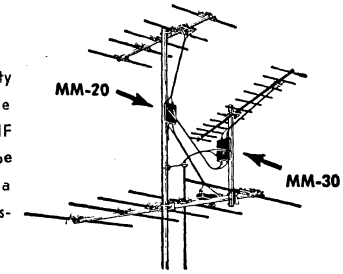
Model MM-30...List **$4.00**



*Lic. A.A.K. Pats. 2,422,458; 2,282,292; 2,611,086; others pending.

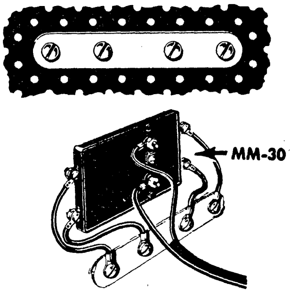
1

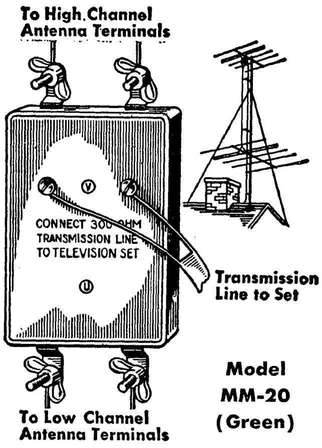
Thanks to Mighty Match, separate UHF and VHF antennas may be connected to a single transmission line.



2

A single transmission line can also be terminated at the converter or the TV set equipped with separate VHF and UHF terminals.





To High Channel Antenna Terminals
CONNECT 300 OHM TRANSMISSION LINE TO TELEVISION SET
Transmission Line to Set
To Low Channel Antenna Terminals

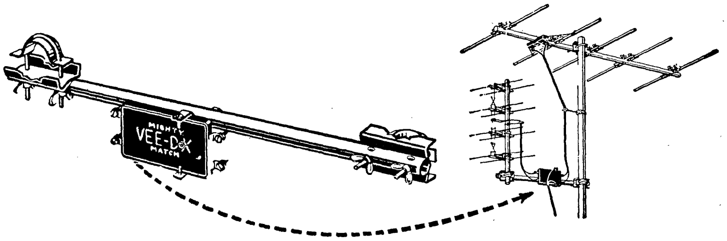
Model MM-20 (Green)

Additional printed circuit isolation filter is designed for use with VHF antenna systems. It permits the use of a single transmission line between separate high and low channel antennas mounted on the same mast. It can also be used in combination with the MM-30 in VHF-UHF antenna installations.

Model MM-20..............................List **$3.50**

VEE-D-X UNIVERSAL MOUNTING BRACKET

Permits fast, easy addition of a UHF antenna to existing VHF installation. Model AB-MM-30



THREE METHODS OF MOUNTING

- **Horizontally off existing mast.**
- **Vertically atop existing mast.**
- **Vertically off VHF antenna boom.**

The Universal Mounting Bracket was designed by VEE-D-X engineers to make the addition of UHF antennas to existing VHF installations as simple as possible. The bracket is supplied in two ways, either plain or with the VEE-D-X Mighty Match that permits the use of a single transmission line for both VHF-UHF. The plain bracket, Model AB—List **$1.50.** The bracket with Mighty Match, Model AB-MM-30—List **$5.50.** This bracket is also supplied in combination with the "V" type UHF antenna.

Model AB-VR—List **$4.25.** Model AB-VR-MM-30—List **$8.25.**

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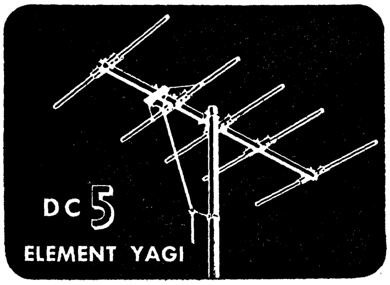
TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

VHF ANTENNAS by VEE-D-X

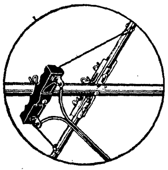
VEE-D-X LOW COST DELTA MATCH YAGIS



MODEL DC

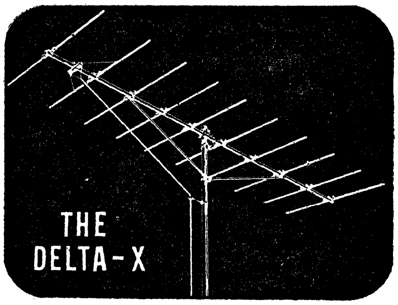
The DC delivers the power of VEE-D-X's world famous JC Yagi, at lower cost! An outstanding value in a quality five-element Yagi. Features include rugged pre-assembled all-aluminum construction; high gain on every channel; 6 megacycle band width; excellent front-to-back ratio. May be stacked for extra gain. Special VEE-D-X phasing harnesses are available for double-stacking.

Model DC (Channel 7-13)..................List **$5.55**



THE DELTA MATCH COST-CUTTER

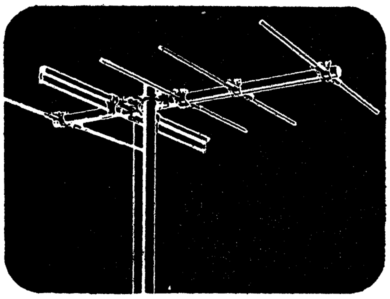
This vital addition to the JC series is responsible for *savings of more than 30%* over standard Yagi antennas. Perfected by VEE-D-X engineers, it offers an ingenious method of selecting the exact impedance point of the dipole with any frequency. The Delta Match accomplishes an exact transformer action over an entire channel without loss of picture highlights or cutting of the audio portion of the TV signal.



MODEL DX

The new Delta-X is not only the lowest priced, but the finest of all 10-element Yagis. The Delta-X produces 30% higher gain on all high channels as a result of 20% (wide) spacing. In addition, the Delta-X has all-aluminum light weight construction — no heavy cumbersome steel boom. All elements are doubly reinforced at boom. All booms are of two-piece construction to reduce carton lengths for ease of handling. Low channels are 1¼" seamless boom, with heavy duty CL-11 mast clamp. High channels have 1" doweled lock seam booms of the new TV alloy #41. Boom struts are used on all models. Can be stacked in double and quad for additional gain. Has famous VEE-D-X Delta Match for perfect 300 ohm termination.

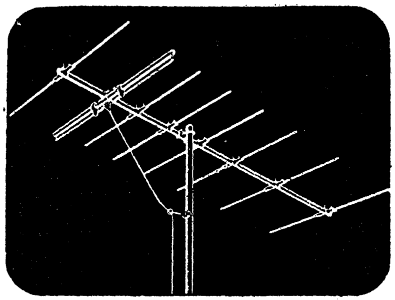
Model DX (Channel 7-13)..........................List **$15.50**



MODEL JC
FAMOUS "JC" YAGI

The world's most popular Yagi! The "JC" was perfected by VEE-D-X engineers in collaboration with a foremost authority on wave propagation. Provides powerful signal at low cost. Pre-assembled for fast, easy installation. JC Yagis may be stacked for additional gain by using VEE-D-X phasing harness. Choice of array depends on area terrain and reception conditions.

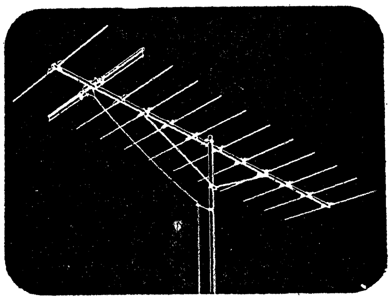
Model JC (Channel 7-13)...............List **$7.95**



MODEL LJ
LONG JOHN YAGI

This sensational 8-element Yagi gives 41% more gain than the best 5-element Yagi and gives equal gain to a double-stacked 5-element Yagi array. It meets the increasing trade demand for a single bay antenna that produces as much gain as a stacked array, yet is lower in cost, easier to install and far better in appearance. It has typical rugged, VEE-D-X pre-assembled construction. Can be stacked.

Model LJ (Channel 7-13)............List **$12.50**



MODEL LLJ
LONG LONG JOHN

Where super high gain is required, the 12-element Long Long John is the answer for superior performance. It is the highest gain, single channel antenna ever developed, and is guaranteed to *out-perform any other Yagi made*. The Long Long John has ruggedized boom bracing with pre-assembled, all-aluminum construction. High front-to-back ratio, full 6 megacycle band width. Can be stacked.

Model LLJ (Channel 7-13).........List **$18.50**

For information on other VEE-D-X accessories, including Tower, Hardware and Lightning Arresters, see your VEE-D-X jobber or write for separate literature.

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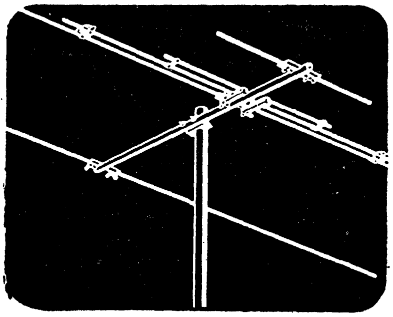
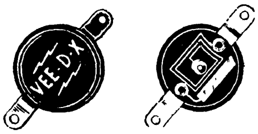
La Pointe **ELECTRONICS, INC.** ROCKVILLE, CONNECTICUT

VEE-D-X ALL-CHANNEL Q-TEE WITH RUGGEDIZED CONSTRUCTION



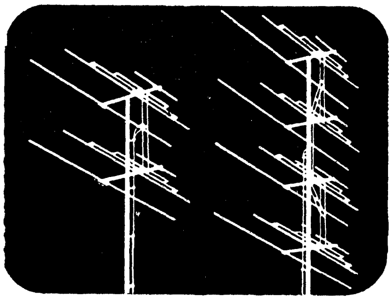


PRINTED CIRCUIT FILTERS

These bright red filters comprise the heart of the Q-Tee. They use newly developed VEE-D-X printed circuits for the first time in any TV antenna, making possible the Q-Tee's simple pleasing design as well as brilliant all-channel performance.

*Lic. A.A.K. Pats. 2,422,458; 2,282,292; 2,611,086, others pending.

The sensationally popular all-channel antenna with built-in patented* electronic channel separators for increased gain, better directivity, higher front-to-back ratio, increased mechanical strength and better appearance. Ruggedized construction gives positive element support under the most severe conditions. At no extra cost the Q-Tee is supplied with special reinforcing brackets, making it the *strongest* antenna for its weight ever made. For all-channel VHF performance, appearance and strength, it has no equal. Model QT..........List **$9.25**



THE Q-TEE DOUBLE—The two bay Q-Tee combination for near fringe areas for a gain increase of 40% or better.

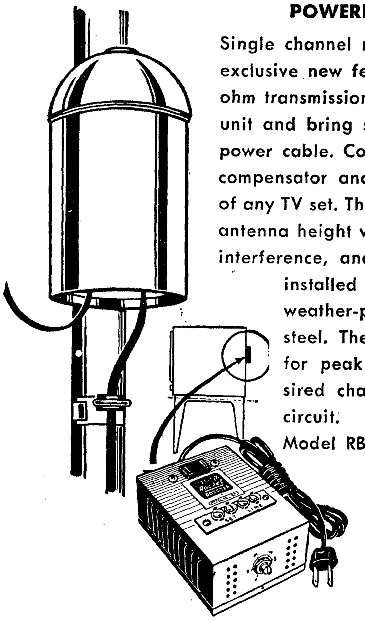
Model QT Double..........List **$19.55**

THE Q-TEE QUAD—The four bay Q-Tee combination for fringe areas provides a gain increase of 100% or better.

Model QT Quad..........List **$41.40**

NEW ROCKET BOOSTER

PRE-AMPLIFIES SIGNAL AT ANTENNA HEIGHT

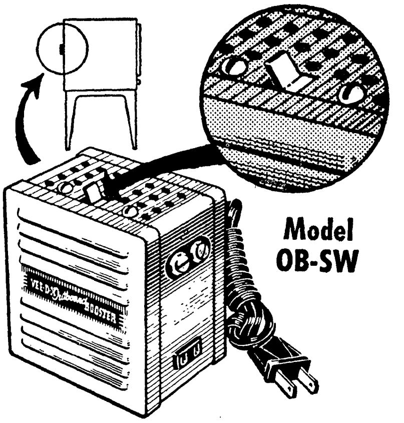


POWERFUL 18 db GAIN

Single channel mast-mounted booster with exclusive new features. Uses only one 300 ohm transmission line to power the booster unit and bring signal to set. No separate power cable. Control unit has line voltage compensator and fits snugly against back of any TV set. The Rocket amplifies signal at antenna height which minimizes line noise, interference, and signal instability. Easily installed mast unit has completely weather-proof aluminum case, not steel. The Rocket is factory pre-set for peak performance on any desired channel. Push-pull 6J6 triode circuit.

Model RB..........List **$34.95** complete

OUTBOARD BOOSTER



The country's largest selling single-channel booster is available with a specially designed by-pass switch that allows the booster to operate on a single weak channel, yet with a flick of the switch, it is by-passed for reception on other channels that have normal signal strength. The VEE-D-X Outboard Booster delivers powerful 18 db gain over full band width.

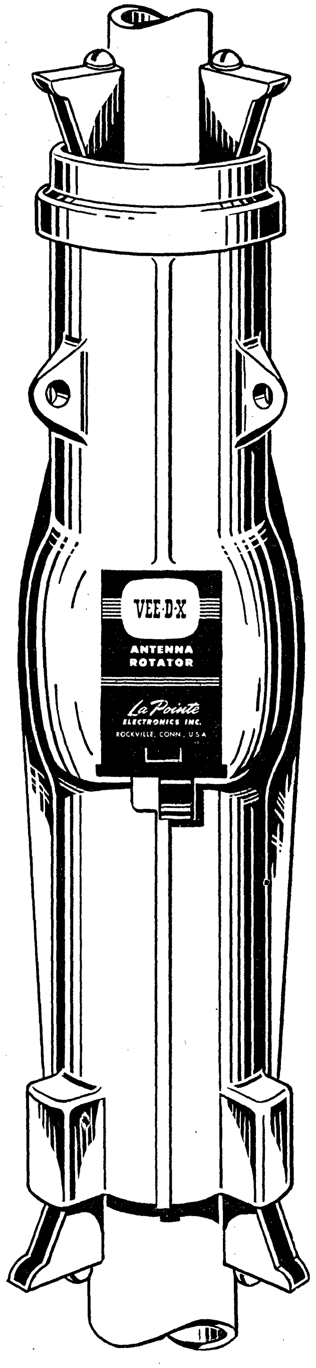
Model OB (Plain)..........List **$19.95**

Model OB-SW (With by-pass switch)..........List **$22.95**

VEE-D-X THE WORLD'S MOST POWERFUL ANTENNA SYSTEMS

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

VEE-D-X THE WORLD'S FINEST ANTENNA ROTATOR



the amazing new
VEE-D-X
ANTENNA ROTATOR

The rotator that obsoletes all others. Precise as a watch — rugged as a bulldozer — streamlined as a rocket

The VEE-D-X Antenna Rotator is a remarkable engineering triumph in design, construction and performance. It was developed to perfection in cooperation with world famous small gear specialists. Fast and easy installation results from its in-line construction. It is the only rotator that requires no meter adjustment to compensate for voltage drop resulting from varying lengths of lead lines. It utilizes a standard four-wire connecting lead. Positive antenna stop means no over-travel and assures pin-point accuracy.

OTHER OUTSTANDING FEATURES

STREAMLINED CASE DESIGN AND BALANCED MOUNTING give far better appearance, less wind resistance, relieve strain on mast and guy wires. No cumbersome offset—improved rooftop appearance.

THREE JAW CHUCK-TYPE MAST CLAMP at top and bottom is an exclusive VEE-D-X feature providing largest clamping surface of any rotator. Easily secured with a screwdriver.

PRECISION CAST GEARING provides dependable performance under all conditions. No backlash due to wear. Reduces objectionable noise. One look at the gearing and you can see why this is the finest of all rotators.

FAST, EASY LINE CONNECTIONS accommodate 4 wire line. Exclusive snap-in cover slides into place—no screws to drop.

POSITIVE MAST ALIGNMENT with built-in self-centering mast guides.

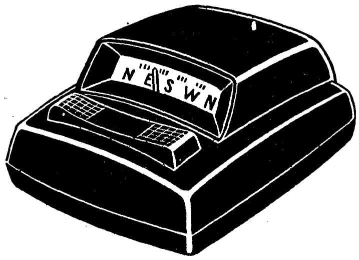
EXTREMELY POWERFUL. Will support a load of over 200 pounds—thereby eliminating any need for an auxiliary thrust bearing. Motor bearings are silicone lubricated for long life.

MAGNIFICENT DECORATOR STYLED CONTROL CONSOLE

Smaller, more compact than any other. Streamline design gives low center of gravity—cannot tip. Unique control circuit with linearly graduated dial permits uniformed scale deflection normally available in DC instruments only. Graduations are equidistant throughout scale giving both geographic and numerical reference points. Dial scale is protected with glass window to avoid electrostatic charging. Made of flame-proof Celanese Lumarith plastic in heather green or cordovan mahogany.

Rotator and Control Console . . .

List Price, Complete..................................**$49.95**



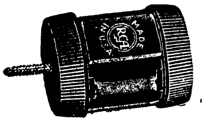
La Pointe ELECTRONICS, INC. ROCKVILLE, CONNECTICUT

RCA ELECTRONIC COMPONENTS

ANTENNA ACCESSORIES

RCA TV SET COUPLER

- For 300-Ohm Ribbon-type Line
- Easy to Install
- Economical



240A1

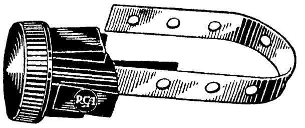
The new RCA-240A1 TV Set Coupler permits simultaneous operation of two TV receivers from a common antenna. Can also be used in combinations of two to four units for simultaneous operation of two to four TV receivers from a common antenna. The 240A1 reduces oscillator radiation between sets and has a flat bandpass response over the VHF bands.

No cutting, splicing, or soldering necessary. Self-contained wood screw, no special tools needed. Complete instructions included.

Type 240A1..Suggested List Price: $1.95 each

TWIN-LEAD LIGHTNING ARRESTERS

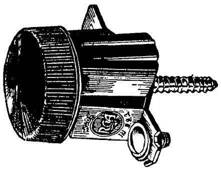
- 300 Ohm Line



214X1

Pipe-mounting type for use with FM and TV antennas. Easy to install—no cutting or stripping of transmission line. Fits any ½″-2″ pipe. Continually dissipates static surges. Does not unbalance line. Brown plastic case.

Type 214X1..Suggested List Price: $1.10



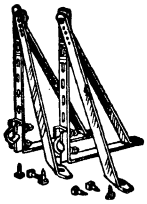
215X1

Wall-mounting type arrester—wood screw firmly secured in body—no special tools needed. No cutting or stripping of transmission line.

Type 215X1..Suggested List Price: $1.25

ANTENNA MOUNTING BRACKETS

- Heavy Duty



227A1

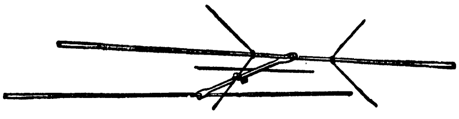
Readily adjustable to permit mounting on any wall regardless of overhang. Can be attached to brick, stone or wood. Entire bracket is heavily plated with bright zinc, preventing rusting and subsequent staining of building surfaces. Special angular supports eliminate sagging.

Type 227A1 .... Suggested List Price: $6.75 per pair

TELEVISION ANTENNAS

RCA 12-CHANNEL TELEVISION ANTENNA

- Easily Assembled
- Ruggedly Constructed
- Uni-Directional



215A1

RCA-215A1 is intended for use in most receiver locations where both high and low-frequency stations are in the same general direction. Unique RCA "V" attachments provide uniform directional characteristics for all 12 channels. Unusually flat response over each of the two television bands.

Supplied with all necessary hardware but less mast. Complete illustrated instructions for installation are included.

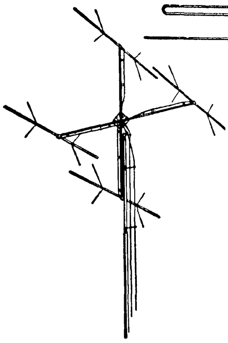
Type 215A1..Suggested List Price: $13.50

THE RCA REVERSIBLE-BEAM TV ANTENNA ARRAY
For Locations with Co-channel Interference

The RCA-212A1 Reversible-Beam TV Antenna Array receives signals from only one direction at a time; eliminates co-channel interference where stations are approximately 180° apart. It also eliminates adjacent-channel interference where the receiver lacks selectivity. RCA-developed "V" attachments provide uniform directional characteristics for all twelve channels. A high overall front-to-back ratio is achieved through the use of driven elements, instead of parasitic elements. This design also makes possible the unique feature of lobe switching.

Sturdily built throughout of high-quality aluminum, the RCA Reversible-Beam Antenna consists of an array of four eight-foot dipoles in the form of a square. A dual transmission line connects the horizontal and vertical dipoles to an attractively packaged diplexing network located at the rear of the receiver. By the mere flick of a switch on the diplexer, antenna directivity can be reversed.

Type 212A1..Suggested List Price: $59.50

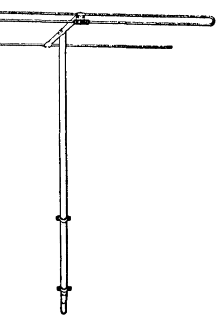


212A1

RCA FM FOLDED-DIPOLE ANTENNA AND REFLECTOR

Engineered by RCA for use with FM receivers having a 300-ohm input, the RCA-229A1 has an unusually flat signal response providing efficient coverage of the entire FM band from 88 Mc to 108 Mc. Excellent for use in fringe area installations. Aluminum elements, complete with all hardware.

Type 229A1............................(Mast not included) Suggested List Price: $7.60



229A1

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

ANTENNA
DESIGN ENGINEERS
SINCE 1921
Tel. ASBURY PARK 2-7252

telrex INC.

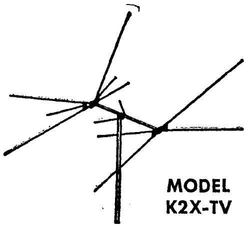
ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N. J.

"CONICAL-V-BEAMS"

The only antenna array that produces FULL TONE, Full Video Band Pass and High Signal to Noise Ratio on All Frequencies

AMERICA'S FINEST ANTENNA — THE BEST MONEY CAN BUY!

Combines the outstanding electrical constructional features of the famous DeLuxe Series with the unusual versatility and selective channel emphasis of the Telrex Universal Series. Available with doweled dural tubing or Solid Dural Rod. Each bay is supplied with eight elements and two stubs. Prices do not include masting.



MODEL K2X-TV

K2X-TV—Single bay, uni-directional "Conical-V-Beam" with reflectors. Finest quality materials—fine performer.

Standard Pack	1/carton
Shipping Weight	5 lbs.
List Price	**$12.60**

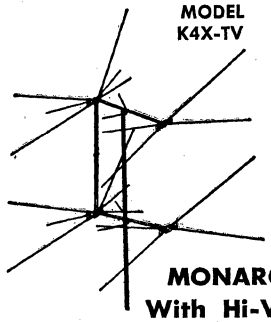
K4X-TV—2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors. America's outstanding TV antenna. 10 to 12 db gain.

Standard Pack	1/carton
Shipping Weight	9 lbs.
List Price	**$25.21**

K4X-TVS—(4X-TV ½ wave) 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors. ½-wave stacking bars provide full ½-wave spacing and 30% more gain performance on Channels 2 to 6.

Standard Pack	1/carton
Shipping Weight	10 lbs.
List Price	**$28.80**

MODEL K4X-TV

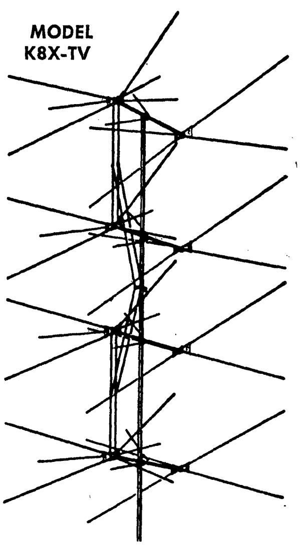


MONARCH SERIES With Hi-V-Reflectors

K8X-TV—4 bay, uni-directional "Conical-V-Beam" with hi-v-reflector. The ultimate in multi-station long distance arrays. Gains up to 16 db. The Telrex MONARCH 8X-TV will outperform any antenna or combination of cut-to-frequency antennas. Unequalled for long distance reception up to 200 miles. "If the 8X-TV does not provide a useable signal, TV reception is impossible or impractical."

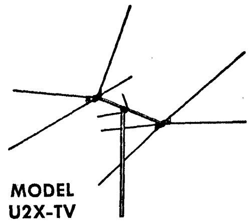
Standard Pack	1/carton
Shipping Weight	18 lbs.
List Price	**$53.11**

MODEL K8X-TV



Conical V-Beams are produced under Re-issue Pat. No. 23,346

UNIVERSAL SERIES WITH HI-V-REFLECTOR



MODEL U2X-TV

U2X-TV—Single bay, uni-directional "Conical-V-Beam" with reflectors; modifiable for selective channel emphasis.

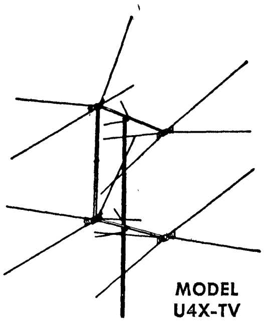
Standard Pack	3/carton
Shipping Weight	12 lbs.
List Price	**$9.30**

U4X-TV—2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors; can be modified for selective channel emphasis. 10 to 12 db gain.

Standard Pack	1 or 3/carton
Shipping Weight	24 lbs.
List Price	**$19.94**

U8X-TV—Economy model. Uni-directional, 4-bay "Conical-V-Beam" with reflectors. Can be modified for selective channel emphasis.

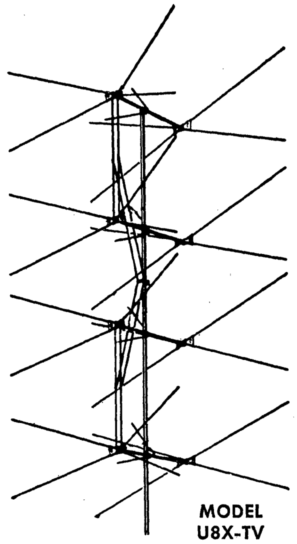
Standard Pack	1/carton
Shipping Weight	16 lbs.
List Price	**$43.89**



MODEL U4X-TV

PRICES DO NOT INCLUDE MASTING

"UNIVERSAL" SERIES ALSO AVAILABLE FOR FM.



MODEL U8X-TV

AMERICA'S LARGEST MANUFACTURER OF "CONICAL-V-BEAMS"

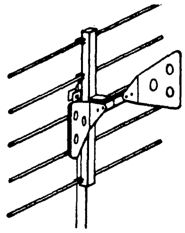
ANTENNA
DESIGN ENGINEERS
SINCE 1921
Tel. ASBURY PARK 2-7252

telrex INC.

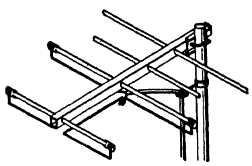
ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N. J.

ANTENNAS FOR UHF . . . BETTER BY DESIGN

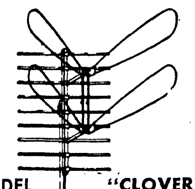
Tested, Tried and Proven for EVERY Reception Area . . . Near or Far!
"Guaranteed to outperform any UHF antennas in the field . . . RAIN OR SHINE!"



ULTRA "BOW-TIE"
CONICAL-V-BEAM
MODEL 750
Shipping Wt. 2 lbs.
Standard Pack 1/carton
List Price $7.50

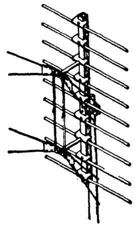


ULTRA
DUPLEX YAGI
MODEL 300
Shipping Wt. 1½ lbs.
Standard Pack 12/carton
List Price $5.95



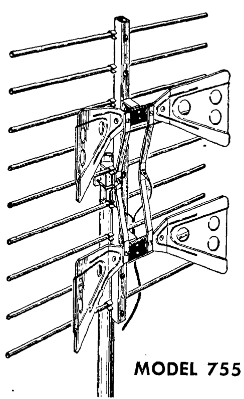
MODEL 900 **"CLOVER" With Reflector**
Ideal hi-gain array for UHF plus Hi-channel VHF (Channels 7-13).
Shipping Wt. 3½ lbs.
Standard Pack 1/carton
List Price $16.33

MODEL 800-2X



ULTRA
"CONICAL-V-BEAM"
Hi-gain directive UHF array with spline reflector.
Shipping Wt. 3¼ lbs.
Standard Pack 1/carton
List Price $13.55

STACKED "BOW-TIE"

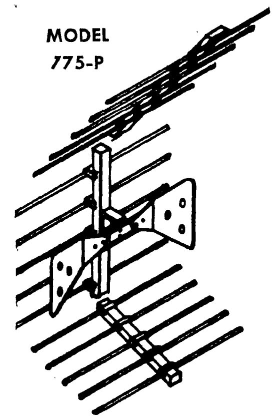


MODEL 755

HAS SINGLE PREASSEMBLED SPLINE REFLECTOR FOR MAXIMUM SIGNAL PICKUP

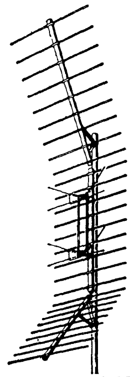
Shipping Wt. 6½ lbs.
Standard Pack 1/carton
List Price $15.00

MODEL 775-P



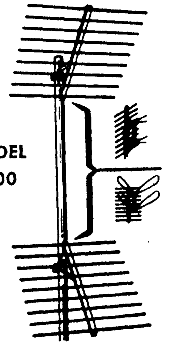
ULTRA "BOW-TIE"
PARABOLIC
Shipping Wt. 4½ lbs.
Standard Pack 1/carton
List Price $15.00

MODEL 850-P-2X



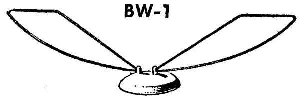
PARABOLIC REFLECTOR
Super sensitive UHF parabolic beam. Excellent horizontal, vertical directivity.
Shipping Wt. 6 lbs.
Standard Pack 1/carton
List Price $26.67

MODEL 1000



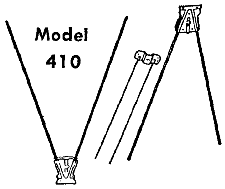
MODIFICATION KIT
For use with 750, 755, 800-2X, 900, and other UHF antennas, to make parabolic reflector arrays.
Shipping Wt. 4½ lbs.
Standard Pack 1/carton
List Price $13.20

MODEL BW-1



ULTRA "BAT-WING"
VHF and UHF - Channels 2 to 83
Outperforms any top-of-set antenna on 80% of all TV channels. Requires no pruning or tuning. Attractive ornamental design.
Shipping Wt. 30 lbs.
Standard Pack............ Single Pack
24 in Master Carton
List Price $5.95

Model 410

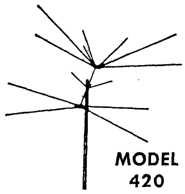


DUO-BAND
CONICAL-V-BEAM
MODIFICATION
KIT
Converts any Telrex VHF "Conical - V - Beam" to a Duo-Band, UHF - VHF antenna, such as the Model 420. Provides hi-gain, Uni-in-line Lobe from channel 2 to 83 with automatic transition from VHF to UHF using one transmission line, and without out-of-phase signals from so-called isolation circuits. For two or four bay stacks, one or two Model 414 Kits ($7.90 list) should be used. Shipping Wt. 5 lbs.
Standard Pack 4/carton
List Price $3.95

UNIVERSAL
DUO-BAND
"CONICAL-V-BEAM"

The UHF-VHF Sensation!

Channels 2 to 83 with ONE antenna, ONE major in-line lobe of reception, and only ONE lead-in. Stacks easily. Two bay #440 ($25.50 list) and four bay #480 ($55.00 list) also available.



MODEL 420

Shipping Wt. 10 lbs.
Standard Pack...2/carton
List Price $12.08

HURRICANE-BUILT to survive bad weather!

The same sterling quality construction featured in VHF models, combined with reliable factory ratings assure antenna satisfaction on every UHF installation. The complete Telrex line for UHF includes famous "Conical-V-Beams," "Fishbones," Yagis and Bat Wings. There is a Telrex UHF antenna for every area — city, suburban or remote-from-transmitter.

"CONICAL-V-BEAMS" are covered by Patent No. 23,346. Canadian and Foreign Patents Pending.
PRICES DO NOT INCLUDE MASTING

ORIGINATORS • PATENTEES • MANUFACTURERS OF "CONICAL-V-BEAMS"

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

ANTENNA
DESIGN ENGINEERS
SINCE 1921
Tel. ASBURY PARK 2-7252

telrex INC.

ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N. J.

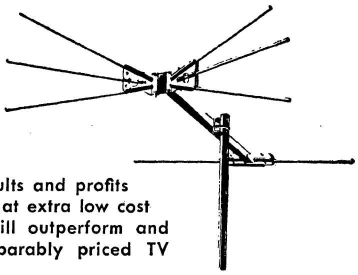
"CONICAL-V-BEAMS"

FOR SUPERIOR RECEPTION ON TV, FM and UHF
CUSTOM-DESIGNED ANTENNAS AT MASS PRODUCTION PRICES

Another Telrex first in superior antenna service. Conical-V-Beams custom designed for best results in your particular area. You get better performance, value and more satisfied customers. Your selling territory for TV receivers is increased tremendously. Installing customized Telrex antennas is insurance against callbacks due to antenna adjustments and you enjoy the added protection of Telrex super-durable, all-weather construction. Just specify the installation area when ordering. Telrex will supply your antennas cut-to-area for the finest pictures ever!

VANGUARD SERIES "CONICAL-V-BEAMS"

The New 'Economy Line



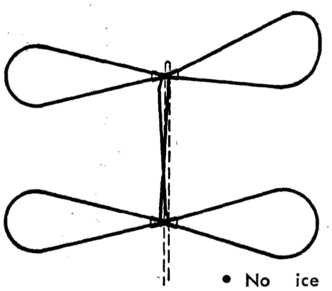
- Designed for results and profits
- Top performance at extra low cost
- The Vanguard will outperform and outsell any comparably priced TV antenna.

VU2X-8

Model VM2X-6 (single bay)	**List**	**$ 7.22**
Model VM4X-12 (2 bay stacked)	**List**	**15.28**
Model VU2X-8 (single bay)	**List**	**7.92**
Model VU4X-16 (2 bay stacked)	**List**	**16.83**

Vanguard Series Bulk Packed

"CLOVER-V-BEAM" E-Z-RIG



A high gain, compact indoor or outdoor array for TV and FM.

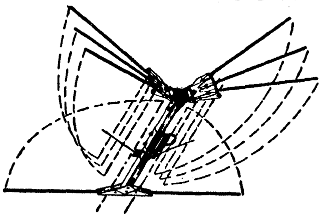
featuring:

- High sensitivity and compact configuration
- Roof, attic, window mounting
- Ease of installation
- No ice loading, low wind resistance

The efficient transposed collinear closed loop CONICAL-V-BEAM provides resonant conical dipole sensitivity on low channels with hi-gain V-Beam operation on the high channels.

Standard Pack	4/carton
Shipping Weight	8 lbs.
List Price	**$5.95**

"METEOR" CONICAL-V-BEAM E-Z-RIG

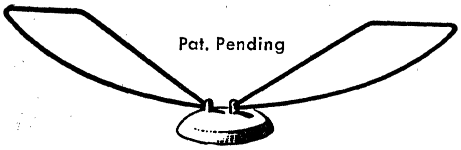


TELREX "METEOR," the CONICAL-V-BEAM with E-Z-RIG assembly. A complete E-Z-RIG assembly with no separate parts to assemble.

- WITH "HI-V-REFLECTOR"
- SOLID, HIGH TENSILE STRENGTH, ALUMINUM ELEMENTS
- RECORD BREAKING ALL CHANNEL GAIN
- NO ICE LOADING, LOW WIND RESISTANCE

Model ME-2X	**List $12.60**
Standard Pack	2/carton
Shipping Weight	8 lbs.
Model ME-4X	**List $25.21**
Standard Pack	1/carton
Shipping Weight	8½ lbs.
Model ME-8X	**List $53.11**

TELREX "BAT-WING"



- EXCLUSIVE CONCENTRATED LOBE DESIGN
- FULL AUDIO AND VIDEO BAND WIDTH
- NO ADJUSTMENT, FUSS OR BOTHER

Outperforms any top-of-set antenna on 80% of all TV channels. Requires no pruning or tuning. Attractive ornamental design!

Single Pack	24 in master carton
Shipping Weight	30 lbs.
List Price	**$5.95**

"BETTER BY DESIGN"—ELECTRICALLY AND MECHANICALLY

AMERICA'S LARGEST MANUFACTURER OF "CONICAL-V-BEAMS"

ANTENNA
DESIGN ENGINEERS
SINCE 1921
Tel. ASBURY PARK 2-7252

telrex INC.

ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N. J.

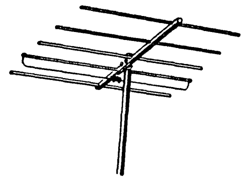
TELREX "CUSTOM BUILT" YAGI'S

- PRECISION TUNED • FULL BAND WIDTH • EXCELLENT IMPEDANCE MATCH
- HIGH FRONT TO BACK RATIO • HIGH IMPEDANCE TRANSFORMATION

— FOR VHF - UHF - FM —

PRECISION TUNED 5-ELEMENT YAGI

Uniformly high gain over full channel with exceptional front-to-back ratio. High impedance transformation provides excellent match for 300 ohm lines, minimizing standing waves and noise pick up.

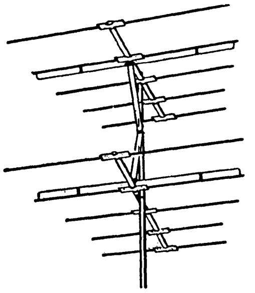


Model Y5X1—2 to 6

(Channels 2 or 3)......**$16.19**
(Channels 4, 5 or 6) **15.28**

Model FMY5X1—For FM Reception

AMERICA'S FINEST 5 ELEMENT YAGI

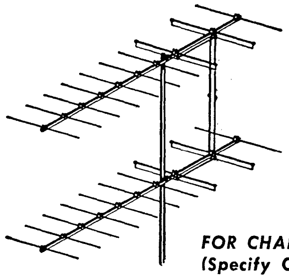


A precision tuned narrow beam array offers 10 db gain and high front-to-back ratio. Full band-width for full audio and video, excellent match with 150 or 300 ohm transmission line.

Model Y5X2—2 to 6

(Channels 2 or 3)......**$37.08**
(Channels 4, 5 or 6) **35.25**

TELREX TWIN-DRIVEN "FISHBONE"



TEN WORKING ELEMENTS

Guaranteed to outperform any Yagi antenna. The most powerful twin-driven single channel array ever made. Telrex guaranteed to outperform any yagi antenna on the market. Up to 15 db gain.

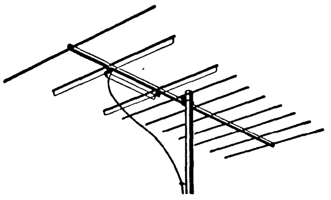
FOR CHANNELS 7 thru 13 (Specify Channel)

Model FBT-1		**Model FBT-2**	
Single Array		Stacked Array	
Shipping Weight	4 lbs.	Shipping Weight	9 lbs.
Standard Pack	1/carton	Standard Pack	1/carton
List Price	**$13.35**	**List Price**	**$27.55**

TELREX "FISHBONE" TWIN-DRIVEN ARRAY

FOR LO-CHANNELS 4, 5 OR 6

Features top performance at low cost, the ultimate in single channel arrays. With ten working elements, it is guaranteed to outperform any yagi now produced. A lightweight, pre-assembled array. Supplied with boom support.



(Specify Channel Number when Ordering)

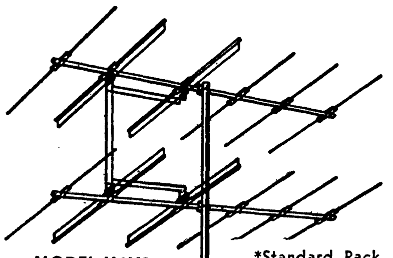
Standard Pack 1/carton	**CHANNEL 4**	**$33.50**
	CHANNEL 5	**33.50**
	CHANNEL 6	**32.35**
	DUAL CHANNELS 4 and 5	**33.50**

TELREX SIX ELEMENT "FISHBONE JR."

TWIN DRIVEN FOR POWERFUL SINGLE CHANNEL PERFORMANCE

Offers electrical features of sharp directivity, 300 ohm impedance, close match and low VSWR. Offers maximum gain, maximum bandwidth, full fidelity of both picture and sound. Provides extremely high signal-to-noise ratio; 11.6 db gain, over 25 db. front-to-back ratio. Can be stacked, as illustrated, for greater gain.

(ALL TELREX YAGI ARRAYS ARE PRECISION-CUT TO INDIVIDUAL CHANNELS. Be sure to specify channel when ordering.)



MODEL Y6X2
FISHBONE JR."
Stacked Array

"FISHBONE JR." Single Arrays*

Channels	Model	Ship'g Weight	List
7 to 13	Y6X1	5½ lbs.	**$ 8.35**
2 and 3	Y6X1	12 lbs.	**21.41**
4, 5 and 6	Y6X1	8½ lbs.	**19.68**

"FISHBONE JR." Stacked Arrays**

Channels	Model	Ship'g Weight	List
7 to 13	Y6X2	11 lbs.	**$18.06**
2 and 3	Y6X2	25 lbs.	**46.00**
4, 5 and 6	Y6X2	18 lbs.	**42.55**

*Standard Pack 1/carton
**Standard Pack 1/carton

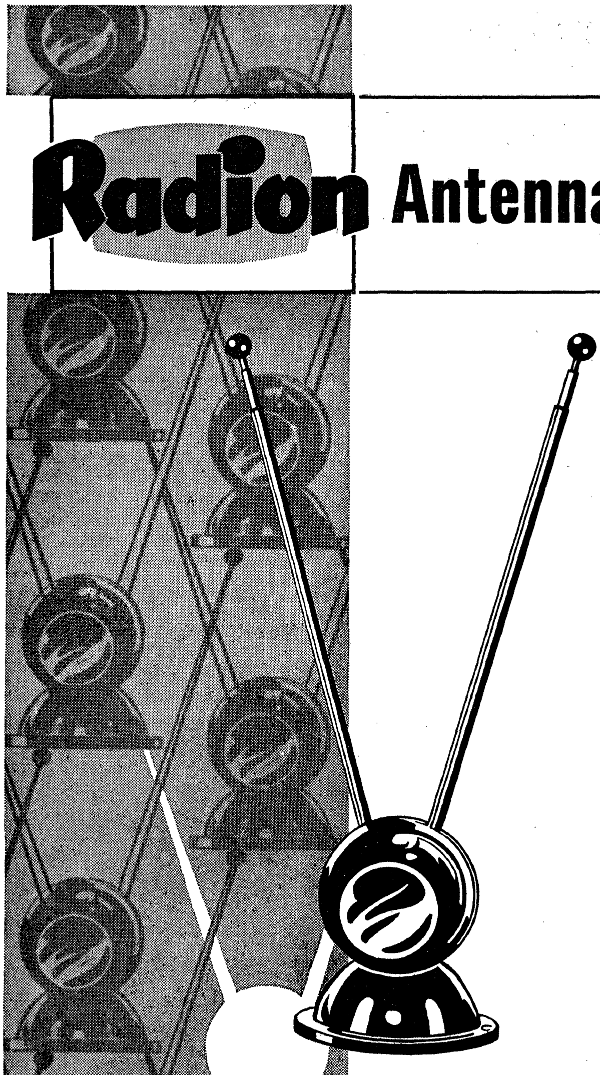
SUPER POWER FOR SINGLE CHANNEL RECEPTION.
DATA SHEETS ON TELREX ANTENNAS AVAILABLE ON REQUEST.

MODEL No. FMY6X1 — FOR FM RECEPTION!

PRICES DO NOT INCLUDE MASTING

ORIGINATORS • PATENTEES • MANUFACTURERS OF "CONICAL-V-BEAMS"

Radion Antennae and Accessories



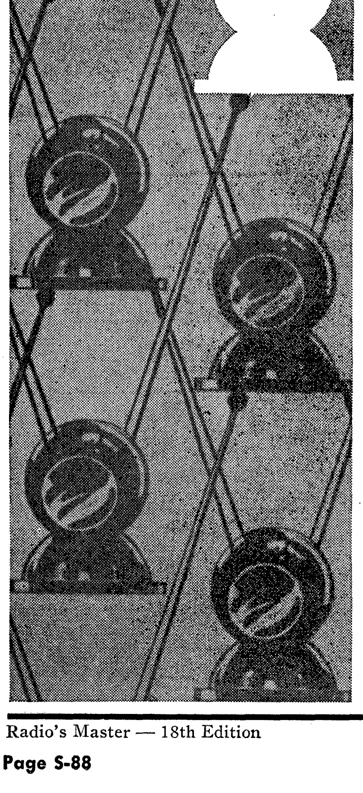
The "Metropolitan"

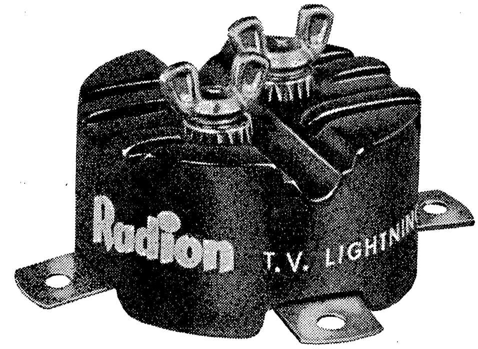
Original and still best selling indoor VHF antenna

Clean design, complaint-free performance and quality manufacture have made it the INDUSTRY STANDARD! . . . *three million* sales are the proof!

The "Metropolitan" Indoor TV antenna is speedily installed with any modern TV set by deliveryman or customer. It stands 19 inches high. The 3-section triple-plated tubular dipoles extend to 92 inches; telescope to 32 inches. Has felt-base pad; comes fully assembled complete with 300 ohm transmission line. Individually packaged and shipped 12 to a master carton; weight 22 pounds. Has positive-locking adjustment knob; extra-heavy weighted base. Mounts on TV Set, table, wall or window frame.

In mahogany (shown Model QTA-3) or blond phenolic (QTA-3B) .... **$6.95** List





Radion Lightning Arrester

The one that Fits *all* twin leads . . . mounts *anywhere*

Simplifies inventories . . . simplifies installations! Radion's all-purpose arrester fits all twin leads including regular, oval, jumbo, open and perforated. UL approved. Comes in *two* models: the "Challenger" in low-loss phenolic, and the "Champion", the deluxe model in hi-dielectric ceramic. Each comes complete with mounting strap for mast installation; 4-place mounting bracket and wood screws for "flat" installations. Comes individually packaged, packed 12 to carton which is designed for counter display and sales. Sell Radion lightning arresters . . . lowest dealer price in the trade yet gives you big markup while it keeps your inventories low!

The "Challenger", Model LA-2.... **$1.00** List

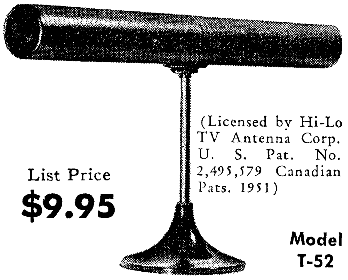
The "Campion", Model QLA-2.... **$1.50** List

The Radion Corporation

Chicago 14, Illinois

OUTDOOR *Tricraft* ANTENNAS INDOOR

INDOOR Antenna

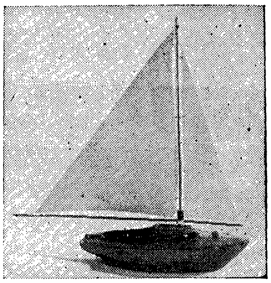

(Licensed by Hi-Lo TV Antenna Corp. U. S. Pat. No. 2,495,579 Canadian Pats. 1951)

Model T-52

List Price **$9.95**

- Tops in indoor performance
- Low loss due to excellent impedance matching
- Highly directional characteristics reject noise and ghosts
- No dangling, unsightly wires (Lead wire is concealed)
- Two-toned mahogany, green, blonde leatherette cover blends with any TV set.
- Simple to orient for better picture on both high or low bands.
- Sturdy construction

"TENNA-BOAT" INDOOR Antenna


Model TB-400

Pats. Appl. For

Beautiful Ceramic of Finest Quality

Everything you would want of an indoor television antenna . . .

- EYE APPEAL
- PERFORMANCE
- EASY OPERATION

Move boom of boat in order to orient for peak reception. Tuning condenser assures perfect impedance match. All models available in Dark Green, Crimson and Harvest Moon with pastel green sails and golden metal parts.

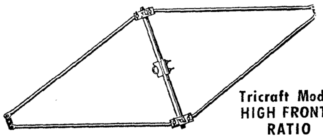
Model TB-400-L (with light) List Price **$12.95** List Price **$10.75**

Complete with 7½ watt bulb, switch and 6 ft. cord and plug.

NEW UHF ANTENNA

All elements ½" round, seamless, hard aluminum tubing.

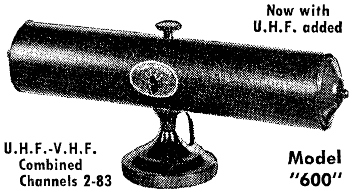
Covers all channels 14 through 83. Designed specifically for UHF although it operates well in channels 2 to 13 with excellent match.


Tricraft Model U-1 HIGH FRONT-BACK RATIO — 17 Decibels.

- IMPEDANCE MATCH — Less than 2:1 voltage standing wave ratio over entire UHF band (300 ohm line).
- HIGH GAIN — Beam width varies from 9 degrees at channel 82 to 16 degrees at channel 14.
- EFFICIENT — Uses Low Loss Moulded Polystyrene insulators so important at UHF Frequencies.
- Stacked Kits available for forming two stacked units.

List **$10.85**

Now with U.H.F. added


U.H.F.-V.H.F. Combined Channels 2-83

Model "600"

INDOOR Antenna

TRICRAFT Model 600

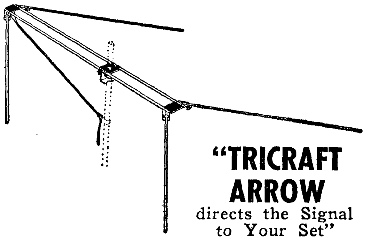
(Patent No. 2,563,243)

ELECTRICALLY ADJUSTED INDOOR ANTENNA

- The "Only" pretuned frequency Indoor Antenna
- Turn switch to channel and Antenna is electrically tuned to station
- Receives on all channels
- Signal gain never before achieved on indoor Antenna
- Two-toned Mahogany, Green, Blonde leatherette cover blends with any TV set
- Consumer tested and approved

Model 600 List Price **$14.95**

ORDER TODAY!



"TRICRAFT ARROW

directs the Signal to Your Set"

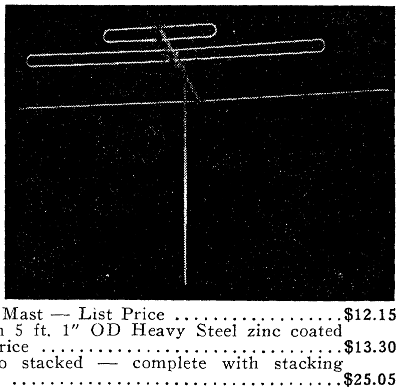
- All Wave — High Gain — Very Directional
- Low Front to Back ratio
- All riveted construction
- Cross pieces: ½" round hard aluminum tubing re-enforced with wood dowels
- Elements ⅜" round butt seam hard aluminum tubing re-enforced with wood dowels
- All insulators made from laminated Phenolic, high impact strength
- Pre-assembled

Model 4000—single unit — less Mast — List Price $6.85

Model 4200 — two-stacked with aluminum stacking bars — less Mast — List Price $15.40

Model 2650

TRICRAFT "IN-LINE"



Well matched in all channels — Highly directional —All elements ½" seamless hardened aluminum tubing—Cross arm ¾" thin wall steel tubing—Completely preassembled — "can be set up in one minute".

Model 2650 — Less Mast — List Price $12.15

Model 2650-5M with 5 ft. 1" OD Heavy Steel zinc coated Mast — List Price $13.30

Model 2750 — two stacked — complete with stacking bars (No Mast) $25.05

(Can also furnish complete kits with standoffs and 300 ohm wire)

All Antennas can be furnished in kits with masts, 300 ohm wire and standoffs.

MASTS

1" O.D. Heavy steel zinc coated masts.

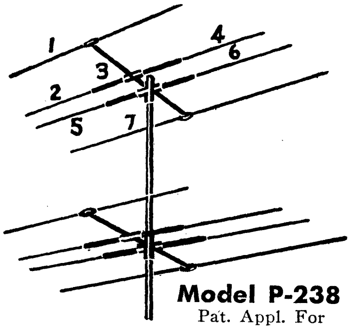
5 Ft. — Upper Section — List Price $1.15

5 Ft. — Lower Section — List Price $1.20

14 ELEMENTS

Two-Stacked, Fringe-Area, All-Wave, Yagi-Type

ANTENNA



Model P-238

Pat. Appl. For

Model P-38—Single unit
Model P-238—Two-stack — with stacking harness
Model P-438—Four-stack—with stacking harness

All 14 elements are active in this two-stack all-wave Yagi-type antenna. Six elements are active in channels 2-6 and 12 elements are active in channels 7-13.

Pre-Assembled — Merely unfold and tighten wing nuts.

Molded Polystyrene insulators.

Hard aluminum tubular construction.

Separate Matching Network for different stacks.

The 2-stack (14-element) and 4-stack (28-element) arrays are not just multiples of the single unit (7 elements) but rather individually designed antennas with their own matching networks for closer matches to 300 ohms than can be obtained by merely stacking two arrays with stacking bars.

Flat response — Gains nearly uniform across whole high V.H.F. band and across whole low V.H.F. band.

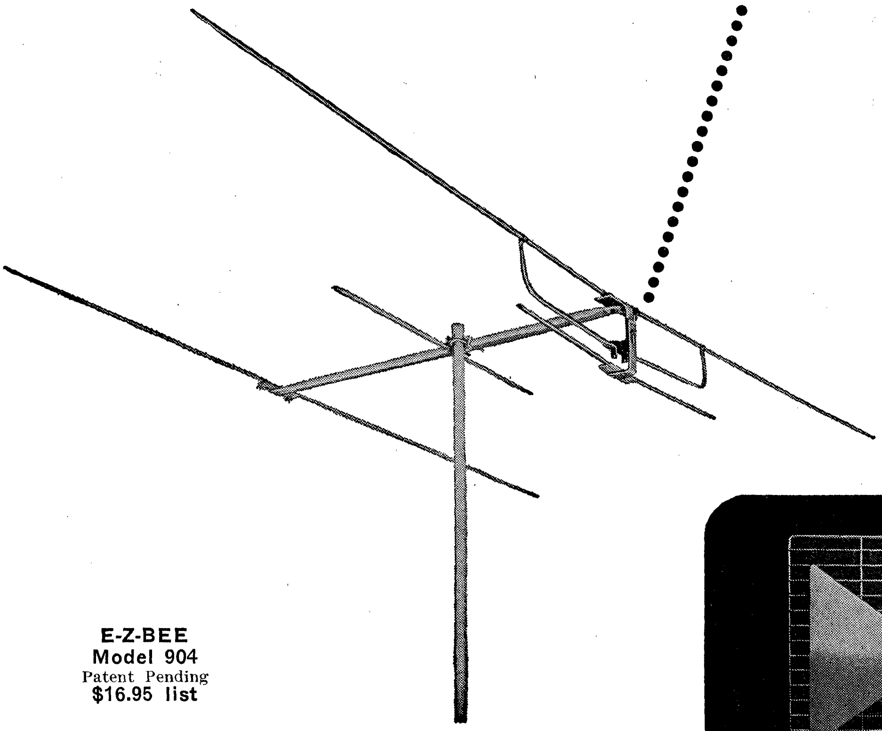
Double-duty Elements — Elements 2, 3, 4, 7 (see above picture) receive in both bands, giving you double reception for each foot of tubing you buy.

Tricraft Products Co.

CHICAGO 22, ILL.

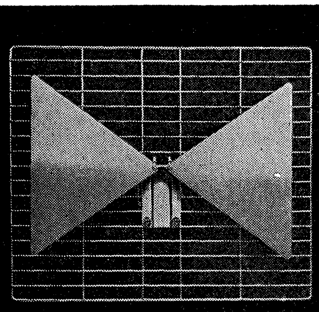
Manufacturers of complete line of Television, FM and AM antennas and accessories

NEW! UHF-VHF Spico OUTDOOR TV ANTENNA
WITH "QUICK RIG" — "B" CONSTRUCTION

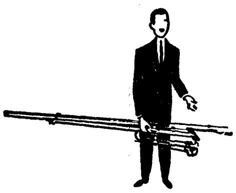


E-Z-BEE
Model 904
Patent Pending
$16.95 list

By the makers of the famous
"Super-Phantom" Indoor TV Antenna



SPICO UHF BOWTIE
model BT 178 $7.95 list



Quick rig for permanent installation within minutes. Pre-assembled, foldaway, individually boxed.

Featuring the matchless "B" construction — designed for **highest gain** in the fringe areas.

Three years in the making, SPICO presents its new "E-Z-Bee" **UHF-VHF** Outdoor TV Antenna with its unique "B" construction. Engineered by SPICO, this remarkable new antenna has conclusively proved it will **outperform and outlast** all others, under **all** conditions.

SPICO "E-Z-Bee" Exclusive Features:

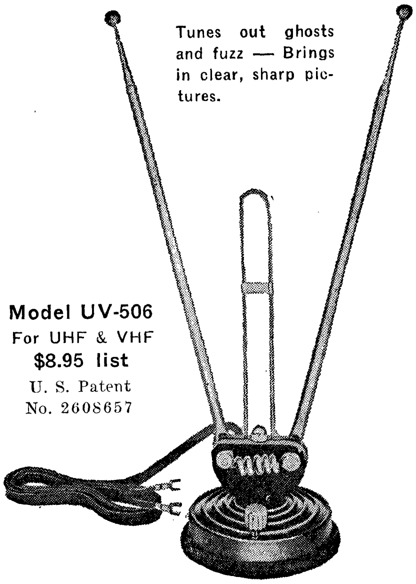
Unique "B" construction
Forward resonator section
Mid-band parasitic resonator
Narrow beam width eliminates interference and ghosts
Uniform gain throughout all channels
Matches 72 or 300 ohm line conveniently
Quick-rig. Pre-assembled foldaway for E-Z installation
Non-corrosive construction
May be stacked in any number of bays
Elements securely held and positioned
Uni-directional
High front-to-back ratio

Here's how SPICO, the industry's fastest selling TV antenna line, makes the "E-Z-Bee" another money maker for you! Unique "B" construction eliminates stacking of extra bays in most locations. Permanent installation within minutes. Weatherproof to withstand all conditions. Customers' satisfaction guaranteed.

Sold only through SPICO Authorized Distributors

SPIRLING PRODUCTS CO., INC.

NOW! FAMOUS Spico UHF-VHF INDOOR TV ANTENNAS


Tunes out ghosts and fuzz — Brings in clear, sharp pictures.

Model UV-506
For UHF & VHF
$8.95 list
U. S. Patent
No. 2608657

This phenomenal *Super-Phantom* which has been breaking sales records wherever TV is received — is now ready for all 83 channels in both UHF and VHF, Model UV-506.

"SUPER-PHANTOM" EXCLUSIVES!

- Specially designed UHF inductance coupler for maximum UHF reception
- Maximum gain, no loss or mismatch
- Steady, clear picture. No rollover
- Rustproof, plated brass tubing
- Tiltproof, new extra heavy base will not tip nor tilt at any angle of dipoles . . . in protected bakelite

For VHF areas, the Spico "Super-Phantom" Model TV-503, Indoor TV antenna, the distributors' greatest sales builder in years. Only Spico distributors and their dealers find Spico antennas "walking" off their shelves in response to the terrific consumer demand created by large scale newspaper advertising in every market from coast-to-coast.

Model TV-503
(Same as illustrated, without inductance coupler.)......List $7.95

Indoor-Jenna

MODEL TV-8

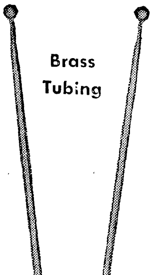
only SPICO can make this

UNCONDITIONAL GUARANTEE

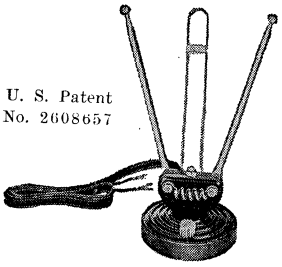
UNBREAKABLE
RUSTPROOF • TILTPROOF

Sturdy construction, handsome appearance, factory warranty enclosed with each unit.

Lowest Prices Ever!
Patent Pending



New Spico STRATO Indoor TV Antenna *Exclusively for UHF areas*



U. S. Patent
No. 2608657

For the distributor who wants to profit by the great demand for a compact, attractive indoor UHF TV antenna, Spico presents the New "Strato." Includes the exclusive patented features of the Spico "Super-Phantom" plus

Engineered and calibrated for all UHF channels, 14 thru 83, quarter wave length, 6 ¼" fixed dipoles.

Strato
Model No. U-505
$7.95 list

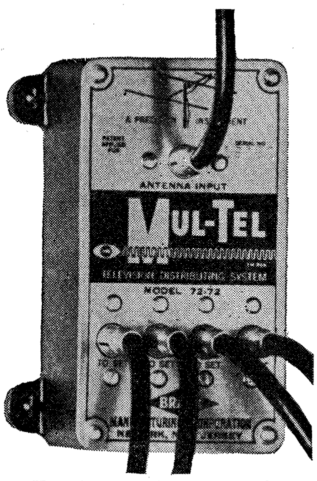
Sold only through SPICO Authorized Distributors

SPIRLING PRODUCTS CO., INC.

BRACH MFG. CORP. MULTIPLE ANTENNA
INSTALLATION EQUIPMENT

UP TO 16 SETS MAY BE OPERATED
FROM ONE ANTENNA

BRACH
EST. 1906



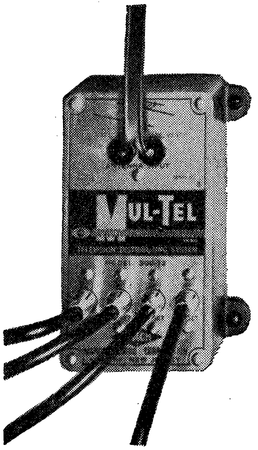
No. 72-72 4-SET COUPLER designed to provide 4-72 ohm coaxial outputs from one 72 ohm coaxial antenna input.

BRACH MUL-TEL MASTER TV-FM ANTENNA SYSTEM

The Mul-Tel System is designed to operate 2 to 16 Television Sets from one common TV Antenna . . . The system discriminates against I.F. interference as it will pass only those frequencies in the TV band from 50-230 megacycles . . . The range of application for the Brach Mul-Tel System is virtually limitless . . . It is ideal for garden type apartment houses or other multiple dwellings, and for extra television outlets in the home . . . It is eminently suitable for multi-room restaurants, taverns and clubs which operate several TV sets on the premises . . . In suburban areas, it supplies the simplest and most satisfactory method of TV distribution for smaller dwellings and two-family houses.

Brach Mul-Tel provides the dealer with the outstanding advantage of being able to demonstrate up to sixteen TV sets simultaneously from one roof antenna, with uniform signal to each receiver.

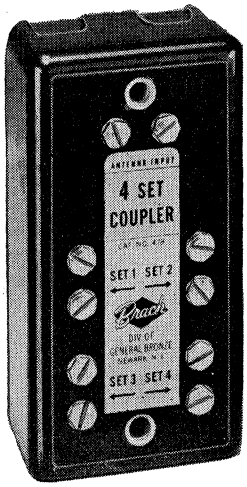
No. 72-72 4-Set Coupler—List Price	$11.95
No. 300-72 4-Set Coupler—List Price	11.95
No. 478 4-Set Coupler—List Price	6.95
No. 477 2-Set Coupler—List Price	5.25



No. 300-72 4-SET COUPLER designed to provide 4-72 ohm coaxial outputs from one 300 ohm antenna input.

ANTENNA INPUT
2 SET
COUPLER
SET 1 SET 2
Brach

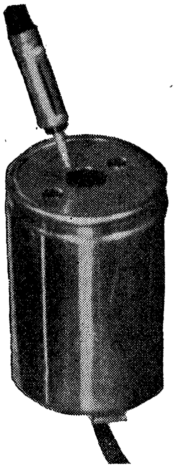
No. 477 2-SET COUPLER designed to provide 2-300 ohm line outputs from one 300 ohm antenna input.



No. 478 4-SET COUPLER designed to provide 4-300 ohm line outputs from one 300 ohm antenna input.

TRANSFORMER (No. 72-300A) is designed to be a perfect termination at Channels 2-13. It also has a high pass filter action and may be used in interference areas to reduce diathermy and other I.F. interference. A coaxial fitting is provided with transformer #72-300A to make a low loss connection to RG59/U. It has negligible loss over the complete TV band and a voltage gain of 2:1. Recommended for all coaxial line installations with individual antennas in noisy and heavy interference areas and as a TV Set Matching Transformer in conjunction with the Brach Mul-Tel System.

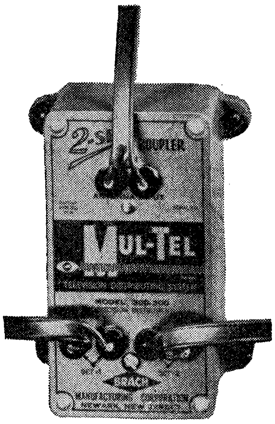
List Price	$3.45



No. 72-300A 72 to 300 OHM MATCHING TRANSFORMER for use with No. 72-72 and No. 300-72 where necessary as a set matching transformer.

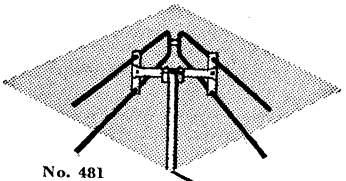
2-SET COUPLER INPUT (No. 300-300) receives its signal from one antenna which may use 75 or 300 Ohm Down-Lead. The signals are filtered of I. F. interference and divided into two outputs which may, by proper connection, be circuited to either 75 or 300 Ohm TV receivers. More than 20 d. b. of isolation in regard to loading effects. A defective connection to either receiver will not affect the operation of the other receiver connected to the 2-Set Coupler. This unit functions on the "Berger Effect" principle as do all other Mul-Tel Units.

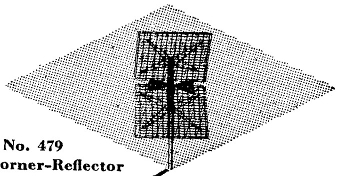
List Price	$10.95



No. 300-300 2-SET COUPLER used to operate 2 sets from one antenna.

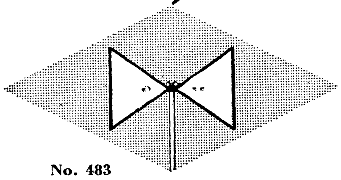
Makers of a Complete Line of Quality-Engineered
TV and Radio Antennas and Accessories.


No. 481
UHF-VHF Dual-V

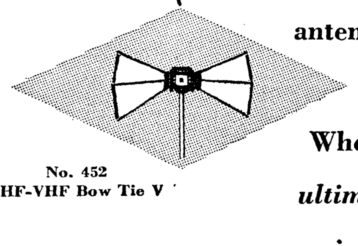

No. 479
UHF Corner-Reflector

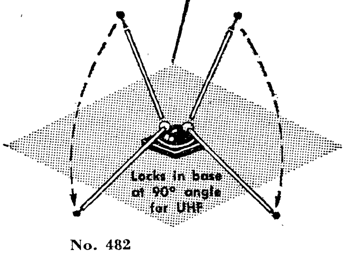
5 NEW Brach QUALITY-ENGINEERED UHF ANTENNAS

the right uhf antenna for every locality!


No. 483
UHF Bow Tie

Brach electronic engineers, who successfully pioneered and developed VHF antennas and Mul-Tel, now proudly present the newest in UHF—5 quality-engineered UHF antennas! Each is designed to solve specific UHF antenna problems. When you sell Brach, you sell *the ultimate* in quality, reception, and service. Write for FREE booklet "How to Select UHF Antennas".


No. 452
UHF-VHF Bow Tie V


Locks in base at 90° angle for UHF
No. 482
UHF-VHF Indoor

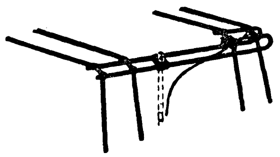
Brach *Division of General Bronze Corp.*

MANUFACTURING CORP.
Quality-Engineered TV & Radio Products
200 Central Ave. • Newark 4, N. J.

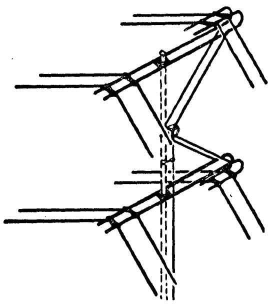
WARD TV Antennas

Trombone

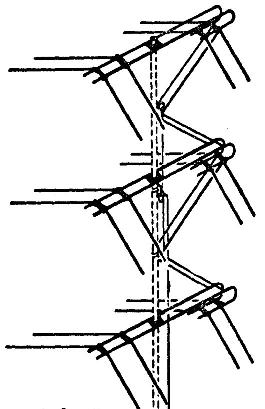
ALL - CHANNELS - UHF - VHF



Single Bay
MODEL TV-132



Double Bay
MODEL TVS-142



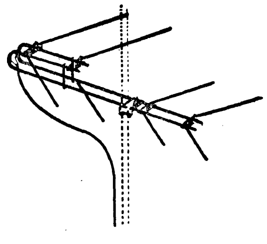
Triple Bay
Model TVS-161
Pat. No. 2538915

Designed specifically to deliver high gain on all channels — UHF and VHF — the new WARD "TROMBONE" Antenna is incomparable even in fringe locations. Has eight driven elements properly spaced and streamlined. Equals double and four stack models of some designs. Completely windproof — vibration-proof; proved in 24 hour shake-table test. Engineered for sharp directivity, 300 ohm impedance, close match and low VSWR. Comes completely preassembled; goes up in seconds.

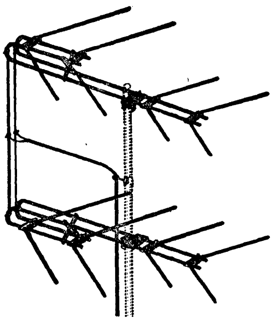
JAZZ Trombone

AUXILIARY UHF ANTENNA

WARD'S amazing, new "JAZZ TROMBONE" is the auxiliary antenna that adds UHF stations to already existing VHF Antennas. Small, lightweight; mounts on the mast of present Antenna. Delivers high gain on all UHF channels. Small, streamlined throughout, it blends with the design of any existing Antenna. Low in cost, the "JAZZ TROMBONE" is a "must" wherever UHF is added. Comes completely preassembled; erects in no time.



Single Bay
MODEL TV-180



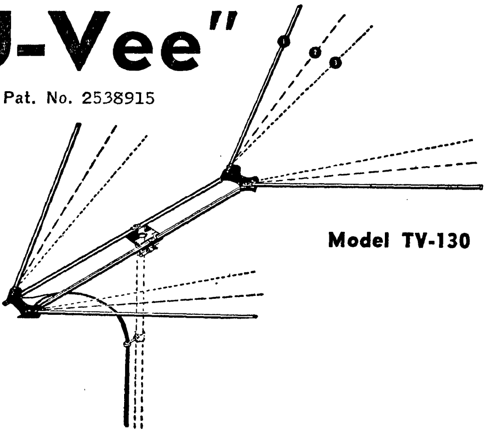
Double Bay
MODEL TVS-182
Pat. No. 2538915

THE WARD PRODUCTS CORPORATION

WARD TV Antennas—Accessories

"U-Vee"

Pat. No. 2538915



Model TV-130

UHF-VHF HIGH GAIN ALL-CHANNEL ANTENNA

WARD'S ingenious "U-VEE" all-channel, UHF-VHF Antenna is designed to permit the elements to be assembled at three different angles, as indicated in the illustration.

Position 1—VHF only; gains up to 8 db; exceeds most Yagis on high band.

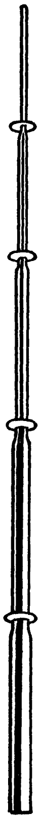
Position 2—UHF and VHF gain up to 6 db on VHF; to 12 db on UHF.

Position 3—UHF only; gain up to 14 db.

In impedance match the "U-VEE" compares favorably with commercial antennas. Matches 300 ohm line. All aluminum construction, light, rugged, streamlined. Completely preassembled.

ZIP-HI

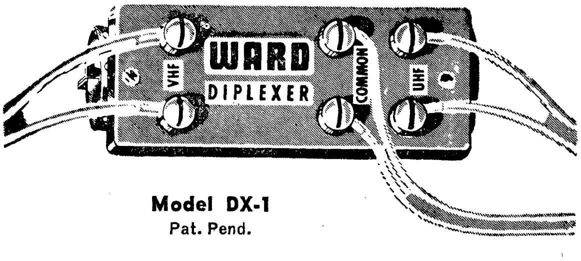
Telescoping Mast



The WARD "ZIP-HI" Telescoping Mast is engineered for quick, easy, one-man installation. Coming in 2, 3, 4 and 5 section models, it can be extended to any desired height and cannot collapse during installation. Self-locking guy-rings make collapsing impossible. Double-lock prevents pulling sections apart. Requires no matching of fastening holes. The "ZIP-HI" is constructed throughout of rugged electric weld Permatube. Durable plastic coating resists corrosion permanently, assures long, trouble-free life. Shipped collapsed and with guy-rings and all hardware. Antenna mounts directly on top section.

Model	Number of Sections	Diameter of Sections
ME 20	2	1¼" - 1½"
ME 30	3	1¼" - 1½" - 1¾"
ME 40	4	1¼" - 1½" - 1¾" - 2"
ME 50	5	1¼" - 1½" - 1¾" - 2" - 2¼"

The DIPLEXER

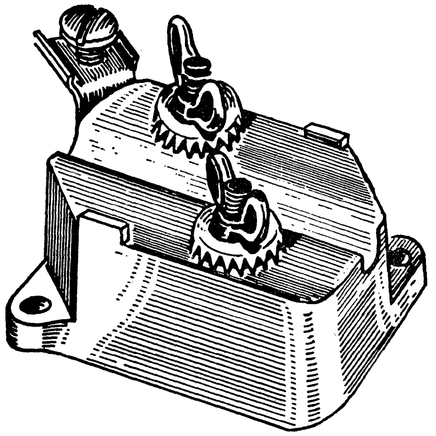


Model DX-1
Pat. Pend.

The WARD DIPLEXER ingeniously solves the problem of separate lead-in lines, where a set or converter requires an individual VHF Antenna and another one for UHF. It combines these two Antennas into an integrated system. Simply connect the lead-in lines from the Antennas to the DIPLEXER and extend one single line to the receiving set.

THE WARD PRODUCTS CORPORATION

WARD
TV Accessories
TRI-WIRE LIGHTNING ARRESTER

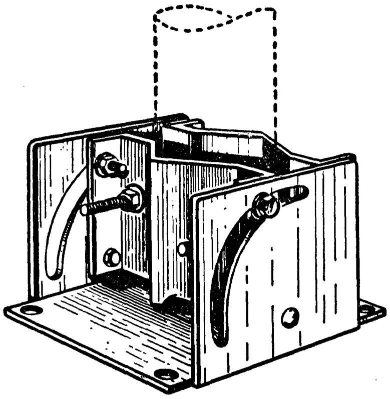


The WARD TRI-WIRE Lightning Arrester is designed to serve three separate purposes: Use it with open transmission line, with flat twin lead, or with tubular twin lead. It is adapted to all popular types of 300 ohm line. TRI-WIRE is versatile, effective, protects every TV set. It is made for flat mounting or on the mast. Positive clamping assures connections.

Model TW-1—Individually packed, 25 to a "Silent Salesmen" carton.
Model TW-2—Packed in bulk, 100 to master carton.

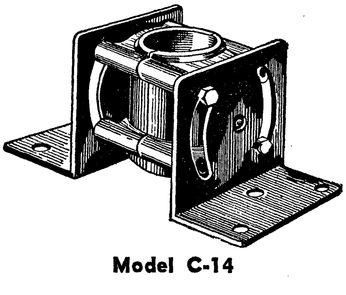
HEAVY-DUTY BASE

The new WARD Heavy-Duty Base is ideally suited to every requirement where a heavy-duty base is needed. It is specially adapted to telescoping masts, including the famous WARD ZIP-HI Mast and all other masts requiring a substantial rugged footing. Its many features include adaptability to roof-pitch, flat surface or side-of-building locations. It is adaptable to any diameter mast from 1¼" to 2¼".



Model C-34

SELF SUPPORTING BASE



Model C-14

Built to support up to 10 foot mast without guying. It is weather-proofed and rugged. Provides excellent solid footing. Mounts on outside walls, pitched or flat roofs. For 1½" O.D. masts. Weight 1½ lbs. each. Individually packed, six to master carton.

BASE MODEL C-11

The Model C-11 WARD Base is produced specifically for use with 1" O.D. mast. Rugged, durable, a good substantial footing. Shipped weight 1½ lbs. approximately.

THE WARD PRODUCTS CORPORATION

WARD AERIALS

World's Finest FOR CAR AND HOME

SIDE COWL MOUNTS

Two stanchions for sturdy installation. Smartly designed insulators with chrome caps. Conversion kit for torpedo bodies included.

LONG RANGER

Special sensitivity for low signal strength areas. Two stanchion, triple chrome plated, rattle-proof.
Four sections, extends to 100"
36" Elektran Cable
EZ-on installation

Model SC-8—Individually packed, 12 to a master carton, 22 lbs. Individual weight, 1 lb. 10 oz.

SKY QUEEN

Smartly styled for side mounting. Rugged construction. Finest quality heavy duty brass tubing, with corrosion free triple chrome plate. Rattle-proof.
Three sections, opens to 66"
36" Elektran Cable
EZ-on installation

Model SC-6—Individually packed 12 to a master carton, 17 lbs. Individual weight, 1 lb. 5 oz.

MASTER

Model SC-3A—12 to a master carton, 13 lbs. Individual weight, 1 lb.

World Famous WARD
Exclusive Patented

EIGHT-BALL

Non-Disappearing

TOP COWL OR FENDER MOUNTS

Completely installed from the outside in 5 minutes . . . at any desired angle. Fits any car. Rugged construction. Completely rattle-proof. Smart appearance. The universal, most popular auto aerial.

Three sections; adjustable from 56" to 22"
36" Elektran Cable

Model TCF-3B—Individually packed, 12 to master carton. 14 lbs. Individual weight 1 lb.

Model TCF-2B—Same as Model TCF-3B with only two sections.

Model TCF-3C—Same as Model TCF-3B with 54" lead.

DISPLAY WARD AUTO AERIALS

YOUR CAR LOOKS
YOUR RADIO SOUNDS
Better
with a
NEW
8 BALL
AUTO AERIAL
WARD
PRODUCTS
CORPORATION

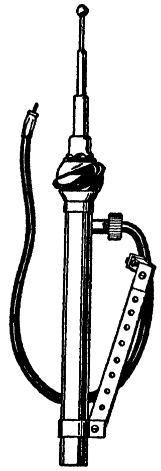
Here is a handsome, colorful display to catch the eye, create interest and make sales . . . on your counter or in your windows. Available at your distributors.

Put this business builder to work for YOU. Identify yourself with the world's oldest, largest, exclusive manufacturer of antennas.

Model WCD-3

PHANTOM

Disappearing



A disappearing antenna — 100% shielded against engine noises. Includes Eight-Ball for easy, smart installation plus popular disappearing feature for attractive built-in appearance.

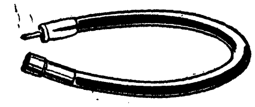
Three sections, 56" to 3½" when collapsed.
36" Elektran Cable

Universal mounting bracket for sturdy installation

Model DCF-3—Individually packed, 12 to master carton, 17 lbs. Individual weight 1 lb.

Model DCF-3A—Same as Model DCF-3 with 54" lead.

EACH MODEL COMPLETE WITH A WARD ELEKTRAN LEAD CABLE

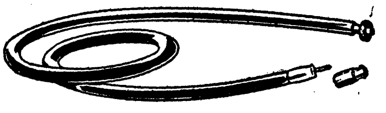


Made of the finest insulating materials—Polyethylene, wire shield braid, oil and abrasion-proof vinylite.

WARD'S exclusive lead connector fitting provides an easy coaxial connection, 100% shielded. Bayonet adapter for pin plug included so lead will fit every car radio.

Model C-8 (12 inches)
Model C-9 (18 inches)
Model C-12 (24 inches)

Provides additional lead length required for fender installation.



Covered by one or more of the following Patent Numbers: 104968, 119160, 2152316, 2251889, 2252671, 2269947, 2366634.

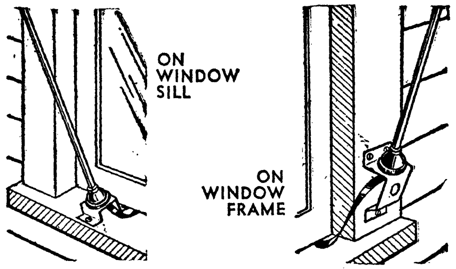
WINDOW MAST

3-Section, 8-Foot, Collapsible to 42 inches

FEATURES . . . Simple 3-point, 3-minute installation for apartments, homes, office buildings. Two-way mounting bracket, 12-inch lead-in strap, and heavy, weatherproof cadmium plating.

Model WM-3

Individually packed — 12 to a master carton.
Approx. ind. shipping weight — 1 lb. 2 oz.



THE WARD PRODUCTS CORPORATION

Special COMMUNICATION ANTENNAS

by WARD
BUILT FOR RIGOROUS SERVICE

UNIVERSAL SWIVEL MOUNTS

Antennas built for the hardest mobile use. Separate components may be combined to meet any requirements. These rear-mounting Transmitting Antennas are designed for the 25-45 mc. services. Base mounts in such a way as to allow the whole rod to be held vertically regardless of contour of vehicle body.

← **SPP-3B**

SINGLE ROD

Special Alloy Whip Rod of maximum resilience and durability. 84" Single rod for use in the range of 30 to 45 mcs. Non-Corroding, stainless steel tapered for proper stress distribution. Base Adapter threaded ⅜-24 to permit mounting on SPP-3 Base or SPP-3A Spring.

Individually packed. Approx. wt.: 2½ lbs.

SPP-12 →

ADJUSTABLE 2-SECTION ROD

Adjustable Rod. Telescopes from 85" to 103" and is equipped with a locking device that permits removal of the whip rod and replacement at the exact previous length. Heavy wall, hard drawn brass tubing — threaded ⅜-24 to fit either SPP-3 Base or SPP-3A Spring. See SPP-3B for Rod description.

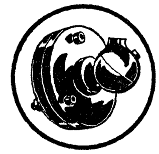
Ind. packed. Approx. weight: 2 lbs. 10 oz.

SPP-3

SWIVEL BASE

Swivel base for mounting at any desired point. Half balls of cast aluminum tapped ⅜-24 to accept whip rods and shock springs. Insulator of black bakelite — rubber gaskets — steel backup plate. All screws are Allen Head type with wrenches supplied.

Individually packed. Approx. wt.: 1 lb. 10 oz.

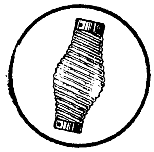


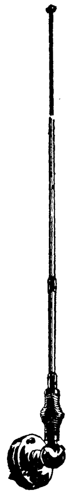
SPP-3A

SHOCK MOUNTING SPRING

This sturdy spring is used to lessen damage to the whip rod. A flexible lead through the center of the spring maintains constant electrical impedance through the spring assembly. ⅜-24 stud on one end — ⅜-24 tapped hole on opposite end — approximately 6" in height — made of oil tempered wire.

Individually packed. Approx. wt.: 2 lbs. 3 oz.

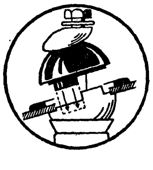




NEW 10 METER MOBILE ← TRANSMITTING ANTENNA NEEDS BUT 1 HOLE FOR INSTALLATION!

Ward's SPP-143 transmitting antenna can be installed on cowl, fender or flat rear deck of any automobile without the necessity of drilling a series of unsightly holes. It is developed to use one 15/16" hole, that can easily be plugged or used to mount a Ward 8-Ball standard broadcast antenna. The short, standard 55½" rod reduces damage from overhead constructions.

MODEL SPP-143



NEW POLICE TRANSMITTING ANTENNA → GIVES COMPLETE DISGUISE TO DETECTIVE CARS

To any criminal a long whip antenna is a police car giveaway. To achieve complete disguise, Ward engineered a standard automotive aerial to withstand transmitting currents and permanently fix the rod length.

MODEL SPPB-71

MOTORCYCLE MOUNTS

These Antennas are designed for use on motorcycles and are built to withstand the rugged service and high vibration of vehicle. Rod is electrically short but can be used on all frequencies. 40" rod of same material as SPP-3B — ¼-20 mounting stud in insulator for mounting to motorcycle. Flexible base of rubber to allow movement when rod is bent — Model SPP-6 with safety ring tip — Model SPP-6A with stainless steel ball tip — no lead supplied. Individually packed. Approx. weight: 1 lb. 5 oz.

Model SPP-6—Ring Tip (Illustrated)
Model SPP-6A—Ball Tip (Not Shown)

ROOF TOP MOUNT

Developed for roof top mountings in 30 to 45 Megacycle range. Advantages of this type of antenna is that directional effects caused by car body shielding of antenna are avoided. Base is designed to be used with the SPP-3B rod which is sold separately. This unit consists of all components of Universal Swivel Mounts except that half-balls are replaced by SPP-3A Spring fastened permanently to insulator. No lead supplied.

Individually packed. Approximate weight: 3 lbs.

Model SPP-26 Base

ROOF TOP ANTENNA →

This model is designed for taxicabs, police services, and others using the 140 to 165 Megacycles frequencies. Installed entirely from the outside of vehicle — 12 ft. length of RG-58/U coaxial cable attached permanently to antenna. Whip rod is replaceable.

Individually packed. Approximate weight: 1 lb.

Model SPP-18

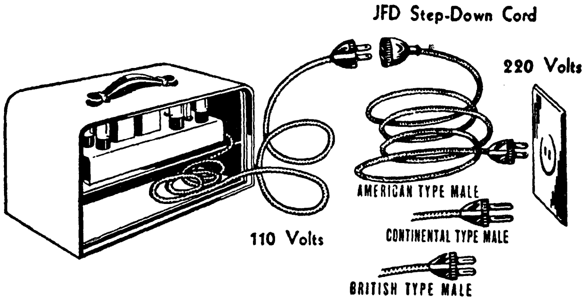
Many More Models for Every Need — Write or See Your Distributor for Catalog.

THE WARD PRODUCTS CORPORATION

STEP-DOWN – AC-DC
RESISTOR LINE CORDS

(Step-down from 220 V. to 110 V.)

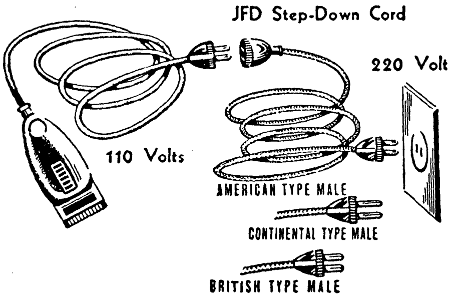
JFD STEP-DOWN LINE CORDS FOR RADIOS



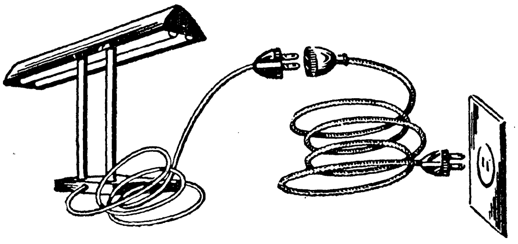
Cat. No.	Description	List Price
2191	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. American Male Plug	$2.88
2193C	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. Continental Male Plug	2.88
2193B	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. British Male Plug	2.88
2192	220V-110V Stepdown for 5 tube sets drawing .15 amps. American Male Plug	2.88
2194C	220V-110V Stepdown for 5 tube sets drawing .15 amps. Continental Male Plug	2.88
2194B	220V-110V Stepdown for 5 tube sets drawing .15 amps. British Male Plug	2.88
2430A	220V-110V Stepdown for 6 tube sets drawing .150 amps. American Male and Female Plugs	2.90
2431B	220V-110V Stepdown for 6 tube sets drawing .150 amps. British Male and American Female Plugs	2.90
2432C	220V-110V Stepdown for 6 tube sets drawing .150 amps. Continental Male and American Female Plugs	2.90

JFD STEP-DOWN LINE CORDS FOR ELECTRIC RAZORS

Cat. No.	Description	List Price
2203	220V-110V Stepdown for Remington Rand Razor 15W. American Female and American Male	$3.12
2203B	220V-110V Stepdown for Remington Rand Razor 15W. American Female and British Male	3.12
2203C	220-110V Stepdown for Remington-Rand Razor 15W. American Female and Continental Male	3.12
2204	220V-110V Stepdown for Schick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and American Male	3.12
2204B	220V-110V Stepdown for Schick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and British Male	3.12
2204C	220V-110V Stepdown for Schick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and Continental Male	3.12
2205	220V-110V Stepdown for Packard Razor 6W with American Female and American Male	3.12
2205B	220V-110V Stepdown for Packard Razor 6W with American Female and British Male	3.12
2205C	220V-110V Stepdown for Packard Razor 6W with American Female and Continental Male	3.12



JFD AC-DC LINE CORDS FOR FLUORESCENT FIXTURES

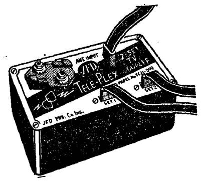


Cat. No.	Description	List Price
2181FL	165 ohm, for 20 watt bulb, 117 volts, 6 feet long	$1.40
2181FL-2	2-Two 165 ohm windings, for two 20 watt bulbs, 117 volts, 6 feet long	2.40
2182FL	180 ohm, for 15 watt bulb, 117 volts, 6 feet long	1.40
2200FL	2-Two 180 ohm windings, for two 15 watt bulbs, 117 volts, 6 feet long	2.40

JFD MANUFACTURING CO. INC.

BROOKLYN 4, NEW YORK

TELEVISION ANTENNAS & ACCESSORIES

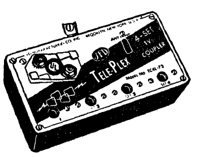


TELE-PLEX 2-SET COUPLER

for 300-ohm antenna and 2 sets

- Operates 2 300-ohm sets from one 300-ohm antenna
- For 2-set owners, duplexes and 2-family homes
- Includes UL JFD "Built-in" Lightning Arrester
- Complete with twin-lead connectors

JFD No. TC2L-300........List $11.95



TELE-PLEX 4-SET COUPLER

for 300-ohm antenna and 4 72-ohm sets

- Operates 3 or 4 72-ohm sets from 300-ohm antenna
- Includes UL JFD "Built-in" Lightning Arrester
- Complete with twin lead and coaxial cable connectors

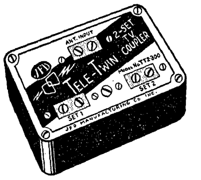
JFD No. TC4L-72........List $12.95

TELE-PLEX 4-SET COUPLER

for 300-ohm antenna and 4 sets

- Operates 3 or 4 300-ohm sets from one 300-ohm antenna
- Includes UL JFD "Built-in" Lightning Arrester
- Minimizes I. F. Interference
- Complete with twin-lead connectors

JFD No. TC4L-300........List $12.95

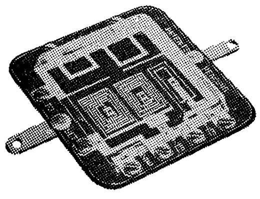


TELE-TWIN COUPLER

DeLuxe Built!

- For 300-ohm antenna and 2 300-ohm sets
- For 300-ohm antenna and 2 72-ohm sets
- For 72-ohm antenna and 2 300-ohm sets
- For 72-ohm antenna and 2 or 4 72-ohm sets.

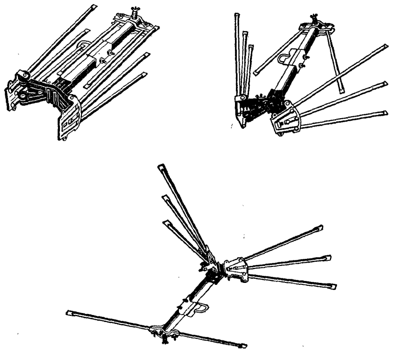
JFD No. TT2-300........List $5.95



JETIE COUPLER For VHF-UHF Antennas

- Only unit of its kind that combines up to 3 UHF and VHF antennas with one down-lead
- Silver printed circuit
- Hermetically sealed transparent butyrate case
- Good for all UHF and VHF antennas

JFD No. Q283........List $5.10

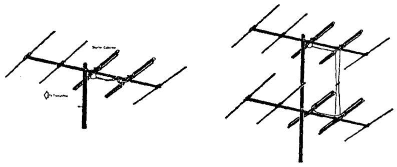


JETENNA

Obsoletes all other pre-assembled conical antennas. Compact. All-aluminum. No other conical assembles so fast, performs so well. In either seamless or butt-seam dowel-reinforced elements.

JFD No.	Seam Type	No. Bays	List
JeT160	Seamless	1 Bay	$12.50
JeT660	Butt Seam	1 Bay	10.00
JeT161*	Seamless	2 Bay	26.40
JeT661*	Butt Seam	2 Bay	21.25
JeT164*	Seamless	4 Bay	56.80
JeT664*	Butt Seam	4 Bay	46.10

*Complete with stacking rods



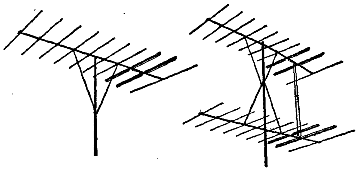
5-ELEMENT MULTI-CHANNEL CASCODE BALINE YAGI

- Broad band coverage plus superior gain and directivity
- High signal-to-noise ratio (Cascode)
- Receives 3 or more channels
- Balanced-Line (Baline) design
- Includes free matching transformer for convenient stacking
- Quik-Rig Design—no loose parts—elements slide into place

JFD No.	CHANNELS	LIST
5B345	3, 4 & 5	$24.95
5B456	4, 5 & 6	24.95
5B2345	2, 3, 4 & 5	24.95
5B3456	3, 4, 5 & 6	22.05
5B713	7, 8, 9, 10, 11, 12 & 13	13.95

For stacked array add letter "S" to JFD No. and double the price.

JFD MANUFACTURING COMPANY
BROOKLYN, N. Y.



10-ELEMENT MULTI-CHANNEL CASCODE BALINE YAGI

High signal-to-noise ratio across the band. Free pair of Boom supports insures rigidity.

JFD No.	CHANNELS	LIST
10B713	7, 8, 9, 10, 11, 12 & 13	$20.85
10B2345	2, 3, 4 & 5	40.95
10B3456	3, 4, 5 & 6	40.95
10B456	4, 5 & 6	40.95
10B26	2, 3, 4, 5, 6	40.95

For stacked array add letter "S" to JFD No. and double the price.

TV AIR-COOLED BALLASTS

JFD manufactures ballasts for these leading TV set manufacturers.

List $2.25

EMERSON
397021
397022
397023
397036*

BELMONT
B9M16534
B9M15822
B9M16067
B9M17571
B9M18941

TELETONE
TBR102D
TBR103D
TBR104D

STEWART-WARNER
SW507300

MOTOROLA
17A470303
17A485459

PILOT
35-37

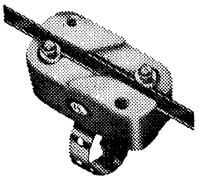
ELECTRO-MATIC
408100

*List $1.25

TELEVISION ACCESSORIES

UHF AND VHF LIGHTNING ARRESTERS

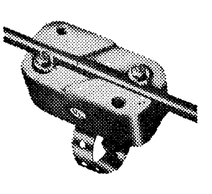
"The secret is in the lips." Only JFD exclusive strain-relief lips prevent saw-tooth washers from ripping twin lead wire apart. JFD manufactures the largest, most complete line of UL-approved Lightning Arresters that withstand the rigors of all-weather service.



"JUMBO"

(For ribbon type twin lead) with 4" aluminum ground wire and stainless steel strap for universal mounting.

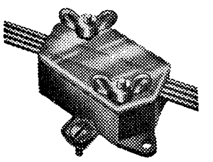
JFD No. AT102 .... **List $2.25**



"JUMBO"

(For oval jumbo and tubular lead) UHF and VHF. With 4" aluminum ground wire and stainless steel mounting strap.

JFD No. AT103 .... **List $2.25**



4-WIRE 8-CONTACT

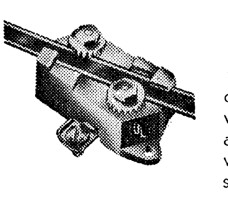
(For Rotator lead-ins)

JFD No. AT104 .... **List $1.50**

Universal Mounting

JFD No. AT104S .... **List $1.75**

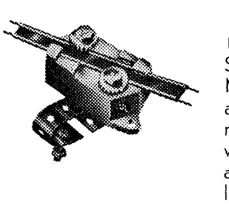
(Same with stainless steel strap)



"LITTLE GIANT"

(For ribbon and oval jumbo lead) with ground lug and hardware for wall or window-sill mounting.

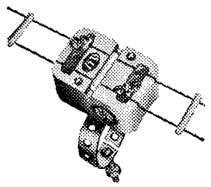
JFD No. AT105 .... **List $1.25**



"LITTLE GIANT"

(With Stainless Steel Universal Mounting strap, and 4 ft. aluminum ground wire. For ribbon and oval jumbo lead).

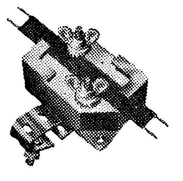
JFD No. AT105S .... **List $1.50**



"JUMBO"

(For open wire) with 4" aluminum ground wire and stainless steel strap. JFD open wires Nos. OL100 and FOL100 recommended.

JFD No. AT107 .... **List $3.50**



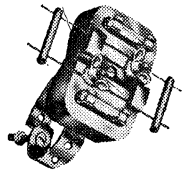
3-IN-1

(For UHF or VHF Tubular, Ribbon, open-wire or oval twin-lead) with ground lug and hardware for wall or window-sill mounting.

JFD No. AT110 .... **List $1.75**

JFD No. AT110S .... **List $2.00**

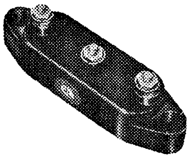
(With stainless steel hanger Universal mounting strap and 4 ft. aluminum ground wire.)



COMBINATION TWIN LEAD AND OPEN WIRE

Static Discharger and Lightning Arrester. With aluminum ground wire and stainless steel Universal mounting strap.

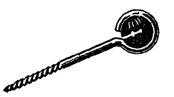
JFD No. AT120 .... **List $5.00**



FOR RADIO AND TV

Protects either radio or TV antenna installations. Takes either twin lead or radio wire.

JFD No. 403 .... **List $.75**



SCREW-EYE STAND-OFFS

(for single lead-ins)

JFD No.	Length	List per C.
BR18TL3	3½"	$6.00
BR18TL5	5½"	8.00
BR18TL7	7½"	9.00
BR18TL12	12½"	20.00

To order coaxial cable type substitute letter R for T. For Tubular, or oval twin-lead, specify "universal grommet."

X18TL3 3½" $4.45

JFD "ZOOM-UP" TELESCOPING MAST

Get Antennas Up — High as 50 Feet!

Section 1. (16 Gauge) 10 ft. 1¼" OD — .065 Wall

Section 2. (16 Gauge) 10 ft. 1½" OD — .065 Wall

Section 3. (16 Gauge) 10 ft. 1¾" OD — .065 Wall

Section 4. (16 Gauge) 10 ft. 2" OD — .065 Wall

Section 5. (16 Gauge) 10 ft. 2¼" OD — .065 Wall

Rigid, Strong, Secure. Comes to you collapsed, all welded nuts in position. Complete with heavy duty supporting bolts and hardware. Insures permanent antenna installation.

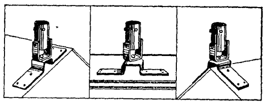
No.	Sections	List
ZU12-20	1 and 2 (20 ft.)	$12.50
ZU23-20	2 and 3 (20 ft.)	15.28
ZU34-20	3 and 4 (20 ft.)	22.08
ZU123-30	1, 2 and 3 (30 ft.)	29.03
ZU234-30	2, 3 and 4 (30 ft.)	29.03
*ZU1234-40	1, 2, 3 and 4 (40 ft.)	34.72
*ZU12345-50	1, 2, 3, 4 and 5 (50 ft.)	52.78

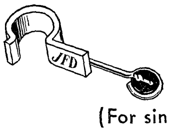
*Complete with Combination Base and Peak Roof Mount Model ZUB2¼.

ALL-ANGLE BASE & ROOF MOUNT

Works on any surface, flat, slanted or peaked roof. Prescribed for "Zoom-Up" or any other mast to 2¼ od. Complete with hardware.

JFD No. ZUB2¼ .... **List $3.95**



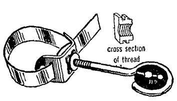


CLIP-ON STAND-OFF INSULATORS

(For single lead-ins)

JFD No.	LENGTH	LIST
SPT100	1"	$.10
SPT116	1" emt.	.10
SPT125	1¼"	.10
SPT138	1⅜"	.12
SPT150	1½"	.12
SPT158	1⅝"	.13
SPT175	1¾"	.13
SPT178	1⅞"	.13
SPT200	2"	.14

For Tubular, or oval twin-lead, specify "universal grommet."



NUT UNIVERSAL STAND-OFF INSULATOR

Reinforced "arch-bridge" construction 6½ FULL machined threads.

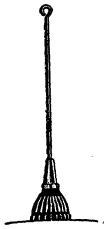
For single lead-ins

JFD No.	LENGTH	LIST
NUT350	3½"	$.19
NUT550	5½"	.24
NUT750	7½"	.25
NUT1200	12"	.46

For Tubular, or oval twin-lead, specify "universal grommet."

ICA COMMUNICATION AERIALS

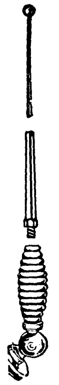
ICA ROOF TOP ANTENNAS



A series of mobile antennas for both VHF (144 mc to 174 mc) and UHF (420 mc to 470 mc) bands, designed especially for roof-top installation. Antenna installed completely from the outside. Suitable for taxicab, commercial, police, fire, amateur, etc. Special rubber gasket and lock-nut design affords waterproof protection. The sturdy stainless steel rod is flexible and durable with loop end. Includes 11 foot antenna cable.

No. 4460—144 mc to 174 mc.................Dealer Cost $2.69
No. 4479—420 mc to 470 mc.................Dealer Cost 2.59

ICA "WHIP" ANTENNA
Communication Aerial



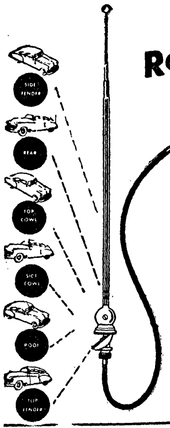
Ruggedly made for rugged use. Designed for all types of mobile application, including police, fire, ambulance, amateur, etc.

MULTI-ANGLE BASE AND SPRING: The heavy base features vari-angle design which permits locking mast in vertical position despite car contours. Moisture proof gasket assures long service. The oil-tempered heavy steel spring prevents damage to mast from low hanging obstructions; absorbs heavy shocks, vibrations. Mast fits into ⅜″ threaded fitting on spring end.

STEEL MAST: The "Whip" mast is made of heavy spring-tempered steel, 96″ long . . . high tensile strength. Resists 90 degree bends. Weather resistant finish.

No.		Dlr. Cost
4486	Multi-Angle Base and Spring	$4.35
4494	96″ "Whip" Mast	4.05
4488	11 foot Antenna cable	2.92

NOTE: RG-58/U or RG-8/U Coaxial Cable also available for use on above communication antennas. When ordering, specify lengths required.



Revolutionary! Revo-Tenna

UNIVERSAL Auto Antenna Mounted Entirely from the Outside . .

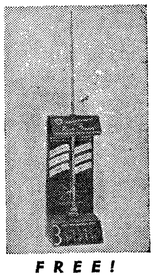
Anywhere on a car — (old or new): May be mounted on Side Cowl; Top Fender; Roof; Top Cowl; Rear of car. One-man "jiffy" installation. Includes 36″ cable.

No.	Dlr. Cost
4646	$2.97

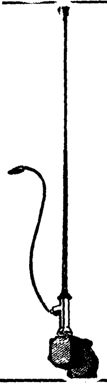
2 Sec. Extends to 49″

No.	Dlr. Cost
4647	$3.57

3 Sec. Extends to 62″



FREE!
All-Metal Display
Fully-Mounted
Pay only for Aerial
No. 4495
Dlr. Cost $3.57



THE ICA MOTO-TENNA

The electrically operated, completely automatic auto-antenna

The MOTO-TENNA is a concealed type aerial that extends from 14″ to 60″.

A FLICK OF THE SWITCH AND
IT LOWERS OR RAISES ITSELF

Powered by its own rugged motor that provides smooth uninterrupted lowering or raising action by remote control. Operating switch may be placed at any convenient location.

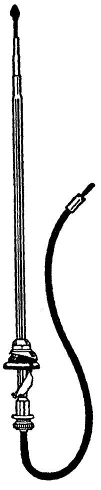
TAMPER-PROOF: Switch may be concealed or hooked into ignition system.

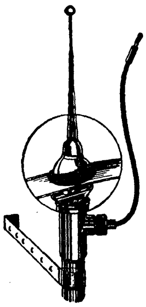
Fully shielded sturdy cast housing weather-proof. Includes 36″ low-loss cable.

No. 4478 ....Dealer Cost $19.95

Popularly Priced Auto Radio Antennas for All Types of Cars

All Insuline Antennas are precision made of chrome-plated Admiralty BRASS tubing. Include HI-Q Lo-Loss shielded leads. Rattleproof. Equipped with both DELCO and MOTOROLA fittings.


A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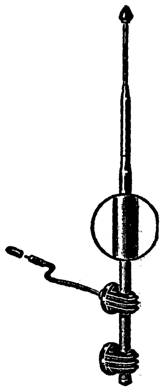
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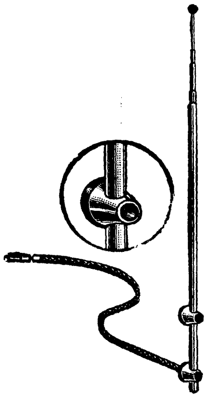
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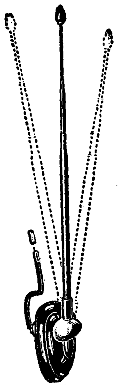
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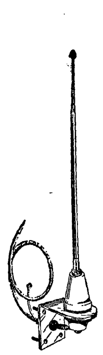
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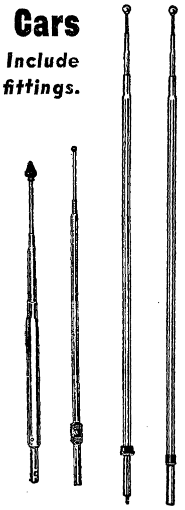

G

A — FENDER AND COWL MT. TYPE

Mounted entirely from the outside. "Solo-Mount" features special multi-angle mount.

No.		Dlr. Cost
4583B	3 Sec. Extends to 60″	$3.40
4587	4 Sec. Extends to 88″	4.17

B — DISAPPEARING TYPE

Collapses to 6½″. Does not obstruct vision.

No.		Dlr. Cost
4571B	3 Sec. Extends to 56″	$4.17
4584	4 Sec. Extends to 76″	5.33

C — SIDE COWL TYPE

Standard Models

No.		Dlr. Cost
4567	3 Sec. Extends to 63″	$2.12
4553	3 Sec. Extends to 93″	3.33

D — SIDE COWL TYPE

Heavy Duty Models with chrome-capped insulators.

No.		Dlr. Cost
4568	3 Sec. Extends to 68″	$2.83
4559	4 Sec. Extends to 100″	3.85

E — "ROCKER" TYPE

Swivel antenna for flat or convex surfaces.

No.		Dlr. Cost
4541	3 Sec. Extends to 62″	$3.50

F — "HOT ROD" REAR MOUNT TYPE

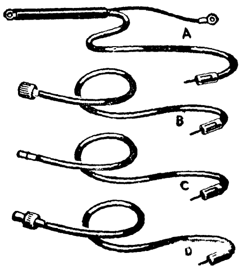
Includes 8 ft. lead-in cable.

No.		Dlr. Cost
4606	3 Sec. Extends to 96″	$4.17

G — REPLACEMENT ANTENNA ASSEMBLIES

No.		Dlr. Cost
4545	For Buick, Hudson, Packard	$1.75
4546	For Ford Cars	1.67
4560	For Oldsmobile Cars	2.25
4561	For Pontiac Cars	2.25

REPLACEMENT LEADS



Various lengths and types of shielded HI-Q Lo-Loss cables for auto radio antennas. Inner polyethylene insulation with Vinylite jacket.

No.	Type		Dlr. Cost
4517	C	For Top Fender and Cowl Mount Antennas Nos. 4600 and 4602 — 36″ L.	$ .83
4519	C	Same as above — 48″ L.	1.08
4518	D	For all Concealed types and Top Fender and Cowl Mount Antennas — 36″ L.	.83
4518B	D	Same as above — 48″ L.	1.08
4520	B	For all Side Cowl Antennas; also for No. 4541 — 36″ L.	.83
4530	B	Same as above — 48″ L.	1.08

UNIVERSAL EXTENSION LEADS

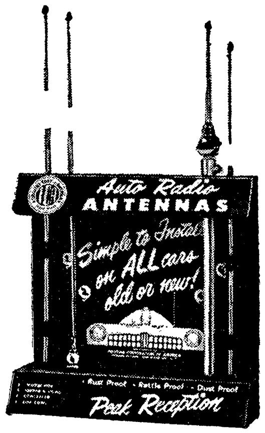
For use with existing leads for additional length.

No.	Description	Dlr. Cost
4522	12″ extension	$ .48
4523	18″ extension	.65
4524	24″ extension	.87
4548	36″ extension	1.08

EXTRA LENGTH LEADS

No.	Type		Dlr. Cost
4537	D	60″ Long. For all Concealed Types and top Fender and Cowl Mount antennas	$1.33
4543	A	96″ Long. For No. 4606 and ICA communication type antennas	2.08
4488	A	Same as above — 11 feet long	2.92

FREE, ALL-METAL DISPLAY

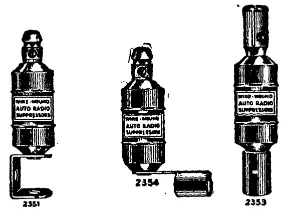

Auto Radio
ANTENNAS
Simple to Install on ALL cars old or new!
Rust Proof • Rattle Proof • Dust Proof
Peak Reception

Colorful all-metal display. Measures 14″ x 16″. Pay only for the following fully mounted antennas:

No. 4647 —"Revo-Tenna" UNIVERSAL
No. 4567 —Side Cowl
No. 4571B—Concealed
No. 4559 —Heavy Duty Side Cowl
Cat. No. 4503 ....Dealer Cost $13.62

AUTO RADIO CONDENSERS AND SUPPRESSORS

ICA WIRE WOUND SUPPRESSORS
LOW RESISTANCE 30 OHMS D. C.



These suppressors have an extremely low D.C. resistance and thus definitely do not affect the intensity of the ignition spark or cut down the speed of the car.

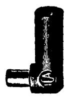
No.		Dlr. Cost
2351B	Spark Plug Suppressor	$.42
2353B	Distributor Suppressor	.42
2354B	Spark Plug Suppressor — Slip-On Type	.42

MASTER DIST. CARBON SUPPRESSOR — 10,000 OHMS

For use on new type cars where only one suppressor is needed. Master Suppressor is guaranteed to eliminate all motor noise — making unnecessary the use of individual suppressors.

No. 330 ....Dealer Cost $.50

ELBOW SHAPED SUPPRESSOR



Auto ignition suppressor. Elbow type. Molded-in-bakelite. Machined brass. Metal parts.

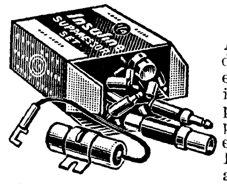
No. 4464....Dealer Cost $18.33C

ICA WHEEL HUB STATIC ELIMINATOR

Used under hub of front wheel. An essential on all cars to eliminate front wheel static. Less Back Plate and screw.

No. 4476......Dealer Cost $9.16C

INTERFERENCE SUPPRESSOR SET



For Auto Radio

All the needed condensers, suppressors, etc. for a complete installation. Neatly packaged as a complete unit. Includes easy instructions. For all cars — old and new. Packed individually or in attractive counter display holding 6 Sets.

No.	For	Dlr. Cost
SK-1	8 Cyl. Cars (except Fords)	$2.50
SK-2	6 Cyl. Cars (except Fords)	2.17
SK-4	Ford Cars ('39 to current)	2.59

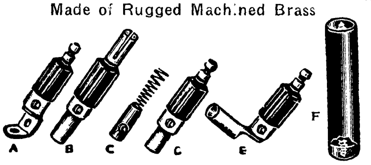
UNIVERSAL WIRE WOUND SUPPRESSOR SET

Complete universal kit suitable for ALL types of cars. Includes wire wound suppressors for distributor and spark plug; dome light or ammeter condenser; universal type generator condenser; front wheel static pickup suppressors; copper braid for grounding to complete noise-free installation. Full instructions.

No.		Dlr. Cost
SK-6	All 6 Cyl. Cars	$3.67 Kit
SK-8	All 8 Cyl. Cars	4.01 Kit

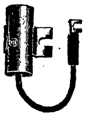
ICA SUPER-TEST AUTO RADIO IGNITION SUPPRESSORS

Made of Moulded Bakelite — All Metal Parts Made of Rugged Machined Brass



Type No.		Dlr. Cost
E—349B	Spark Plug Slip-on Suppressor	$18.35C
E—349F	Slip-on Spark Plug Suppressors for New Model Ford cars	18.35C
D—350B	Spark Plug Suppressors with Dual Threaded Inserts	18.35C
D—351B	Spark Plug Suppressors for Ford cars	18.35C
A—377	Bracket type Suppressor	18.35C
B—352B	Distributor Suppressor for all cars	21.66C
C—4461	Ford Early Models	21.66C
C—4463	Ford Late Models	21.66C
F—4465	Cable Type Suppressor	18.33C

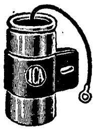
DOME LIGHT & GENERATOR SILENCER



For by-passing ammeter, dome light or generator.

No. 1244..........Dealer Cost $.38

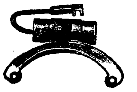
ICA GENERATOR SILENCER



Heavy duty generator condenser eliminates generator, ammeter, distributor noises.

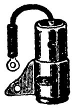
No. 1243 .5 Mfd....Dlr. Cost $.52
No. 1247 1 Mfd....Dlr. Cost .72

ICA FORD V8 NOISE SILENCER



No. 1245
Dealer Cost $.53

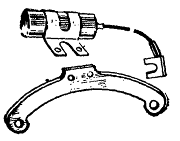
ICA FORD V8 CONDENSERS FOR 1939-1941 MODELS



Equipped with Special Bracket. Capacity ½ mfd.

No. 1246......... Dealer Cost $.53

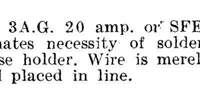
UNIVERSAL GENERATOR CONDENSER



Of universal application. Special bracket permits use on generators needing end installing, such as Fords, etc. Minus bracket, serves for all other type generators.

No. 2355 .... Dealer Cost $.66

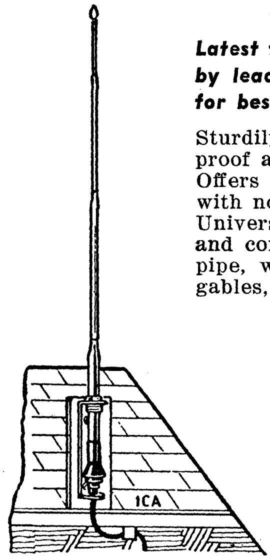
PRE-WIRED JUMBO FUSE HOLDER



Suitable for 3A.G. 20 amp. or SFE 14 amp. fuse. Eliminates necessity of soldering when changing fuse holder. Wire is merely severed, stripped and placed in line.

No. 2368..........................Dealer Cost $.27

MAST ANTENNAS



Latest type home antenna suggested by leading radio set manufacturers for best standard reception results.

Sturdily made of guaranteed rust-proof admiralty brass.
Offers clear, noise-free reception with no power-line interference.
Universal bracket allows permanent and convenient installation on soil pipe, window pipe, chimney, roof, gables, cornices, wall copings, etc.
Includes all accessories for Universal Mounting — Lead-in Wire; Ground Wire; Brackets; Lightning Arrester; Screws; Insulators, etc.

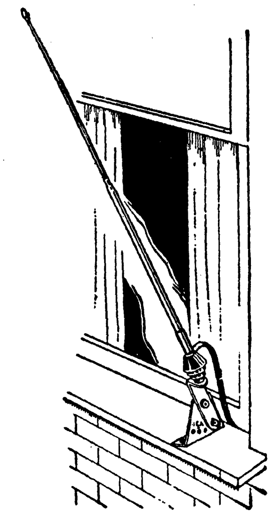
No. 4516.... Dlr. Cost $4.17

4 Sections—Extends to 12 Feet

Individually boxed—10 to Standard Carton—Wt. 33 Lbs.

WINDOW ANTENNAS

Easily installed, sturdily made, rust-proof admiralty brass window antennas for homes, apartments, hotels!



Adjustable bracket at base permits focusing in any position for best results. Telescopic rods.
Completely assembled.
Includes mounting flange, insulator and lead-in strip.
Individually boxed.

3 Sections—Extends to 96"

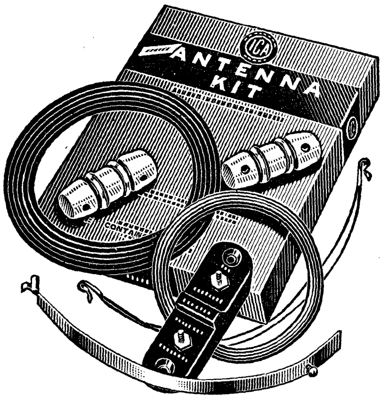
No. 4527B........Dlr. Cost $2.92

Extra Length Window Antenna

4 Sections extends to 12 feet. Ideal for DX reception and rural sections where extra length needed for best results.

No. 4513.........Dlr. Cost $4.58

INSULINE AERIAL KITS



CAPITALIZER KIT

Contains high-grade components for fine performance. Includes:
100 ft. Aerial Wire, 7 Strand, 26 gauge — 30 ft. Insulated Lead-in Wire — Underwriters' Approved Lightning Arrester — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Handsome 4-color Box.

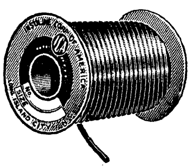
No. 651...Dealer Cost $1.08

JUNIOR KIT

A utility Kit for satisfactory reception. Kit contains:
100 ft. 7/26 Aerial Wire — 30 ft. Insulated Lead-in Wire — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Handsome 4-color Box with instructions.

No. 649...Dealer Cost $ .90

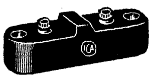
INSULATED LEAD-IN WIRE



A top-grade lead-in wire that serves a variety of purposes. This 7-strand copper-monel, plastic insulated lead-in wire has weather-proof braiding to withstand all climatic conditions. Comes in a variety of coil sizes.

No.	Size	Dealer Cost
5895	25 ft. coil	$ .37 coil
5896	50 ft. coil	.63 coil
5897	100 ft. coil	1.20 coil
5898	500 ft. coil	6.00 coil
5899	1000 ft. coil	11.50 coil

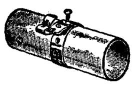
LIGHTNING ARRESTER



Black porcelain, measures 3¾" in length. Non-grounding and weather-proofed. Individually packed.

No. 336
Dealer Cost $.27

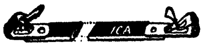
GROUND CLAMP



For a quick but firm connection to ground rod or pipe of varying diameters from ¾" to 2½". Equipped with adjustable screw and convenient clip for fast contact.

No. 223............................Dealer Cost $8.35C

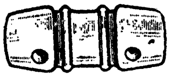
WINDOW LEAD-IN STRIP



Flexible metal strip, ½" wide, with Duco varnished covering. Fully insulated. Convenient clips soldered to ends.

No. 1504.......................Dealer Cost $11.68C

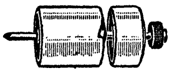
PORCELAIN INSULATOR



Glazed porcelain insulator that will not crack or absorb moisture. Offers highest measure of strain safety.

No. 227
Dealer Cost $6.66C

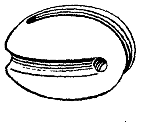
"NAIL-IT" KNOB



Made of durable glazed porcelain. Will not crack or absorb moisture.

No. 229 .... Dealer Cost $9.00C

STRAIN INSULATOR



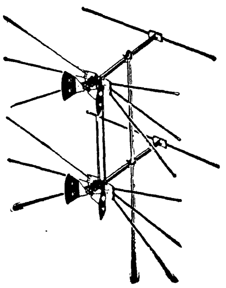
Glazed ceramic strain insulator featuring low moisture absorption and high di-electric strength. Particularly suitable for outdoor antenna installations; high tensile strength. Length: 1½"; Diam: 1⅛"; Wire Hole: $\frac{5}{16}$" diam: Distance between holes: ⅝".

No. 2326........................Dealer Cost $8.00C

SINCE 1921 **insuline** *Corporation of America*
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

A REPRESENTATIVE GROUPING OF ICA UHF-VHF TELEVISION ANTENNAS. FOR COMPLETE LISTING, SEND FOR CATALOG.

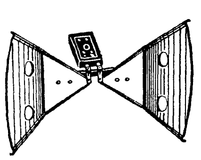
THE INSULINE CONICAL "TRI-VEE"



For full UHF-VHF reception. Includes separate UNI-LEAD inter-action filter.

No. 6725 Single ....Dealer Cost **$11.37**
No. 6727 Stacked ....Dealer Cost **23.61**

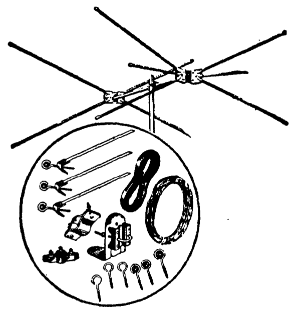
THE INSULINE "COMBO-FAN"



Provides existing VHF antenna with combination all-channel VHF-UHF reception. Includes interaction filter for single transmission line use.

No. 6720.......................... Dealer Cost **$5.70**

THE DE LUXE TELEVISION KIT



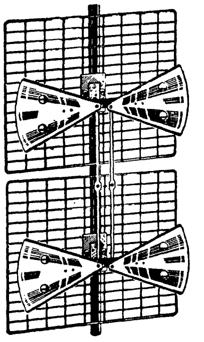
Packaged kit for complete antenna installation. Includes Conical Antenna; 5 ft. steel mast; base mount; 300 ohm wire; guy wire; guy wire clamp; stand-offs; lightning arrester.

No. 6325.........................Dealer Cost **$11.50**

PACKAGED ANTENNA KITS

Insuline offers a complete line of antenna kits for every type of installation.

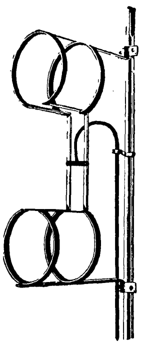
THE INSULINE "TRI-FAN"



Bow-tie with reflector antenna for complete UHF reception. Vibration-free. Pre-assembled for easy installation.

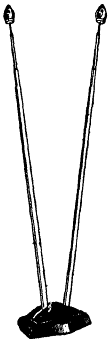
No. 6688 Single .... Dealer Cost **$4.50**
No. 6689 Stacked .... Dealer Cost **8.85**

THE INSULINE "CIRCLE-4"



Unique design that features sharp directivity and low pickup for excellent all-channel UHF reception. Sturdy steel construction with practically zero wind resistance. Easy to install. Highly directional characteristics for effective elimination of "ghosts."

No.	Dlr. Cost
6674	$5.97



INDOOR PORTABLE ANTENNA

(Pat. No. 158679)

All-Channel Reception

For All Television Receivers

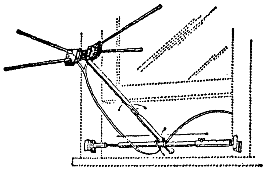
Features

- √ BRASS DIPOLES
- √ Complete adjustability
- √ Tilt-free Base
- √ Quick Installation
- √ Include 300 ohm connecting lead and open end mounting lugs.

THE "METEOR"
3 Section
No. 6470......Dlr. Cost **$2.50**

THE "METEOR UTILITY"
2 Section
No. 6474......Dlr. Cost **$2.08**

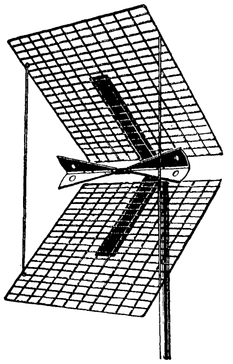
INSULINE WINDOW ANTENNA



Latest conical type. Made of sturdy steel and 3/8″ aluminum; sealed ends. Provides horizontal or vertical positioning. Steel mast measures 2½ feet in length. 1 inch in diameter. Window clamp (1″ diam.) is adjustable . . . spans 30 to 50 inches for almost any wood or casement window frame. Easily installed.

No.	Dealer Cost
6451—Conical Type	$6.66
6450—Folded Dipole Type	6.66

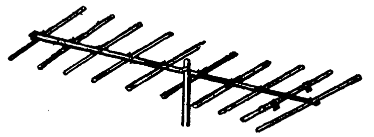
THE INSULINE "BOW-FLEC"



Tested and proved design for outstanding fringe area UHF performance. All-metal construction. Pre-assembled units for quick set-up.

No. 6672 Single ....Dealer Cost **$ 9.90**
No. 6673 Twin type......Dealer Cost **16.50**

10 ELEMENT UHF YAGI

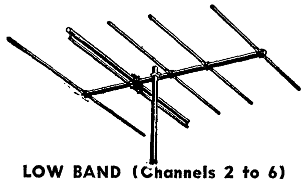


A broad-band YAGI antenna for areas where super high-gain is needed. Rigidly braced.

*No. **6710**......................... Dealer Cost **$4.35**
*Specify channel when ordering

5 ELEMENT YAGI ANTENNA

Precision cut to exact channel length.

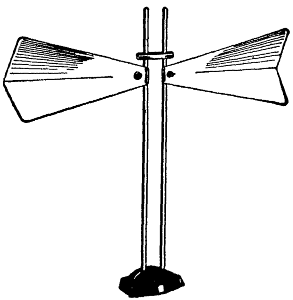


LOW BAND (Channels 2 to 6)
*No. **6620**........................Dealer Cost **$10.57**
HIGH BAND (Channels 7 to 13)
*No. **6630**............................Dealer Cost **$5.73**

YAGI STACKING KITS
****LOW BAND (Channels 2 to 6)**
*No. **6625**...........................Dealer Cost **$3.50**
HIGH BAND (Channels 7 to 13)
*No. **6635**......................... Dealer Cost **$1.00**

*Designate desired channel.
**Includes special center harness assembly for rigid support.

THE "BOW-FAN" INDOOR UHF ANTENNA



Offers full range UHF coverage. Universal adjustability. Includes 5 ft. 300 ohm UHF lead-in wire.

No. 6670..........................Dealer Cost **$3.57**

Net

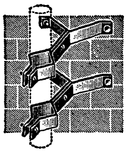
SINCE
1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

A REPRESENTATIVE GROUPING OF UHF-VHF TELEVISION ACCESSORIES. FOR COMPLETE LISTING, SEND FOR CATALOG.

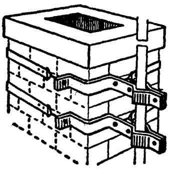
ANTENNA WALL BRACKETS



A useful antenna accessory where a vertical wall installation is desired. Offers a tight-gripping clamping action. Suitable for masts from ⅞″ to 1½″ in diameter. Made of weather-resistant plated heavy gauge steel.

No.	Dealer Cost
6131	$1.80 pr.

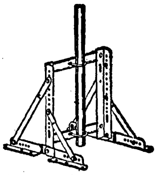
THE INSULINE "WHIZ MOUNT"



A fast-installing chimney antenna mount. One piece sections require minimum handling . . . heavy gauge steel. Steel strapping is perforated. Convenient—easy to install. Sections may be spread for greater support.

No. 6129 Dlr. Cost $1.83

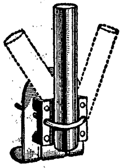
MULTI-POSITION MOUNTING BRACKET



Provides many mounting positions on either rooftop, roof-side or side-wall. Maximum adjustability; cadmium plated steel.

No.	Dealer Cost
6136—For masts up to 1½″ d. (Offsets to 8″)	$3.92
6139—For masts up to 2″ d. (Offsets to 12″)	5.90

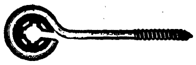
MULTIPLE ANGLE ANTENNA BASE



Offers rigid support; adjustable in three positions for maximum antenna direction. Cadmium plated, sturdy steel complete with hardware. For sidewall or flat mounting. For masts up to 1½″ diameter.

No. 6128 .... Dealer Cost $ .48

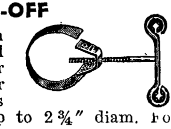
UNIVERSAL STAND-OFFS



All-purpose, for UHF-VHF flat, oval or round lead-ins. Low-loss polyethylene insulation minimizes signal strength loss.

No.	Dealer Cost
6119—3½″ L.	$32.49M
6120—7″ L.	51.65M

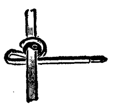
LOK-STRAP STAND-OFF



T-Type stand-off with special adjustable metal strap. All-purpose, for UHF-VHF flat, oval or round lead-ins. Assures firm grip. For masts up to 2¾″ diam. For double lead-ins.

No.	Dealer Cost
6250—3½″ Stand-off	$20.00C
6251—7″ Stand-off	23.32C

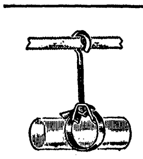
MAST STAND-OFF



Has 3½″ pointed shaft for use on wood surfaces. Low-loss polyethylene insert. All-purpose, for UHF-VHF flat, oval or round lead-ins.

No. 6271....Dlr. Cost $4.58C

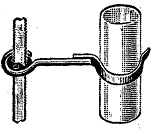
MAST STAND-OFF



For quick and easy set-up. Assures sway-free line. All-purpose, for UHF-VHF flat, oval or round lead-ins. Polyethylene insert. Adjustable strap with self-locking feature permits use on masts up to 2¾″ diam.

No.	Dlr. Cost
6274—3½″ Stand-off	$ 9.50C
6275—7″ Stand-off	11.83C

SNAP-ON MAST STAND-OFF

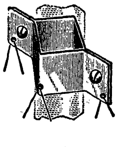


For UHF-VHF flat, oval or round lead-ins. Easily snaps on mast. Low-loss polyethylene insert.

For 1¼″ Mast

No. 6269—3½″ Stand-off
Dlr. Cost $6.00C

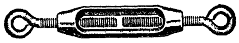
GUY WIRE CLAMP



Ideal for set-ups requiring guy-wire support. May be located at any position on antenna mast for maximum rigidity. This rugged adjustable steel clamp is suitable for masts ranging from ¾″ to 1¼″ diameters. Includes nuts and lockwashers.

No. 6144 .... Dealer Cost $ .25

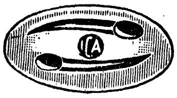
ICA TURNBUCKLES



Sturdy, steel turnbuckles that afford balanced tension of supporting wires. Especially suitable for antenna guy wires. Assure slack-free, rigid support.

No.	Dealer Cost
6150—3″ (closed)	$ .13
6151—5″ (closed)	.18
6154—7½″ (closed)	5.25C

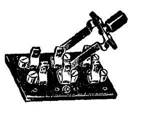
ICA AIRCRAFT TYPE INSULATOR



A strain insulator made of Insulex. Particularly adaptable for aircraft, automobile and TV installation. Two ¼″ mounting holes. Distance between holes ¾″.

No. 2325 .... Dealer Cost $ .07

DOUBLE POLE DOUBLE THROW SWITCHES



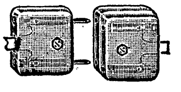
Ideal for television needs. Black bakelite base is 2¾″ x 1⅞″.

No. 1219 Dlr. Cost $.90

Same as above with PORCELAIN Base.

No. 238....Dlr. Cost $.58

DUAL TWIN LEAD CONNECTOR

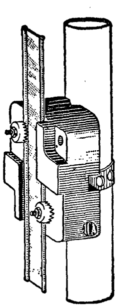


Fully-insulated, low-loss plastic, solderless connection for 300 ohm twin-lead. Permits rapid connecting or disconnecting of set to two separate leads.

No. 6242 .... Dealer Cost $ .60

UHF-VHF LIGHTNING ARRESTER

U/L Approved

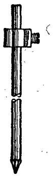


A single lightning arrester that is designed for BOTH VHF 300 OHM-LEAD-IN and UHF TUBULAR TYPE TRANSMISSION LINE. Made of molded phenolic; non-ferrous plated hardware. No insulation stripping necessary.

No. 6114—Includes metal strap for indoor use. **Dealer Cost $.90**

No. 6113—For outdoor use. **Dealer Cost $.75**

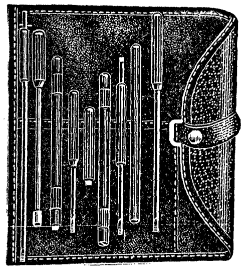
INSULINE GROUND RODS



Rugged copper-plated steel rods that provide direct-to-earth ground. Has pointed end for easy driving. Includes screw clamp capable of holding No. 4 to 14 gauge wire.

No.	Dealer Cost
6137—4 ft.	$ .82
6146—8 ft.	1.66

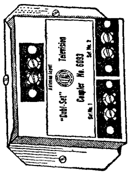
TELEVISION HANDI-KIT



For Television servicing. Contains nine (9) latest tools especially designed for television needs. Includes Aligner for IF and RF and "K-Tran" Transformers (No. 978); slim aligning tool for cramped spaces (No. 6161); thin diameter tuning wand (No. 6163); deep nib aligner (No. 6156); narrow insulated screw driver for deep tuning (No. 6157); extra thin long (9″) aligner (No. 6162); tuning wrench (No. 6164); stackpole core aligner (No. 6170); dual aligner, narrow shaft (No. 6166).

No. 6165 .... Dealer Cost $5.00

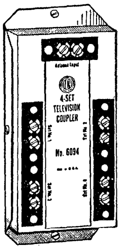
ICA "DUBL-SET" ANTENNA COUPLER



Permits operation of two TV sets with 300 ohm input from a single antenna. Allows simultaneous operation with no interference from either set; no loss in signal strength. Easy to install. Soldering unnecessary. Ideal for two set homes, apartments, etc.

No. 6093 Dlr. Cost $3.50

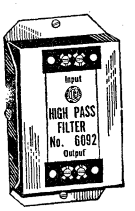
ICA "MULTI-SET" ANTENNA COUPLER



Three or four TV receivers (of 300 ohm input) may be used simultaneously connected to a single antenna with no inter-action interference or signal strength loss. Designed for apartments or multi-set installations. Simple to install. Soldering unnecessary.

No. 6094 Dlr. Cost $4.75

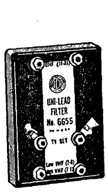
ICA HIGH PASS FILTER



A highly efficient filter for the elimination of television reception disturbances caused by such noise generators as electric shavers, diathermy machines, etc. May be installed at the set or source of disturbance. Easy to install . . . no soldering required.

No. 6092 Dlr. Cost $3.30

UNI-LEAD FILTER

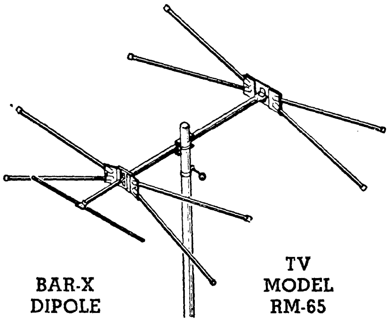


Insuline's printed circuit inter-action filter permits combining a UHF antenna with a VHF type, requiring but a single transmission line. Has three sets of terminals, fully sealed in weather-resistant plastic case that may be quickly and easily added to antenna cross-arm.

No. 6655 Dlr. Cost $3.15

RADELCO CLEVELAND

RADELCO AERIALS



BAR-X DIPOLE

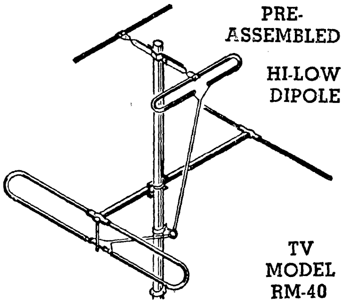
TV MODEL RM-65

NOW PREASSEMBLED!

Vastly superior to ordinary conicals! Director Bar in front of receiving dipole greatly increases signal strength on high channels. Rugged 1¼" galvanized steel mast with 1" cross boom. Heavy duty construction throughout. Aluminum elements specially engineered to reduce vibration and noise. Accessories consist of swivel base, guy ring and clamp-type standoff insulator.

Model	List	Description
RM-65	$10.95	10' mast and accessories.
RM-65S	8.95	5' mast only.
RM-652	19.25	2 bays, 10' mast and acc.
RS-751	7.45	Single array only.
RS-752	15.75	2 bays, jumper bars.

PRE-ASSEMBLED HI-LOW DIPOLE



TV MODEL RM-40

A fine general purpose antenna for local and near fringe reception. Ruggedly constructed with 1¼" galvanized steel mast and heavy duty 1" cross beam.

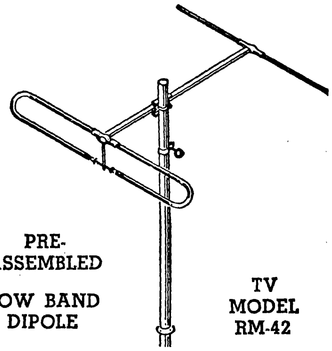
Model RM-40 includes two 5-ft. sections of 1¼" mast, swivel base, guy ring, clamp-type standoff insulator, jumper cable and arrays.

Model RM-40S includes high and low channel arrays and 5-ft. mast only.

Model	List	Ship. Wt.
RM-40	$10.95	9.2 lbs.
RM-40S	8.95	7.5 lbs.

HIGH BAND ARRAY ONLY

Model	List	Freq.	Ship. Wt.
RT-51	$2.20	74-216 mc.	1.3 lbs.



PRE-ASSEMBLED LOW BAND DIPOLE

TV MODEL RM-42

Ideal for local and near fringe areas where only low channels are operating. Add RT-51 array for high channel reception. Same rugged construction as RM-40.

Model RM-42 includes two 5-ft. sections of 1¼" galvanized steel mast, swivel base, guy ring, clamp-type standoff insulator and low channel array.

Model RM-42S includes low channel array and 5-ft. most only.

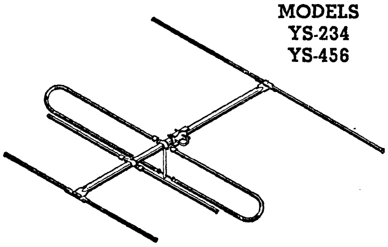
Model	List	Ship. Wt.
RM-42	$8.95	8.8 lbs.
RM-42S	7.45	6.2 lbs.

LOW BAND ARRAY ONLY

Model	List	Freq.	Ship. Wt.
RS-52	$5.95	54-88 mc.	4.5 lbs.

RADELCO TRI-CHANNEL YAGI COVERS THREE CHANNELS INSTEAD OF ONLY ONE!

MODELS YS-234 YS-456

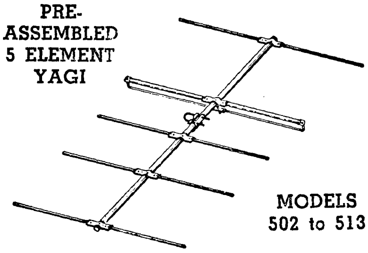


NOW PREASSEMBLED!

Radelco Tri-Channel Yagi covers 3 channels instead of only one! High gain with flat response across 3 channels instead of high gain at the center of one channel only. Guaranteed to absolutely show no side band cutting. Impedance is practically constant at 300 ohms across the full three channel coverage. Ideally suited for stacking. In many cities the Tri-Channel Yagi will do the work of two antennas.

Model	List	MC.	Channels	Wt.
YS-234	$11.45	54-72	2-3-4	6.1 lbs.
YS-456	10.45	66-88	4-5-6	5.5 lbs.

PRE-ASSEMBLED 5 ELEMENT YAGI

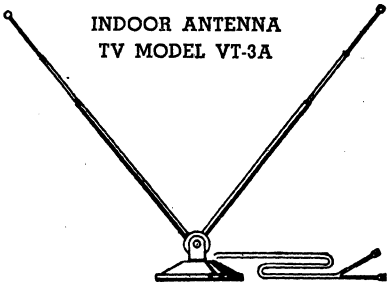


MODELS 502 to 513

The ideal aerial for extreme fringe areas. Custom cut. Five heavy-duty aluminum elements pre-assembled on 1" boom. U-bolt mounting assembly accommodates up to 1½" mast.

Model	Chan.	Mc.	List
YS-502	2	54-60	$12.00
YS-503	3	60-66	11.35
YS-504	4	66-72	10.65
YS-505	5	76-82	10.00
YS-506	6	82-88	9.25
YS-507	7	174-180	7.00
YS-508	8	180-186	7.00
YS-509	9	186-192	7.00
YS-510	10	192-198	7.00
YS-511	11	198-204	7.00
YS-512	12	204-210	7.00
YS-513	13	210-216	7.00

INDOOR ANTENNA TV MODEL VT-3A



The Radelco VT-3A is a high quality antenna made with three sections of satin chrome seamless brass tubing to provide excellent indoor reception.

The VT-3A has a heavily weighted mahogany lacquered base and is smartly designed to harmonize with all furnishings. The VT-3A is equipped with 5-ft. lead and is individually packed in a corrugated carton.

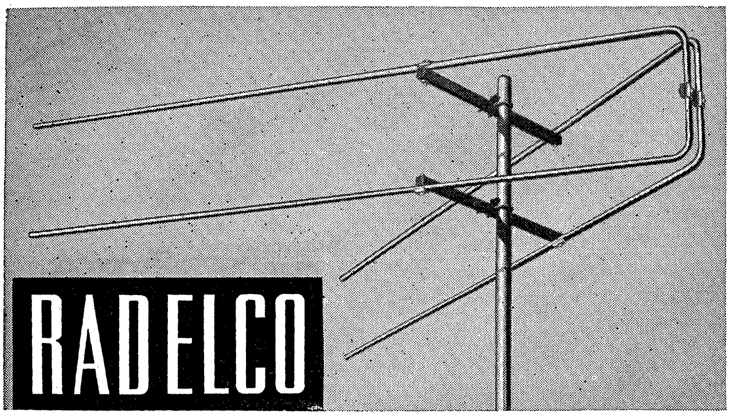
Attractively priced at the low list of $3.45 . . . makes it one of the finest values today in indoor antennas.

Model	List	Ship. Wt.
VT-3A	$3.45	1.4 lbs.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

RADELCO
CLEVELAND

RADELCO AERIALS



UHF-VHF Model US-102 ANTENNA
Covers All TV Channels

FROM CHANNEL 2 THROUGH CHANNEL 83

MODEL US-102 DOUBLE STACK

One of the finest UHF antennas on the market. It has been tried, tested and proved in the field. No other antenna provides better reception in either picture or sound. It is a high gain job. Gain increases with increasing frequency . . . this means that the antenna compensates for the decreasing wave length at the high frequency end of the band. Completely preassembled. Matches 300-ohm line. As shown, less mast. Packed 2 to a carton.

MODEL US-102A DOUBLE STACK

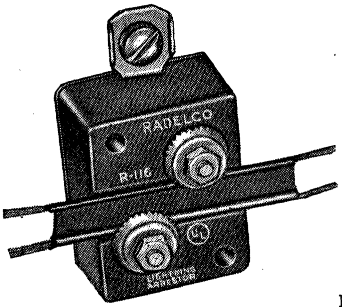
Same as US-102, but packed only one to a carton.

MODEL US-104 QUAD STACK

An ideal performer for remote fringe areas. Shipped complete with jumper bars.

Model	List	Ship. Wt.
US-102	$ 5.45	5.5 lbs.
US-102A	6.25	3.3 lbs.
US-104	11.75	5.7 lbs.

★ ★ ★ RADELCO TV ITEMS ★ ★ ★



RADELCO LIGHTNING ARRESTOR R-116

List $ .90

For Flat and Oval Lead

Combination resistance bleeder and gap-type arrestor. Small and compact for easy wall installation. Arrestor network is completely enclosed in molded Bakelite housing. No stripping of insulation . . . positive piercing contacts provide perfect electrical path, regardless of variation in width or thickness of insulation. Does not disturb impedance of twin line. Improves both picture and sound by carrying off small static charges. Ground terminal accommodates up to .125" wire. Complete with wood screws. Individually packaged, 50 to master carton.

MAST EXTENSIONS

Heavily galvanized, internal lock-seam steel tube with swedged end and key way lock.

ME-60 **List $1.35** **1¼" Dia. x 5' long**

STANDOFF INSULATOR

Clamp-type for masts from 1" to 1¼"

R-102 **List $ .20**

CHIMNEY MOUNT

Bracket arms of double strength. Complete with four adjusting eyebolts and extra thick ¾" steel strap, heavily galvanized for long, dependable service.

R-105 **List $2.25** Ship. Wt. 3.3 lbs.

JUMPER AND PHASING BARS

Jumper bars are used to connect two arrays into a double stack. Phasing bars are used to connect two double stack arrays to a terminal block on the mast forming a quad stack.

RQ-42	JUMPER BAR	List $.50 ea.
RQ-45	PHASING BAR	List .70 ea.

QUAD STACK PHASING KITS

Four phasing bars RQ-45 plus one R-111 Terminal Block. Couples two double stack arrays into a quad stack.

R-114 **List $3.50**

GROUND ROD

Sturdy steel copper coated ground rods complete with terminal bolt.

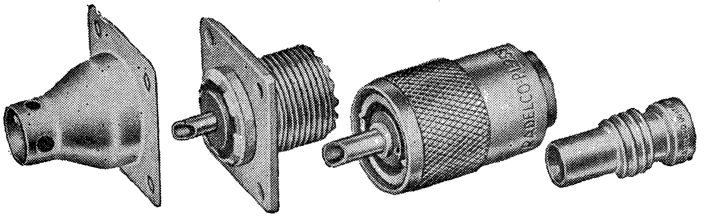
R-110	Four Foot	List $ .95
R-117	Six Foot	List 1.45

SWIVEL MOUNTING BASE

Type R-107 is for 1¼" mast. One-inch mast uses Type R-104.

R-107 **List $ .50**

RADELCO COAXIAL CONNECTORS



Radelco Connectors are made to meet JAN and Signal Corp specifications. Insulators are of Durez mica material to assure long, satisfactory service.

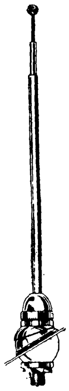
Model	Item	List
UG-106-U	Shield Cap	$ .25
SO-239	Coaxial Socket Receptacle	1.05
PL-259	Coaxial Connector	.95
UG-176-U	Cable Plug Reducer	.25

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

RADELCO AERIALS

RADELCO CLEVELAND

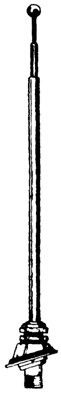
ACCLAIMED ACROSS THE NATION FOR QUICK, EASY INSTALLATION



MONARCH
Cowl-Fender

Model MH-3—Ball-joint metal mounting base, adjustable from flat to 30°. Base sufficiently large to cover largest holes. Lovely chrome finish. Waterproof construction. Holds angular adjustment permanently. 36" cable.

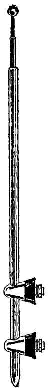
Model	Sec.	List
MH-3	3-57"	**$5.65**
MH-3A	3-70"	**6.25**



ROTOLOK
Cowl-Fender

Model CO-3A — Easy mounting, all tightening outside. Half-inch mounting hole. Chrome-plated mounting base. Exclusive VISE-LOCK eliminates clumsy braces. Fits any fender or top cowl. 36" Radar type cable.

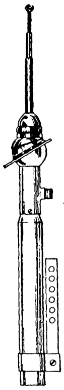
Model	Sec.	List
CO-3A	3-57"	**$5.15**



CHAMPION
Side Cowl

Model CS-3 — A competitively priced aerial built to RADELCO's high quality standard. Chrome-plated brass tubing. Shielded polyethylene cable with black cover. Screw-on connector and chrome capped insulators.

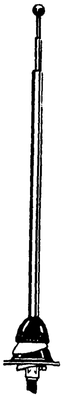
Model	Sec.	List
CS-3	3-60'	**$3.85**



CONCEALED
Cowl-Fender

Model FD-3, 3A — Chrome-plated all-metal adjustable mounting base. Strong, non-crushable! Waterproof, electrically efficient, guaranteed trouble free. 48" Radar cable.

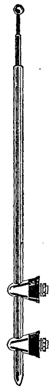
Model	Sec.	List
FD-3	3-4"-55"	**$7.45**
FD-3A	3-9"-68"	**$7.95**



"SCREW BALL"
Cowl-Fender

New, entirely different! Installed entirely from outside by only one man. The screw portion of the assembly assures quick and economical installation. The ball portion provides angular adjustment for every type of fender or cowl contour.

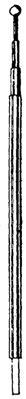
Model	Sec.	List
EZ-2	2	**$3.45**
EZ-3	3	**4.95**



DELUXE
Side Cowl

Model RAD-3, 4, 5 — Built to superior quality standards. Automotive specification chrome-plate. Low loss 100% shielded 36" Radar cable with screw-on connectors.

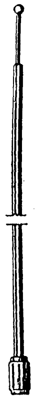
Model	Sec.	List
RAD-3	3-70"	**$5.15**
RAD-4	4-92"	**$6.25**
RAD-5	5-112"	**$7.25**



BUICK
Replacement
Mast

Mast for roof aerials on all Buicks from year 1940 to present models. Built to Radelco's high quality standards.

Model	List	Sec.	Lth.
B-448	**$2.75**	4	45"



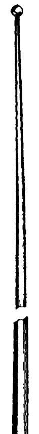
FORD
Replacement
Mast

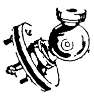
For 1941, 42, 46, 47 Ford-Mercury Roof Antennas that operate behind windshield center post. A high quality replacement.

Model	List	Sec.	Lth.
F-254	**$2.25**	2	54"

COMMUNICATION ANTENNAS

BUILT FOR HARDEST MOBILE USE . . .
EACH AN OUTSTANDING VALUE!

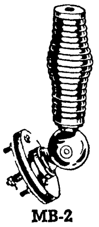




MB-1

SWIVEL BASE. Has adjustable split-ball with positive locking feature to maintain angular adjustment at all times. Black bakelite insulator mounting plate with moisture-proof rubber gasket. Heavy steel backup plate.

Model MB-1 **List $4.45** Ship Wt. 1.2 lbs.



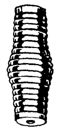
MB-2

SWIVEL BASE AND SPRING. Responds instantly upon contact with overhead obstructions. ⅜" threaded fitting on end of spring.

Model	List	Ship. Wt.
MB-2	**$6.45**	2.1 lbs.
MB-2H (heavy duty spring)	**7.45**	2.5 lbs.

SPRING TEMPERED STEEL MASTS. Chrome silicon steel, can be bent 90° and still return to original vertical position. Fits any standard base.

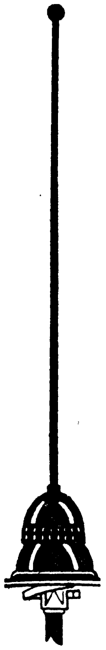
Model		List	Lth.	Ship. Wt.
MM-40F	Motorcycle Mast	**$5.25**	40"	.75 lbs.
MM-60	Mobile Mast	**5.25**	60"	1.00 lbs.
MM-72	Mobile Mast	**5.25**	72"	1.10 lbs.
MM-84	Mobile Mast	**5.50**	84"	1.20 lbs.
MM-96	Mobile Mast	**6.25**	96"	1.40 lbs.



MBS-1

BASE SPRINGS. Oil tempered, tightly coiled heavy spring steel. Model MBS-1 is a regular strength spring. Model MBS-2 is a heavy duty spring for heavier masts.

Model	List	Ship. Wt.
MBS-1	**$2.25**	1.0 lbs.
MBS-2	**3.25**	1.2 lbs.



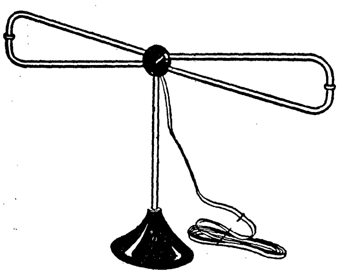
ROOF TOP
Communication

Quick mounting roof top antenna, embodying the exclusive "Screw-Ball" feature for ease of installation. Although quickly, easily installed, this antenna mounts securely and permanently. Installed entirely from the outside. Complete with 11' of coaxial cable. The mast is replaceable and full instructions are provided for tuning to exact frequency.

Model	Frequency	List
MR-1	144-172 mc.	**$4.95**

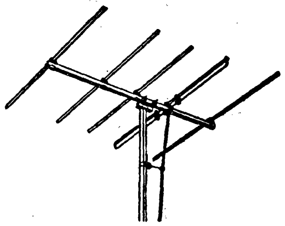
CORNELL DUBILIER

CAPACITORS—ROTATORS—VIBRATORS—AUTO, TV & FM ANTENNAS—CONVERTOR



THE "LOADED X" INDOOR

The highest rated indoor antenna. This unusual CORNELL-DUBILIER design delivers peak performance comparing favorably with many outdoor installations.



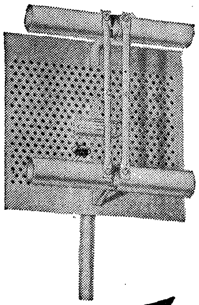
"YAGI" TV ANTENNAS

The perfect answer to the demand for maximum signal pick-up in FRINGE areas. Each YAGI is cut for a specific channel . . . in pre-assembled QUICK-FOLD-OUT design for fast installations.

UHF TV ANTENNA MODEL U-4

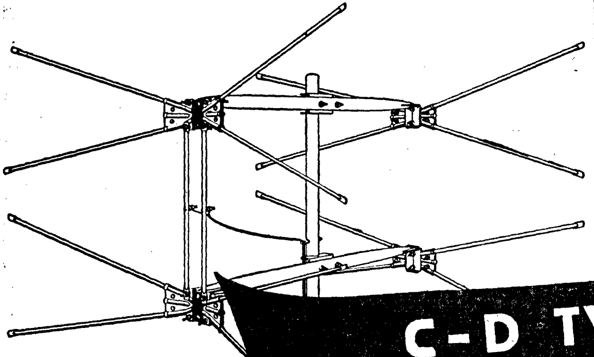
The U-4 Ultra High Frequency Antenna was designed around proven engineering Ultra High Frequency techniques and principles.

Not a cut down version of present VHF television antennas but a completely new antenna developed after months of research. A stable operating, broad band antenna of uniform gain covering the entire UHF spectrum, with a very low standing wave ratio. This antenna was thoroughly tested in our laboratory under the most severe conditions, and then field tested in numerous sections of Portland, Oregon.



C-D TV ANTENNAS

SUPERIOR DESIGN · QUICKLY INSTALLED · TROUBLE-FREE PERFORMANCE

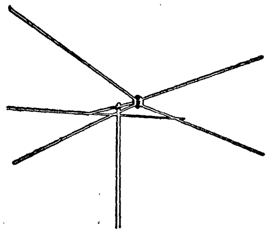


"LAZY X" CONICALS

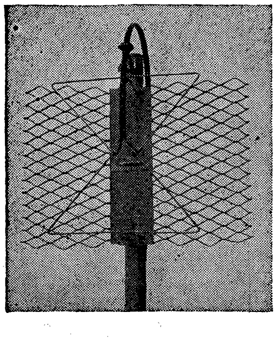
A complete group of conical-type antennas in assortments for single bays, double-stacked and quadruple-stacked arrays. The ideal "all-channel" antenna. Also available in ALL ALUMINUM construction.

SUPERIOR CONICAL MODEL S-6

The "Superior" Conical is designed to meet the demand for a quality antenna in the low price market. The S-6 is engineered to give all the electrical advantages of the conical antenna, combined with mechanically sound construction and ease of installation. The "Superior" Conical may be assembled as a double or four stacked array by using the standard quarter wave (AK-50) and half wave (AK-51) stacking kits.



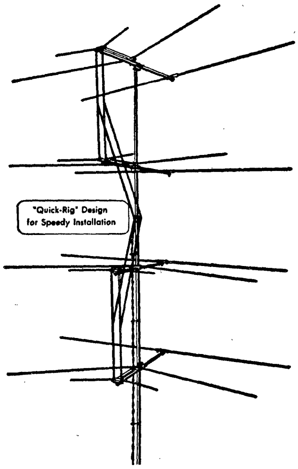
THE UW-2 UHF TV ANTENNAS



- The UW-2 is a *completely balanced broad band antenna covering all channels* 14 to 82 and terminating in 300 ohms with a very low voltage standing wave ratio.
- Minimum voltage and front-to-back ratio of 6 to 1 at 470 MC. and exceeding 10 to 1 at 800 MC.
- Excellent directivity, single lobe horizontal field pattern 470 to 850 MC. minimizing ghost problems and signal pick-up from other than the wanted direction.

THE LAST WORD IN FRINGE AREA RECEPTION . . .

THE V*8 TV ANTENNA


"Quick-Rig" Design for Speedy Installation

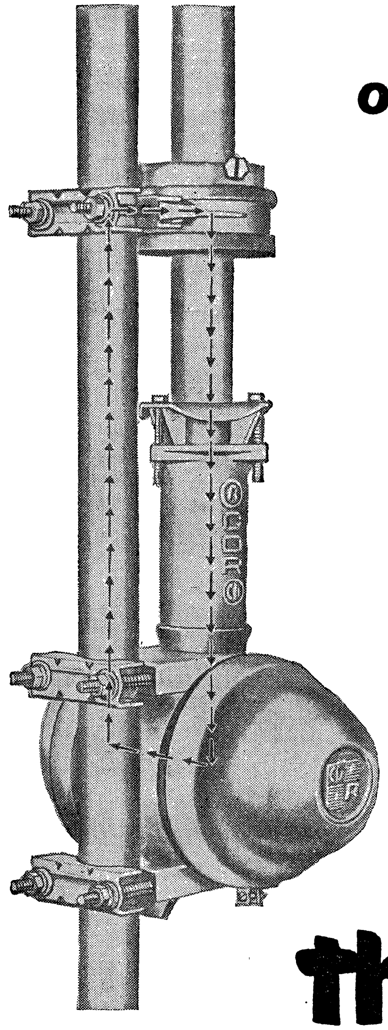
An all-channel array that brings in a signal where other antennas have failed . . . that's what jobbers tell us.

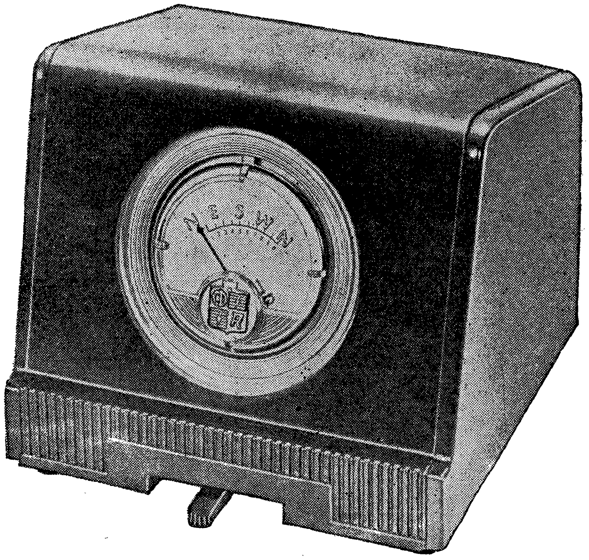
- ★ All Aluminum Construction
- ★ Lower Wind Resistance
- ★ Speedy One-Man Installation
- ★ Proven Outstanding in the Field
- ★ Mounts on any Mast up to 1¾" O. D. — minimum length: 8 Ft.

The V-8 antenna means the end of fringe area TV reception problems. Tried, tested and proven . . . this type antenna pulls in a signal where other antennas can't! Highest quality construction throughout . . . to our exacting standards . . . that mean that once they're installed — they're up to stay!

CORNELL DUBILIER

IT'S ALL NEW-the Rotor of Tomorrow HERE TODAY!





the Rotor

The NO. 1 ALL-PURPOSE ROTOR *That Has Everything!*

Designed to give the trade everything they've asked for. To do this, it's taken time . . . lots of time and money and engineering skill . . . and NOW WE HAVE IT . . . . the best possible ALL-PURPOSE ROTOR! It's TOPS! Order them at your jobber NOW . . . be the FIRST with the BEST in your area!

★ Quick Mounting Antenna Mast Collet
★ Speedy Installation — No Loose Parts to Assemble
★ Takes Antenna Masts up to 1½" OD
★ High Torque
★ Instant Locking — will not drift

MODEL TR-12 Complete rotor *including thrust bearing* and handsome modern design plastic cabinet featuring meter control dial . . . fingertip lever . . . uses 4-wire cable.......... **$47.95**

MODEL TR-11 Complete rotor with handsome modern design plastic cabinet and illuminated meter control dial . . . fingertip lever . . . using 4-wire cable.......... **$44.95**

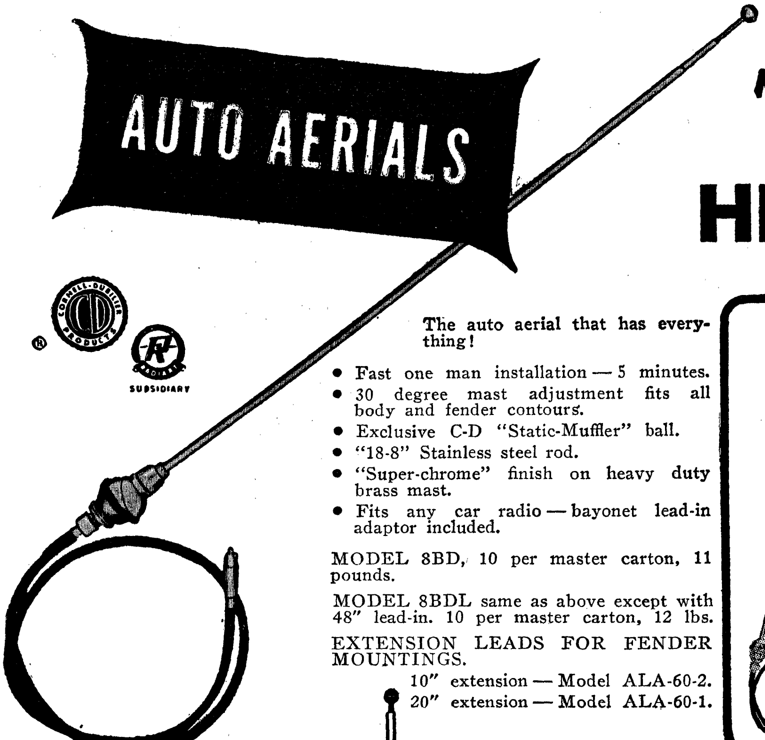
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

CORNELL DUBILIER

CAPACITORS—ROTATORS—VIBRATORS—AUTO, TV & FM ANTENNAS—CONVERTORS

AUTO AERIALS

Model 8BD
List $4.95
HI•BALL



The auto aerial that has everything!

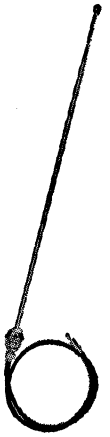
- Fast one man installation — 5 minutes.
- 30 degree mast adjustment fits all body and fender contours.
- Exclusive C-D "Static-Muffler" ball.
- "18-8" Stainless steel rod.
- "Super-chrome" finish on heavy duty brass mast.
- Fits any car radio — bayonet lead-in adaptor included.

MODEL 8BD, 10 per master carton, 11 pounds.

MODEL 8BDL same as above except with 48" lead-in. 10 per master carton, 12 lbs.

EXTENSION LEADS FOR FENDER MOUNTINGS.

10" extension — Model ALA-60-2.
20" extension — Model ALA-60-1.



DELUXE MODEL 4BX3

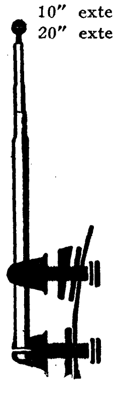
Three section design extends to 59½" **List $3.95**

SUPERIOR STANDARD MODEL 4BX2

Two section design extends to 43".

- Brilliant long lasting chrome finished mast and spacer cap
- Full length quality 36" polyethylene waterproof lead-in
- Only one half inch mounting hole required **List $2.95**

TWO INSULATOR SIDE MOUNT TYPES



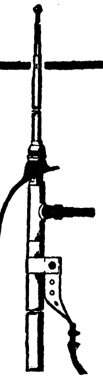
Sturdy high quality construction throughout. Brilliant chromed brass masts with stainless steel rods. Wedge type adaptor furnished, with 36" polyethylene lead-in.

MODEL 2S, 43" extended, 2 sections. 10 per master carton, 9 pounds — List $3.25

MODEL 3S. 63" extended, 3 sections. 10 per master carton, 13¼ pounds — List $4.25

MODEL 4S, 92" extended, 3 sections. 10 per master carton, 17½ pounds — List $5.25

DISAPPEARING MOUNT



A handsome addition to any car . . . collapses to 6 inches and extends to 60 inches. Fits either fender or cowl and features the exclusive "O" ring seal around the mast that prevents water from entering inside the aerial. Only one $\frac{7}{8}$" mounting hole required.

MODEL 3D, 60" extended. 3 sections, 2 pounds each — List $6.75

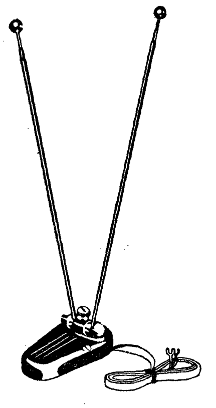
10 per master carton weighing 19 pounds.

DELUXE
MODEL CT-331

THREE SECTION CHROME RODS
RODS EXTENDABLE
16¼" to 43¼"
12 per master carton
Shipping weight 19 lbs.
LIST PRICE $5.25

STANDARD
MODEL CT-231

TWO SECTION RODS EXTENDABLE
20¼" to 37½"
12 per master carton
Shipping weight 18 lbs.
LIST PRICE $4.35



THE FAMOUS CDR TR-2

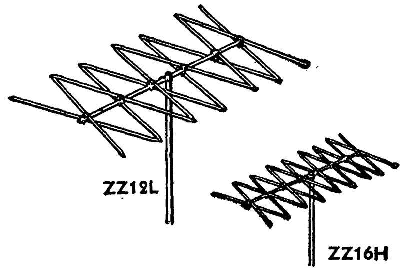
is still the most POWERFUL and dependable Heavy Duty TV Antenna ROTOR on the market. Complete rotor with "COMPASS CONTROL" cabinet with illuminated "perfect pattern" dial (uses 8 wire cable) $49.95

TRIO MANUFACTURING CO.
GRIGGSVILLE, ILLINOIS

TRIO ZIG-ZAG TV ANTENNAS

Higher Gain Than Any Yagi! All Channels VHF Performance!

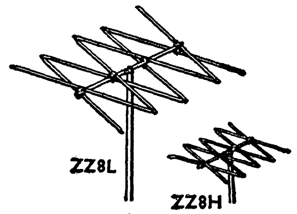
Here's the TV antenna that is setting the standards for the industry! This sensational new design results in sharper directivity and higher front-to-back ratio. It provides snow-free pictures and fade-free sound in even the most remote fringe areas.



MODEL ZZ12L—For extreme fringe reception. Narrow forward lobe and a high front-to-back ratio for extreme fringe area reception. This pattern—in most areas—effectively solves the problem of co-channel interference, since it is highly directive. The antenna consists of 12 half-wave elements, all directly connected to the feed line at one point. The ZZ12L provides the ultimate in gain and directivity on the low channels, 2-6.

MODEL ZZ16H—Also for extreme fringe reception, covering all high channels 7 thru 13. Has narrowest forward lobe and highest front-to-back ratio, also effectively overcomes co-channel interference. This antenna has 16 half-wave elements all directly connected to the feed line at one point and provides saleable TV reception in areas where it had previously been considered impossible.

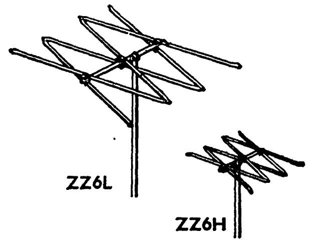
The ZZ12L and ZZ16H may be stacked for fine all VHF channel reception in even the most remote fringe areas.



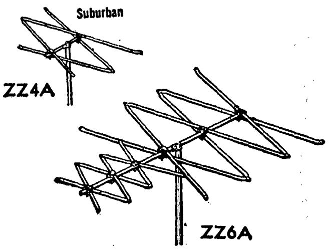
MODEL ZZ8L — For normal fringe area reception, providing more than adequate gain on channels 2 thru 6. Radiation pattern is comparable to a well designed multiple element single channel yagi. Has 8 half-wave elements all directly connected to feed line at one point.

MODEL ZZ8H—Has same advantages and features as the ZZ8L but covers channels 7 thru 13.

Antennas are shipped with all hardware mounted on the boom with the exception of the mast clamp. Complete assembly is only a matter of minutes. To provide added strength, TRIO ZIG-ZAG TV ANTENNAS now have stamped steel element clamps.



MODELS ZZ6L and ZZ6H—These models consist of 6 half-wave elements — have a pattern and gain comparable to a cut-to-channel yagi. They are recommended for near fringe installations. Model ZZ6L covers channels 2 thru 6; Model ZZ6H, channels 7 thru 13.



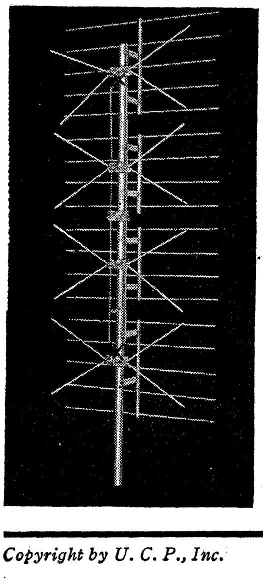
MODELS ZZ6A and ZZ4A—These antennas offer all-channel reception with a single bay. Model ZZ6A is for near fringe reception. Model ZZ4A is for suburban use. These effectively replace popular all-channel antennas by providing increased gain and greatly increased directivity.

TRIO ROTATOR & DIRECTION INDICATOR

Equally as famous as TRIO TV Antennas is the dependable TRIO Rotator. Tested and proved under every conceivable condition of load, weather, strain and stress. Two husky motors—one for each direction of rotation. Positive electrical stops, positive brake action—no drift. Fully guaranteed for TWO YEARS. Direction indicator is smartly styled, has easy-to-read dial face—finger touch control. A beautiful, dependable instrument throughout—the final product of more than $50,000 in exhaustive research to build the most dependable, trouble-free rotator ever produced!

TRIO BOW-TIE AND YAGI UHF ANTENNAS

HIGH IN QUALITY — LOW IN COST



New TRIO UHF Bow-Tie With Reflector

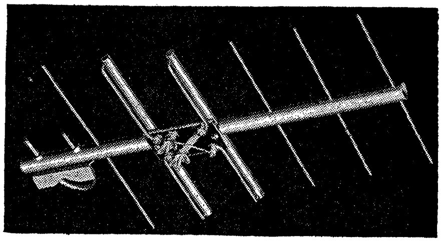
Sturdy, broad-band antennas of uniformly high gain that have been thoroughly field tested. Phasing strips installed, pre-assembled — a jiffy to attach reflector screen. Available in one, two and four bay models. Usual high-quality TRIO construction.

MODEL UBT-1—Supplied with 2 ft. mast. Single bow-tie with reflector.

MODEL UBT-2—Supplied with 3 ft. mast. Two stacked bow-ties with reflectors.

MODEL UBT-4 (Illustrated) — Supplied with 4 ft. mast. Four stacked bow-ties with reflectors.

New TRIO UHF Multi-Channel Yagi Antennas



Broad-band yagis developed by TRIO now successfully applied to UHF. Four models cover all UHF channels, rarely more than two needed for any one area.

These high gain six element yagis have sharper directivity, thereby eliminating ghosts. Thoroughly field tested. Entire antenna mounted in front of mast removes metal from field of reflectors or antenna elements. Mast clamp supplied.

MODEL 6-UBY 14-26	for Channels 14-26
MODEL 6-UBY 27-42	for Channels 27-42
MODEL 6-UBY 43-60	for Channels 43-60
MODEL 6-UBY 61-83	for Channels 61-83

WRITE FOR TRIO CATALOG

ANTENNAS *Master Mobile* MOUNTS

All the prime requisites of a reliable, long lasting mobile antenna system are incorporated into MASTER MOBILE MOUNTS through scientific engineering, high quality of materials and workmanship...AND THE PRICES ARE RIGHT.

MOUNT SPECIFICATIONS: Packaged and sealed at factory. Ship. wt. Approx. 3 lbs.

Model	TYPE (All types are tapped for 3/8", 24 thread stud fitting on Antenna end)	Net Price	List Price
126	Body Mount—Straight Spring—Swivel Base	$ 8.75	$14.60
126X	Body Mount—Heavy Duty—Straight Spring—Swivel Base	9.40	15.67
126C	Body Mount—Straight Spring—Swivel Base—With Coaxial Connector	8.75	14.60
126XC	Body Mount—Heavy Duty—Straight Spring—Swivel Base—With Coaxial Connector	9.40	15.67
132	Body Mount—Double Tapered—Spring Swivel Base	8.75	14.60
132X	Body Mount—Heavy Duty—Double Tapered—Spring Swivel Base	9.85	16.42
132C	Body Mount—Double Tapered Spring—Swivel Base—With Coaxial Connector	8.75	14.60
132XC	Body Mount—Heavy Duty—Double Tapered Spring—Swivel Base—With Coaxial Connector	9.85	16.42
132S	Body Mount—Stainless Steel—Double Tapered—Spring Swivel Base	10.75	17.92
132XS	Body Mount—Heavy Duty Stainless Steel—Double Tapered—Spring Swivel Base	11.85	19.75
132SC	Body Mount—Stainless Steel—Double Tapered Spring—Swivel Base With Coaxial Connector	10.75	17.92
132XSC	Body Mount—Heavy Duty Stainless Steel—Double Tapered Spring—Swivel Base—With Coaxial Connector	11.85	19.75
138	Bumper Mount—Straight Spring	6.55	10.92
138X	Bumper Mount—Heavy Duty—Straight Spring	7.65	12.75
140	Bumper Mount—Double Tapered Spring	6.55	10.92
140X	Bumper Mount—Heavy Duty—Double Tapered Spring	7.65	12.75
140S	Bumper Mount—Stainless Steel—Double Tapered Spring	8.65	14.42
140XS	Bumper Mount—Heavy Duty Stainless Steel—Double Tapered Spring	9.65	16.10
142	Bumper Mount—Less Spring, with Insulators for Direct Mounting by Series Bumper Mount—100 Antennas or 92 Extension and 106 Antennas	3.25	5.42

WHIP ANTENNA SPECIFICATIONS: Postage rate 10 lbs. minimum. 3 lbs. on all other whip antennas.

MODEL Stainless Steel	Overall Length	Base Specifications	Net Price	List Price
100-60S	60"	Threaded 3/8" Stud to fit all Mounts	$4.95	$8.25
100-72S	72"	Threaded 3/8" Stud to fit all Mounts	4.95	8.25
100-78S	78"	Threaded 3/8" Stud to fit all Mounts	5.00	8.35
100-86S	86"	Threaded 3/8" Stud to fit all Mounts	5.15	8.58
100-90S	90"	Threaded 3/8" Stud to fit all Mounts	5.20	8.67
100-96S	96"	Threaded 3/8" Stud to fit all Mounts	5.25	8.75
106-60S	60"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.15	6.92
106-72S	72"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.15	6.92
106-78S	78"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.20	7.00
106-86S	86"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.35	7.25
106-90S	90"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.40	7.34
106-96S	96"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.50	7.50

COAXIAL CONVERSION KIT

No. 118 Master Coaxial Conversion Kit. Fits No. 132 Model. **NET $1.00 LIST $1.67**

SEPARATE SPRINGS FOR ANTENNA MOUNTS

100 Regular, **NET $4.50 LIST $7.50** 100X—Heavy Duty, **NET $5.50 LIST $9.15**
100S—Stainless Steel, **NET $5.50 LIST $9.15**

MODEL 90 EXTENSION, 26" NET $3.25, LIST $5.42—92 EXTENSION, 18" NET $3.25 LIST $5.42
MODEL 94 EXTENSION, 36" NET $4.25, LIST $7.10

MODEL 99 TENNAJUSTER EXTENSION, 8" NET $1.95, LIST $3.25

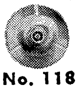
ALL BAND MOBILE ANTENNA

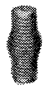
- Center-loaded antenna comes with one coil — 20, 40 or 75 meters. Change coils to any band 80 through 20...For 10 meter operation, short coil in use.
- Fits any MASTER MOUNT or 3/8" SAE thread, Hammertone or Chrome finish (if available).
- Height: 8' 10". Weight: 28 oz. Shipping wt.: 3 lbs.

NET PRICE: $8.75 LIST PRICE: $14.60 Specify freq. coil desired. Less spring mount.
Extra coils — 20, 40 or 75 meters: NET — $3.30 LIST — $5.50

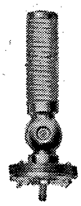
CIVIL AIR PATROL ANTENNA: 2374, 3507.5 and 4585 KC.	NET $9.95	LIST $16.60
With Coil—less mounting. EXTRA COILS:	NET $3.60	LIST $ 6.00
MARINE FREQUENCY COIL	NET $7.50	LIST $12.50

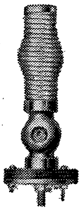
*** X — Heavy Duty, C — Coaxial Type, S — Stainless Steel.**

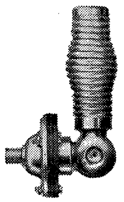

No. 118

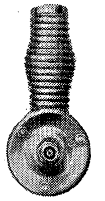

MODEL 100 100X

ALL BAND MOBILE ANTENNA


MODEL 126

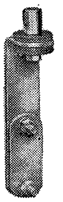

MODEL 132


MODEL 132C


MODEL 132C (COAXIAL TYPE)
(Coaxial Type Body Mounts Optional)

MODEL 138

MODEL 140


MODEL 142

Extension Model 92

Series 106

Series 100

ORDER FROM YOUR DEALER OR WRITE. • Dealer Inquiries Invited • Prevailing Discounts to Distributors and Amateurs.

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Master Mobile Mounts, Inc.

ANTENNAS *Master Mobile* MOUNTS

Master Mobile's SENSATIONAL...
New! JUNIOR LINE

Always ahead, Master Mobile Mounts, Inc., announce new advanced line of Mobile Mounts and Antennas manufactured to same high quality and specifications as regular Master Mobile line....The *new* JUNIOR LINE meets every need for competitive light weight mobile mounts and antennas.

JUNIOR—BODY MOUNTS

No. 132J—Swivel base, mounted with double tapered spring, is actually a junior model of our standard No. 132 which is accepted as "tops with the trade." The 132J is the same quality double tapered spring as the standard No. 132, but of slightly less size—Built to fill the bill where price counts. It is a mount which provides high operational performance. Price: **Net $4.17. List $6.95**

No. 132 JC—Same as No. 132J with coaxial connection. Price: **Net $5.17. List $8.62**

JUNIOR—BUMPER MOUNTS

No. 140J—Double tapered spring bumper mount—same high quality spring construction and finish as No. 132J. Installation can be quickly made so antenna stands truly vertical for top reception. Price: **Net $4.17. List $6.95**

JUNIOR SPRING

No. 100J—Light type, double tapered spring only. (Dimensions: 4" x 1⅛" spring ends tapped for ⅜", 24 thread studs—cadmium plated). Price: **Net $3.25. List $5.42**

JUNIOR COAXIAL CONVERSION KIT

No. 118J—Jr. Coaxial Conversion Kit—fits No. 132J body mount only. Price: **Net $ .90. List $1.50**

TWO METER ANTENNAS

No. 113—Master VHF Roof Top Antenna—designed for police, fire service, taxi cabs, and amateurs using 140 MC to 165 MC. Antenna constructed of stainless steel wire with threaded fitting—easily replaced or changed without disturbing mounting. Comes with 10' coaxial cable. Price: **Net $3.96. List $6.60**

No. 114—Master Coaxial VHF Antenna, an efficient antenna for open type vehicles, convertibles, station wagons, fire trucks, taxi cabs, and amateurs using 140 MC to 165 MC frequencies. Design permits mounting on any convenient place by use of any of the Master Standard Mounts. Supplied with 18" adjustable section and 10' of coaxial cable. Price: **Net $9.95. List $16.60**

No. 115—Adjustable 36" section for use with No. 114. Price: **Net $4.25. List $7.10**

No. 214—Master De Luxe—a superior new, ruggedly-constructed, vertically polarized antenna with frequency range of 140 to 170 MC. Completely waterproofed. Attractive, highly polished chrome finish enhances appearance of any vehicle. Furnished with approx. 10' of 72 Ohm Coax Cable. MOUNTING TYPES: **Type 1**—on side with 2 brackets furnished—**NET: $15.95. Type 2,** MASTER MOUNT (No. 132X or 140X). Mounts sold separately. Complete antenna: **$17.45.** Adjustable mounting—adjusts to 17".

SILICON-CHROME WHIP ANTENNAS

Fits all Master Mounts, finest cadmium plated.

SERIES 9 with ⅜" 24 thread studs.

Model No.	**Length**	**Net Price**	**List Price**
9-60T	60"	$2.97	$4.95
9-72T	72"	3.24	5.40
9-84T	84"	3.30	5.50
9-86T	86"	3.60	6.00
9-96T	96"	3.75	6.25

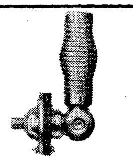
SERIES 8 without studs.

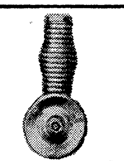
Model No.	**Length**	**Net Price**	**List Price**
8-60	60"	$2.82	$4.70
8-72	72"	3.08	5.13
8-84	84"	3.13	5.22
8-86.	86"	3.42	5.70
8-96	96"	3.56	5.93

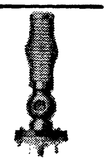
*J-Junior Models

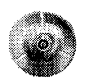
Order from your dealer or write. Dealer Inquiries Invited.
Prevailing Discounts to Distributors and Amateurs.

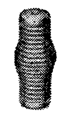
Master Mobile Mounts, Inc.
P. O. BOX 1817 • LOS ANGELES 36, CALIFORNIA
WAREHOUSE AND SHIPPING ADDRESS: 1306 BOND ST.


MODEL 132JC


MODEL 132JC


MODEL 132J

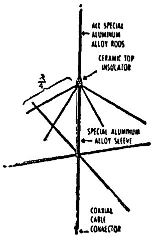

MODEL 118J COAXIAL KIT FITS JR. MOUNTS ONLY


MODEL 100J

MODEL 140J

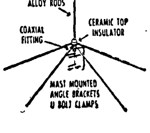
GROUND PLANE ANTENNA—Model 300—Master De Luxe

...**NEW!**...brings in that DX for you. Outperforms any type of vertical dipole. "Drooping" Type Ground Plane plus four straight radials to give a low angle of radiation for general coverage. It gives an almost perfect circle radiation pattern. Ideal for CD and defense nets. Covers complete Amateur Band with excellent Broad Band characteristics. Other frequencies as specified. Matches 52 ohm coaxial cable through threaded coaxial fitting at end. Straight radials are adjustable (up or down) for purpose of eliminating standing waves on transmission lines. For medium or low-powered transmitters. Sturdily-built of finest alloys to withstand corrosion, high winds and extreme icing. With 36" length of ¾" pipe for mounting purposes. Standard mounting facilities can be secured locally.

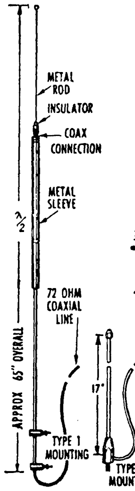


MODEL 300—
AMATEUR'S NET: $12.95
LIST: $21.60

Model GP-4. Four "Drooping" Radials for perfect match to 52 ohm coax cable. Complete amateur band coverage. Specify other frequencies. Attaches to Mast with U-Bolts. (U-Bolts and Mounting Brackets furnished.) Also attachable to side of building. Sturdy, with special alloys, to withstand corrosion and extreme weather.

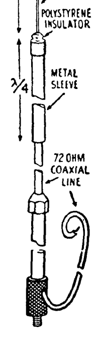

ALL SPECIAL ALUMINUM ALLOY RODS
CERAMIC TOP INSULATOR
COAXIAL FITTING
MAST MOUNTED ANGLE BRACKETS U BOLT CLAMPS

Model GP-4
AMATEUR'S
NET: $5.95
LIST: $9.95



MODEL 214 (COAXIAL TYPE)

113



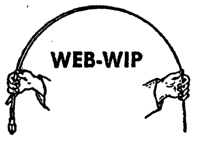
MODEL 114 (COAXIAL TYPE)

WEB WIP and WEBSTER "TIARE"

MOBILE ANTENNAS and Accessories

MILITARY—MARINE—POLICE—FIRE—AIRCRAFT
AMATEUR—C-D—COMMERCIAL

COMMERCIAL-TYPE WEB-WIPS



Commercial-type, high quality whips with extreme flexibility yet will not fatigue or take permanent set under extreme flexure. Bonded-on fiber glass covering . . . insulated . . . weather-proof. Standard lengths are listed but these whips can be provided in any practical length on special order.

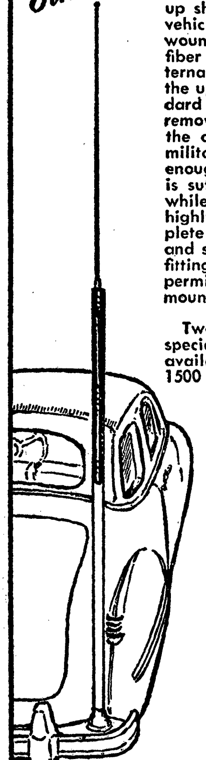
STANDARD LENGTHS—60", 72", 78", 90", 96". Suggested resale price............$12.00

MOTORCYCLE RECEIVING ANTENNA—30". Suggested resale price.......................$8.00

All standard whips are provided with brass, male, base fittings threaded 3/8 SAE unless otherwise specified.

WEB-WIP CENTER LOADED ANTENNA

Total weight 22 ounces



A new and highly effective center-loaded antenna designed specifically for vehicular mounting or for small boats or aircraft. This antenna incorporates numerous mechnical features found only in the well-known WEB-TIARE marine antenna. Notable in this regard is the overall weather-proof construction and the thorough and complete protection of all metallic parts. The lower support column of the WEB-WIP center-loaded mobile antenna is an extremely sturdy but lightweight fiber glass tube. This column permits ample flexure to take up shock but prevents excessive sway at high vehicle speeds. The center loading section is wound directly on the upper portion of the fiber glass column and is protected by an external plastic covering. The top whip secures to the upper end of the loading section by a standard screw thread fitting and may be readily removed. This top whip incorporates many of the design features of the WEB high-quality, military and commercial whips. It is flexible enough to bend into a complete half circle yet is sufficiently rigid to prevent excessive sway while the vehicle is in motion. A bonded-on highly flexible fiber glass jacket provides complete protection against weather. Both whip and support column have Chrome plated brass fittings and the standard 3/8 thread utilized permits mounting on any standard type of base mount or with WEB special fiberglass mount.

Two amateur band models are listed though special antennas of this same general type are available for operation on any frequency from 1500 to 30,000 kcs. Prices on request.

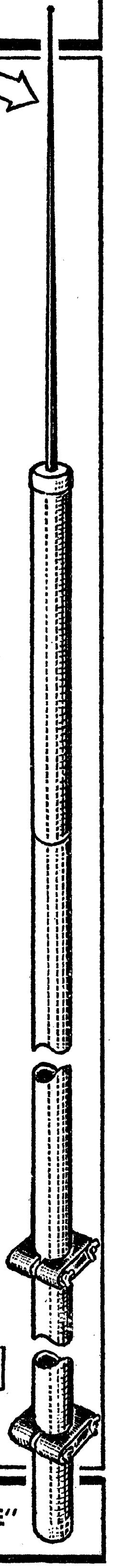
(75 meter phone band)
(40 meter phone band)
Suggested resale price $18.00

MARINE DE LUXE BASE MOUNT

A streamlined, insulated base mount for WEB-WIP center-loaded antennas. Made of fiber glass, it is readily mounted. Has top insert with thread to fit antenna base.

MODEL AM-4 BASE MOUNT
Suggested resale price..... ......$15.00

WEBSTER-"TIARE" ANTENNA



A center-loaded antenna for use in marine or other fixed or mobile services where a full length quarter wave vertical antenna is not feasible. The "Tiare" is time-tried-and-proven with thousands of units giving outstanding performance on boats of many different types. The antenna has an overall height of 24 feet and the construction throughout will stand up under motion of the craft as well as heavy weather. The antenna is completely waterproof! Bottom support column is heavy-wall, water resistant aircraft aluminum, anodized and sealed with a most durable plastic coating. Upper loading section is also completely sealed and is watertight. Top whip has a highly flexible, bonded-on fiber glass covering and the whip design is such that it can be subjected to extreme flexure without fatigue or permanent set. Antenna comes with rugged, insulating mounts of die-cast, high impact bakelite. Holding bolts and wing nuts are bronze. Marine model covers 2-3 mcs. Models in other ranges are available on special order.

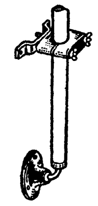
Suggested resale price (FOB)...........$54.50

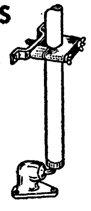
JUNIOR "TIARE" MARINE ANTENNA

The WEBSTER-TIARE Junior Model Antenna incorporates the same principles as the Standard and gives the same unequalled performance. Its features are the same with two exceptions: the tube base and all hardware are Chrome plated brass and the antenna telescopes to a fraction of its extended height. Ruggedly built for extra long life in rugged marine service. Price includes standard mounts but all Webster special mounts can also be used.

Suggested resale price (FOB)............$60.00

DE LUXE HINGED MOUNTS

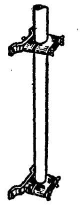




Two special De Luxe Hinged Mounts are available: Model AM-1 with bottom mount designed for fastening to side of cabin. Botton flange 3⅞"D with three fastenings. Max. protrusion from side of cabin, 4½". Model AM-1A has bottom mount for fastening to deck. Base is triangular 3⅝" on each side. Both mounts are finest marine hardware, heavy Chrome plated brass. All springs are Monel.

AM-1 Suggested resale price....$25.00 AM-IA

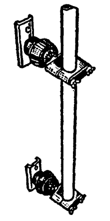
AM-2 TOP-HINGING MOUNT



Designed for boats where the antenna must hinge from the top mount. Has Monel spring-loaded hinge at the top mount to permit the antenna to lie forward or aft. No possibility of rattling when antenna is in vertical position. Metal parts are Chrome plated cast brass.

Suggested resale price.......$25.00

AM-3 HEAVY DUTY MOUNT



Designed for conditions where insulators are likely to be heavily incrusted with salt after long exposure to weather. Large, heavy-duty ceramic insulators mounted on thick bronze castings. Can be installed on masts or flat surfaces.

Suggested resale price......$18.00

All prices subject to change without notice.

DEALERS: WRITE FOR UNIT AND QUANTITY DISCOUNT INFORMATION.

WEB-WIP

WEBSTER MANUFACTURING CO.

242 SHORELINE BLVD., MILL VALLEY, CALIF.

"TIARE"

mobile antenna...

now . . . the Shakespeare "Wonderod"

New "Wonderod" is a Fiberglas reinforced antennae for mobile radio equipment . . . made by the pioneer manufacturer of Fiberglas fishing rods. Thoroughly tested under extreme conditions, for commercial and private installations. STOCK SIZES READILY AVAILABLE.

NOTE THESE "WONDEROD" ADVANTAGES:

- **Will not corrode — excellent weathering properties**
- **Will not take a set**
- **Light weight, reduces bumping on spring-mount**
- **Exceptionally high flexual strength**
- **High impact strength**
- **Excellent insulation even at high frequencies**
  Reduces hazard of operating under live wires, around sub-stations, etc.

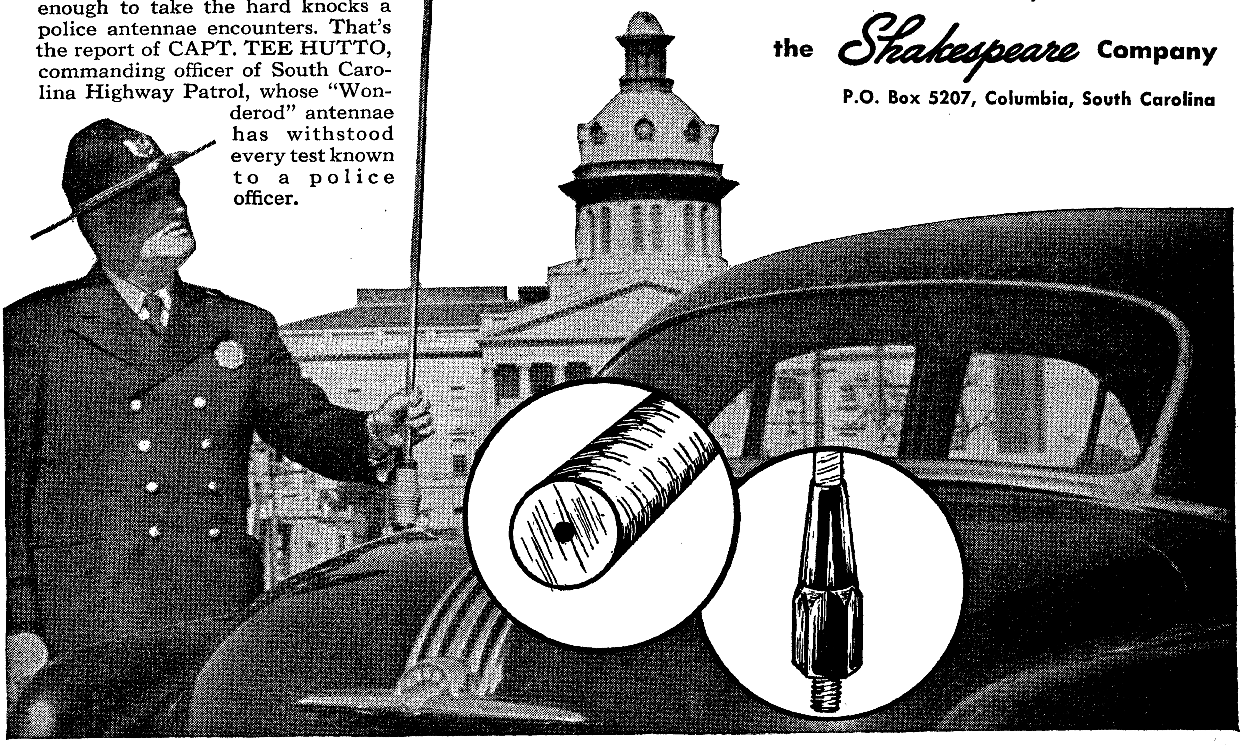
PAT. APPLIED FOR

Length	Retail List Price
60" to 90"	$12.90

— price includes ⅜" — 24 chrome-plated brass fitting at base and smooth, rounded tip. Larger ball at tip and special base fittings available on request. Rods are white Fiberglas. Special colors available on quantity orders.

NOTE: The best impedance match requires a somewhat shorter "Wonderod" antennae than is required with solid steel.

COLUMBIA PRODUCTS COMPANY, a division of
the Shakespeare Company
P.O. Box 5207, Columbia, South Carolina



. . . Excellent performance . . . excellent weathering . . . tough enough to take the hard knocks a police antennae encounters. That's the report of CAPT. TEE HUTTO, commanding officer of South Carolina Highway Patrol, whose "Wonderod" antennae has withstood every test known to a police officer.

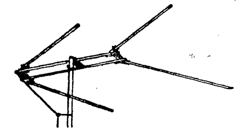
HY-LITE ANTENNAS for any installation

Any antenna problem can be solved with the use of the proper HY-LITE model. There is a unit for every purpose and every job. Single channel and all-band antennae are available for local, medium, and fringe areas.

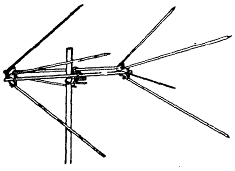
HY-LITE units are made of tubing that is specifically manufactured for use in antennae. Combined with HY-LITE time proven methods of construction, this tubing is made into units that will give unequalled reception and long life.

HY-LITE END FIRE ARRAYS

MODEL D. V., 2-13
Versatile local and semi-fringe unit. Stacked for fringe area. Features simplicity of installation.

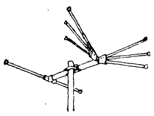


MODEL C. V., 2-13, UHF
Advanced all channel End-Fire Conical high uniform gains fringe area unit. Stacked for more gain.

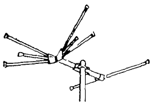


HY-LITE CONICAL TV ANTENNAS

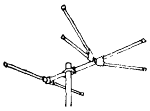
MODEL X6R2, 2-13
6-Element Insert. Dipole. Pre-assembled Reflector.



MODEL X6HR2, 2-13
All Band-High Gain Two Elements Peaked for High Band.



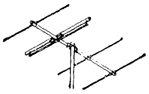
MODEL X4R2, 2-13
4-Element Dipole Pre-assembled Reflector.



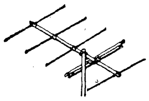
HY-LITE "YAGI"

The HY-LITE "YAGI" is designed for signal reception on a specific channel. The important feature of the "YAGI" type antenna for TV receivers is the directional characteristic. This affords greater discrimination against unwanted interfering signals and at the same time gives better reception to the TV Signal the "YAGI" is designed to receive. Specify channel when ordering.

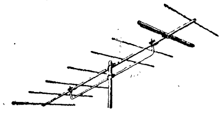
MODEL Y
4-Element Yagi. Pre-assembled, Elements Pre-aligned.



MODEL 5Y
5-Element Yagi. Pre-assembled, Elements Pre-aligned.

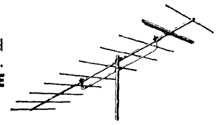


MODEL 8Y
8-Element Yagi. Low Band supplied with extra boom Cross-Arm as shown.



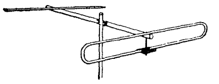
MODEL 10Y
10-Element Yagi. Low Band supplied with extra Boom Cross-Arm as shown.

YAGI MODELS FOR UHF AVAILABLE

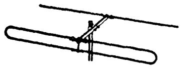


HY-LITE SNAP OUTS

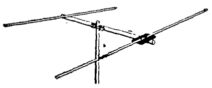
MODEL BHF, 7-13
High Band Folded Dipole & Reflector Pre-assembled.



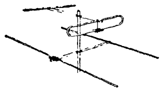
MODEL S030, 2-5 & S030-6
Low Band Folded Dipole & Reflector.



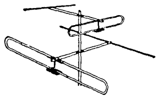
MODEL S070, 2-6
Low Band Straight Dipole & Reflector Pre-assembled for Low Impedance Lead.



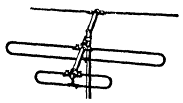
MODEL S070 BHF, 2-13
Folded High with Straight Low.



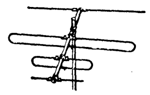
MODEL S030 BHF, 2-13
Folded High with Folded Low Dipoles with Reflectors.



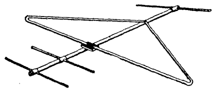
MODEL S040, 2-13
In-Line High & Low.



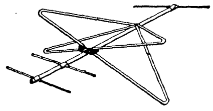
MODEL S040-D, 2-13
In-Line High & Low Additional Director for High Band.



MODEL BL3-H, 2-13
Bat Wing Type Low Band & High Band. All Pre-assembled.

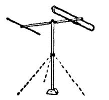


MODEL BVL-3, 2-13
Similar to BL3-H Two Bat Type Dipoles Forms Conical Effect.

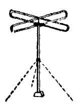


HY-LITE FM ANTENNAS

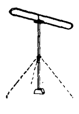
MODEL FM 30
Folded Dipole & Reflector supplied base, lead-in, and mast with Guy Ring.



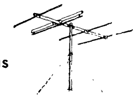
MODEL FM 3T
Multi-Directional F.M. Antenna. Does not require Directional Orientation.



MODEL FM 3
Simple F.M. unit for improving reception in "fair to good" areas.



MODEL Y FM
High Gain Directional F.M. Antenna for Areas with Weak Signal.

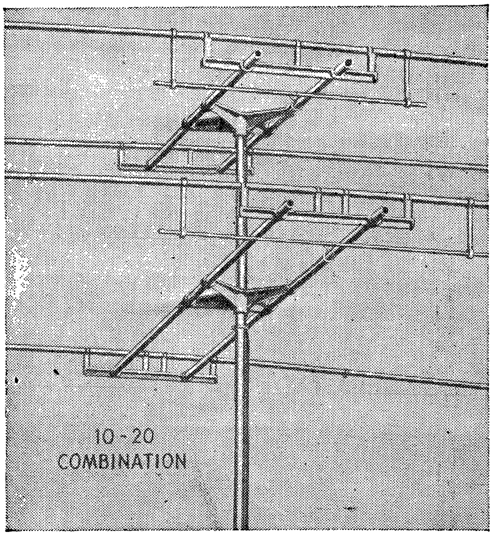


HY-LITE AMATEUR ANTENNAS

- **Fully Adjustable**
- **All Aluminum**
- **Priced Right - Built Right**
- **Permanent**

BEAMS

THE FAMOUS INSULATED STANDARD



HY-LITE
6, 10-11, 15, 20
METERS

●

2, 3 and 4
ELEMENTS

●

Quickly and easily assembled, the HY-LITE BEAMS are ideal for any transmission location. They are built ruggedly and will stand up under stress and strain far beyond that encountered under actual use.

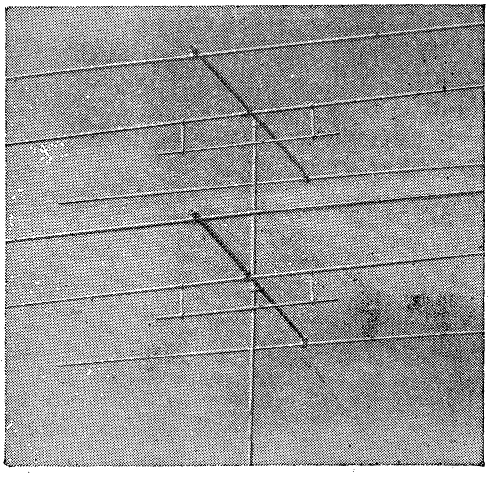
The elements on the 6, 10-11 meter beams are made of 5/8" and 3/4" telescopic aluminum tubing of the highest grade. (The elements of the 15 and 20 meter beam are of 1" and 7/8" tubing) with locking clamps for securing after tuning. The elements are supported on heavy Steatite insulators. Strong aluminum castings support the reflectors and directors and the antenna elements.

The HY-LITE ROTARY BEAMS are rigid and sturdy and mounted on a standard size 6' mast.

Any BEAM can be purchased and later a BEAM of a different frequency added to the original. Stacked array can be had in any combination on order.

6, 10 and 15 meter beams supplied with .1 and .15 spacing. 3-element 20-meter units supplied with .075 and .1 spacing.

ALL-GROUNDED ARRAY.....



SKY-LITE
6, 10-11
METERS

●

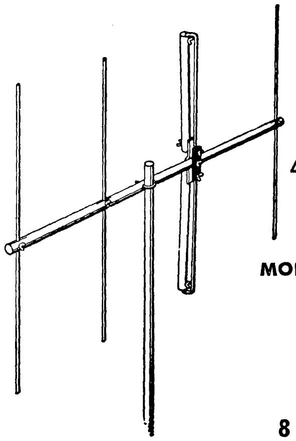
3 and 4
ELEMENTS

●

Lightest Beam ever built by HY-LITE. Beam complete includes Mast. Can be assembled and adjusted in less than 30 minutes by one man with only a screw driver. Element lengths and spacing fully adjustable. Will withstand high winds and gale, built of all dural tubing and rigid aluminum castings. Elements are 3/4" and 5/8" diam., boom is heavy wall 1". "T" match is adjustable by movable castings to match 300 ohm line. So light it can be rotated with almost any TV antennae rotator. Completely grounded. Good lightning protection. No wood used. Good forward gain and front to back ratio. Very little sag in either boom or elements. Using .1 and .15 spacing. 6 meter or 10 meter can be added separately at later date for stacking. Full instructions are given for length of elements and spacing at different frequencies.

2 METER ARRAYS

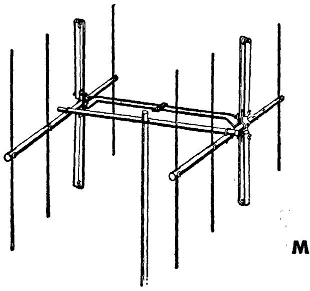
Can be mounted for horizontal polarization, built of all dural tubing. All elements are grounded. Excellent forward gain and front to back ratio. Boom is 1" diameter hard tubing. Using .2, .2, and .25 spacing. Elements are 3/8" and 1" outside diameter. Unit is supplied with clamp to fit any size mast up to 1 3/8 inch outside diameter (no mast is included with unit.) So light it can be rotated with almost any TV Antennae Rotator. Each four element unit weighs under 3 lbs. — 16 Element unit weighs approximately 12 lbs. Made to match 300 ohm line. Can be stub matched for use with low impedance coax.



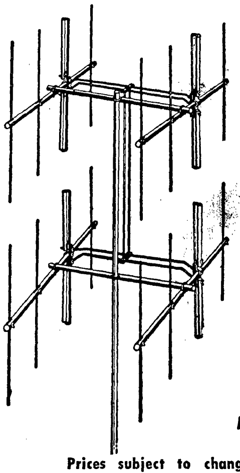
4 ELEMENTS

MODEL 4E2

8 ELEMENTS



MODEL 8E2

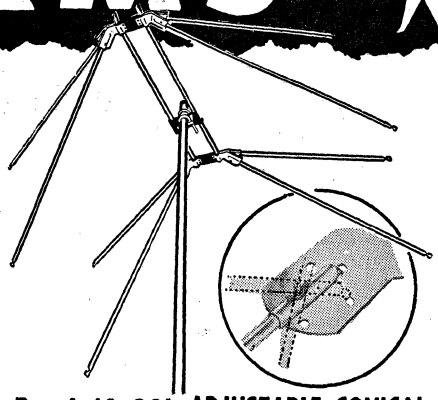


16 ELEMENTS

MODEL 16E2

Prices subject to change without notice.
For prices refer to pricing index.

RMS



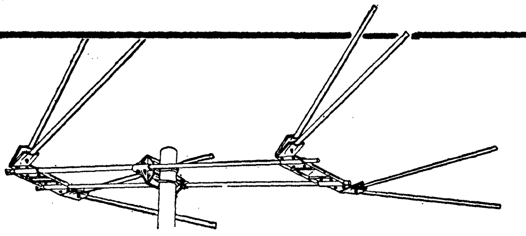
All Band (2-83) ADJUSTABLE CONICAL V

Model AAV-100

$15.74 List Packed individually

Adjust any one or all 8 of the elements for efficient reception on uhf, vhf and uhf-vhf. Elements at 45° for uhf; 60°—uhf-vhf; 90° and 180°—vhf . . . and still an end-fire array. Adapts itself for your own specific problem. Deluxe construction features dowel-reinforcement of elements and Q-bars at the mast attachment — plus double u-bolt mast attachment. Fully preassembled.

2-bay Model AAV-200 with stacking bars	**$32.87 List**
4-bay Model AAV-400 with harness assembly	**$70.06 List**

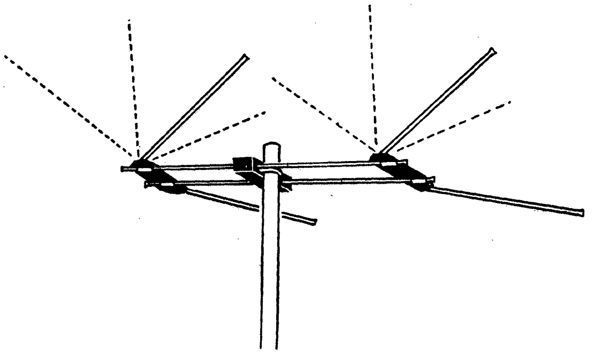


CONICAL V FRINGE LEADER SR.

Model CVA-500 $13.33 List 4 to carton

Same design as AAV-100 but elements not adjustable.

2-bay Model CVA2-500 with stacking bars	**$28.00**
4-bay Model CVA4-500 with harness assembly	**$60.50**



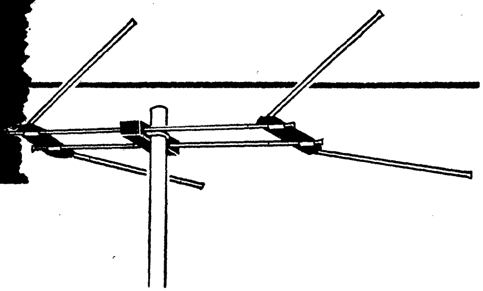
All Band (2-83) ADJUSTABLE V

Model UVA-1

$7.56 List Packed Individually

Any 1 or all 4 elements adjustable to 45° (uhf) 60° (uhf-vhf), 90° and 180° (vhf) — and still a high gain end-fire array. Completely preassembled

2-bay Model UVA-2 with stacking bars	**$16.51 List**
4-bay Model UVA-4 with harness assembly	**$37.37 List**

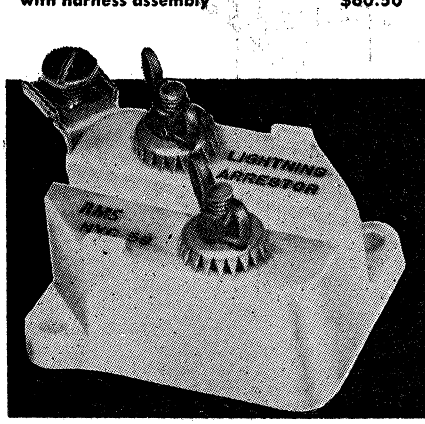


FRINGELEADER JR. V. ANTENNA

Model EVA-100 $5.40 List 4 to carton

4 element end-fire array, ideal for urban and semi-fringe area. Completely preassembled Similar in design to UVA series, but elements not adjustable.

2-bay Model EVA-200 with stacking bars	**$12.20 List**
4-bay Model EVA-400 with harness assembly	**$28.70 List**



the renown RMS LA-3

$1.00 list

lightning arrestor and static charge eliminator . . . all in one! Takes twin lead and open line; mounts flat or to the mast. UL approved. High conductivity, corrosion resistant contact hardware throughout.

UHF Lightning Arrestor LA-UH3

$1.48 list

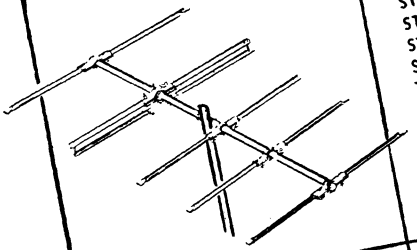
incorporates specially designed filter networks to effectively isolate r.f. from ground potential so that the arrestor operates to discharge static and lightning. Takes regular twin lead, oval and tubular lead, 375 ohm and 450 ohm open line. UL approved. High conductivity, corrosion resistant contact hardware used throughout. Can be mounted flat, or to mast.

THE YAGI LEADERS OF THE INDUSTRY

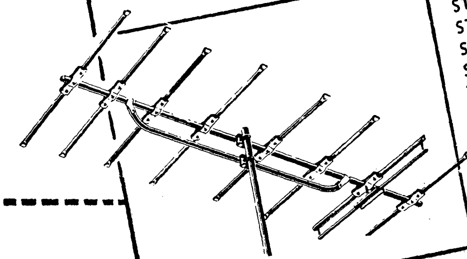
Completely preassembled — 3/8" aluminum elements with sealed ends; crossarm of 1" aluminum dowel-reinforced at U-bolt — step-up type transformer element.

Low-band models feature unique steel brace

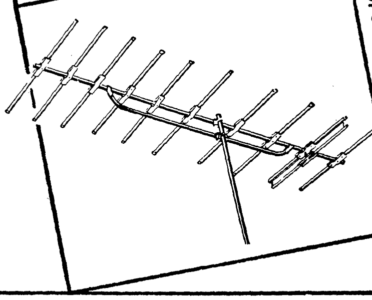
RMS 5 - 8 - 10 element Yagis



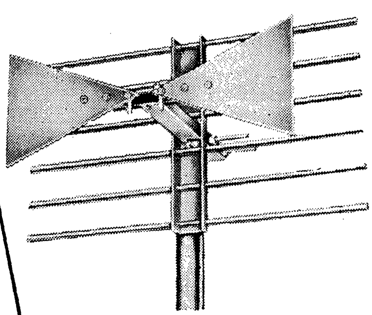
Model No	Chan. No.	List Price
STY-2	2	$18.15
STY-3	3	15.74
STY-4	4	14.94
STY-5	5	14.23
STY-6	6	13.11
TY-7	7	7.62
TY-8	8	7.62
TY-9	9	7.62
TY-10	10	7.62
TY-11	11	7.62
TY-12	12	7.62
TY-13	13	7.62



Model No	Chan. No.	List Price
STYL8-2	2	$24.69
STYL8-3	3	23.15
STYL8-4	4	22.38
STYL8-5	5	21.60
STYL8-6	6	20.83
TYL8-7	7	13.12
TYL8-8	8	13.12
TYL8-9	9	13.12
TYL8-10	10	13.12
TYL8-11	11	13.12
TYL8-12	12	13.12
TYL8-13	13	13.12



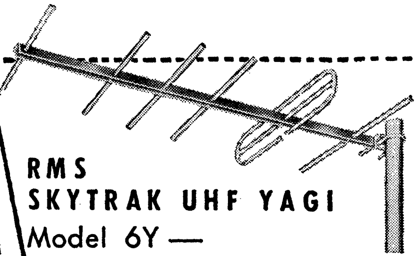
Model No	Chan. No.	List Price
STYL10-2	2	$30.86
STYL10-3	3	29.32
STYL10-4	4	27.77
STYL10-5	5	26.23
STYL10-6	6	24.39
TYL10-7	7	14.81
TYL10-8	8	14.81
TYL10-9	9	14 81
TYL10-10	10	14.81
TYL10-11	11	14.81
TYL10-12	12	14.81
TYL-10-13	13	



RMS BO-TENNA FOR UHF

- Universally accepted for uhf areas — excellent gain over channels 14-83.
- Reflector is not wire mesh but actually tuned elements — eliminates ghost pickup.
- Greater air gap around signal takeoff points acts to prevent shorting due to excessive rains.
- Bow Tie elements fold back on crossarm for protection during shipping swivel out for speedy installation

Model	Chan. No.	List	Description
BT-5	14-83	$3.85	Bow Tie & Crossarm without reflector
BT 10	14-83	6.00	Bow Tie & Crossarm with reflector

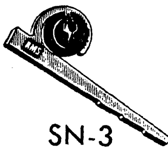


RMS SKYTRAK UHF YAGI

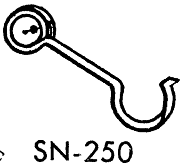
Model 6Y —

6 element, all-aluminum; no plastic components to short out; no hardware joints to corrode Fully assembled, 1 to carton. Specially designed 3-wire folded dipole transformer for impedance matching. Six models cover UHF band from 14 through 83

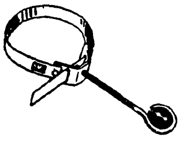
Model	Channels	List Price
6Y2	14-20	$5.10
6Y3	21-30	5.10
6Y4	31-40	5.10
6Y5	41-54	5 10
6Y6	55-68	5 10
6Y7	69-83	5.10



SN-3
12¢ list



SN-250
10c list

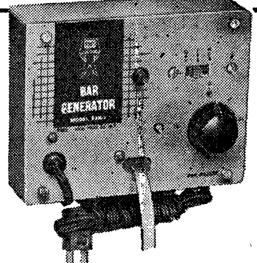


MC-3
20c list

RMS MAKES EVERYTHING YOU NEED FOR TV INSTALLATION

TRANSMISSION LINES • HARDWARE
SERVICE INSTRUMENTS • TUBE CARRIERS

WRITE FOR NEW CATALOG



PORTABLE BAR GENERATOR

Model BAR-1

$24.90 list

Transmits modulated carrier on channel 5, thereby producing a series of vertical or horizontal bars on the TV screen, for fast accurate linearity adjustment Provides adjustable number of bars. Complete with 300 ohm receiver cord. Compact to fit in serviceman's kit

JERROLD

World's largest manufacturer of AMPLIFIED MASTER ANTENNA SYSTEMS

Each Jerrold system is specifically designed for its type of application and includes all necessary accessories and equipment. Since prices depend on the size and complexity of the installation, it is suggested you contact Jerrold or your distributor for complete information. A catalog describing the Jerrold Job Rated line of equipment for systems of 2 to 48 receivers is available on request.

JERROLD products include:

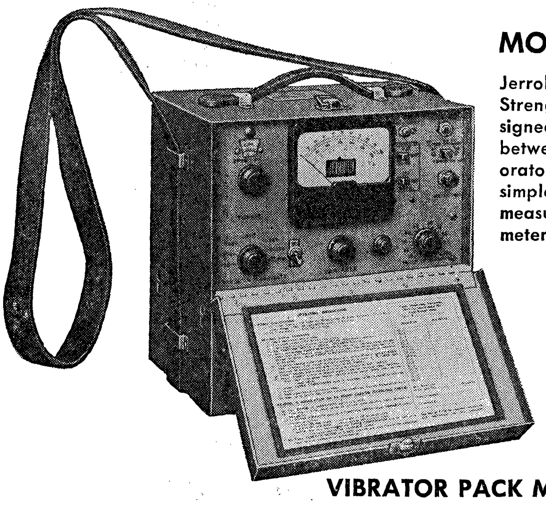
- Community Master Antenna Systems for communities, towns and cities
- Constant Level Master Antenna Systems for hotels, motels, institutions, apartment buildings
- Pre-amplifiers
- UHF Converters

JERROLD maintains a complete consultant engineering service to solve all your Master Antenna System problems, prepare blueprints, cost estimates, and bills of materials for any project as well as render field engineering supervision. Consult Jerrold for any type of assistance regarding Master Antenna Systems.

Accurate for Laboratory—Rugged for the Field

DIRECT READING

FIELD STRENGTH METER



MODEL 704

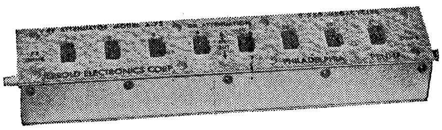
Jerrold Model 704 Field Strength Meter is designed to fill the gap between expensive laboratory equipment and simple types of relative measuring field strength meters.

$275 Net
Model 704
with AC power supply

VIBRATOR PACK MODEL 704-6V
(Price includes all cables)
$24.75 Net

Model 704 measures actual microvolts. It is accurate within ± 0.8 db. It separates and measures video, audio and adjacent channel carriers and also helps locate RF interference. Model 704 reads directly in microvolts and in db. six ranges from zero to 3.0 volts. AC or 6 Volt power supply units are available. Input impedence is 72 and 300 ohms. Weighing less than 17 pounds, it can easily be carried for field tests.

Variable RF ATTENUATOR



Model A-72
for use with RG-59/U cable

Net Price $54.50

Model A-72X
for use with RG-11/U

Net Price $59.50

Jerrold Models A-72 and A-72X attenuator have been designed and engineered to provide precise attenuation in steps ranging from 0 to 82 db. by simple "IN" and "OUT" switching arrangement. The attenuators are linear over a range of frequencies from 0 to 250 MC, and have a VSWR less than 1.05, when properly terminated.

Accuracy is ± 1.0 db. at maximum (82 db.) attenuation. The insertion loss is less than 0.5 db. at 200 MC. They are capable of handling 500 milliwatts CW.

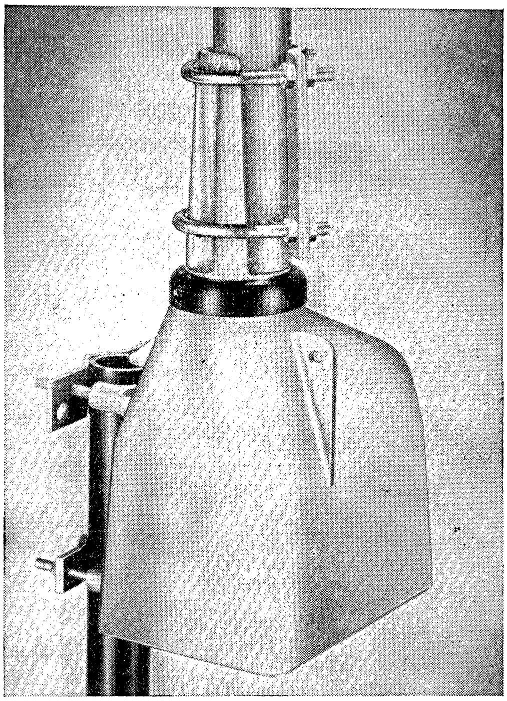
JERROLD

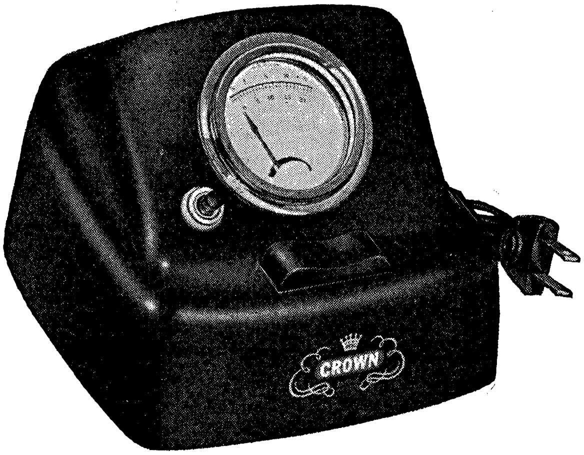
JERROLD ELECTRONICS CORPORATION

PHILADELPHIA 46, PA.

CROWN® Antenna Rotator

A Product of
Crown Controls Co., Inc.
New Bremen, Ohio

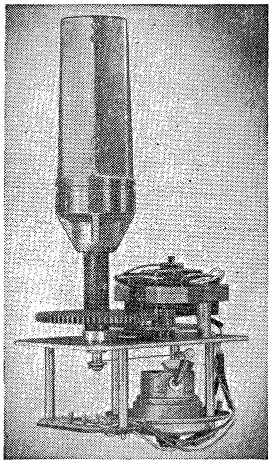




COMPASS INDICATING MODEL

1. 115 Volts 60 Cycle AC
2. 30 Watts AC Input
3. Gear Ratio 3000 To 1
4. 175 Lbs. Weight Capacity
5. Takes Antenna Mast Up To 2″
6. Shipping Weight 11 Lbs.
7. 4 Conductor Installation
8. 365° Rotation, 60 Seconds

NEW AND EXCLUSIVE FEATURES



Constant Indication—No need to rotate antenna to obtain a reading. Needle does not fluctuate . . stays steady and accurate. Is easily observed and accurately read.

Automatic Voltage Compensation—Line voltage variations do not interfere with the indicating accuracy. No need to calibrate or adjust.

Finger Tip Switch—One switch controls antenna in either direction.

Dial—Compass indicating type. Illuminated for easy reading.

Control Box—Beautiful mahogany Bakelite.

Off and On Switch—Located next to dial. Electrically safe, push button type.

Gears—Brass and steel machine cut gears accurate to within .002″. Bull gear is 3″ in diameter and has own roller ball thrust bearing.

Housing — Reinforced — High strength aluminum casting, chemically protected on interior surface.

Brake—Automatic brake releases only when motor is energized. Prevents coasting and windmilling. Permits use of a spur gear drive which increases delivered torque.

Terminals—Readily accessible. Standard terminal screws permits 4 wire hook-up to be made with screw driver only.

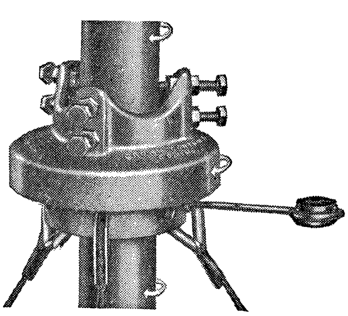
Bearing—Built in roller ball thrust bearing. No other bearing necessary.

Sending Unit—A tele-metering indication system. A complete unit within itself, hermetically sealed. Not a reostat device.

Motor—Life time lubricated capacitor motor.

A Product of
Crown Controls Co., Inc.
New Bremen, Ohio

CROWN® ROLLER BEARING GUY RING

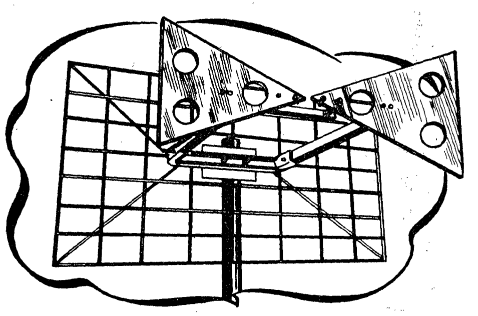


- Cast aluminum construction. Alloy used has extra high corrosion resistance rating.
- Weather-proof . . . no danger of freeze-ups due to unique outside casting design.
- Roller bearing equipped for easy turning.
- Stand-off insulator furnished as standard equipment... tapped hole for fast installation, can be used with maximum of 6 guy wires.
- Fits any mast up to 1¾″ O. D. Furnished complete with 6 bolts, 12 locking nuts, and 3 guy wire thimbles.
- Shipping weight approximately 2 pounds.
- Bearing lubrication will not freeze at 50-F. below zero or melt at 200-F.
- Can be used with the Crown Antenna Rotator where the rotator is mounted at the base of the antenna mast.

TELEMATIC **ANTENNAS** | **WAVE TRAPS** | **HI-PASS FILTERS**

INDUSTRIES, INC. - BROOKLYN 2, N. Y.

NEW U.H.F. BOWTIE ANTENNA



The ULTRA MATIC

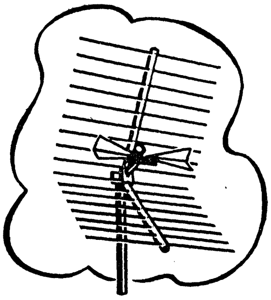
ULTRA...

- *SENSITIVE*
- *LOW LOSS*
- *DIRECTIONAL*
- *COMPACT*
- *HIGH GAIN*
- *ECONOMIC*

The finest Bowtie ever designed. A TELEMATIC engineering triumph! Look at these features: Wide spaced element support minimizes R.F. leakage. Virgin poly spacing pillars. Double zinc plated screen reflector. Folds flat as a pancake — sets up in seconds. Rigid construction for sharp, flicker free reception. Guaranteed — the best!

CAT. NO. 700 .... List $7.50

NEW! U.H.F. CORNER REFLECTOR

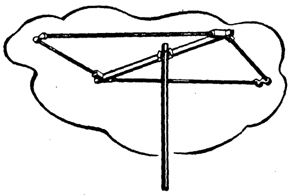


Completely new from dipole to reflector. TELEMATIC'S finest broadband U.H.F. antenna. An excellent all-around fringe area performer. No forward obstruction to reduce "Beam-power" gain. Solid, vibrationless construction. Easy assembly — only seconds to install.

CAT. NO. 710 .... List $14.50

NEW! U.H.F. RHOMBIC

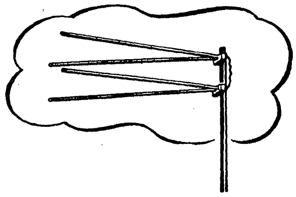
The U.H.F. obstruction chaser. Designed for use in areas where trees, buildings and other obstructions cause multiple reflections. Narrow beam horizontal directivity reduces ghosts and interference. Uniform signal gain over entire U.H.F. spectrum. Simple rugged construction. Reinforced elements. A real performer.



CAT. NO. 730 .... List $9.95

NEW! U.H.F. FRONT "V"

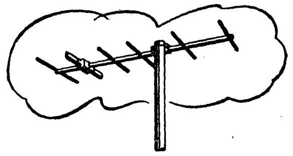
The New TELEMATIC U.H.F. front "V" antenna, like its V.H.F. predecessor, is designed for razor sharp, narrow beam reception. Exceptionally high gain. Receiving range in excess of 50 miles. Matches 300 ohm twin lead. Rigid "Windproof" construction. Installed in seconds — lasts for years. Another TELEMATIC "Plus value."



CAT. NO. 720 .... List $7.95

NEW! U.H.F. YAGI

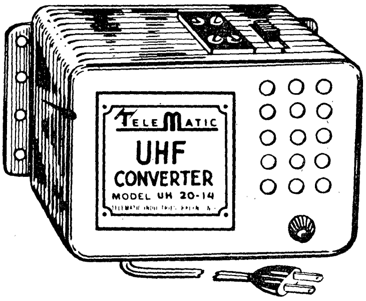
Old reliable! A U.H.F. yagi combining broad band coverage plus high gain directivity. All the brilliant performance that only a YAGI can deliver. Simple everlasting construction. Crossarm drilled to receive elements. No fussing with "U" bolts. Pre-adjusted for maximum signal gain. Razor sharp "beam power" directivity. An exceptional antenna.



CAT. NO. 750 .... List $5.95

Add Channel number to No. 750 when ordering.

EXCLUSIVE! U.H.F. SINGLE CHANNEL CONVERTER



An all new, hide away U.H.F. converter. Designed to provide finest reception of your favorite U.H.F. channel on present V.H.F. television receivers. Superbly designed for high efficiency. No tuning required, once in use. Just set it and forget it. Guaranteed not to interfere with normal V.H.F. reception. Supplied with all tubes, ready for immediate installation and use. Completely self powered. For use on 110 Volts 60 Cy. only.

CAT. NO. UH20 (specify channel) .... List $27.65

FEATURES...

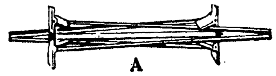
- *OUT OF SIGHT*
- *SET & FORGET*
- *SELF POWERED*
- *EXTRA HIGH GAIN*
- *EASILY INSTALLED*
- *COMPACT*
- *FINE TUNING*

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

TELEMATIC INDUSTRIES, INC. - BROOKLYN 2, N. Y.

ANTENNA SWITCHES | CO-AX MATCHING TRANSFORMERS | T.V. RECEIVER COUPLERS

SPEEDY RIG CONICAL ANTENNAS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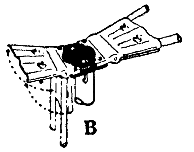
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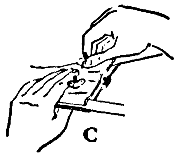
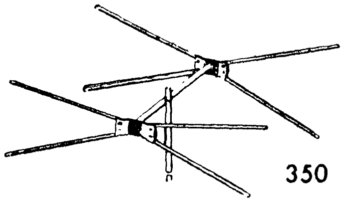
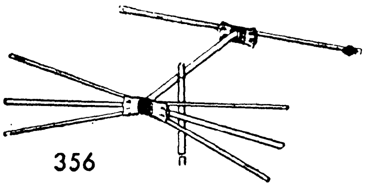

C

The last word in antenna Engineering. Designed for ease in installation, as well as efficiency in operation. Installed in a jiffy. A.) Packed completely pre-assembled. No loose hardware. B.) Elements pinned-in and hinged at ends ready to swing into position. C.) Swing jaws shut, tighten wing nuts and antenna is ready. Exceptional gain on all channels, 2 to 13 inclusive. Extra sturdy, all aluminum construction. Supplied less mast.

CAT. NO. 350—Single, 8 elements	**List $11.77**
CAT. NO. 350-2X Two bay, 16 elements	**List 24.54**
CAT. NO. 356—Single, 8 elements	**List 11.77**
CAT. NO. 356-2X Two bay, 16 elements	**List 24.54**

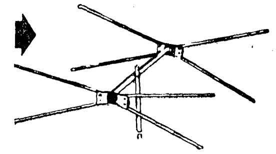

350

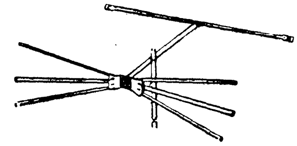

356

DELUXE PLUG-IN CONICALS

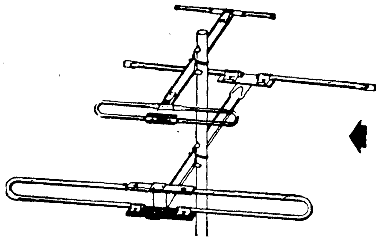
Economical and efficient. Especially designed for weak signal areas. Features 4 to 1 front to back ratio. Maximum signal to noise ratio. Equal reception on all channels 2 to 13 inclusive. For use with 72, 150, 300-ohm line. Sturdy all aluminum construction. Built to take it. Less mast.

NO. 250—Single, 8 elements	**List $ 6.93**
NO. 250-2X—2 bay, 16 elements	**List 14.44**
NO. 256—Single, 8 elements	**List 6.93**
NO. 256-2X—2 bay, 16 elements	**List 14.44**





HI-LO FOLDED DIPOLES WITH REFLECTORS

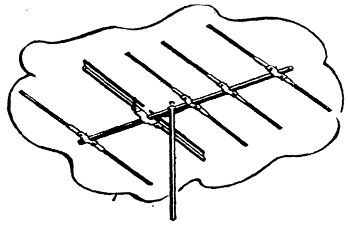


Speedy rig folded dipole antennas are completely pre-assembled. All loose hardware is securely locked in place. Installed in minutes, they last for years. Designed for broad band tuning. Hi and low orient independently.

CAT. NO. 462—Combination Hi-Lo	**List $9.28**
CAT. NO. 463—Hi frequency section only	**List 2.77**
CAT. NO. 461—Lo frequency section only	**List 7.06**

ALL LESS MAST

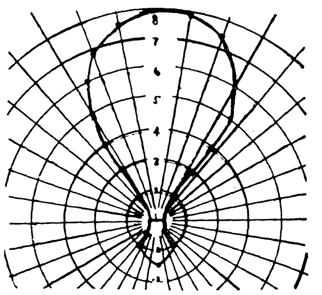
SUPER BROAD BAND YAGIS



The ultimate for fringe area reception. Covers 3 to 4 channels from the same direction. 26 db front to back ratio. Forward gain 10.2 db over a di-pole. Pre-assembled on one piece collector bar. Installed in minutes. All aluminum construction. Matching stubs available for stacking.

NO. 200-2 Channel 2 — 5 elements	**List $12.50**
NO. 200-3 Channel 3 — 5 elements	**List 11.75**
NO. 200-4 Channel 4 — 5 elements	**List 11.10**
NO. 200-5 Channel 5 — 5 elements	**List $10.44**
NO. 200-6 Channel 6 — 5 elements	**List 9.70**
NO. 200-7 to 200-13 Chan. 7 — 13 elements	**List 6.95**
STACKING KITS QB-22-2 through QB-22-6—Channels 2 thru 6	**List 3.50**
STOCKING KITS QB-22-7 through QB-22-13—Channels 7 thru 13	**List 1.40**

FIELD PATTERN OF THE 'SUPER-YAGI' SHOWING HIGH FRONT-TO-BACK RATIO



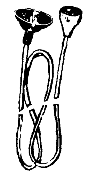
CHANNEL 4

TELEMATIC INDUSTRIES, INC. - BROOKLYN 2, N. Y.

ANTENNAS **WAVE TRAPS** **HI-PASS FILTERS**

C. R. T. EXTENSIONS

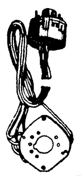
ANODE EXTENSIONS



A high voltage extension permitting CR tube to operate either 3 or 6 ft. from TV chassis. Anode cap made of Neoprene, Ext. end of Polyethelene. Non-breakable ends designed for hard usage.

CR-33—3 Feet	List $1.50
CR-33-6—6 Feet	List 2.00

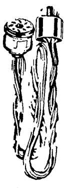
CR SOCKET EXTENSION



6 wire picture tube extension harness either 3 or 6 ft. long. Tube socket on one end and tube base on other. Generally used with anode extension above.

CR-35—3 Feet	List $2.25
CR-35-6—6 Feet	List 3.25

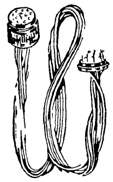
YOKE EXTENSION



8 wire yoke extension. Both ends completely enclosed with plugs and pitch filled for durability. 3 or 6 ft. lengths available.

CR-55—3 Feet	List $2.25
CR-55-6—6 Feet	List 3.25

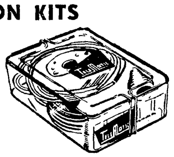
PHILCO CHASSIS EXTENSION



Two types, 6 or 10 wire, covers all current Philco TV sets. Plugs on both ends pitch filled for hard service. May be used in servicing or custom installation.

CR-75— 7 Lead	List $2.25
CR-76—11 Lead	List 3.00

EXTENSION KITS

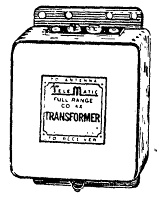


C.R.T. extension kits consisting of various combinations of assemblies described above. Each kit has been carefully selected to provide the utmost in convenience for servicing, converting or custom installing of TV receivers.

CR-41—(3 ft.) contains 1 CR-33, and 1 CR-35	List $3.75
*CR-57—(3 ft.) contains 1 CR-33, 1 CR-35 and 1 CR-55	List $6.00
CR-57-6—(6 ft.) contains 1 CR-33-6, 1 CR-35-6 and 1 CR-55-6	List $7.75
*CR-78—(Philco) contains 1 CR-55, 1 CR-75 and 1 CR-76	List $7.50

(*Packed in transparent styrene boxes)

MATCHING TRANSFORMERS

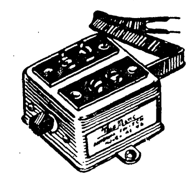


Highly efficient matching transformers for use where 300 Ohm twin lead must be matched to 72 Ohm co-ax input and vice versa.

AT-19—300 Ohm to 72 Ohm input
AT-26— 72 Ohm to 300 Ohm input
List $3.00

ANTENNA SWITCHES

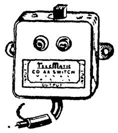
2 POSITION — 300 OHM



Sturdy, compact, impedance matched switch accommodates two 300 Ohm antennas to one 300 Ohm rcvr. input.

AS-46—2 position antenna switch List $2.00

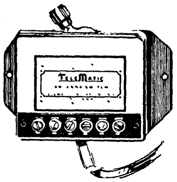
2 POSITION — 72 OHM



Similar to AS-46 but designed for use with two 72 Ohm co-ax antennas and one 72 Ohm co-ax receiver input.

AS-48—2 position co-ax sw. List $2.50

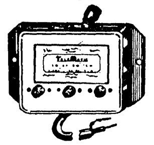
3 POSITION — 300 OHM



Low loss impedance matched switch will accommodate 3 separate 300 Ohm antennas to one 300 Ohm input or 3 rcvr. inputs to one antenna.

AS-18—3 position ant. sw. List $3.50

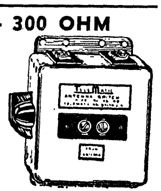
3 POSITION — 72 OHM



Similar to AS-18 but designed for use with three 72 Ohm co-ax antennas and one 72 Ohm co-ax rcvr. input or vice versa.

AS-47—3 position co-ax sw. List $4.50

4 POSITION — 300 OHM

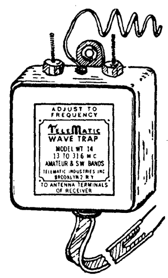


Accommodates four 300 Ohm antennas to one 300 Ohm rcvr. input, or one antenna to four 300 Ohm receivers. Employs rotary selector switch.

AS-49—4 position ant. sw. List $5.95

WAVE TRAPS

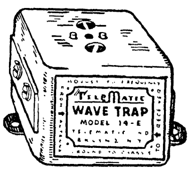
INDUCTIVE TUNED TRAPS



Slug tuned wave traps designed to eliminate undesired or interfering RF signals received through TV receiver front ends. Two section slug tuned circuits for fine tuning of either balanced or unbalanced antenna inputs.

WT-14 for amateur or commercial sw., 13.5 to 31.6 Mcs.	List $3.50
WT-15 for amateur or diathermy, 30 to 60 Mcs.	List $3.50
WT-16 for FM or diathermy, 60 to 90 Mcs.	List $3.50
WT-17 for FM images, 90 to 112 Mcs.	List $3.50
WT-27 for comm. transport band, 140 to 170 Mcs.	List $4.00

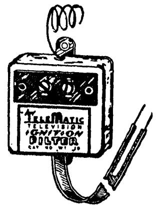
CAPACITIVE TUNED TRAPS



Condenser tuned wave traps similar to above. Designed for use in circuits that can not accommodate additional inductance at the front end.

WT-14E for the new 15 mtr. amateur band 13.5 to 32 Mcs.	List $3.50
WT-15E for amateur or diathermy, 30 to 75 Mcs.	List $3.50
WT-16E for FM interference, 72 to 160 Mcs.	List $3.50

IGNITION FILTERS



Specifically designed to eliminate or reduce those annoying streaks, on TV screens, generated by passing automotive traffic. Fully enclosed in metal shield. Simple to install.

WT-28 Ignition filter
List $2.00

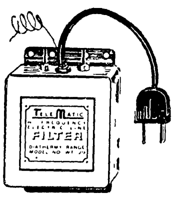
ANTENNA SWITCHES

CO-AX MATCHING TRANSFORMERS

T.V. RECEIVER COUPLERS

TELEMATIC INDUSTRIES, INC. - BROOKLYN 2, N. Y.

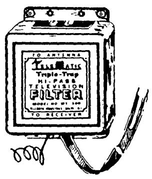
AC LINE FILTERS



Tunable low pass line filters designed eliminate RF signals or other noises received through the AC mains. Fully shielded Easy to install.

WT-29 for diathermy .... List $5.95
WT-30 for general line noises List $4.95

HI-PASS FILTERS

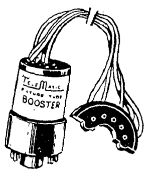


Completely eliminates harmonic interference from amateur, diathermy or other RF sources. 3 section filter, completely shielded. For 72 or 300 Ohms.

WT-300 for 300 Ohm line List $5.95
WT-072 for 72 Ohm co-ax... List $5.95

C. R. TUBE BOOSTERS

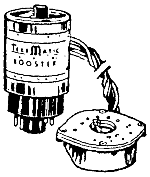
1 STAGE BOOSTER



Add life to your old, worn-out picture tube. Just plug it in and get months and months of extra bright TV reception.

CR-50 Series fil. circ............... List $3.50
CR-51 Isolation type............. List $3.50
CR-64 Par. Fil. Circ. List $3.50

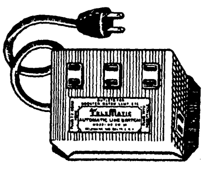
2 STAGE BOOSTER



For very old CR tubes. Intensifies in two stages, adding more than twice the extra life provided by the single stage intensifier. No line cord — no splicing. Easy to install.

CR-54 2 stage booster..........List $5.95

AC LINE SWITCHES

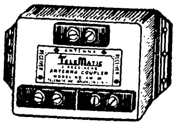


Automatically operates accessories normally used with your TV set. Turns the equipment on or off as the receiver is turned on or off. No more unsightly tangled wires. Sturdy, compact metal case mounts conveniently in rear of set.

SW-58 Automatic line switch..List $5.95

ANTENNA COUPLERS

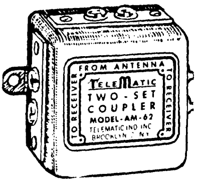
2 SET — TWIN LEAD



Efficiently couples two 300 Ohm rcvrs. to one 300 Ohm antenna. Employs balanced semi-tuned system with no noticeable signal loss. Housed in a compact metal case. Out of sight — easy to install. Factory tested.

AM20 Two set 300 Ohm coupler List $7.95

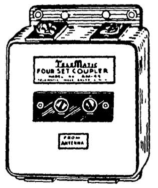
2 SET — "ECONOMY"



Low priced 2 set coupler featuring two stage transformer inductive coupling. Allows two 300 Ohm TV receivers to operate from the same 300 Ohm antenna. Can be installed anywhere.

AM-62 Two set 300 Ohm coupler List $3.50

4 SET TWIN LEAD AND CO-AX

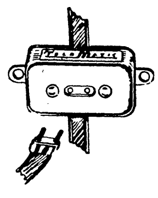


Two types to choose from. Matches four rcvrs. from one 300 Ohm antenna. Compact, easy to install.

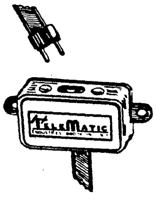
AM-44 Matches one 300 Ohm antenna to four 300 Ohm receivers List $5.95
AM-40 Matches one 300 Ohm antenna to four 72 Ohm receivers List $8.95

WALL ANT. RECEPTACLES

Two models of wall receptacles for convenience in store demonstration, servicing or home use where several TV sets must be used at the same time. Eliminates using screw driver each time set is moved. 300 Ohm plug is supplied with each receptacle Model AT-66 has receptacle at the top, Model AT-67 has receptacle on the front. May be paralleled on one feedline, or used on separate antennas.



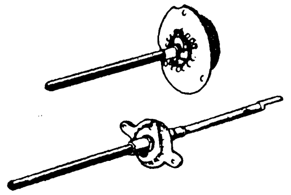
AT-66



AT-67

AT-66 Front receptacle ....List $1.00
AT-67 Top receptacle ....List $1.00

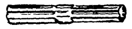
DETENTS



Popular TELEMATIC STURDY TUNE detents are widely known for their heavy duty construction and economy in price. Made for most popular TV sets in use today. (*Asterisk before model number indicates that locator plate is NOT supplied.)

	REPLACES	LIST PRICE
*1015	RCA #71463	$1.50
1015PL	RCA #71463	2.80
*1016	RCA #72743	1.50
1016PL	RCA #72743	3.15
*1017	Admiral #76B14	2.00
1017PL	Admiral #76B14	4.15
1018	RCA #73440	4.75
*1019	Teletone 1/4" shaft	2.00
*1020	TELETONE 3/16" shaft	2.00
*1021	Magnavox #633722-1	2.00
1021PL	Magnavox #633722-1	4.15
1022	RCA #75162	4.00

MAST COUPLERS



The ideal method for securely coupling two 1 1/4 inch masts. No tools or hardware required. Cannot work loose. Simply slide end of coupler into each mast section. Heavy weatherproof cadmium plated finish.

CU-1 for 1 1/4" O.D. mast.........List $.85

CONICAL STABILIZERS

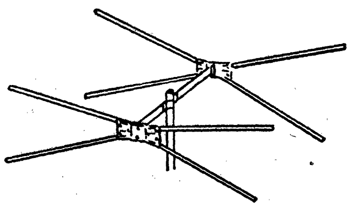
A durable, low loss means of preventing conical antenna elements from bending, buckling or breaking due to vibration. Aluminum arms firmly clamped over weatherproofed hardwood center. For use on both 3/8" or 1/2" O.D. elements.

CS-21 Conical stabilizer..........List $.50

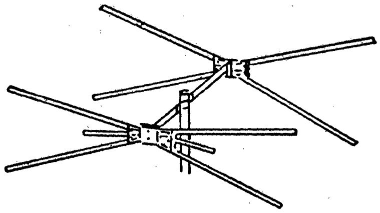
PHOENIX ELECTRONICS, INC. LAWRENCE, MASS.

PHOENIX CONICALS

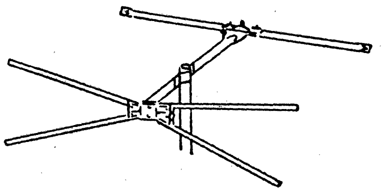
HIGH GAIN. 4 TO 1 FRONT TO BACK RATIO. ALL CHANNELS 2-13 UNI DIRECTIONAL. MAXIMUM SIGNAL TO NOISE RATIO. FOR USE WITH 72-150-300 OHM LINES. LOW INCEPTION ANGLE.



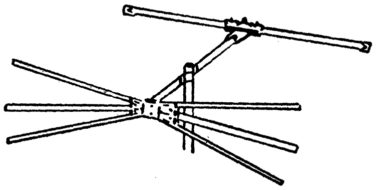
PAR-4. High gain. Channels 2-13. 4 elements. 4 reflectors. LIST ________ 8.25



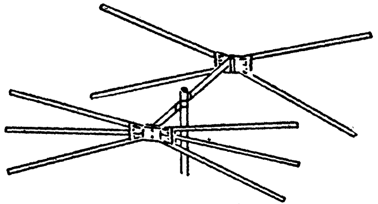
PAR-48. 4 elements plus 2 high freqs., 4 reflectors. Single bay. PAR-48-4X. Four stacks with ¼ wave connecting bars. LIST ________ 8.60



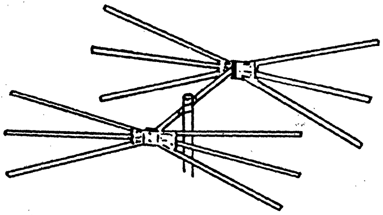
PAR-49. 4 elements. 2 reflectors. Single bay. PAR-49-4X. Four stacks with ¼ wave connecting bars. LIST ________ 8.50



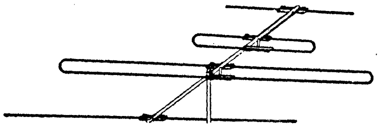
PAR-47. 6 elements. 2 reflectors. Single bay. PAR-47-4X. Four stacks with ¼ wave connecting bars. LIST ________ 9.25



PAR 46. 6 elements. 4 reflectors. Single bay. PAR-46-4X. Four stacks with ¼ wave connecting bars. LIST ________ 8.75

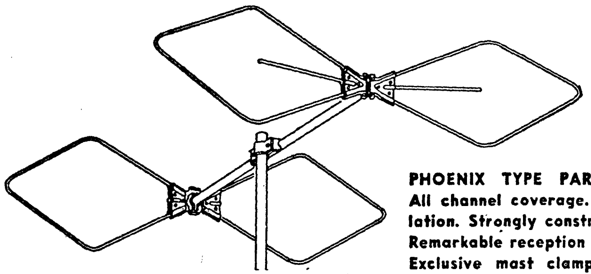


PAR-50. 6 elements. 6 reflectors. Single bay. PAR-50-4X. Four stacks with ¼ wave connecting bars. LIST ________ 10.50



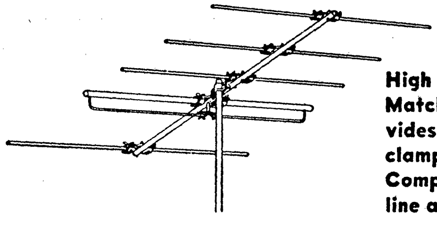
PHOENIX PAR-3 IN-LINE
High gain antenna consisting of director, high and low folded dipoles and reflector. Lo-loss insulation. Complete with all hardware — less mast. Complete coverage from channels 2-13.

LIST 11.50

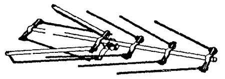


PHOENIX TYPE PAR-8 DOUBLE LOOP
All channel coverage. Quick, easy installation. Strongly constructed for long life. Remarkable reception even in fringe area. Exclusive mast clamp prevents turning, canting or breaking.

LIST ________ 8.25

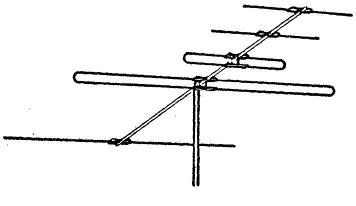


PHOENIX YAGI 5 ELEMENT



High gain. Clearer, sharper, steadier pictures. Matches 300 ohm impedance. Molded insulator provides additional strength. Exclusive design mast clamp. Sturdy, trouble-free construction. Quick rig. Completely pre-assembled. Just swing elements into line and tighten wing nuts.

LIST, CHANNELS 2-3___17.
CHANNEL 4________14.
CHANNELS 5-6____12.50
CHANNELS 7-13____7.50

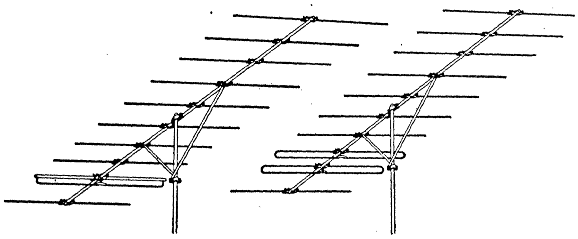


PHOENIX PAR-5 IN-LINE

Complete coverage from channels 2 to 13

Maximum performance in fringe areas. Matches 300 ohm line. Molded lo-loss insulators. Sturdy construction. Exclusive design mast clamp prevents antenna turning or canting under any conditions. Quick rig — Completely preassembled. Just swing elements into line and tighten nuts. Simple — quick — easy.

LIST ________ 11.80

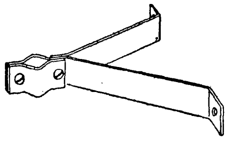


LIST, CHANNELS 7-13_14.
CHANNELS 2-3-4___30.
CHANNELS 5-6_____25.

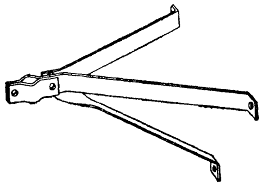
PHOENIX 10 ELEMENT FRINGE MASTER YAGI

10 elements for maximum performance, minimum interference. Exclusive mast clamp design prevents canting or turning. "Intralok" support stops waving and wiggling, assures permanent rigidity. Matches 300 ohm impedance.

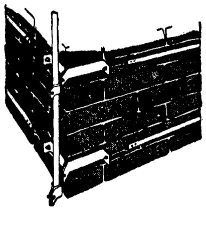
PHOENIX ELECTRONICS, INC. LAWRENCE, MASS.



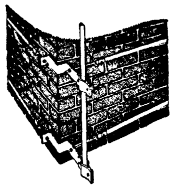
PHOENIX WALL MOUNT PAM-1
Can be mounted on any wood or masonry wall. Adjustable clamp holds any size pole from ¾" to one and a half inches in diameter. 6" clearance.
LIST PRICE______2.50 pr.



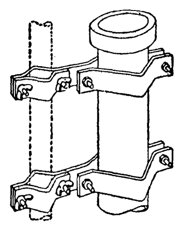
PHOENIX WALL MOUNT PAM-4
For installations requiring up to 12½ inches clearance. Mast clamp securely holds poles from ¾" to one and a half inches in diameter. Ruggedly constructed of heavy plated steel.
LIST PRICE______5.00 pr.



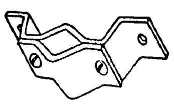
PHOENIX CHIMNEY MOUNT PAM-9
Adjustable clamp holds masts ¾" to 1½". Extra strength at point of greatest stress! All weatherproofed steel.
LIST PRICE______3.00 pr.



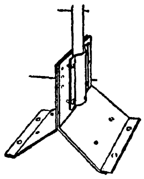
PHOENIX PAM-5 CHIMNEY MOUNT
Fits any type of chimney. Fast, one man installation. Weather proof. Adjustable clamp holds any mast from ¾ inch to 1½ inches.
LIST PRICE______2.50 pr.



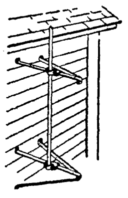
PHOENIX VENT PIPE MOUNT PAM-7
Quickly attached to any pipe or round object 2½" to 6" in diameter. Holds any size mast from ¾" to 1½". Heavily plated steel.
LIST PRICE______3.00 pr.



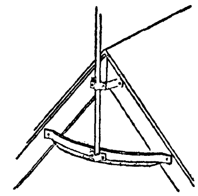
PHOENIX WALL MOUNT PAM-8
3" clearance. Heavily plated steel. Adjustable clamp holds any pole from ¾" to 1½" in dia.
LIST PRICE______1.50 pr.



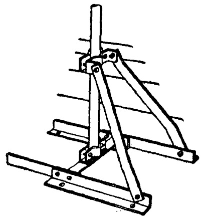
PHOENIX ROOF MOUNT PAM-12
For quick and easy mounting on flat or peaked roofs. Heavily plated steel strongly braced. Clamps will hold any size pole from ¾" to 1½" in diameter.
LIST PRICE______3.95 ea.



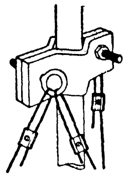
PHOENIX WALL MOUNT PAM-6
Exceptionally strong and rigid. Adjustable from one inch to nineteen inches. Holds masts from three quarters to one and one-half inches. Heavy gauge steel.
LIST PRICE______7.00 pr.



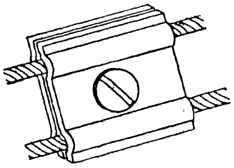
PHOENIX EAVE MOUNT PAM-10
Quickly mounts on rafters, trim boards and offsets at top of building, clearing windows, louvres and other obstructions.
LIST PRICE______3.95 pr.



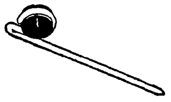
PHOENIX UNIVERSAL MOUNT PAM-3
Mounts anywhere — flat roofs — sloping roofs (any pitch) — peaked roofs. Clamps will hold any size pole from ¾" to 1½" in diameter.
LIST PRICE______9.50 ea.



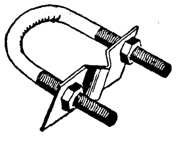
PHOENIX GUY WIRE CLAMP PC-1
Can be fastened anywhere on mast. Quickly attached to any size mast ¾" to 1½" in diameter. Heavily plated.
LIST PRICE______.50 ea.



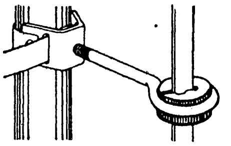
GUY WIRE CABLE CLAMP PCC-1
Holds any size guy wire securely. Vibration-resistant. Heavily plated steel.
LIST PRICE______.10 ea.



PHOENIX TYPE PDI-1 DRIVE-IT INSULATOR
Just hammer it in — DRIVE-IT stays in permanently and securely. Made of heavily plated steel. Lo Loss Polyethylene insert.
LIST PRICE______.06 ea.



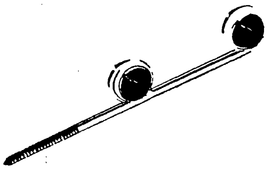
U BOLT CLAMP TYPE PUC-1
Joins 2 masts together quickly and securely. Galvanized steel. 10 to the carton. 100 to master carton.
LIST PRICE______.25 ea.



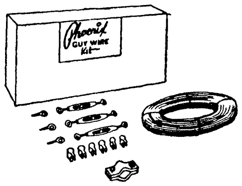
PHOENIX PAM-11 STAND-OFF INSULATORS
Attaches in 10 seconds to any size mast. Polyethylene insert. 3½" stand-off.
LIST PRICE______.15 ea.

PHOENIX PAM-11-T TWIN STAND-OFF INSULATORS
LIST PRICE______.30 ea.

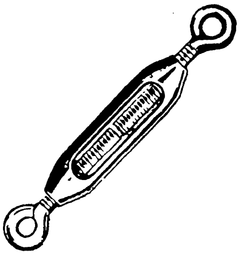
PAM-11A Stainless Steel Strap
LIST PRICE______.19 ea.



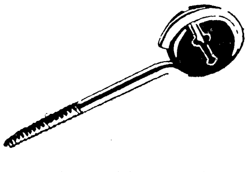
PHOENIX TWIN SCREW TYPE PST-3 INSULATORS
Holds HF leads 7" from wall — improves performance — cuts losses. One piece all steel, heavily plated.
LIST PRICE______.25 ea.



PHOENIX GUY WIRE KIT PK-1
Consists of 50 feet of 6 strand steel guy wire; 3 turnbuckles; 3 screw eyes; 6 cable clamps, and 1 guy wire mast clamp all packed in carton. Metal parts are galvanized.
LIST PRICE______3.25 ea.



TURNBUCKLES TYPE PTB-1
(adjusts 4⅞" to 6⅞" long)
For adjusting tension on antenna guy wires. Heavily galvanized with clean cut threads. Twelve to carton.
LIST PRICE______.30 ea.



PHOENIX SCREW TYPE INSULATORS
Heavily plated. Lo Loss Polyethylene insert. Type PS-1 — 3½" long. Type PS-2 — 7½" long. PS-4 screw insulator, 10/32 mach. Thread 3½" long. PS-5 screw insulator, 10/32 mach. Thread 7½" long. PST-6 twin screw insulator, 10/32 mach. Thread 7½" long.
LIST PRICE______.06 ea.
LIST PRICE______.09 ea.
LIST PRICE______.06 ea.
LIST PRICE______.09 ea.
LIST PRICE______.25 ea.

PHOENIX ELECTRONICS, Inc., Lawrence, Mass.

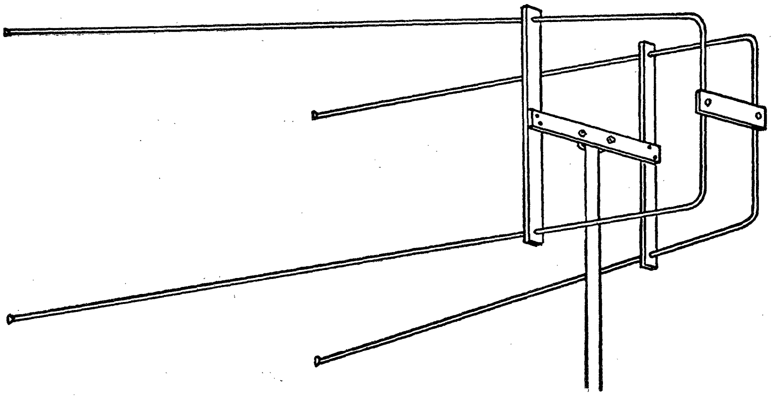
ULTRA HIGH FREQUENCY SPEED-TENNAS

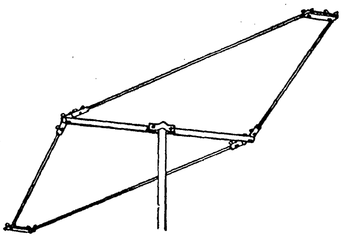
Phoenix Type
PAR-108

ULTRA HI-V

Channels 14-83

- High gain
- 300 ohm impedance
- Exclusive mast clamp



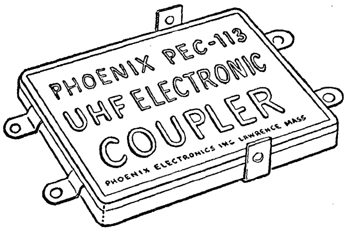


Phoenix Type
PAR-104

UHF RHOMBIC

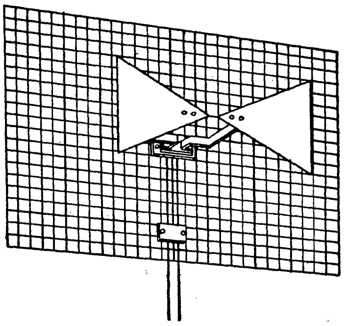
Channels 14-83

High gain . . . 300 ohm impedance.


PHOENIX PEC-113
UHF ELECTRONIC
COUPLER
PHOENIX ELECTRONICS INC LAWRENCE MASS

Phoenix Type
PEC-113

UHF ELECTRONIC COUPLER



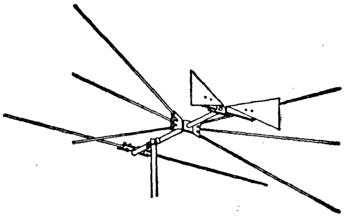
Phoenix Type
PAR-102

ULTRA Hi BOW

with Screen Reflector

Channels 14-83

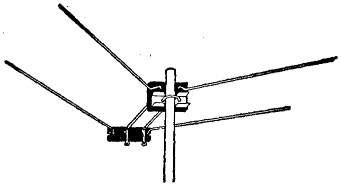
High gain . . . 300 ohm impedance.



Phoenix Type
PAR-103

NEW UHF-VHF ALL CHANNEL 2-83

One antenna . . . one transmission line for all channels.

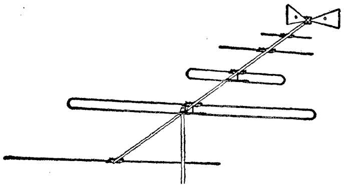


Phoenix Type
PAR-111

UHF ULTRA-METRO

Channels 7-83

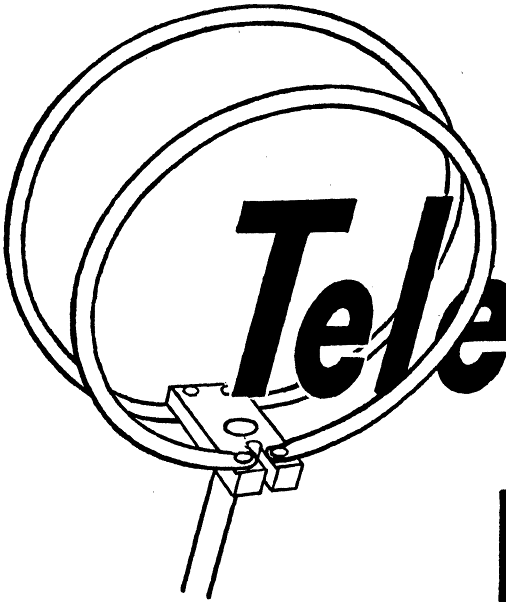
WRITE FOR PRICES
AND COMPLETE CATALOG



Phoenix Type
PAR-105

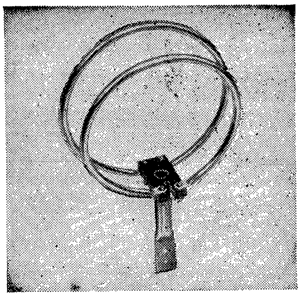
NEW UHF-VHF ALL CHANNEL 2-83

One antenna . . . one transmission line for all channels.

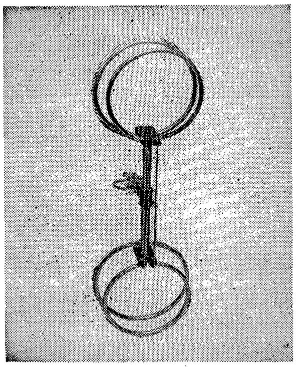


Telesine UHF ANTENNAS

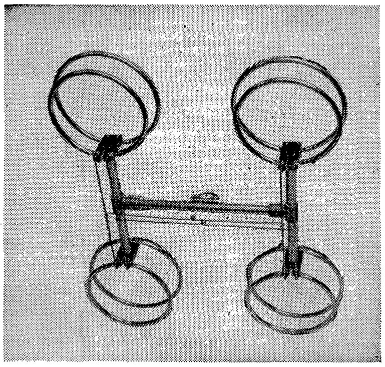
are
Precision Engineered
Ruggedly Built
Pre-Assembled



Two-element antenna for
Grade "A" UHF areas



Four-element antenna for
Grade "B" UHF areas



Eight-element antenna for UHF
fringe areas . . . and BEYOND

USE-TESTED IN UHF AREAS!!

They offer your customers . . .

HIGH GAIN — Six, nine and fifteen db gain are obtained by three Telesine UHF models.

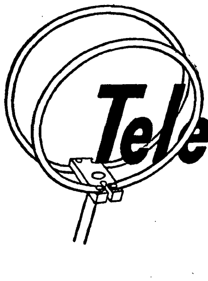
SPEEDY INSTALLATION — Open the box and mount UHF Telesine on mast . . . No assembly! Elements precision-spaced at the factory!

SERVICE FREE PERFORMANCE — Telesine Antennas are built of heavy-guage *seamless* aluminum tubing to withstand high winds and ice . . . will not rust or corrode!

All Telesine Antennas respond to *both* HORIZONTAL *and* VERTICAL COMPONENTS — every signal variation . . . gives you BETTER RESOLUTION than any antenna on the market!

FULL WAVE LENGTH ELEMENTS — no side lobes to pick up interference! 10° Forward Beam.

Patent Pending



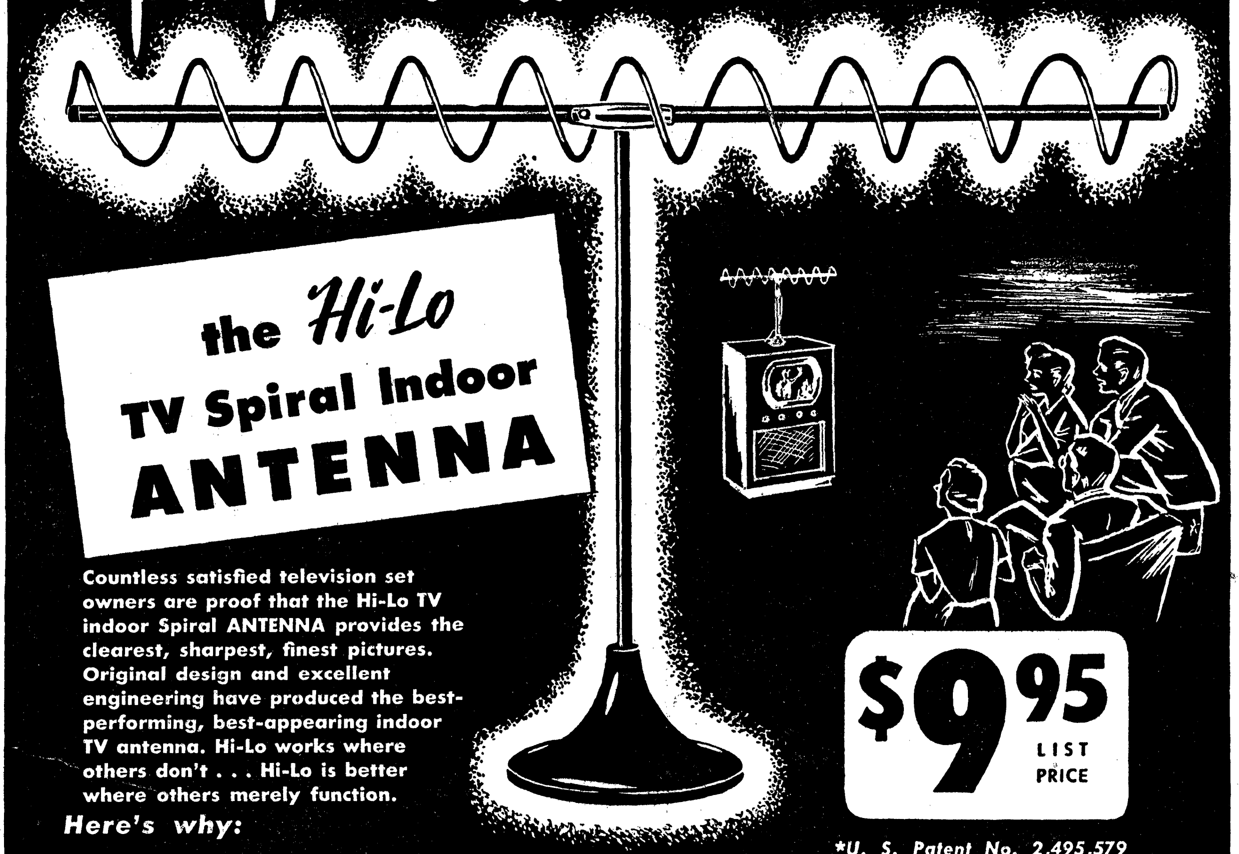
***. . . also a complete line of* Telesine VHF ANTENNAS**

For detailed information, write or wire
TELESINE ANTENNA CORPORATION
P. O. Box 1387
Shreveport 92, Louisiana

Copyright 1953
Telesine Antenna
Corporation

a TELESINE solution for every UHF reception problem

peak performance for indoor TV reception!



the Hi-Lo TV Spiral Indoor ANTENNA

Countless satisfied television set owners are proof that the Hi-Lo TV indoor Spiral ANTENNA provides the clearest, sharpest, finest pictures. Original design and excellent engineering have produced the best-performing, best-appearing indoor TV antenna. Hi-Lo works where others don't . . . Hi-Lo is better where others merely function.

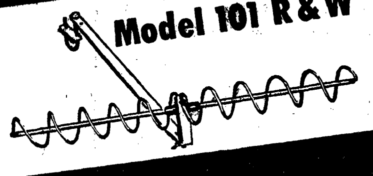
Here's why:

- *high signal gain*
- *tuned to high and low TV channels*
- *no switches or rods to adjust*
- *receives clear picture immediately*
- *screwdriver only necessary for rapid installation*
- *gleaming gold appearance*
- *height 20″ — width 32″*
- *bakelite base*
- *aluminum bars*
- *modern design to blend with any furniture*

$9.95 LIST PRICE

Model 101*

*U. S. Patent No. 2,495,579
Canadian patents 1951



Model 101 R&W* for Outdoor Use

- Window Installation
- Roof Installation
- Attic Installation

ORDER Hi-lo TV Spiral ANTENNAS today!

HI-LO TV Spiral Indoor and Outdoor antennas are sold through recognized jobbers. ORDER NOW for assured delivery.

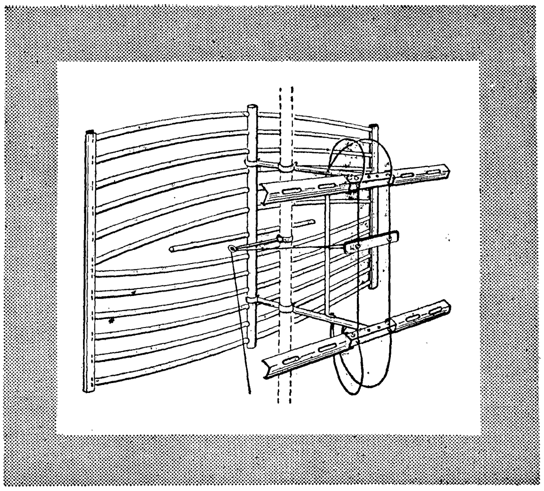
Hi-Lo TV ANTENNA CORP.
3540 N. Ravenswood • Chicago 13, Illinois

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

New Improved DAVIS SUPER-VISION TELEVISION ANTENNA

WIND TESTED And WEATHERIZED

DAVIS SUPER-VISION



LIST PRICE

$34.95

Less Mast

With the Newly Designed
ELECTRONIC DIPOLE SEPARATORS
(as illustrated)

features...

1. Excellent for fringe area and DX receiving and broad band receiving and high gain on all channels — 2 through 13.
2. Ghost problems reduced or eliminated due to excellent pattern.
3. Clearer pictures up to 125 miles or more from the station.
4. Provides 10 DB or more gain on high channels where gain is most needed.
5. Has excellent front to back ratio on all channels. Eliminates co-channel interference.
6. Minimizes interference: Airplane Flutter — Diathermy and Ignition — F.M. — Neon Signs — X-Ray — Industrial — Etc.
7. Eliminates double stacked arrays, and out-performs 2 bay yagis on low band and 4 bay yagis on high channels.
8. Only one transmission line necessary.
9. No worry over possible channel changes on either high or low channels.
10. It can be tipped without tilting the mast — to take advantage of the horizontal wave lengths.
11. Can be used with an Antenna Rotor.

SUMMARIZING THE PERFORMANCE CHARACTERISTICS: The excellent gain pattern and line match are outstanding on all of the high channels and very good on all of the low channels.

PACKED: One to a corrugated shipping carton.

SHIPPING WEIGHT: 12 lbs. Complete with Assembly Instructions.

Design Patent Pending — U.S. & Foreign Countries

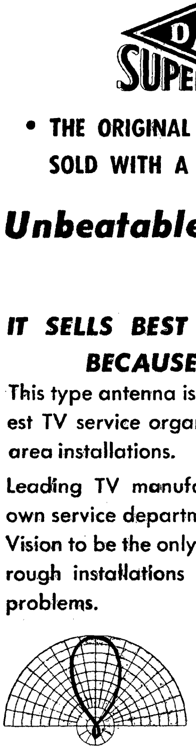
- **THE ORIGINAL TELEVISION ANTENNA SOLD WITH A MONEY-BACK GUARANTEE**

Unbeatable for Fringe Area

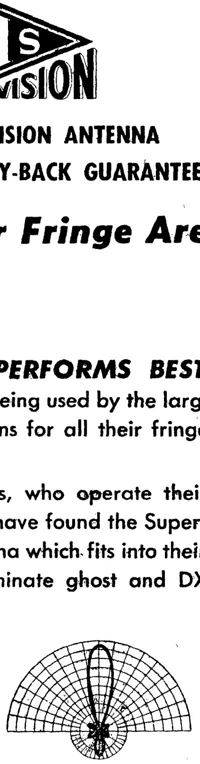
IT SELLS BEST BECAUSE IT PERFORMS BEST

This type antenna is now being used by the largest TV service organizations for all their fringe area installations.

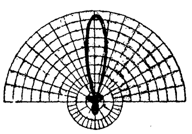
Leading TV manufacturers, who operate their own service departments, have found the Super-Vision to be the only antenna which fits into their rough installations to eliminate ghost and DX problems.



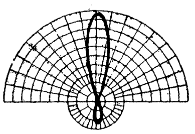
LOW BAND PATTERN



CHANNEL 7



CHANNEL 8, 9, & 10



CHANNEL 11, 12, & 13

ANTENNA SIZE:
6' 2" High (less mast)
8' Wide
4' Deep

WEST COAST ELECTRONIC MANUFACTURERS ASSOCIATION MEMBER

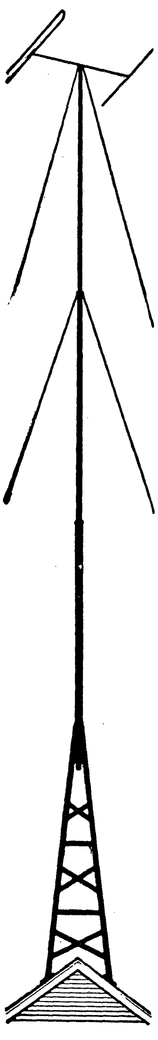
DAVIS ELECTRONICS

MANUFACTURERS OF V.H.F. AND U.H.F. ANTENNAS
Backed By Over A Quarter Century of Experience

P.O. BOX 1247 • CHarleston 0-3032 • BURBANK, CALIFORNIA

BAKER

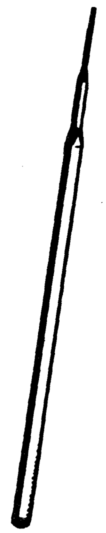
TOWERS FOR TELEVISION



MODEL 40 TK

Complete 40' installation including 010 TK and 30 AM, described below. Tower 10' high with especially designed 30' telescoping mast allows for simple one man erection of antenna 40' over a roof. Includes base to fit all roofs, self contained permanent ladder, two sturdy cast iron mast clamps adjustable for mast diameter 1" to 2", and guy washers. Exclusive built-in mast joint is simple, rigid. Safety catch holds mast during erection, installer has hands free. Heavily galvanized, built to withstand 80 mile wind. Shipped flat with major assembly done at factory.

Tower No.	Height	Wt. Lbs.	List Price	Net Dealer Price
40 TK	40' (10' Tower & 30' mast)	80	$54.60	$32.76

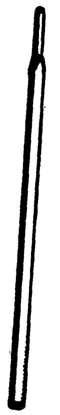


PATENT APPLIED FOR

MODEL 30 AM

Economical 30' three-section telescoping steel mast for simple, one man straight-up vertical erection, eliminating cumbersome tip-ups and high climbing. Special hardware makes tight rigid joints, and holds mast during erection, installer has hands free. Light and sturdy —will withstand 80 mile wind.

No.	Height	Wt. Lbs.	List Price	Dealer
30 AM	30' Mast	30	$24.15	$14.49
31 AM	Roof Mount with 30' Telescoping Mast	39	$31.95	19.17



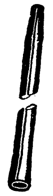
PATENT APPLIED FOR

MODEL 20 AM

A two-section 20' telescoping mast built the same as the 30 AM mast described above.

No.	Height	Wt. Lbs.	List Price	Dealer
20 AM	20' Mast	20	$15.50	$9.30

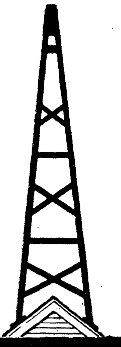
MODEL 10 AM



10' sections of sturdy 1¼" O.D. 18 gauge tubing with special Baker joint for stacking. The sections are rust proofed with Perma-tube coating inside and out.

No.	Height	Wt. Lbs.	List Price	Dealer
10 AM	10' Mast	8	$3.80	$2.28

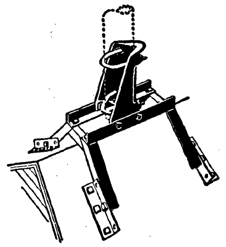
MODEL 010 TK



Self supporting steel tower 10' high. Includes base to fit all roofs, self contained permanent ladder, and two sturdy mast clamps, spaced 16" apart, adjustable for mast diameter 1" to 2". Folded flat for shipment. Heavily galvanized.

Tower No.	Height	Wt. Lbs.	List Price	Dealer
010 TK	10' Tower	50	$36.49	$21.89

ROOF MOUNT



Fits any roof. Sturdy casting and two U bolts clamp firmly to base of mast, diameter 1" to 2". Mount pivots in 2 directions to allow double tip-up. Built strong enough to support mast temporarily without guys during erection.

No.	Wt. Lbs.	List Price	Dealer
1 FM	9¼	$7.95	$4.77

BAKER MANUFACTURING COMPANY

Prices and specifications subject to change without notice.

JONTZ TV INSTALLATION ACCESSORIES

Safe . . . Long Lasting . . . Easy To Install

Model 200 "Super Kwick Climb" Tower

FINEST SELF-SUPPORTING TOWER*

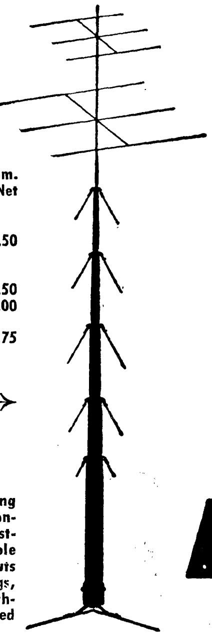
Here is the finest self-supporting tower available. Tested to withstand wind loads up to 100 m.p.h. . . . assures maximum safety with no guy wires. Approved by one of the world's leading liability insurance companies, when installed according to specifications. Constructed of highest quality rust-resistant, 1", 14 gauge steel tubing.

Available in 10-ft. sections, shipped complete with foundation mounting.

Simple to erect . . . easy to climb. This 50-foot tower may be set up in one piece or by sections . . . additional height up to 150 feet by using guys every 30 feet. Total weight 200 lbs. Additional 10-ft. sections 40 lbs. each.

*Twelve men in photograph represent 2018 lbs.!

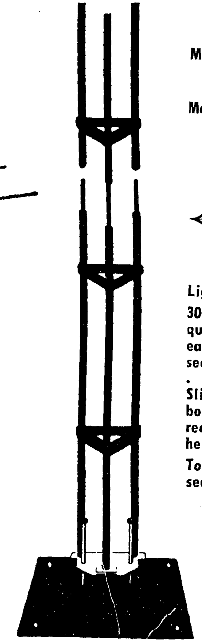
	Recom. List	Recom. Deal.Net
50′ Tower, complete with foundation mountings	$129.75	$82.50
10′ Top sections, including foundation mountings	28.75	18.50
10′ Mid sections	25.25	16.00
20′ Gim poles for erection (2″ tubing)		8.75



"Kwick Up" Telescoping Mast

QUICK MOVING . . . ECONOMICAL

Sturdy, well built, non-twisting masts to suit any location. Constructed of heavy-weight rust-resistant 16 gauge steel tubing. Available in complete package of welded nuts with set bolts, six-way guy rings, and cotter keys . . . with or without roof mounts. All masts shipped in special protective cartons.

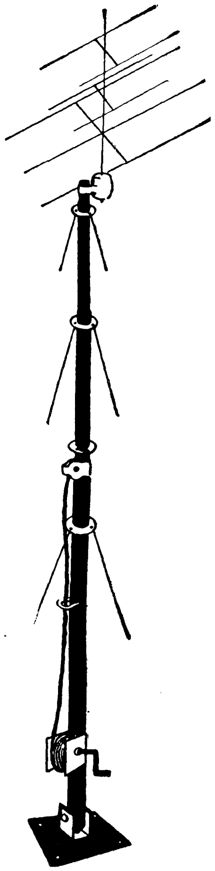


"Krank Up" TV Mast

EASY TO ERECT, EASY TO SERVICE

Low priced mast constructed of the highest quality 16-gauge steel tubing for years of satisfactory service. Cranks to any positive position from 10 feet up to 27 feet on Model 115, up to 47 feet on Model 125. Locking device eliminates all strain from cables. Available in a complete economy package including all hardware.

	List Recom.	Deal.Net Recom.
Model 115, 27′, complete with base and guy rings	$46.95	$29.50
Model 125, 47′, complete with base and guy rings	54.50	34.50



Model 100 "Kwick Climb" Tower

ECONOMY LEADER IN GUYED TOWERS

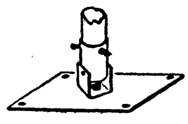
Lightweight, yet strong, durable . . . 30 feet tall. Constructed of highest quality steel tubing . . . safe and easy to climb. Available in 10-ft. sections complete with base mount . . . adaptable to any pitch roof. Slip jointed section ends eliminate bolting . . . top section sleeved to receive mast up to 2¼″. Additional height up to 100 feet if required.

Total weight 80 lbs. Additional 10-ft. sections 22 lbs. each.

	Recom. List	Recom. Deal.Net
30′ Tower, complete with base	$69.95	$44.65
10′ Top Sections	20.95	12.95
10′ Mid Sections	19.15	12.50
20′ Gim Poles for Erection (1¾″ Tubing)		8.75
Base Plates	10.70	6.70

	Recom. List	Recom. Deal.Net
Model 120, 20′, 22 lbs. with all hardware including base	$11.95	$ 7.95
Model 130, 30′, 33 lbs. with all hardware including base	20.95	13.25
Model 140, 40′, 46 lbs. with all hardware including base	27.95	17.65
Model 150, 50′, 52 lbs. with all hardware including base	30.95	19.25
Model 150A, 50′, 61 lbs. with all hardware including base	37.95	23.75

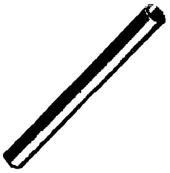
Model 120 packaged 8 per carton. Models 130, 140, 150 and 150A packaged 4 per carton.



ROTARY MOUNT — Model S

4-way rotary base mount for easy installation on flat surface. Mount weighs approximately 4 lbs., and will take up to 2¼″ tubing.

	Recom. List	Recom. Deal.Net
Model S, each	$1.95	$1.25

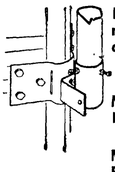


TELE-TUBE CONSTRUCTION

Jontz masts are made with Nikoh Tele-Tube — highest quality electric weld steel tubing, with heavy zinc galvanized coating. Your assurance of tubular strength and durability.

Zinc Plated with a Chromate Dip for Weather Resistance —

1″ x 14 Gauge x 10′ lengths
1¼″ x 16 Gauge x 10′ and 20′ lengths
1½″ x 16 Gauge x 10′ and 20′ lengths
1¾″ x 16 Gauge x 10′ and 20′ lengths
2″ x 16 Gauge x 10′ and 20′ lengths
1¼″ x 16 Gauge swadged x 10′ lengths
1½″ x 16 Gauge swadged x 10′ lengths



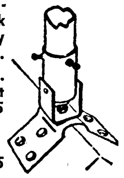
APEX MOUNT — Model A-S

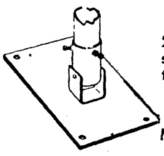
4-way swivel mount for any type of installation. Fully adaptable to flat surface, peak roof, or corner mounting. Mount is sturdily constructed, and takes up to 2¼″ tubing.

	Recom. List	Recom. Deal.Net
Model A-S, each	$2.15	$1.35

Individually packaged — master cartons of 25.

Model E, Price per 5 units $3.25
Packaged 5 units per box, 10 boxes per carton.

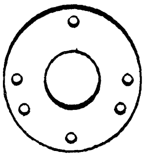




2-WAY MOUNT—Model P

2-way swivel base mount constructed of 12 gauge steel base. Rugged construction . . . will take up to 2¼″ tubing. Approximate weight 4 lbs.

	Recom. List	Recom. Deal.Net
Model P, each	$1.55	$ .95



JONTZ GUY RINGS

The answer to your guy ring needs. Handy ring may be used with either 3 or 4 wires. Outside diameter is 3⅜″, with your choice of five I.D.'s: 1″ - 1¼″ - 1½″ - 1¾″ - 2″.

	Recom. List	Recom. Deal.Net
All Sizes, each	$ .15	$ .10

JONTZ MFG. CO. T-V INSTALLATION ACCESSORIES

MANUFACTURED BY

JONTZ MANUFACTURING COMPANY

PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

PREMAX ALUMINUM ANTENNAS

Premax Telescoping Adjustable Aluminum Antennas for marine, mobile, amateur and commercial installations are built up of specially-drawn, seamless, tempered aluminum tubing engineered to withstand wind velocities up to 60 m.p.h. Collet type locking device.

No.	Description	Ext'd Lgth.	Col'd Lgth.	Base O.D.	Base I.D.	Wgt. Lbs.
AL-312	2-Sec. Tele.	12'4"	6'4"	.500"	.334"	1½
AL-518	3-Sec. Tele.	18'5"	6'4"	.750"	.584"	3
AL-324	4-Sec. Tele.	24'4"	6'4"	1.000"	.834"	5
AL-530	5-Sec. Tele.	30'0"	6'5"	1.250"	1.084"	7
AL-535	6-Sec. Tele.	35'8"	6'5"	1.500"	1.310"	12

PREMAX STEEL ANTENNAS

Low-cost, adjustable Steel Antennas for commercial, municipal, amateur, Civil Defense and other installations. Made of high-tensile, copper-nickel steel tubing, heavily cadmium-plated and resistant to corrosion. Fully telescoping and adjustable. Not recommended for marine installations on salt water.

No.	Description	Ext'd Lgth.	Col'd Lgth.	Base O.D.	Base I.D.	Wgt. Lbs.
112-M	2-Sec. Tele.	11'8"	6'0"	.656"	.556"	4
318-M	3-Sec. Tele.	17'3"	6'2"	.875"	.775"	7
224-M	4-Sec. Tele.	22'9"	6'3"	1.063"	.963"	11
130-M	5-Sec. Tele.	28'3"	6'4"	1.250"	1.150"	15
136-M	6-Sec. Tele.	33'9"	6'5"	1.500"	1.400"	20

STAINLESS STEEL ANTENNAS

Fully telescoping, adjustable Stainless Steel Antennas, made of a special grade of stainless steel tubing, hard-drawn for tensile and yield strength. Special locking device. Polished finish.

No.	Description	Ext'd Lgth.	Col'd Lgth.	Base O.D.	Base I.D.	Wgt. Lbs.
SS-1118	3-Sec.	18'4"	6'3"	.750"	.680"	6
SS-1124	4-Sec.	24'3"	6'3"	1.000"	.900"	9
SS-1130	5-Sec.	30'0"	6'4"	1.250"	1.120"	13
SS-1135	6-Sec.	35'7"	6'4"	1.500"	1.370"	19

TAPER WHIP ANTENNAS

Type E has ¼" base, taper-ground to 3/32" tip for high flexibility and strength. Easily cut to exact frequency. Fits any Premax Mounting. In Chrome Silicon Steel, cadmium-plated or in Stainless Steel with polished finish.

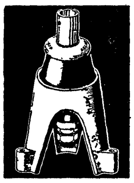
Length Overall	Chrome-Silicon Steel	Stainless Steel
60"	EC-660	ES-760
72"	EC-672	ES-772
84"	EC-684	ES-784
96"	EC-696	ES-796

Type A, made up of sections of varying diameters, securely joined into a solid step-tapered whip ¼" at base, ⅛" tip. In hi-carbon oil-tempered steel, cadmium-plated, or in polished stainless steel.

Length Overall	Stainless Steel	Cadmium-Plated Steel
60"	AS-160	AC-160
72"	AS-172	AC-172
84"	AS-184	AC-184
96"	AS-196	AC-196

Type E

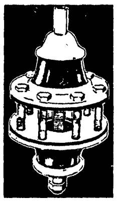
BASE MOUNTINGS



Type 1—Heavy-duty porcelain cones and galvanized malleable iron or chrome-plated bronze hardware. Height to post base, 7" to 9". Wt. 8 lbs. Available for all Premax Vertical Antennas. Specify antenna number or post diameter; also malleable or bronze, rigid or hinged post.

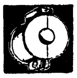
Type 2—Light design with brown glazed porcelain and removable top post, steel only. Height to post base, 6". Wt. 4 lbs. For Premax Antennas up to 25'. Specify Antenna number or post diameter.

DECK OR ROOF MOUNTING



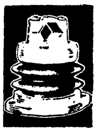
Lead-thru construction permits connections below roof or deck. 6" flange with studs and bolts for ½" to 3" deck. Galvanized malleable iron or chrome-plated bronze. Height to post base, 3" to 5". Wt. 11½ lbs. Available for all Premax Vertical Antennas. Specify Antenna number or post diameter.

TYPE 10-C MOUNTING CLAMP



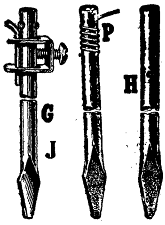
Type 10-C Mounting Clamp has stamped steel frame with porcelain split bushing. Height to center, 2". Wt. ¾ lb. Sizes to fit ⅝", ¾", ⅞" and 1" only.

PREMAX STANDOFF INSULATORS



Type 10-S—Heavy-duty Insulator, chrome-plated bronze with brown-glazed porcelain. Solid or hinge clamp. Height to center about 4½". Wt. 3 lbs. Available in sizes to fit ⅞" to 1½" tube diameter.

Type 13-S—Heavy cast aluminum, plain or chrome-plated bronze with brown glazed porcelain, 3" diameter. Height to center 4¾". Wt. 2 lbs. In sizes to fit ¾" to 1½". Specify size; also whether solid or hinge cap, aluminum or bronze.

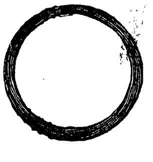


PREMAX GROUND RODS

FOR ALL RADIO AND TV INSTALLATIONS

Copper-plated steel rods, pointed for easy driving, in 4 ft. to 8 ft. lengths. Four types: Screw-Clamp, Style J in ⅜", G in ½" and ⅝"; Drilled-Hole in ½" and ⅝"; Pigtail wire in ½" and ⅝"; Plain Rods in ½" and ⅝".

Size	Screw Clamp	Hole	Pigtail	Plain
⅜" x 4'	J-64	...	...	...
⅜" x 6'	J-66	...	...	...
⅜" x 8'	J-68	...	...	...
½" x 6'	G-86	H-86	P-86	X-86
½" x 8'	G-88	H-88	P-88	X-88
⅝" x 8'	G-108	H-108	P-108	X-108



ALUMINUM GROUND WIRE

Round-drawn soft aluminum, No. 8 (about ⅛").

No. AW-810	100'	Wt. 1½ lbs.
No. AW-825	250'	Wt. 3¾ lbs.
No. AW-850	500'	Wt. 7½ lbs.

PREMAX PRODUCTS, DIV. OF CHISHOLM-RYDER CO., INC., 5306 HIGHLAND, NIAGARA FALLS, N. Y.

PREMAX ANTENNAS--MOUNTINGS--ACCESSORIES

SERIES C CENTER-LOADED MARINE ANTENNAS

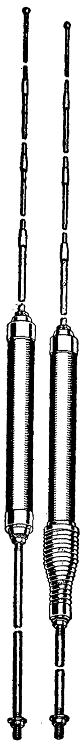
Center-Loaded Collapsible Marine Antenna for 2 to 3 mc. with power gain of 6 db. Two telescoping base sections with top whip. Extended length 17 ft., collapsing to 7 ft. In steel, monel and stainless. Fits standard Premax Mountings shown on preceding page.

No.	Type	Base O.D.	Base I.D.	Wt. Lbs.
CLA-619	Aluminum	1.000″	.834″	5
CLM-519	Monel	.893″	.799″	7
CLS-1119	Stainless	1.000″	.902″	7

SERIES B LOW-COST CENTER-LOADED ANTENNAS FOR MOBILE AND MARINE

Center-Loaded Whip-Type Antennas that produce gains up to 8 db. consist of a standard base section or spring-type on which is mounted a special Premax coil. The top is a taper-ground stainless steel whip 6 ft. in length, giving a total overall height of 9 ft. Various coils are available or the standard 75-meter coil can be adapted by shorting out turns on the coil. Antennas can be used with any of the Standard Premax Mountings shown below, or will fit any 3/8″x24-thread mounting.

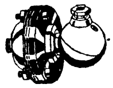
Frequency	Type BX Less Spring	Type BS With Spring	Coil Only
14,000 kc. (20M.)	BXS-14	BSS-14	B-14
2374 kc. (CAP)	BXS-23	BSS-23	B-23
3105 kc. (APT)	BXS-31	BSS-31	B-31
3800 kc. (75M)	BXS-38	BSS-38	B-38
4325 kc. (CAP)	BXS-43	BSS-43	B-43
4585 kc (CAP)	BXS-46	BSS-46	B-46
2000 to 3000 kc. (Marine)	BXS-25	BSS-25	B-25



TYPE BX TYPE BS

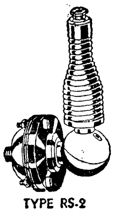
MOBILE

For 1/4″ Diam. Whips



TYPE R-2

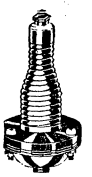
TYPE R-2 — Universal Mounting. Solid aluminum split-ball can be adjusted to any angle. Has shielded coax connection.



TYPE RS-2

TYPE RS-2—Similar to the above except has spring as shown under Type S-1.

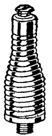
TYPE S-1 — Spring Mounting. Heavy-duty spring, bakelite insulation with rubber gasket and steel back-plate. Ht. 5″.



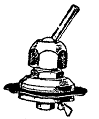
TYPE S-1

TYPE SA-1 — Spring Adaptor (similar to Type S-1) which can be attached to Type K, L, TA, CA or NA Mounting. Ht. 4¾″, Dia. 1⅝″.

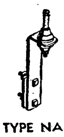
TYPE F—30° Adjustable Mounting for fender, cowl or gravel pan. Chrome-plated brass with bakelite insulation.



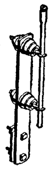
TYPE SA-1



TYPE F



TYPE NA-1



TYPE L-1

MOUNTINGS

or Any 3/8″ - 24 Male Thread

TYPE NA-1 — Bumper Mounting with ceramic cone insulator and steel backplate.

TYPE L-1 — Bumper Mounting, 2 pairs ceramic cone insulators with steel backplate. 10″ adjustment.

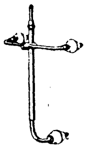
TYPE XL — Panel Mounting, similar to L-1 less bumper bracket.

TYPE K-1 — Bumper Mounting, ceramic cone insulators, cadmium-plated brackets; 10″ height adjustment.

TYPE TA — Trunk or Panel Mounting; ceramic cone insulators, cadmium-plated brackets. Fits any contour surface. 10″ adjustment.

TYPE CA — "Chain Style" Bumper Mounting. Fits any bumper with 1″ clearance; theft-proof.

TYPE K-I



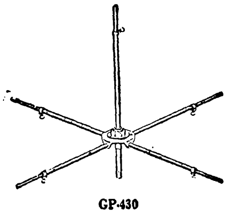
TYPE TA

TYPE CA

CIVIL DEFENSE, PUBLIC SERVICE, FIRE, POLICE ANTENNAS 100-162 MC.

With the FCDA defraying 50% of the costs, cities are installing CD radio communications throughout the country. Add to this huge new market the regular Public Service, Fire, Police and other VHF installations served by Premax VHF Antennas for 100 to 162 Mc., and you have a low-cost but highly satisfactory installation.

GROUND PLANE ANTENNAS



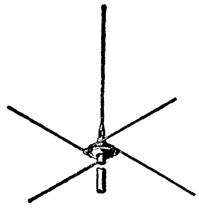
GP-430

For point-to-point installations, Premax has two VHF Antennas: The Style GP-3 which has elements of heavily-plated spring steel with skirt wires that can be bent down to any angle to match coax cable. Mounting is within a water-proof housing that fits standard 1/2″ pipe. Cable carries down thru pipe.

Style GP-314 for 144 Mc. For 2 meter and CD.

Style GP-312 for 108 to 120 Mc. For aircraft and CAP.

Style GP-315 for 152 to 162 Mc. For police and taxi.



GP-314

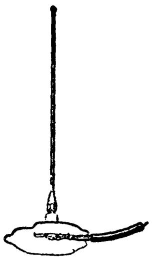
Another low-cost type Ground Plane Antenna is adjustable from 20 to 40 mc. or 40 to 60 mc. Standing wave ratio matching to 52-ohm line is 1.07 to 1.13 and to 72-ohm line is 1.27 to 1.23 depending on type of transformer cable. All-aluminum construction employing adjustable tubular elements.

Style GP-430—Adjustable 20 to 40 Mc.

Style GP-450—Adjustable 40 to 60 Mc.

CAR-TOP OR MOBILE ANTENNAS

Premax Mobile or Car-Top Antennas are made of heavily-plated, highly-tempered spring steel wire in elements of precise diameters and lengths. Mountings are well insulated and so designed that one man can install them through a single small hole in a car roof.



CD-11

STYLE DSH-118, for 152 to 162 mc. 18″ antenna with bakelite mount and rubber gasket; coax grounding.

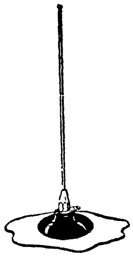
STYLE DSJ-118, similar to DSH-118 excepting mounting has porcelain cone insulator.

STYLE DS-118 is the Anntena only less mounting.

STYLE CD-114 for 144 mc. For 2-meter amateur and CD. Porcelain insulator. One man installation thru 1/2″ rooftop hole.

STYLE CD-112 for 108 to 120 mc. For aircraft and CAP. Similar to CD-114.

STYLE CD-115 for 152 to 162 mc. For police and taxi. Similar to CD-114.



CD-21

STYLE CD-214 for 144 mc. Emergency type with rubber suction cup base. No hole required. Can be installed in matter of seconds. Ideal for CD.

STYLE CD-215 for 152 to 162 mc. For police and taxi. Similar to CD-214.

STYLE CD-212 for 108 to 120 mc. For aircraft and CAP. Similar to CD-214.

DSH-118

PREMAX PRODUCTS, DIV. OF CHISHOLM-RYDER CO., INC., 5306 HIGHLAND, NIAGARA FALLS, N. Y.

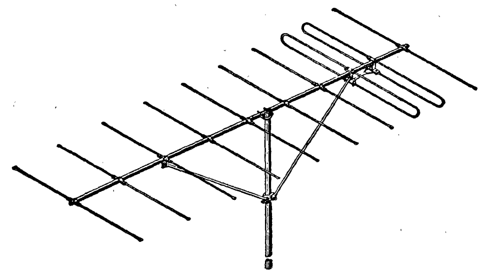
TACO NOISE-REDUCING ANTENNA SYSTEMS

SILVER STREAK TWIN-DRIVEN 10-ELEMENT YAGI

For Single Channel 2-6

Designed for the weakest signal areas. Patented TACO twin-driven principle raises terminal impedance to match 300-ohm line, resulting in maximum transfer of energy to transmission line. Excellent directivity and front-to-back ratio for optimum reception in areas affected by noise or co-channel interference. Excellent gain on desired channel with sharp cut-off on either side for rejection of signals of other frequencies. Single bay shows gain of approximately 11 db, while stacked array provides 14 db. Extra-rugged construction provides years of trouble-free service under most adverse weather conditions.

CAT. NO. 1800-(*). SINGLE-BAY TWIN-DRIVEN YAGI ANTENNA. Consists of: 1 crossarm assembly supporting two antenna elements; seven directors and one reflector. Jiffy-Rig construction. Shipping Weight, 15½ lbs., ch. 3; 14 lbs., ch. 5.



CAT. NO. 1801-(*). STACKED YAGI ANTENNA. Consists of: 2 Cat. No. 1800-(*) assemblies with stacking lines. Shipping Weight, 31 lbs., ch. 3; 28 lbs., ch. 5.

SILVER STREAK 10-ELEMENT YAGI

For Single Channel 7-13

Companion to the 'Twin-Driven' Silver Streak Antenna. Two-diameter driven element provides terminal impedance to match transmission line. As a single antenna, it provides a gain on the order of 11 db, and 14 db as a stacked array. Extremely rugged. Antenna is completely factory-assembled. All elements are spring-loaded, no screws or nuts. Simply swing elements into position and they are locked for installation. Designed for weakest signal installations where high-band channels are to be covered.

CAT. NO. 1850-(†). SINGLE-BAY 10-ELEMENT YAGI. Consisting of: 1 crossarm with mounting hardware, 1 two-diameter driven antenna, 1 reflector and 8 directors mounted on crossarm. Shipping Weight, 6½ lbs.

CAT. NO. 1851-(†). STACKED 10-ELEMENT YAGI. Consisting of: 2 Cat. No. 1850-(†) assemblies with stacking lines. Shipping Weight, 14 lbs.

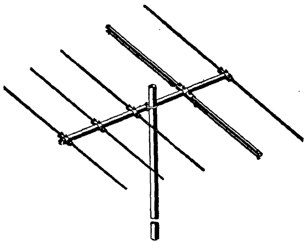
5-ELEMENT YAGI

For Single Channel 2-6

An economy antenna for average fringe-area installations. Five elements with a two-diameter driven element. Provides approximately 8 db gain on desired channel with good front-to-back ratio. Available as stacked array with approximately 11 db gain. Completely factory-assembled. Ruggedized for dependable service.

CAT. NO. 1325-(*). ONE-BAY YAGI ANTENNA. Consists of 1 crossarm with U-bolt and saddle; 1 two-diameter driven antenna; 1 reflector and 3 directors mounted on crossarm. Shipping Weight, 7 lbs.

CAT. NO. 1326-(*). TWO-BAY YAGI ANTENNA. Consists of 2 Cat. No. 1325-(*) assemblies with stacking lines. Shipping Weight, 14 lbs.



(* - †) Indicate Desired Channel.

5-ELEMENT YAGI

For Single Channel 7-13

Tuned for any one of the high-band channels. Ideal for use in most fringe-area installations. Same design as low-band model pictured. Three directors, two-diameter driven element and one reflector. TACO design assures high signal-to-noise ratio through sharp tuning and directivity. Click-Rig construction.

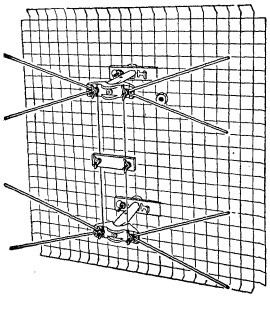
CAT. NO. 1350-(†). ONE-BAY YAGI ANTENNA. Consists of: 1 two-diameter antenna element, 1 reflector and 3 directors mounted on crossarm; U-bolt and saddle. Shipping Weight, 2 lbs.

CAT. NO. 1351-(†). TWO-BAY YAGI ANTENNA. Consists of: 2 crossarms with U-bolts; 1 two-diameter antenna element, 1 reflector and 3 directors mounted on each crossarm; stacking lines. Shipping Weight, 5 lbs.

UHF BOW-TIE ANTENNAS

For Channels 14 thru 83

The most successful UHF antenna design. The basic Bow-Tie design is utilized as a stacked array with a variation of reflectors to meet all UHF reception needs. Open design eliminates picture flutter caused by wind resistance of solid designs. Screen reflector raises front-to-back ratio eliminating ghosts caused by reflected signals. A single basic antenna covers entire UHF spectrum from channel 14 thru 83.

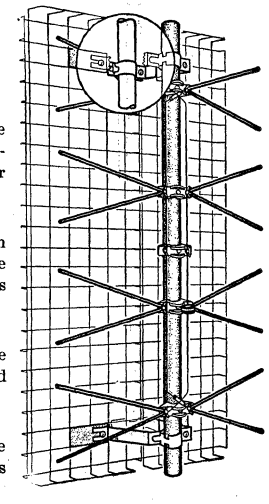


CAT. NO. 3001 (Not Illus.) Bow-Tie antenna completely assembled with X-type reflector. Strap mounting for mast connection.

CAT. NO. 3031 (Not Illus.) Screen reflector in combination with above basic antenna. Strap-type mount passes through screen.

CAT. NO. 3032 (Illus.) Dual Bow-Tie antenna with screen-type reflector and stacking lines.

CAT. NO. 3006 (Illus.) Four Bow-Tie antennas with screen reflector plus stacking lines.

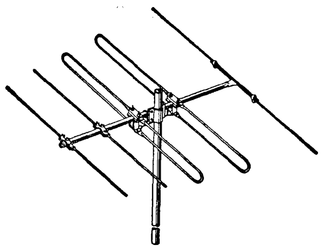


TECHNICAL APPLIANCE CORPORATION, SHERBURNE, N. Y.

TACO · NOISE-REDUCING ANTENNA SYSTEMS

TWIN-DRIVEN 5-ELEMENT YAGI

For Single Channels 2-6



The ideal antenna for most fringe-area VHF installations. Tuned for any one of the Low-Band channels. (Also available as dual-channel antenna covering channels 4 and 5.) Utilizes TACO exclusive Twin-Driven principle. Gain of 7½ db as single antenna and 11 db when stacked. Extremely good front-to-back ratio has made this antenna popular in co-channel and adjacent-channel areas. Ideal for use with rotor. Will receive high-band channels when rotated 40° off beam. Folded-dipole driven element withstands heavy ice and wind strains.

CAT. NO. SUPER 980-(*). STACKED TWO-BAY TWIN-DRIVEN 5-ELEMENT YAGI. Consisting of: 2 crossarm assemblies each supporting two folded dipole antennas, two directors, one reflector; transmission line for stacking the two bays; tie wire; complete instructions. Shipping Weight, 13 lbs.

CAT. NO. SUPER 981-(*). SINGLE BAY TWIN-DRIVEN 5-ELEMENT YAGI ANTENNA. Consisting of: one crossarm assembly supporting two folded dipole antennas, two directors, one reflector; complete instructions. Shipping Weight, 6 lbs.

BROAD-BAND 'TRIPLE-DRIVEN' YAGIS

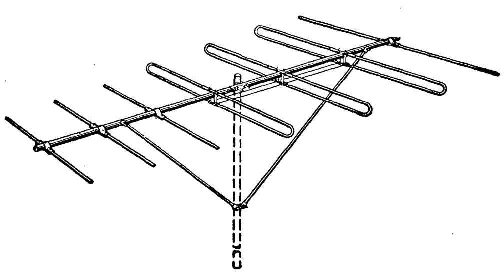
For Low-Band Channels

The finest Broad-Band antenna ever designed. Yagi performance on Low-Band channels, with a single antenna. Eliminates separate lead-ins and switching devices. Triple-Driven elements provide inherent advantages of parallel drive, plus Broad-Band tuning. Reflector and directors increase gain and sharpen directivity. The right antenna for fringe-area installations requiring multiple Low-Band reception. Double braced boom prevents sway and arching of crossarm, holding all elements firmly for top performance.

CAT. NO. 1824, TRIPLE DRIVEN YAGI, 5 elements. Covers channels two thru four.
Shipping Weight, 6 lbs.

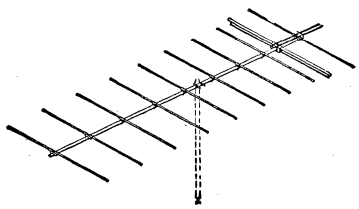
CAT. NO. 1836, TRIPLE DRIVEN YAGI, 6 elements. Covers channels three thru six.
Shipping Weight, 6 lbs.

CAT. NO. 1840, TRIPLE DRIVEN YAGI, 7 elements. Covers entire low-band, channels two thru six.
Shipping Weight, 7 lbs.



BROAD-BAND SILVER STREAK BAZOOKA

For all Channels 7 thru 13



The ideal antenna for weak signal areas in which multiple High-Band channels are to be received. TACO's BAZOOKA-tuning permits 'yagi' gain throughout the entire frequency range. Recommended for use in signal areas where High-Band needs additional gain to match performance of Low-Band. May be used with rotor for receiving various High-Band channels in different directions. Completely factory-assembled, spring-loaded ready for installation.

CAT. NO. 1860. SILVER STREAK BAZOOKA. Consisting of complete spring-loaded assembly of crossarm, 8 directors, driven element and reflector. Shipping Weight, 5 lbs.

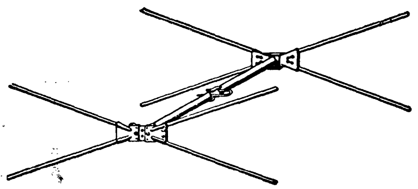
CONICAL ALL-CHANNEL ANTENNA

For all Channels 2 thru 13

The right answer to all-channel reception. Covers entire Low-Band and High-Band with relatively flat response. Newly developed apex design eliminates inherent weakness of other conicals. May be stacked for additional gain in fringe areas. Factory assembled with hinged apex, and slot-fitted screws. Swing elements into position and tighten screws. C-clamp mast mounting serrated for permanence of installation.

CAT. NO. 950B. STACKED LAZY-X ANTENNA for Channels 2-13. Consists of: 2 single X antennas with crossarms and X-type reflectors; stacking lines and terminal panel for connecting antennas; complete instructions. Shipping Weight, 11 lbs.

CAT. NO. 953B. SINGLE LAZY-X ANTENNA. Consisting of: Single X Antenna with crossarm and X reflector; all elements and crossarm of hard drawn aluminum tubing; Universal U-bolt and saddle bracket mount; complete instructions. Shipping Weight, 5 lbs.



USE A TACO ANTENNA FOR EVERY INSTALLATION

See complete antenna and accessory line in general catalog

CAT. NO. 925A
Hi-Low Piggy-Back Antenna

CAT. NO. 930A
In-Line Antenna

CAT. NO. 953B
Lazy-X Single Antenna

CAT. NO. 1000
Tri-X Two-Bay Antenna

CAT. NO. 1001
Tri-X Single-Bay Antenna

CAT. NO. 1410
Folded V Antenna
Single-Bay BAZOOKA Yagi

CAT. NO. 1420C
Trinamic (4-5-6) Antenna

CAT. NO. 1475
Super H Colinear Array

CAT. NO. 1700L
Two-Bay Twin-Driven Corner

CAT. NO. 1703
One-Bay Twin-Driven Corner

CAT. NO. 3002
Screen Grid Reflector

CAT. NO. 3003
Dual Screen Grid Reflector

CAT. NO. 3005
4 Stack Bow-Tie

CAT. NO. 3015
UHF 10-Element Antenna

CAT. NO. 1660
Cascode Low-Band
Antenna Amplifier

CAT. NO. 1665
Cascode Hi-Band
Antenna Amplifier

(*) - (†) Indicate Desired Channel.

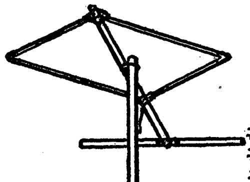
TECHNICAL APPLIANCE CORPORATION, SHERBURNE, N. Y.

TELEVISION ANTENNAS

GONSET CO.

801 South Main St. - - Burbank, Calif.

"ROCKET" ALL VHF CHANNEL TV ANTENNA

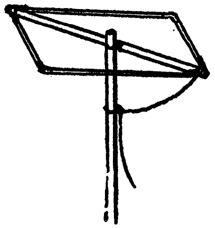


A low cost antenna combining principles of a folded dipole on low channels and a rhombic on high channels together with features of cone and arrow types. Single bay suitable for most installations, two or four bays for fringe areas.

#1506 Rocket less mast,.. net ...$3.87
#1512 Rocket with 4' mast, net $4.77
#1508 with 8' mast...... .....net $5.61

#1511 Four bay Rocket, net $17.91
#1510 Two bay Rocket, net $9.01

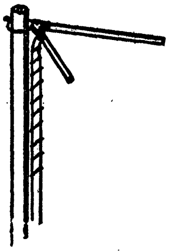
UHF RHOMBIC



High gain and excellent directivity characteristics together with a rugged mechanical structure. A modestly priced optimized rhombic for UHF. Uniform gain of approximately 8 db from channel 14 through 65. (½ wave matched dipole reference) Sharp forward pattern with spurious lobes attenuated to reject ghosts in most installations. Single unit comes with 8' mast. Antennas are stackable for greater gain where required.

#1529 UHF Rhombic with 8' mast........net $7.77
#1536 Four bays, less mast...............net $23.25

UHF "ECONO-VEE"



A rugged, low price antenna for use in areas of good signal strength not troubled by ghosts. Choice of three models, each covering half the UHF channels.

#1550-A,	Channel 14-42	net	$2.37
#1550-B,	Channel 25-65	net	$2.37
#1550-C,	Channel 42-83	net	$2.37
#1553-A,	Channel 14-42	net	$4.37
#1553-B,	Channel 25-65	net	$4.37
#1553-C,	Channel 42-83	net	$4.37

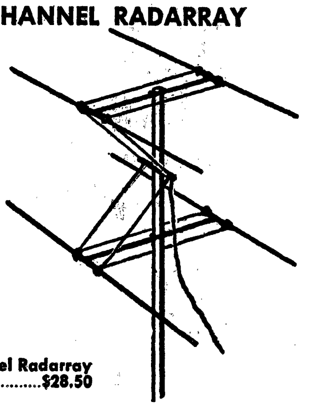
(Last three items have 8' mast)

GONSET OPEN WIRE LINES

Two types available. #1499 with ½" spacing for optimum UHF performance. Closer spacing restricts RF field and minimizes losses and reflections common at UHF. May also be used for VHF.
Type #1500 is the highly effective open wire line with 1" spacing first introduced by Gonset for VHF.
Attenuation of either line is substantially lower than "Ribbon" type lines.

#1499 (100, 250 and 500' rolls)................Net per 100' $7.08
#1500 (100, 250 and 500' rolls)................Net per 100' $6.24

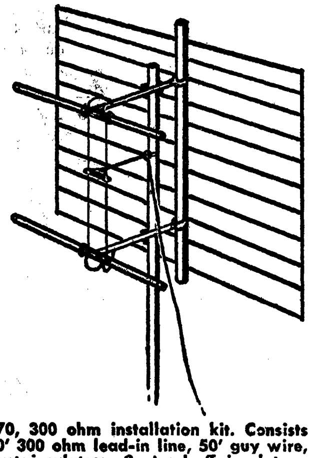
TWO BAY, LOW CHANNEL RADARRAY



For use on low channels, (2 to 6) where signals are very weak. Employs colinear dipoles with quadrature driven reflector curtain for narrow forward pattern, high front-to-back ratio, highest gain per bay. Excellent impedance match . . . high ghost and interference rejection. All in all, one of the very finest low channel antennas on the market. Two, two-bay units may be utilized in areas where signals are extremely weak.

#1519 Two Bay Low Channel Radarray Net $28.50

"RADARRAY" VHF ANTENNA

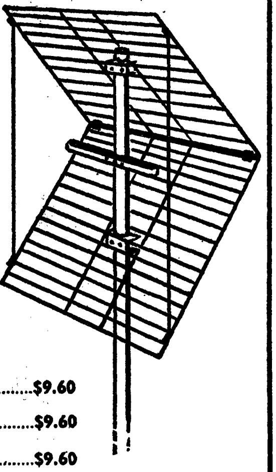


The sensational new Model C Radarray for high gain on all 12 VHF channels. 10 DB (or more) gain on high channels where most needed. Excellent front-to-back ratio on all channels. Reduces or eliminates ghosts. Minimizes airplane flutter, diathermy and ignition interference. Array can be tipped without tilting mast. Size and construction ideally suited for use with rotator.

#1527 Model C less mast....Net.... $23.97
#1528 w/mast, base and guy wire rings. Net......$26.97

#1570, 300 ohm installation kit. Consists of 50' 300 ohm lead-in line, 50' guy wire, 2 mast insulators, 2 stand-off insulators, 3 guy wire anchor hooks........Net........$2.25

CORNER REFLECTOR UHF TV ANTENNA

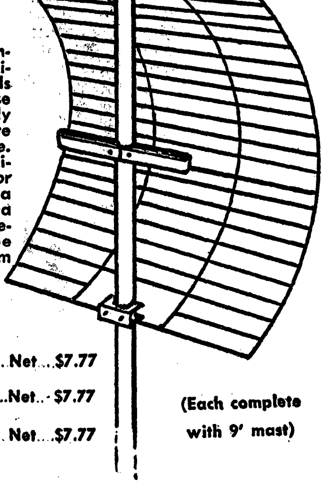


A sturdy, well designed array of the corner-reflector type using a folded dipole and 90° reflector. Choice of three models, (low, medium, high) each covering approximately half of the UHF band. Gain, (approx. 8 DB) is comparable to UHF rhombic with broader forward response and lower rear response. This antenna is virtually dead off the back.

#1535-A, Channels 14-42........Net........$9.60
#1535-B, Channels 25-65........Net........$9.60
#1535-C, Channels 42-83........Net........$9.60

(Each complete with 9' mast)

UHF PARABOLIC



A parabolic sheet-type antenna using a folded dipole. Construction avoids use of insulation. For use in areas with moderately strong signal strength where ghost problems are acute. Gain is 4 to 5 DB over specified range. Not intended for fringe area use but as a moderately priced antenna having excellent rear rejection. Choice of three models permits optimum performance.

#1531-A, Channels 14-42... Net ... $7.77
#1531-B, Channels 25-65. ..Net... $7.77
#1531-C, Channels 42-83. . Net... $7.77

(Each complete with 9' mast)

POLYSTYRENE ROD — TUBING — SHEET

For radio and electronic applications, because of its very low loss factor at ultra high frequencies, Polystyrene is the ideal material for insulators, coil forms, shields, etc. It has excellent arc resistance, is non-tracking and has splendid insulating properties. Because its water absorption is practically zero it has excellent dimensional stability.

POLYSTYRENE ROD — Transparent

Available in 12″ or 48″ lengths

Catalog Number	Diameter	Net Price 12″ lgth.	48″ lgth.
JB-100	⅛″	$ .03	$ .12
JB-101	3/16″	.06	.24
JB-102	¼″	.10	.40
JB-103	5/16″	.16	.64
JB-104	⅜″	.21	.84
JB-105	7/16″	.30	1.20
JB-106	½″	.40	1.60
JB-107	⅝″	.57	2.28
JB-108	¾″	.80	3.20
JB-109	⅞″	1.15	4.60
JB-110	1″	1.55	6.20
JB-111	1⅛″	2.00	8.00
JB-112	1¼″	2.30	9.20
JB-113	1⅜″	3.00	12.00
JB-114	1½″	3.30	13.20
JB-116	1¾″	4.50	18.00
JB-118	2″	5.90	23.60

POLYSTYRENE TUBING — Satin Finish

Available in 12″ or 48″ lengths.

Catalog Number	O.D.	I.D.	Net Price 12″ lgth.	48″ lgth.
JB-201	¼″	⅛″	$ .07	$ .28
JB-202	5/16″	3/16″	.10	.40
JB-203	⅜″	¼″	.13	.52
JB-205	½″	⅜″	.18	.72
JB-206	⅝″	½″	.23	.92
JB-207	¾″	⅝″	.29	1.16
JB-208	1″	⅞″	.38	1.52
JB-220	1½″	1¼″	1.13	4.52
JB-222	2″	1¾″	1.50	6.00

POLYSTYRENE SHEET

The following sheets are all crystal clear with smooth surfaces fully protected against abrasion by masking paper on both sides.

Catalog Number	Thickness	Sheet Size	Net Price
JB-125	1/16″	12″ x 12″	$2.50
JB-126	3/32″	12″ x 12″	2.75
JB-127	⅛″	12″ x 12″	3.00
JB-128	3/16″	12″ x 12″	3.75
JB-129	¼″	12″ x 12″	4.60
JB-245	1/16″	12″ x 24″	4.90
JB-246	3/32″	12″ x 24″	5.25
JB-247	⅛″	12″ x 24″	5.90
JB-248	3/16″	12″ x 24″	7.25
JB-249	¼″	12″ x 24″	8.25
JB-300	1/32″	20″ x 20″	7.75
JB-301	1/16″	24″ x 24″	9.50
JB-302	3/32″	24″ x 24″	10.25
JB-303	⅛″	24″ x 24″	11.75
JB-304	3/16″	24″ x 24″	14.00
JB-305	¼″	24″ x 24″	16.00
JB-306	5/16″	20″ x 20″	14.50
JB-308	⅜″	20″ x 20″	16.00
JB-309	⅜″	24″ x 24″	23.75
JB-310	½″	20″ x 20″	21.50
JB-311	½″	24″ x 24″	31.88
JB-312	⅝″	20″ x 20″	34.50
JB-313	¾″	20″ x 20″	41.00
JB-314	1″	20″ x 20″	55.50

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**Serving Industry
Since 1910**

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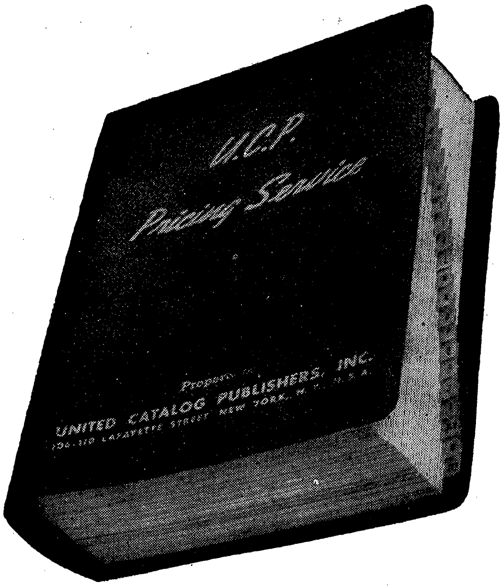
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TECH-MASTER Custom Built TV Chassis

The World's Most Powerful, Most Dependable TV Receivers

Gold Medal Series

CUSTOM BUILT DELUXE TV CHASSIS

Tech-Master's Gold Medal Series Chassis are no ordinary mass-produced "commercial" sets. They are truly custom-built, carefully, precisely, painstakingly — custom-built to provide your most quality-minded customers with the ultimate in sight and sound and value!

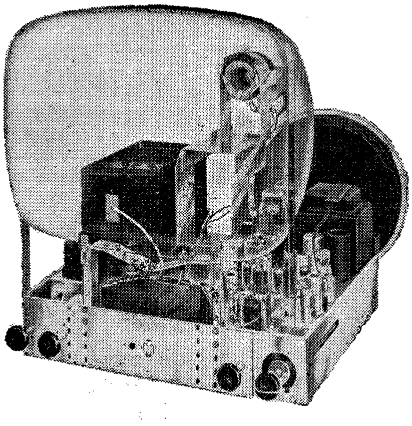
Tech-Master design and custom-construction are as fine as human hands and technical know-how can produce. The most advanced engineering methods, the finest components, rigid alignment and test standards and the pledged determination to produce the OPTIMUM in Television . . . these and other Tech-Master features add up to the finest line of TV Chassis that the industry has to offer. In fringe areas as well as normal range areas, the Gold Medal Series brings modern motion picture brilliance and clarity to the TV screen.

Compare These Features

- ★ **TECH-MASTER 630 TYPE CIRCUIT:** Of all the circuits known to the TV industry, the RCA-630 type is still acclaimed the finest. But, even the 630 is only as good as the Engineering, the Components and the Workmanship that go into it. These three factors are inherent in every Tech-Master Custom-Built Chassis.
- ★ **ADVANCED CASCODE TURRET TUNER, Adaptable to UHF Without Tools:** Employs a Cascode RF amplifying stage, affords a high signal-to-noise output resulting in a sharper picture, with a minimum of "snow", even in weak signal areas. **UHF channel strips may be inserted at any time, without the use of tools.**
- ★ **Full 4 Mc Band Width** for better picture definition.
- ★ **Quick-Action Keyed AGC Circuit** assures stabilized control.
- ★ **New Hi-Sweep Auto Transformer System** for outstanding brilliance.
- ★ **5 Microvolt Sensitivity** . . . Excellent for Fringe Areas
- ★ **Full Horizontal and Vertical blanking.**
- ★ **Area Control Switch** (on front panel) for local or distant setting.
- ★ **Chassis are beautifully plated in gleaming nickel finish** . . . come completely wired, aligned and tested, with all tubes (less kine).

FOR NEW 90°, 24" RECTANGULAR, 27" AND 30" PICTURE TUBES

Model 2430-9, Tech-Master's Latest Addition to the Gold Medal Series. Specifically designed to drive 27" and 30" picture tubes as well as the new 24" rectangular tube. The size and quality of this ruggedly built chassis makes it ideal for school and commercial installations. The most advanced designs are embodied in the latest type high voltage and sweep circuits which feature 22KV second anode voltage, polyethelene enclosed HV socket, quick retrace auto-transformer, full horizontal and vertical sweep even under low voltage line conditions, variable vertical linearity and height controls, edge to edge focus and the latest 90° ferrite cosine yoke.



FOR PICTURE TUBES UP TO 30"

Model 2430:—Designed specifically for all picture tubes requiring 60 to 70 degrees horizontal deflection. Has quality PM speaker. Universal picture tube mounting brackets, Phono-input jack. Equipped with audio take-off to feed sound thru external amplifier, if desired. Jack mounted on rear of chassis for easy connection..........**$189.50**

Model 2431:—Same as Model 2430 (less sound take-off), but with true fidelity Push-Pull audio output..........**$199.95**

Model 2430-9:—For new 90° kinescopes, (24" rectangular, 27" and 30"). Features similar to 2430, but incorporates new high voltage horizontal and vertical sweep circuits. Less kinescope and mounting brackets..........**$262.50**

DIMENSIONS: 19¾" wide, 16¼" deep.
SHIPPING WEIGHT: 70 lbs.

Blue Ribbon

CUSTOM DESIGNED, CUSTOM-BUILT TV CHASSIS

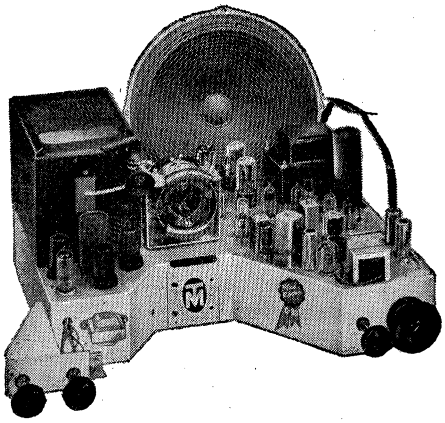
Combining High Quality with Low Price

For Picture Tubes Up to 24"

MODEL C-30 has been designed for the utmost in economy, retaining every important feature necessary for quality of image and sound.

Here again is Top TV Performance attained through skilled engineering and finest set-tested components, embodied in a completely factory-wired chassis, pre-aligned, pre-adjusted and ready for use.

- ★ **Basic 630-Type Circuit Features Include:**
  - Full 4 mc bandwidth
  - 4-Stage Video IF
  - 3-Stage Audio IF
  - 2-Stage Video Amplifier
- ★ **30 Tubes,** including picture tube and rectifiers.
- ★ **Advanced, Cascode 12 channel turret tuner, adaptable to UHF without tools.**
- ★ 4-Stage Synchronizing Amplifier and Separator.
- ★ 5 Microvolt Sensitivity.
- ★ 16 kv 2nd Anode Voltage
- ★ New, Automatic Horizontal Stabilizer.
- ★ Automatic Background Control.
- ★ Retrace Blanking Circuit.
- ★ Permanent Dynamic Focusing System.
- ★ Double-time Constant AGC.



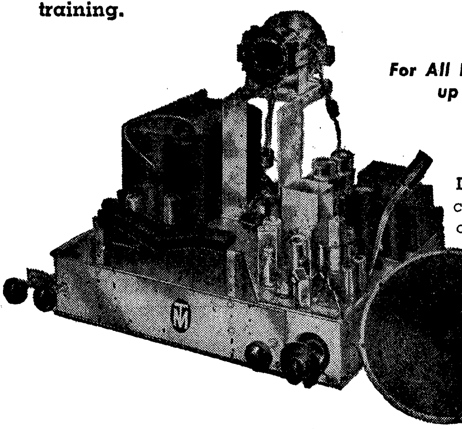
MODEL C-30: completely wired, aligned and tested . . . with quality PM speaker, and all tubes (less picture tube)..........**$149.50**
Dimensions: 21¾" wide x 16¼" deep.
Shipping Weight: 55 lbs.

TECH-MASTER Quality Television Kits

America's Finest TV Kit—Model 630-D [Also available factory wired, assembled and aligned. See below.*]

Tech-Master Model 630-D is acknowledged by the entire industry as the finest TV Kit available! Tech-Master engineers have again demonstrated their skill by developing new and better features for the world famous RCA-630 type circuit. All components used are the best available . . . rigid factory test standards are your assurance of years of trouble-free performance.

With a minimum of tools you will have a TV receiver with unsurpassed picture quality . . . at a cost considerably less than a manufactured set. Special Tech-Master schematic and pictorial diagrams guide every move and make assembly utterly simple and enjoyable! MODEL 630-D IS USED BY LEADING SCHOOLS all over the country! Established multiple tube circuits, rather than compromise economy circuits, make this Tech-Master TV Kit ideal for comprehensive television training.



For All Picture Tubes up to 24"

No Other TV Kit Offers All Of These Important Features

- ★ **ADVANCED CASCODE TURRET TUNER, Adaptable to UHF Without Tools:** High signal-to-noise ratio results in a sharper picture, with a minimum of "snow" even in weak signal areas.
- ★ AFC horizontal synchronization employing 6AL5 phase detector, 6AC7 Reactance tube, and Sync. Discriminator Transformer in a Hartley Oscillator circuit assures optimum noise immunity and horizontal stability.
- ★ 3 Stage Sync. Amplifier, Clipper and Separator circuit provides unexcelled interlace characteristics and the finest picture detail.
- ★ Noise saturation circuits utilized throughout minimize effect of external interference.
- ★ 4 Stage stagger tuned Video IF system produces full 4 MC band width and complete picture definition.
- ★ Adjacent Channel Trap.
- ★ 2 Stage Video Amplifier.
- ★ Direct Coupling Used for Keyed AGC Circuit.
- ★ Improved Picture Brilliance — Due to New "Hi-Sweep" Voltage Multiplier System.
- ★ Shielded High Voltage Supply for Maximum Protection.

Chassis Dimensions: 21¾" wide x 15¾" deep.
Shipping Weight: Approximately 70 lbs.

DELUXE KIT—MODEL 630D24: All principal components mounted. Supplied complete with all components, picture tube mounting brackets, speaker, and all tubes (less kine, wire and solder)........................**$159.50**

*MODEL 1930, Deluxe TV CHASSIS:

Similar to TV Kit 630D24 described above but completely factory wired, tested and aligned, ready for installation. (Less Kine mounting brackets) $179.50

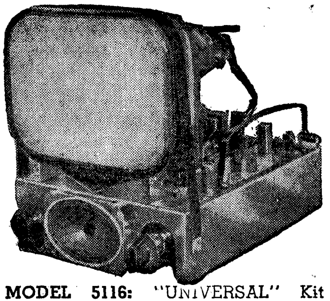
UNIVERSAL TELEVISION KIT

Tech-Master brings high quality television within reach of the most economy-minded customer, with the lowest price ever for a top-performing, precision-engineered, AC/DC kit.

Tech-Master's development of the IF "Synchro-Strip" cuts in half the amount of work required to assemble and wire the kit! It comes mounted in place, on the main chassis, together with the tuner, and is completely wired, aligned and tested. The newest engineering advancements have been utilized in the design of the horizontal and vertical sync circuits to assure excellent stability and noise immunity characteristics. Complete step by step instructions and diagrams (both pictorial and schematic) permit complete wiring over a week-end!

IDEAL FOR SCHOOLS: Requires minimum bench equipment; affords maximum opportunities for comprehensive TV training.

- ★ **Compact, light-weight** easily portable unit, operates on both AC and DC, for use with picture tubes up to 17" rectangular.
- ★ **Advanced and improved 12 channel turret tuner, adaptable to UHF without tools!**
- ★ **Latest type hi-gain stagger-tuned IF system incorporating bi-filar coils — for excellent picture definition.**
- ★ **New AGC system,** utilizing special delay network — for steady pictures regardless of varying transmission conditions.
- ★ **High efficiency beam power amplifier and ceramic core horizontal output transformer** provide clear, bright pictures and full horizontal deflection.
- ★ **Two-knob control** on front panel provides automatically synchronized picture and sound.



MODEL 5116: "UNIVERSAL" Kit complete with **set of 16 Circuit Tested Tubes,** all hardware, instructions and picture tube mounting brackets, (less kine, wire and solder) **$99.95**
Dimensions: 17" deep x 14" wide.
Shipping Weight: Approx. 30 lbs.

MIGHTY VERSATILE MIDGET

3 INSTRUMENTS IN ONE!

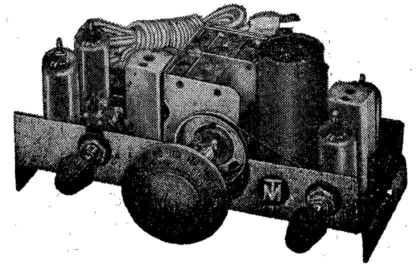
Completely Wired, Tested and Aligned

(1)—**A Complete AM Superhet Receiver** which connects to any speaker system.
(2)—**A Sensitive AM Tuner** with output connections for external amplifier.
(3)—**A Complete Audio Amplifier** with high-impedance input.

Affords the most economical method of adding radio, phono or P.A. operation to any TV receiver, speaker system or record player.
● Quadruple-tuned IF circuit ● Ferrite-core, omnidirectional antenna ● 2 Watts audio output ● AVC for both RF and IF circuits ● Simple, 2-point mounting ● Electrically isolated chassis, safe to handle ● Fits into 630-type chassis front opening ● AC (105-125V., 50-60 cycles) and DC ● Complete with tubes: 12BE6, 12BA6, 12AV6, 50C5, 35W4 ● Shipping Weight: 2½ lbs.
Size: L: 7⅛", H: 3⅝", D: 3⅛".

MODEL B-15........................$19.95

All prices are subject to change without notice.



TECH-MASTER HIGH FIDELITY AUDIO AMPLIFIER KITS

Wherever quality custom television installations are desired, Tech-Master chassis are the overwhelming favorites. Tech-Master products are built to a standard, not to a price. They are the result of advanced engineering coupled with an honest determination to obtain the optimum in reception, performance and value.

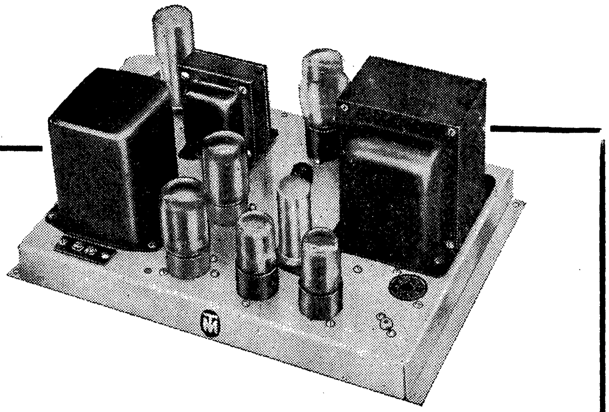
Tech-Master . . . first name in custom-built TV receivers . . . is rapidly earning a similar reputation in the high fidelity audio field. The Tech-Master Williamson Amplifier Kit and the Tech-Master Pre-Amplifier Kit are made with the same "custom-quality" attention that is given to our TV receivers. We have cut no corners . . . our components are the finest . . . our workmanship is meticulous. When you buy a Tech-Master Amplifier Kit, you get a world of pleasure, years of satisfaction . . . and great economy, too.

TECH-MASTER TM-15A
U.L.* Williamson Circuit Amplifier Kit

Uses the famous WILLIAMSON circuit with unique modification for true high fidelity reproduction at increased power output. Only top quality products are used — specially wound famous-make, high fidelity audio output transformer** — ruggedly constructed power transformer. A few hours of assembly, and the builder will be repaid with the finest listening quality he has ever heard. Frequency response flat and smooth beyond the two extremes of the audible range, and distortion is less than .25% at normal listening levels, with excellent transient characterisics. The kit is furnished complete with punched chassis, transformers, tubes and all other components, together with full detailed wiring and assembly instructions.

Power Output	15 watts undistorted
Output Impedance	4-8-16 ohms
Input Impedance	High for crystal pickups, tuners pre-amps, etc.
Input Voltage	1.1 VRMS (for 15W out)
Intermodulation and Harmonic Distortion	.25% at 2W .45% at 5W
Hum and Noise Level	70 db below rated output
Feedback	20 db
Response at 5 Watts	8 cps to 100,000 cps ±1 db
Response at 10 Watts	10 cps to 70,000 cps ±1 db
Tube Complement	2 6SN7 2 5881 1 5V4G
Power Requirements	105-125V, 50-60 cycles, 120 W

Dimensions......9"x12"x6½", • **Shipping Weight**......27 pounds



TM-15A (Complete Kit of Parts)	**$49.95**

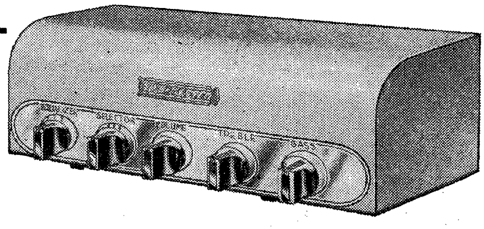
DELUXE AMPLIFIER KIT, Model TMD-15A, completely factory assembled, all major components mounted in place on chassis, ready to wire.................. $59.95

***Ultra linear operation through use of screen-tapped primary output transformer.**

****Altec Lansing PEERLESS or Chicago Transformer audio output transformers will be furnished depending upon availability.**

TRANSFORMER: Audio output transformer only, as used in Model TM-15A amplifier kit.

Part No. AT-15	**$17.95**



TECH-MASTER TM-15P
Four Channel Pre-Amplifier Kit

Input Selector — Phono Pre-Amp — Tone Control

Input channels	One low level — high gain Three hi-impedance
Bass Frequency control	±15 db boost or attenuation at 20 cycles
Treble frequency control	±15 db boost or attenuation at 20 KC

EQUALIZATION CONTROL

Position	Turnover	Roll-off	
1	300 Cps.	none-flat	for 78 RPM
2	500 Cps.	none-flat	
3	400 Cps.	12 db at 10 KC	for 33-1/3 and 45 RPM

Tube Complement	1 — 12AX7, 1 — 12AU7
Power Requirement	125 volts DC at 6 ma, 6.3 volts at 600 ma

Dimensions......10¾"x4"x4" • **Shipping Weight**......4 pounds

TM-15P (Complete Kit of Parts)	**$19.95**

DELUXE PRE-AMPLIFIER KIT, Model TMD-15P, completely factory assembled, all major components mounted in place on chassis, ready to wire.................. $29.95

TECH-MASTER design and TECH-MASTER quality—for discriminating listening. Has four input channels and selector switch for: FM—AM or TV Tuner, crystal pickup, reluctance style pickup, tape or wire recorder, or other signal source. 3 position equalizer switch in high gain input circuit permits selection of turnover and roll-off characteristics to match most types of recordings. Two independent, continuous controls provide full base and treble boost and attenuation. Power is obtained from main amplifier. AC outlet on chassis permits main amplifier and associated equipment to be controlled by master switch.

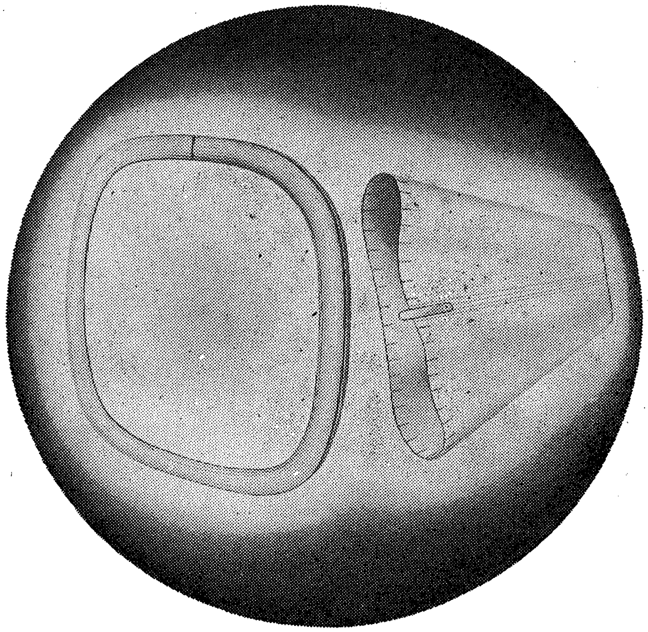
The Kit is furnished complete with punched chassis (pre-printed with pictorial diagram for easy assembly), all components, tubes, cabinet and detailed instruction.

Net

TECH-MASTER PRECISION TELEVISION COMPONENTS

ANCHOR PLASTIC INSULATING RINGS AND SLEEVES

FOR ALL METAL TV PICTURE TUBES
COMPLETE PROTECTION FROM HIGH VOLTAGES

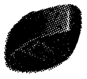


made of DUPONT "ALATHON"

Size	Ring	Sleeve	Complete Set	
16" Short	$2.15	$1.90	PL4S	$4.05
16" reg.	2.15	1.90	PL4	4.05
17" reg.	2.74	2.21	PL17R	4.95
19" reg.	2.74	2.21	PL19	4.95
21" reg.	3.20	2.25	PL21	5.45
24" reg.	4.76	3.18	PL24	7.94
24" reg.	4.70	3.12	PL24R	7.82
27" reg.	5.03	3.50	PL27	8.53

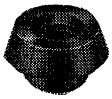
*Produced under one or more of the following U. S. patents 2503813, 2559353, 2560336, 2601269, 2602112, 2602113, 2602114, other pats. pend. ANCHOR IND'L

KNOBS AND ESCUTCHEON PLATES



536-537

535



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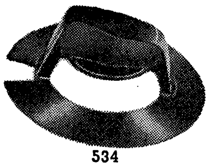
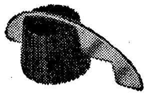


534

HORIZONTAL HOLD, VOLUME	Part #536	$.18
BRIGHTNESS (dummy)	Part #537	.18
FINE TUNING	Part #533	.24
STATION SELECTOR	Part #534	.30
BRIGHTNESS, CONTRAST OR VERTICAL HOLD	Part #535	.21



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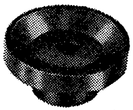
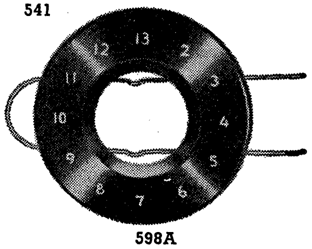
541



539-540



598A

STATION SELECTOR	Part #538	$.30
FINE TUNING	Part #539	.24
BRIGHTNESS, CONTRAST OR VERTICAL HOLD	Part #540	.21
HORIZONTAL HOLD, VOLUME	Part #541	.18
BRIGHTNESS one piece mold (#540, 541)	Part #542	.35
CHANNEL PLATE and SPRING	Part #598A	.60

Complete Line of Quality 630 Replacement Parts and Conversion Kits

- TRANSFORMERS
- I.F. TRANSFORMERS
- VIDEO PEAKING COILS
- HORIZONTAL OUTPUT and H.V. TRANSFORMERS
- WIDTH and LINEARITY COILS
- FOCUS COILS
- CONTROLS
- ELECTROLYTIC CONDENSERS
- BLEEDER RESISTORS
- DEFLECTION YOKES
- KNOBS and ESCUTCHEON PLATES
- PLASTIC SLEEVE and RING SETS
- KEYED A.G.C. KITS for 630-TYPE CHASSIS
- HI-SWEEP VOLTAGE MULTIPLIER KITS
- UNIVERSAL PICTURE TUBE MOUNTING BRACKETS

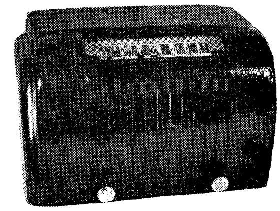
Detailed, illustrated literature and listing available upon request.

All prices are subject to change without notice.

Grossman Quality Radio and Television Products

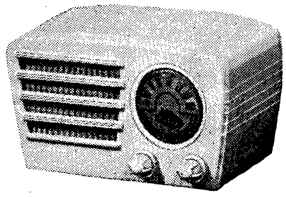
30 Models from 1 to 8 Bands—AC—AC/DC—Battery Radio Receiver Kits — Broadcast and Multi Band Complete with cabinets or chassis, only.

ECONOMY SUPERHETERODYNE MODELS
Broadcast 550-1700 KC 5 Tubes For 110V or 220V



A51

- Beam Power with large PM Speaker
- All features of Quality Production Sets
- Tube complement: 50L6 - 35Z5 - 12SA7 - 12SQ7 - 12SK7 or 50C5 - 35W4 - 12BE6 - 12AT6 - 12BA6

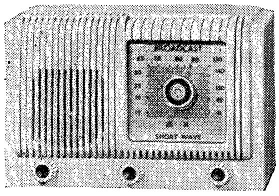


S51

- Superheterodyne circuit
- High gain K Tran IF's
- Automatic Volume Control
- 2 Gang Variable Condenser
- Built in Loop Antenna
- Cabinets available in all decorator colors

Dimensions: Model A51—7" H x 11" W x 6½" D — Wt. 7 lbs. net
Model S51—5¼" H x 8½" W x 5½" D—Wt. 3½ lbs. net

2 BAND AC-DC AND 1000 HOUR BATTERY MODELS



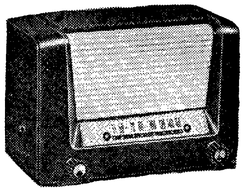
Custom "B" Series

Large illuminated Airplane Dial 550 KC to 1700 KC Broadcast Short Wave 16 to 49 or 62 meters Handsome Cabinet 9" H x 13" W x 7" D

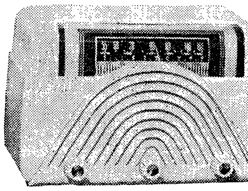
Model B52—5 tubes AC/DC 110 V or 220 V Tubes: 50L6-35Z5-12SA7-12SQ7-12SK7

Model 4B2—4 tubes 90 Volt/1½ Volt 1000 hour low drain battery Superheterodyne using 1½ Volt Tubes: 1L6-1U5-1U4-3S4

Additional Features: 5" PM Alnico Speaker with 1.47 oz. magnet—Tropicalized Components — High Gain Short Wave Coils—Ceramic Trimmers and Padders — Plastic Knobs with Brass Inserts. Net weight—8 lbs.



Also Available in "E" Series



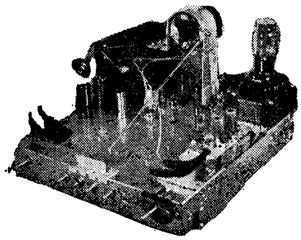
Custom "D" Series

110 V and 220 V

D52—Two Band 5 Tube AC/DC
D62—Two Band 6 Tube AC/DC
D63—Three Band 6 Tube AC/DC
Cabinet dimensions — 9" H x 13" W x 7" D

NOTE: All GROSSMAN and McMURDO SILVER kits are supplied complete and include tubes, speakers, coils, condensers, resistors, cabinets, chassis, dials, variable condenser, switches, hardware (less wire and solder), and all accessories necessary to build a regular factory type radio. * Cabinet-Chassis-Dial Kits also available information on request.

SUPER POWERED — PRODUCTION DESIGNED TELEVISION KITS AND WIRED CHASSIS
MODEL G21

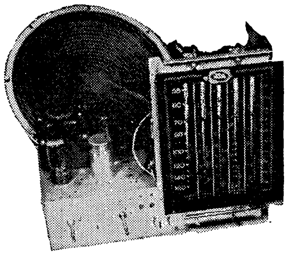


Most advanced television receiver chassis. Contains all the latest engineering advances. Adaptable to UHF and color reception. For picture tubes from 17" to 24".

Specifications

- 21 tubes (including 3 rectifiers)
- Turret tuner with cascode amplifying stage
- Adaptable to UHF
- Color television receptacle
- Phonograph receptacle
- Automatic picture lock
- RF Stage
- High signal to noise ratio
- Automatic gain control
- Retrace blanking circuit
- Static free FM sound system
- One knob tuning
- Power supply 115V 60 Cycles
- Underwriters laboratory listed
- 12" Alnico V PM Speaker
- Dimensions: 18" H x 19" W x 9" D

AC CHASSIS KITS 6 TO 8 TUBES
Large Slide Rule Dials
Assorted Speakers — 3 to 5 Bands



Deluxe Multiband AC Radio Receiver Chassis

8 tubes including rectifier. Powerful transformer with advanced filtering circuit for high fidelity and minimum distorton.

Model AC-85

Dimensions: 11" H x 13" W x 9" D
Model AC-83 — three band, 8 tube, AC, 12" PM Speaker
Model AC-85 — Five band, 8 tube, AC, 12" PM Speaker

Both models designed with phono switch — single and three speed record changers available for radio-phonograph combinations.

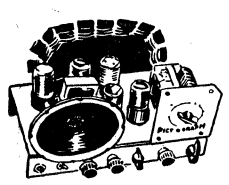
GROSSMAN quality components are used on all kit models and are manufactured and supplied by the most famous and important manufacturers in the industry. This assures an efficient factory receiver as long as simple instructions are followed. GROSSMAN and McMURDO SILVER units and components are used by manufacturers, schools, and training organizations all over the world where rigid factory test requirements have to be met to guarantee trouble-free performance.

GROSSMAN RADIO AND ELECTRIC COMPANY

137 Hudson Street, New York 13, N. Y. **Cable: GRECOELEC**

STARS ON EAGLE'S *Pict-O-Graph* TRADE MARK RADIO KIT PARADE

MFGD. BY
EAGLE ELECTRONICS, INC.
NEW YORK, N. Y.

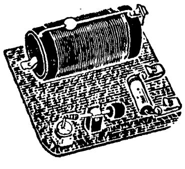


Q5

QUADRUCATIONAL 4 IN 1 KIT

A complete electronic laboratory for learning. Combined on one chassis are: 1—Amplifier, 2—Code oscillator, 3—Receiver, 4—Transmitter. Uses 5 tubes (included), 12SA7, 12SK7, 12SL7, 50L6 and 35Z5 rectifier. For use on 110 volts AC or DC.

KIT NO. Q-5 .... NET $23.40
CODE KEY NO. Q-201 .... NET $ .90
HEADPHONE NO. Q-207 .... NET $ 1.50
CABINET NO. Q-206 .... NET $ 3.00

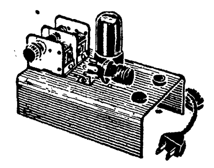


CX-1

CRYSTAL RADIO KIT

The first step in electronic education. Screwdriver construction (no soldering). Operates without batteries or power. Prefabricated tuning slide coil. Complete with all parts and instructions. (Less headphone).

KIT NO. CX-1 .... NET $1.11
HEADPHONE NO. Q-207 .... NET $1.50

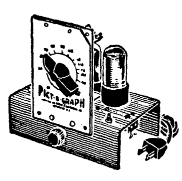


T-10

'PAL' ONE TUBE AC-DC RADIO

Designed for the radio newcomer. Engineered for easy construction and efficient operation. No skill or knowledge required. Uses one 6SL7 dual triode (two tubes in one). Complete with tube, parts and PICT-O-GRAPH instructions.

KIT NO. T-10 .... NET $7.20

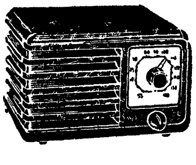


RT-20

2 TUBE AC-DC 'BC' RADIO

Four tube performance with two tubes. Features Iron core permability tuner, calibrated face plate, two hi-mu 6SL7 twin triodes. Kit includes tubes, all parts and simple PICT-O-GRAPH instructions.

KIT NO. RT-20 .... NET $9.60

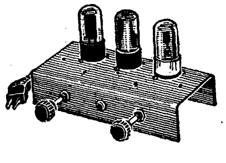


RT-3

3 TUBE RADIO plus SELENIUM RECTIFIER

POWERFUL! Designed for maximum stability, selectivity and high output. Uses three tubes; 2—12SJ7, 1—50L6 plus selenium rectifier. Includes tubes, parts, loop antenna, alnico PM speaker, plastic cabinet and instructions. For use on 110 volts AC-DC.

KIT NO. RT-3 .... NET $16.20

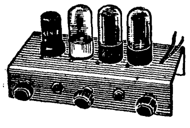


AM-30-A

3 TUBE AC-DC AMPLIFIER KIT

Complete beam powered amplifier. Operates through phono crystal pickup or carbon mike. Excellent tone. Controlled speaker volume. Uses 3 tubes: 12SQ7, 50L6 & 35Z5 rectifier. Kit comes complete with parts and instructions. (Less tubes).

KIT NO. AM-30A .... NET $5.40

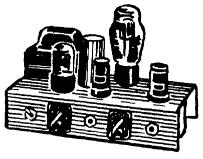


AM-40-A

4 TUBE AC-DC AMPLIFIER KIT

Exceptionally fine, compact amplifier. Similar to AM-30A (left) with added preamplifier to operate crystal or dynamic mike as well as crystal phono pickup. Tubes: 12SJ7, 12SQ7, 50L6 and 35Z5. Complete with all parts and instructions. (Less tubes).

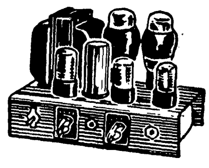
KIT NO. AM-40A .... NET $7.20


AMP-10

10 WATT 'SUPER' AMPLIFIER KIT

High gain P.A. amplifier for home or auditoriums seating up to 800 persons. Separate mike and phono inputs. Full 10 watts from 40 to 16,000 CPS. Tubes: 2— 6SJ7, 1—6L6, 1—5Y3. Includes all parts, hardware, instructions, etc. 110 V. 60 cycles only. (Less tubes).

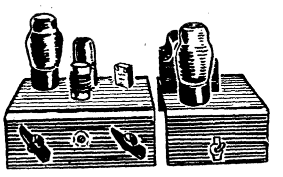
KIT NO. AMP-10 .... NET $15.00


AMP-25

25 WATT 'CUSTOM' AMPLIFIER KIT

A deluxe hi-fi amplifier for custom ensembles or auditoriums seating to 1500 persons. 25 watts, 28 on peaks. 30-20,000 CPS. Separate mike and phono channels. Xtal or dynamic input. Tubes: 2—6SN7, 2—6L6, 1—5Y3. 110 V. 60 cycles. (Less tubes).

KIT NO. AMP-25 .... NET $27.00


X-30 PS-30

NOVICE TRANSMITTER

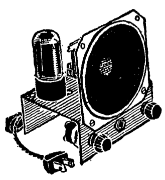
35 watts from 10-160 Mtrs. 6F6 tri-tet oscillator. 6L6 final. Pi-network. Resonance indicator. (Less tubes, coils, xtal).

KIT NO. X-30	**NET $9.60**
COIL C-3 (per band)	**NET $1.11**

X-30 POWER SUPPLY

Supplies full power for X-30. Matching chassis.

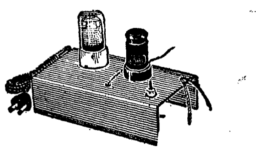
KIT PS-30 (Less 80 tube) $9.60


CP-12

CODE OSCILLATOR KIT

Clear rich tone variable from 600 to 1,500 cycles. Full room volume. Speaker, headphone or both may be used. Includes parts, tube (117L7), speaker and instructions.

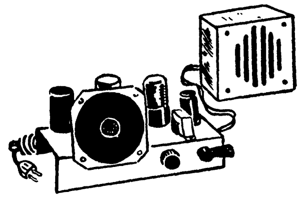
KIT NO. CP-12	**NET $9.60**
CODE KEY NO. Q-201	**NET $ .90**
HEADPHONE NO. Q-207	**NET $1.50**


PH-20

'MYSTERY' AC-DC PHONO OSCILLATOR KIT

Absolutely amazing! Talk or play records thru your own radio, without wires, up to 100 ft. away. No license required to operate. Uses 2 tubes: 6SA7 and 6SK7. Complete with all parts, tubes, hardwear and easy PICT-O-GRAPH instructions.

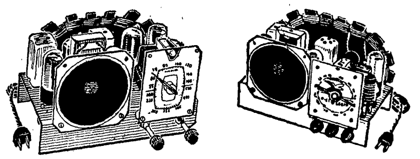
KIT NO. PH-20 .... NET $5.40


MA-5A CS-7

TWO STATION CALL SYSTEM KITS

Ideal for store, office, etc. Separate master and remote kits. Any remote may call master. Master calls all remotes. Tubes: 12SJ7, 50L6 and 35Z5. (Less tubes). PM speaker included in all kits.

MASTER MA5A (less cabinet)	**$10.20**
REMOTE CS-7 (incl. cabinet)	**$ 4.05**
CABINET (for MA5A) C-6	**$ 3.00**


S-500A S-520A

5 TUBE AC-DC 1 & 2 BAND SUPERHET RECEIVER KITS

For the advanced student. Sensitive and selective. Tunes from 6.9 to 17 Mcs. (20 and 40 Mtrs.) plus the BC range 540-1600 Kcs. Tubes: (not incl.) 12SA7, 12SK7, 12SQ7, 50L6 and 35Z5. Includes loop, speaker, etc.

KIT S520A (2 BANDS)	**NET $16.20**
MATCHED CABINET C5A	**NET $ 3.00**
KIT S500A (BC ONLY)	**NET $14.40**
MATCHED CABINET C5	**NET $ 3.00**

EAGLE

Pict-O-Graph
TRADE MARK

RADIO KITS

approved by the NEW YORK BOARD of EDUCATION ("S-1" List 1950)

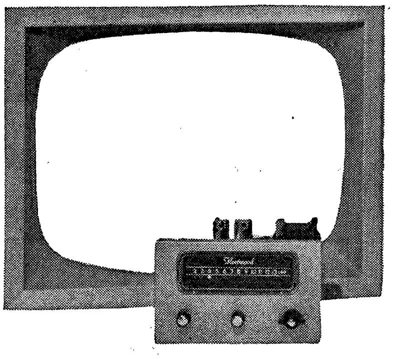
Fleetwood Remote

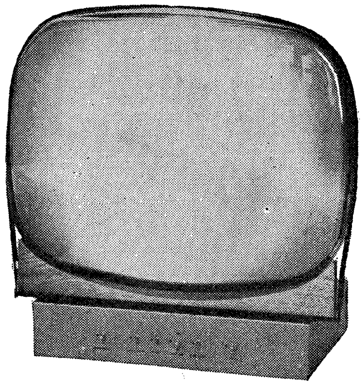
TELEVISION RECEIVERS

CONRAC, INC., GLENDORA, CALIFORNIA

The Fleetwood Remote is a complete two chassis television system, built to professional standards. It employs 27 tubes in addition to the picture tube and provides audio power for a loudspeaker. The picture chassis is relay operated by the on-off switch of the Tuner, thus providing full remote control. Both Tuner and Picture Units are attractively finished in gray and black baked lacquer.

The separate Tuner Unit, with edgelit dial and individual channel pilot lamps includes the off-on, picture, volume, channel selection and fine tuning controls. The Tuner is of the Super Cascode type and is completely adaptable for Ultra High Frequency reception by a simple interchange of strips. There is a U.H.F. position on the illuminated dial. Four I.F. stages provide full 4 megacycle video bandpass. The unit includes separate cathode followers for the audio and video circuits, as well as a high impedance output to match the finest home music systems.





Fleetwood "600" Full Remote Control Receiver for 21" and 24" Picture Tubes. Includes Tuner Chassis and Picture Chassis. Supplied with 27 tubes, 14 pilot lamps, 40 feet of cable, all knobs and Ion Trap. Net **$254.50**

Fleetwood "610" Complete television chassis for 21" and 24" picture tubes. (Not remote control.) Supplied with 23 tubes, all knobs and Ion Trap. Net **$199.50**

Fleetwood "700" Full Remote Control Receiver for 27" Picture Tube. Includes Tuner Chassis and Picture Chassis. Supplied with 27 tubes, 14 pilot lamps, 40 feet of cable, all knobs and Ion Trap. Net **$274.50**

Fleetwood "710" Complete television chassis for 27" picture tubes. (Not remote control.) Supplied with 23 tubes, all knobs and Ion Trap. Net **$219.50**

All chassis less picture tube and mounting brackets.

Accessory Kits: Contains mounting frame, laminated safety glass, and royalite picture tube mask.

621A for 21" spherical face tubes as 21AP4 (18" x 24"). Shipping wt. 10 lbs. Net **$15.00**

621B for 21" cylinder face tubes as 21EP4 (18" x 24"). Shipping wt. 10 lbs. Net **$15.00**

624A for 24" tubes as 24AP4 (22" x 28"). Shipping wt. 17 lbs. Net **$22.50**

727A for 27" metal shelled tubes as 27MP4 (24" x 30"). Shipping wt. 20 lbs. Net **$25.00**

727B for 27" glass tubes as 27EP4 (24" x 30"). Shipping wt. 20 lbs. Net **$25.00**

Mounting Kits: Includes tube supports, tie down cables and all hardware for mounting picture tube on chassis.

601A mounts 21" metal tube on Model 600 or 610. Includes plastic ring and sleeve. Shipping wt. 2 lbs. Net **$10.00**

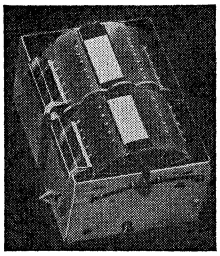
601B mounts 21" glass tube on Model 600 or 610. Shipping wt. 2 lbs. Net **$3.00**

604A mounts 24" metal tube on Model 600 or 610. Includes plastic ring and sleeve. Shipping wt. 6 lbs. Net **$15.00**

704B mounts 24" rectangular glass tube on Model 700 or 710. Shipping wt. 4 lbs. Net **$6.00**

707A mounts 27" metal tube on Model 700 or 710. Includes plastic ring and sleeve. Shipping wt. 4 lbs. Net **$18.00**

707B mounts 27" glass tube on Model 700 or 710. Shipping wt. 4 lbs. Net **$6.00**



CONRAC TUNER-KLEEN'R

The new Conrac "Tuner-Kleen'r" is easily snapped into position in all standard tuners to perpetually clean all the stationary and revolving contact points for clearer television reception. Every turn of the tuner puts the Conrac "Tuner-Kleen'r" to work. List Price **$1.50**

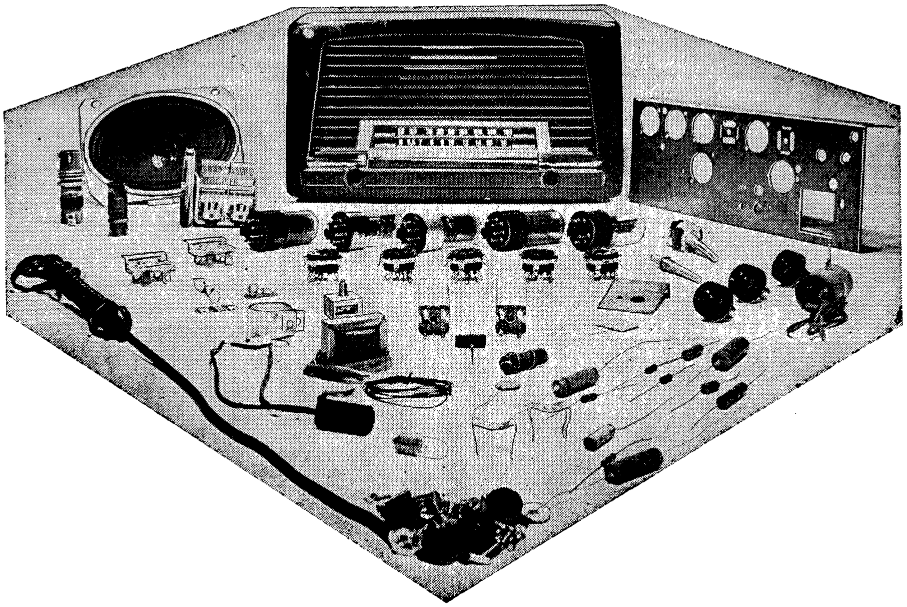
DIMENSIONS

Unit	Height	Width	Depth
Tuner Chassis	7"	11½"	8½"
Picture Chassis (21" Tube Mounted)	21"	20¾"	23¼"
Picture Chassis (24" Tube Mounted)	30"	26"	25¼"
Picture Chassis (27" Tube Mounted)	26"	25½"	23¼"

CONRAC, INC. • Since 1939 • Glendora, California

ARKAY: World Famous for Radio & TV Kits

Model Q5X



Model S-5D
For the beginner
5-Tube AC/DC
SUPERHET. KIT

Model S-5X
2-BAND RADIO KIT
For advanced student
5-TUBES, SUPERHET.

Model M-AC3X
For the experienced
3-BAND AC KIT
With large bakelite cabinet

AC/DC PORTABLE KIT
Model 3W10D — 1 Band
Model 2X3W4 — 2 Band

Model TK-19
TELEVISION KIT
19 Tubes

Model M-3C
Ohm-Volt-Milliamp
METER KIT
For the Beginner

Model 012
Standard Type
VACUUM TUBE VOLT METER KIT

Model K-450
4-BAND—5-TUBE
SUPERHET. KIT
550 KC—32 MC

Model P-120
3-BAND AC/DC KIT

Model Q-5X
2-BAND AC/DC KIT

Model TB2X
2-BAND FARM PACK KIT

Model A
10 WATT AMPLIFIER KIT

For complete details and descriptions, write for Catalog RK-53

ARKAY: Radio Kits, Incorporated
120 Cedar St., New York 6, N. Y., BE 3-6686

CUSTOM CABINETS FOR RADIO, PHONOGRAPH, TV, AND SPEAKER INSTALLATIONS INCLUDING SPECIAL FEATURES FOR HIGH FIDELITY REPRODUCTION

by RIVER EDGE INDUSTRIES

Distinctive designs built to the highest standards of fine furniture with hand rubbed finishes . . . in modern, provincial and traditional styling. Units are made from the original species of wood specified in the finish unless otherwise noted and constructed of heavy plywood, reinforced throughout for vibrationless performance. The wide variety of finishes includes: Cherry Mahogany, Cordovan Mahogany, Blonde Mahogany, Grey Mahogany, Walnut, Platinum Walnut, Limed Oak, African Oak, Ebony, Maple, Fruit-wood, Natural Birch and Knotty Pine.

High Fidelity demands a "care-constructed" cabinet that will not permit the slightest vibration to interfere with radio's new miracle of faithful tone reproduction.

Speaker enclosures are of two types—conventionally shaped cabinets and those designed to fit into room corners and to save space. Conventional cabinets are bass reflex or horn loaded with C. G. McProud engineered *Flex-O-Port* which is adjustable to match any speaker; corner cabinets are horn loaded, and are also available for two-way systems.

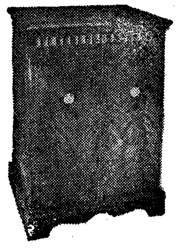
Acoustically perfect grill fabric is used on all loudspeaker enclosures which are lined with approved sound absorbing material to minimize internal sound reflections. Television cabinets are available with pull-out phonograph drawers. Models will accommodate most chassis and tube sizes up to 27 inches.

Installing equipment in these cabinets is quick and simple—only a screw-driver is needed. All cabinets can be shipped with instrument panels pre-cut for easy installation of equipment.

COMPLETE CATALOGUES AVAILABLE TO JOBBERS AND DEALERS.

HI-FIDELITY

INSTRUMENT CABINETS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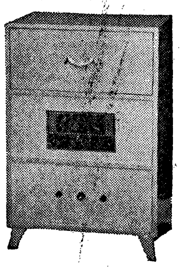
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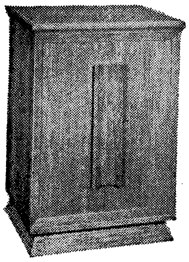
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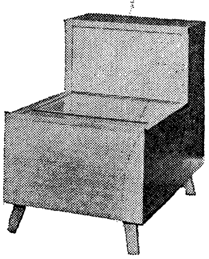
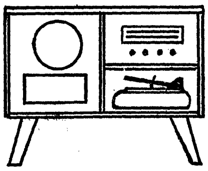
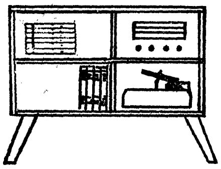
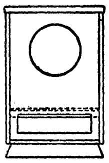

ST 410

RIVER EDGE STYLES FOR HI-FI CABINETS


STYLE L


STYLE R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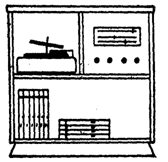
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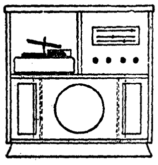
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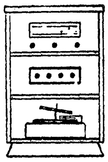
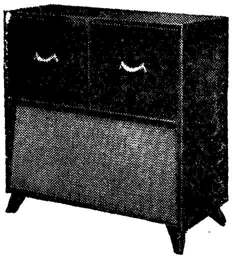

STYLE "B"

INSTRUMENT & SPEAKER COMBINATION CABINETS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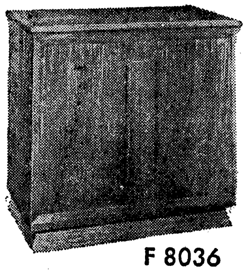
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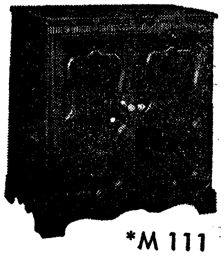
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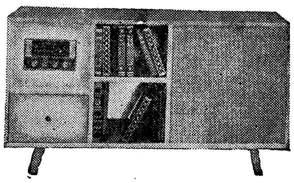
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*CH 44

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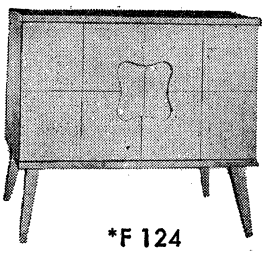

*F 124

*M 113

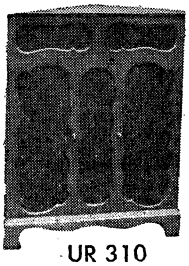
*Available for both Hi-Fidelity & TV Cabinets

River Edge
INDUSTRIES

5 RIVER EDGE ROAD, RIVER EDGE, NEW JERSEY

(High Fidelity - con't)

CORNER ENCLOSURES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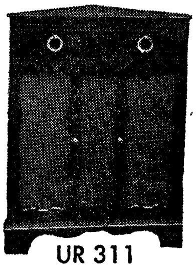
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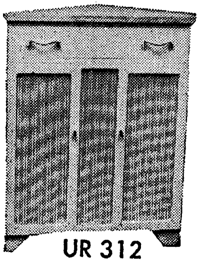
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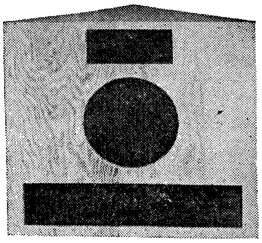
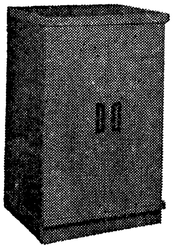

No. 700 KIT

TELEVISION CABINETS

MODERN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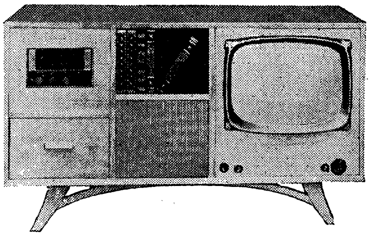
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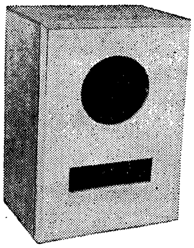
BASE REFLEX OR FOLDED HORN SPEAKER ENCLOSURES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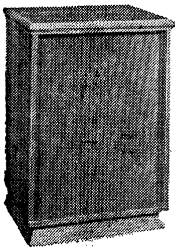
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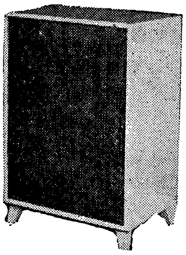
CP-8024 S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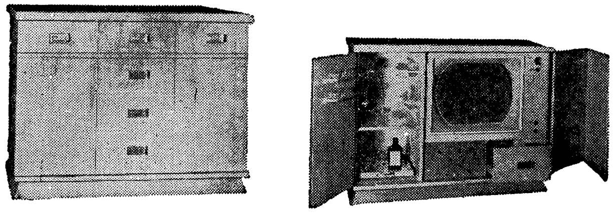
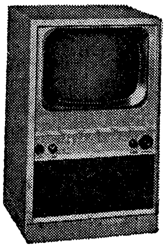

*C 100 LB. (OPEN AND CLOSED)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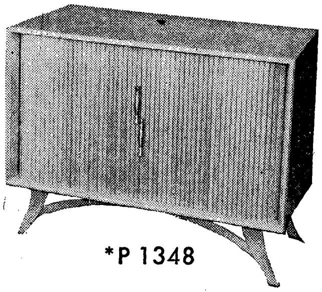
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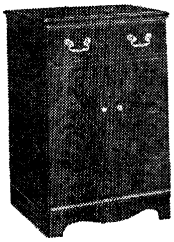
TRADITIONAL AND PROVINCIAL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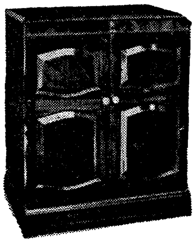
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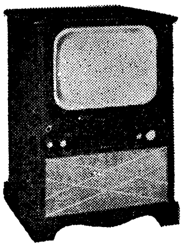
P 84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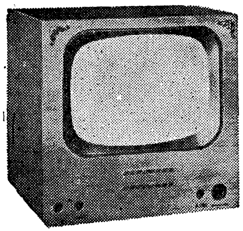
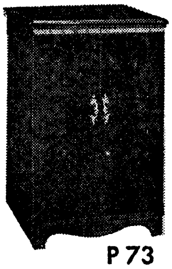

TM 21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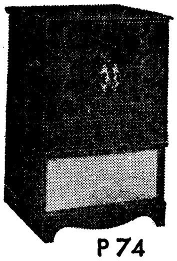
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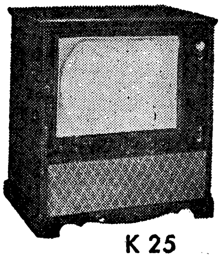
K 25

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*Available for both Hi-Fidelity & TV Cabinets

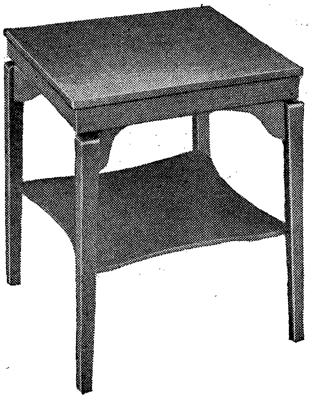
5 RIVER EDGE ROAD, RIVER EDGE, NEW JERSEY

UNIVERSAL WOODCRAFTERS INC.

. . . TELEVISION FURNITURE

TELEVISION TABLE with Shelf

Model S-650 .... 21" x 21"
Model S-750 .... 21" x 24"

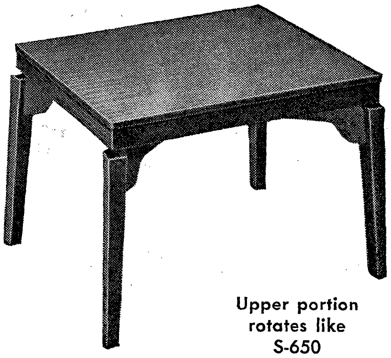


One of the most consistent sales-producers of the "UW" line. Available in mahogany, limed oak and blonde . . . finished to appeal to everyone.

Entire upper portion (top and rails) completely rotates with our nationally famous ball bearing center unit; eliminates warping or binding under any weight.

TELEVISION TABLE

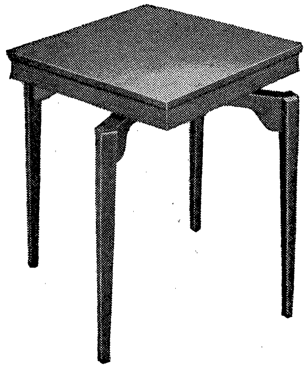
Model TT-900 .... 26½" x 22"
Model S-950, with shelf .... 26½" x 22"



Upper portion
rotates like
S-650

Especially designed for 21" TV table models. Guaranteed not to bind under the heaviest TV sets. Top of beautifully grained 5 ply veneer; hardwood legs; finished in matching mahogany, limed oak or blonde.

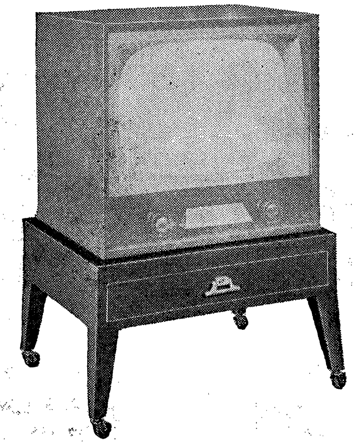
Model TT-600 .... 21" x 21"
Model TT-700 .... 21" x 24"



Another quality table in mahogany, limed oak or blonde. Includes nationally famous ball bearing center unit described in Model S-650. Finished as skillfully as your grand piano.

New Console Base

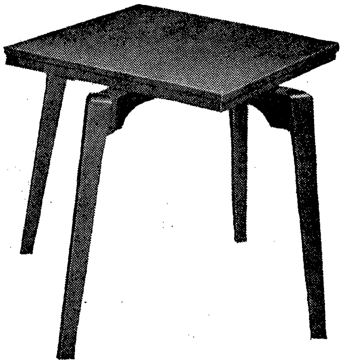
CB1000 ..... 21" x 21", ht. 18"
CB2000 ..... 24" x 21", ht. 18"
CB3000 ..... 26½" x 22", ht. 18"



Will make any table model into ideal modern or conventional base. Made for any television set. Eliminates inventory problems. Made of 5 ply veneer with solid top, finished in matching mahogany, limed oak, blonde.

Television Table

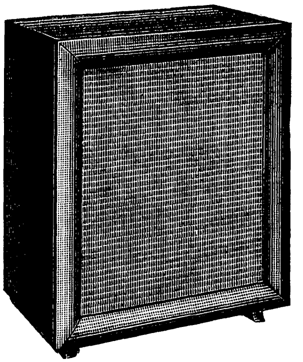
Model TT-30 .... 21" x 21"
Model TT-40 .... 24" x 21"



Here is a real volume-producer which has everything . . . quality . . . design . . . sales-appeal. Your choice of mahogany, limed oak or blonde.

"UW" . . . the quality line of television furniture is manufactured by UNIVERSAL WOODCRAFTERS, INC., of La Porte, Indiana.

Argos PRODUCTS COMPANY *Craftsmanship in Cabinets*



NEW BASS REFLEX CABINETS

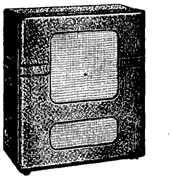
Mahogany or Blonde Wood Front

Matching Leatherette Top and Sides

For 12" or 15" Speakers

Designed for the finest surroundings, yet economically engineered. Never before has any cabinet offered so much for so little. Picture-frame front is hand-rubbed 1 x 2½ in. solid hardwood. Top and sides are ½-in. 5-ply wood, covered with 6½-lb., pyroxylin-coated Brahma-grain matching leatherette. Plastic grille cloth. Scientifically engineered for high fidelity reproduction. ½-in. cellufoam padding on interior gives richness without boom. 7564 cubic inch capacity exceeds recommendations for 15-inch speakers. Size 23⅞" wide, 30" high, 14⅞" deep. 15" speaker mounting screws installed; also reducing ring with screws for 12" speaker. Specify Mahogany or Blonde, same price. Shipping Weight 35 lbs.

DBR-15—For either 12 or 15-in. Speaker. List $75.00..................Net **$45.00**

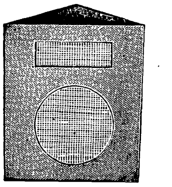


BASS REFLEX CABINETS

Same high quality as above, without picture-frame front. ½-in. 5-ply wood; brown mahogany leatherette with gold beading. Acoustic lining. Plastic grille cloth. Mounting screws in place for standard size speaker.

BR-12—20 x 30 x 12½ in. Shipping Weight 31 lbs. List $44.50..................Net **$26.70**

BR-15—23⅞ x 30 x 14 in. Shipping Weight 35 lbs. List $49.50..................Net **$29.70**



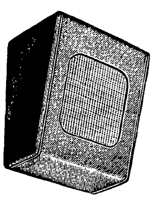
CORNER WALL BAFFLES

Get more effective coverage, at lower cost. Corner location often aims sound better, and is less conspicuous. Heavy ⅜" construction, bass reflex design and ½" acoustic lining for richer tone than ordinarily obtained in baffles. Plastic grille; pyroxylin-coated leatherette.

Mahogany or Blonde, Same Price

CB-8—For 8" Speaker. 12¾ x 14¼ x 6½ in. Shipping Weight 5 lbs. List $9.25..................Net **$5.55**

CB-12—For 12" Speaker. 17¾ x 20½ x 9 in. Shipping Weight 9 lbs. List $15.50..................Net **$9.30**

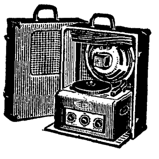


WALL BAFFLES

Same fine craftsmanship as above. Heavy construction, reinforced for extra strength. Plastic grille; Pyroxylin coated leatherette. Packed 2 in carton. Shipping weight per carton of two in the order listed below: 2½, 3, 5½, 7, and 10 lbs.

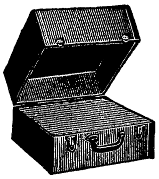
Mahogany or Blonde, Same Price

Part No.	Speaker	Width, Height, Depth	List Price	Dlr. Net
WB-4/5	4-5 in.	6x6⅛x3¾ in.	$3.90	$2.34
WB-6	6 in.	7¼x8½x5 in.	4.40	2.64
WB-8	8 in.	9½x10¼x6⅜ in.	4.90	2.94
WB-10	10 in.	11⅝x12½x6⅞ in.	5.80	3.48
WB-12	12 in.	13½x14¼x9 in.	7.75	4.65



SOUND CADDY

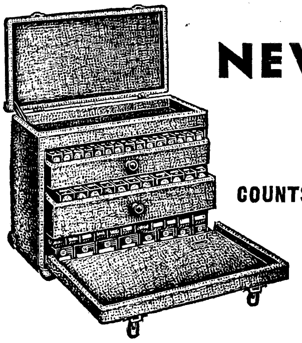
Highly serviceable portable case. Accommodates two 12-in. speakers with space below for most amplifiers (with turn-table) up to 30 watts. Amplifier bolts to mounting board, slips out when case is opened. Brackets for cables. Heavy plywood construction, steel corner angles. Brown leatherette 17" wide by 23" high by 13" deep. SC-1—Shipping Weight 22 lbs..................Net **$19.50**



RECORD CHANGER CASE

Designed for long dependable service. More sturdily built than other carrying cases selling for the same price. Handsome brown leatherette with brass-finish hardware. Clearance above mounting board 6½ in. Takes any standard changer. Size 16½" square by 11½" high. Inside dimensions ¾" less.

PC-1A—Shipping Weight 16 lbs..................Net **$12.60**



NEW *DeLuxe* tube caddy

TRADE MARK

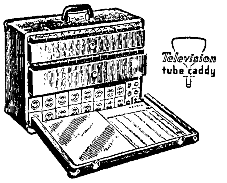
COUNTS and CARRIES your TUBES

Specially designed for the television serviceman. Makes work easier and quicker — and YOU more efficient. Holds up to 225 receiving-type tubes, plus handy space at top for TOOLS and METER. You TAKE INVENTORY AT A GLANCE. Each space is designed for a certain number of tubes, and missing cartons are easily spotted. You carry a complete assortment of tubes as easily as just a few.

Shop owners say the Tube Caddy PAYS FOR ITSELF IN 3 WEEKS time. Their men are checked in and out faster, and always arrive on the job with the tubes they need. This means more calls per day, and lower cost per call. Moreover, customers recognize their service is up-to-the-minute, with every aid available for faster, more efficient repair.

Heavy two-tone gray scuff-resistant leatherette with handsome brass finish hardware. Solidly built for long service. Stay hinges support top cover. Slip-out hinges on front cover; clips inside for holding data sheets or mirror (not furnished).

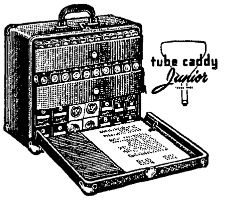
TC-3—Size 18 x 14½ x 9¼ in. Shipping Weight 16 lbs..................Net **$14.95**



ORIGINAL "TUBE CADDY"

Holds up to 249 tubes without a single inch of waste space. Prized possession of thousands of TV servicemen. Drawer partitions removable to accommodate TOOLS and METER. Brown leatherette. Slip-out hinges, etc. Size 20 x 13½ x 9 inches.

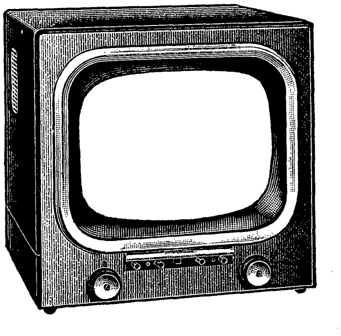
TC-1B—Ship. Wt. 16 lbs..................Net **$13.50**



TUBE CADDY "JUNIOR"

Companion piece to larger units above. Same work-saving features in ⅔rds the size and weight. Easy to carry. Holds up to 143 tubes, or less with TOOLS and METER. Brown leatherette, slip-out hinges on cover, etc. Handy size 15½ x 13 x 8 in.

TC-2—Ship. Wt. 13 lbs..................Net **$7.75**



TV CABINETS

For All Popular TV Chassis

16" to 27" Tube

Mahogany or Blonde, Same Price

Convert your TV chassis into a complete set with minimum cost. Exceptionally well built Argos cabinets fit finest surroundings. Richly grained pyroxylin coated leatherette—Mahogany or Blonde, same price. Smart plastic beading around front panel and along sides. Rugged construction with ⅜" 3-ply sides and ½" 5-ply bottom. Long ¼" slots in bottom provide adequate ventilation. Speaker grille is woven plastic. Fin-shanked bolts in place for 8" speaker.

Cabinets for Radio Craftsman and 630-type chassis have all holes cut, ready for chassis to slide right in. Cabinets TV-24RC and TV-24PT have picture opening to accommodate either 24" round or 27" rectangular tube; tuning knob holes are cut. Cabinets TV-3PT and TV-24PTU have completely blank (uncut) front panels.

ARGOS #	Tube Size	Type Chassis	Ship. wt.	Dlr. Net*
TV-1RC	16 - 17"	Radio Craftsmen	25 lbs.	$31.25
TV-3PT	16 - 21"	630 Uncut Panel	32 lbs.	33.30
TV-21RC	20 - 21"	Radio Craftsmen	32 lbs.	35.10
TV-21PT	20 - 21"	630 Type	32 lbs.	35.10
TV-24RC	24 - 27"	Radio Craftsmen	40 lbs.	48.00
TV-24PT	24 - 27"	630 Type	40 lbs.	48.00
TV-24PTU	24 - 27"	630 Uncut Panel	40 lbs.	46.20

*Includes Fed. Excise Tax

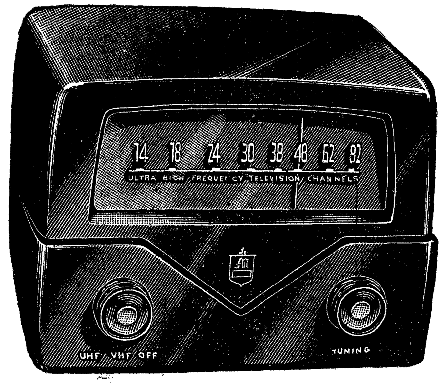
ALL ARGOS PRODUCTS equipment is sold only through Parts Jobbers. The name Argos stands for craftsmanship in cabinetry. Prices slightly higher West of Rockies.

P. R. MALLORY & CO. Inc.
MALLORY

UHF CONVERTER AND UHF TUNER

P. R. MALLORY & CO., INC. · INDIANAPOLIS

MALLORY TV-101 UHF CONVERTER*



The Mallory TV-101 UHF Converter expands the receiving capability of any conventional VHF television set to include reception of all UHF stations located within the signal range.

Designed for continuous tuning, this UHF converter insures a compatible balance of inductance and capacitance over the entire, tuning spectrum from 470 to 890 megacycles with a single control.

The smooth and easy operation of the TV-101 Converter is the result of many years of Mallory research in the field of variable inductance tuning devices. This program has resulted in the successful combination of modern circuit techniques required for converting conventional UHF signals to intermediate channels. The TV-101 will result in added television entertainment, through wider program selection, from the conventional television receiver.

The TV-101 Converter is equipped with a built-in UHF antenna which permits installation without the need for special tools or technical skills.

To simplify the operation of this unit even further, a 3-position, "master control" switch is located on the panel to assure rapid selection of:

(a) UHF station tuning.
(b) Normal operation of the VHF set.
(c) Switching VHF set and converter off and on.

Complete installation and operating instructions and warranty are included with each unit.
*Pat. Pending

Catalog No. **TV-101** List Price **$42.50**

DETAILED SPECIFICATIONS

Tuning Range: The tuning range of the TV-101 extends from 470 to 890 megacycles in a continuous, unbroken sweep of the tuning dial. This permits accurate tuning of all UHF TV channels without the addition of strips, coils, or band switches. The Mallory Converter is constantly tuned for operation in all areas of television reception.

Tube Complement: 6AF4/6T4 Oscillator; 6CB6 I.F. Amplifier; Selenium Rectifier; and a 1N72 UHF Diode Detector.

Circuitry: Three tuned circuits are employed in the UHF range to provide antenna pre-selection as well as the oscillator-mixer tuning function. These circuits are controlled manually by means of a single shaft actuated from the front panel of the converter. A 6CB6 amplifier, operating at a mean of 82 megacycles, is part of the TV-101. It provides additional amplification at the converter I.F. (either VHF channel 5 or 6). A combination change-over and AC on-off switch is provided to permit quick selection of either VHF or UHF stations from the front panel of the instrument.

Antenna Input Impedance: 300 ohms nominal. Either balanced or unbalanced line may be used.

Output Impedance: 300 ohms.

Stability: Oscillator drift and instability in the TV-101 are reduced to a negligible factor by the omission of all mechanically unstable parts, such as; air-tuned condensers, long leads, switches, and coil strips. Thermal sensitive parts are mounted away from heat producing components such as the I.F. and power supply tubes. The TV-101 stabilizes after approximately 1 minute when used with inter-carrier VHF TV sets, and after 3 to 5 minutes when employed with split-circuit sets.

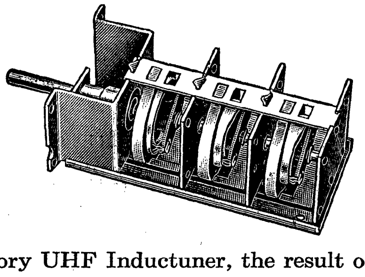
Dial Mechanism: The dial is a slide-rule type, calibrated linearly in TV channels 14 through 82. Full coverage of the entire tuning range is accomplished with approximately 9.75 turns of the tuning knob. Numerals indicating calibration are in gold on glass, and extend approximately 4¾" across the face of the instrument.

Power Supply: The TV-101 is designed for 117 volt, 60 cycle operation. The power supply consists of a transformer, a selenium rectifier, and a resistance-capacitance filter. Approximately 25 watts of power are required for operation.

Cabinet: Cabinet is attractive molded plastic in modern design. Measures 9" wide, 6⅞" deep, and 6¾" high. Bottom of cabinet has felt pads to prevent marring of furniture.

Weight: Approximately 6½ lbs.

THE MALLORY UHF INDUCTUNER*



The Mallory UHF Inductuner, the result of years of research by P. R. Mallory & Co. Inc. in variable-inductance tuning of resonant circuits, is a compact assembly of variable inductances available in three sections. It will tune continuously the UHF range of television channels from 470 to 890 megacycles when used with proper circuitry.

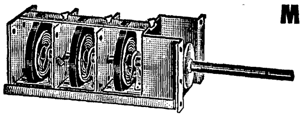
Features of the UHF Inductuner include: reduction in overall capacitance while maintaining the same compact case as used for the Spiral Tuner; complete shielding between sections; shaping of the various sections for oscillator tracking at an I.F. of 82 Mc.; rugged contacts, and positive, uni-control coverage in 270° of rotation.

Additional information is available on request.

Catalog No.	Dimensions	List Price
8313	4 11/16 x 2 x 2⅛	**$15.00**

* Inductuner—Registered trade mark for Mallory variable inductance tuning devices. Pat. Applied For.

SPIRAL TUNERS • GRID BIAS CELLS



Mallory Spiral Inductuner*

The two, three and four gang Spiral Inductuners* are variable inductance tuning devices designed to provide efficient front-end tuning in deluxe television and FM receivers and boosters. When used in conjunction with suitable tubes and a minimum of circuit wiring, these Inductuners assure accurate, noise-free and continuous tuning of the entire frequency spectrum from 52 through 216 megacycles. The Inductuner eliminates the need for band switches, plug-in coils, turret coil assemblies or complicated circuit wiring when used for this purpose.

Tuning is accomplished in all models by means of a single ¼″ shaft to vary the inductance of each of the inductors simultaneously from the front of the equipment using the Inductuner. Automatic stops at the maximum and minimum inductance positions are provided to prevent damage to the inductors.

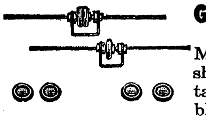
The individual coils have a maximum inductance of .985 uh and a minimum inductance of .025 uh. Total shaft turns are 5.925 +.060-.000. Each Inductuner has a 2½″ shaft—¼″ diameter.

Model 8302 is ideal for use in a TV booster (see schematic diagram below). Models 8303 or 8304 are suitable for TV front-end service.

Catalog No.	No. of Gangs	Dimensions†	List Price
8302	2	3⁹⁄₁₆ x 2 x 2⅛	$12.00
8303	3	4¹¹⁄₁₆ x 2 x 2⅛	15.00
8304	4	5⅞ x 2 x 2⅛	18.00

† Excluding lugs and shaft.

* Inductuner—Registered trade mark for Mallory variable inductance tuning devices. Manufactured and sold under one or more of the following Paul Ware and Mallory patents: 2,163644, 2,163645, 2,163646, 2,163647, 2,260877, 2,377789, 2,377790, 2,399060, 2,405890, 2,443020, 2,443822. Other patents applied for.



Grid Bias Cells

Mallory Grid Bias Cells are small acorn-shaped, self-contained devices. The metal container or cup is the negative electrode. The black disc is the positive electrode.

The principal use of Mallory Grid Bias Cells is in the biasing of the first audio amplifier tube in modern high-gain receivers. The bias cell does not need to be by-passed to ground.

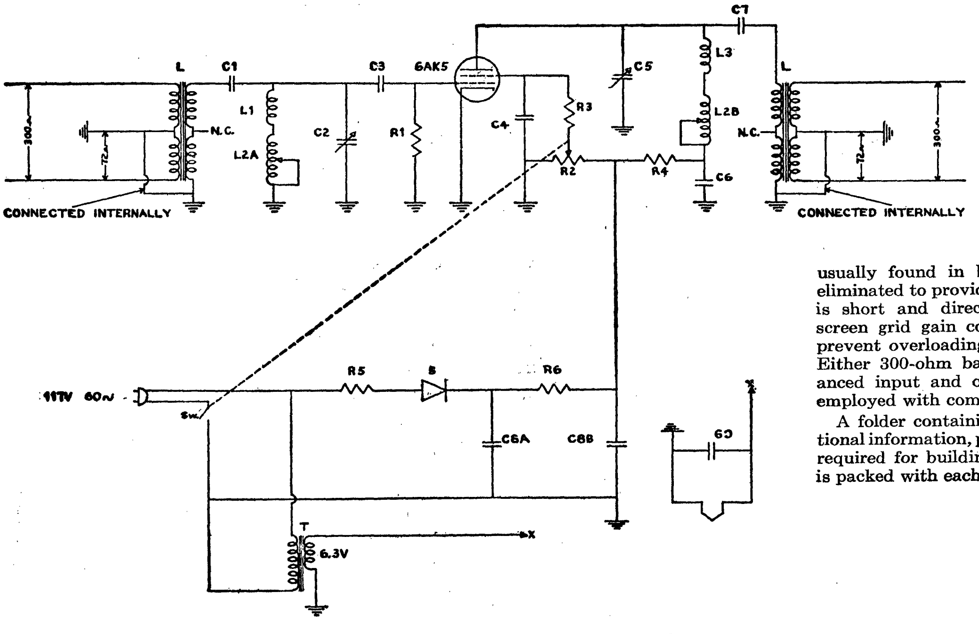
The no-current potential of the cells is within plus or minus 10% of their rated voltage. The cells are strictly potential or voltage cells for biasing class "A" amplifier tubes and should not be used for biasing power tubes or oscillators, or for any circuit where direct current may flow through, or be drawn from, the cells.

The cells may be used at temperatures from 0°F to 140°F. The voltage of the cells remains reasonably constant throughout this wide temperature range. Whenever possible, place the bias cells in the coolest location. The cells exhibit no change in characteristics when exposed to a relative humidity of 90% at 120°F.

Mallory Grid Bias Cells are non-reactive at audio frequencies. The DC resistance of the cell ranges between 10,000 and 40,000 ohms. The cells do not cause noise.

Cat. No.	Description	List Price
BC-3	1½-volt Grid Bias Cell (packed 10 to box).	**$0.30**
BC-4	1½-volt Grid Bias Cell (packed 10 to box) With mounting stud.................	**.45**
BC-5	1¾-volt Grid Bias Cell (packed 10 to box).	**.30**
BC-6	1¾-volt Grid Bias Cell (packed 10 to box) With mounting stud.................	**.45**
BC-7	1¼-volt Grid Bias Cell (packed 10 to box).	**.30**
GB15	Cell Clip, 1-cell capacity for BC-2 or 2-cell holding capacity for BC-3 or BC-5....	**.24**
GB16	Cell Clip, 2-cell capacity for BC-2 or 4-cell holding capacity for BC-3 or BC-5.....	**.24**
GB17	Cell Clip, 1-cell capacity for BC-3.......	**.24**

Two-Gang Spiral Inductuner Booster for TV, FM and General Purpose Tuning
Continuous Range: 54 to 216 Mc.



At the left is a schematic diagram of a full-coverage, TV booster employing the Mallory No. 8302 2-gang Spiral Inductuner. This TV booster is entirely practical and suitable for home-shop construction by the average technician. The Inductuner supplies all the essentials required for tuning in one, compact, factory-adjusted unit, thus providing simplified construction. No tuning condensers, band switches or plug-in coils are needed. Possible errors usually attendant with hand-wound coils and unknown tolerances of tuning condensers are completely avoided.

The proven efficiency and high gain of a 6AK5 tube has been utilized to the fullest extent. The antenna changeover switch usually found in booster circuits has been eliminated to provide vital R.F. wiring, which is short and direct. An infinitely variable screen grid gain control has been added to prevent overloading by strong, local signals. Either 300-ohm balanced or 72-ohm unbalanced input and output feed lines may be employed with comparable results.

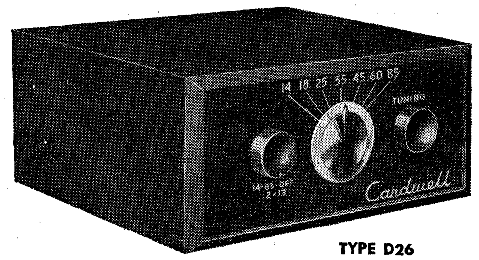
A folder containing detailed and constructional information, plus a listing of components required for building an Inductuner booster, is packed with each No. 8302 Inductuner.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

CARDWELL U.H.F. CONVERTER

FEATURES

- **High Sensitivity**
- **Low Noise Figure**
- **Stable Oscillator**
- **Constant L/C—ratio tuner**
- **Gear Driven Dial**
- **Quality Standard Parts**
- **Miniature Size**



TYPE D26

SPECIFICATIONS

Tubes—6AF4 oscillator
6CB6 I.F. Amplifier
IN72 crystal Diode

Power Supply—120 volt, 60 cycle. Includes full transformer type power supply

Input Impedance—300 ohms

Tuning Range—Continuous over entire UHF range from 470 to 890 mc. No sliding contacts.

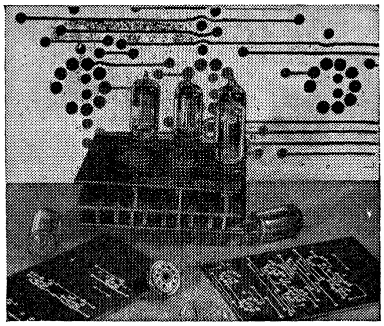
Designed for use with any standard television receiver to expand reception over the entire U.H.F. frequency spectrum, 470–890 mc. Featuring *superior performance, low cost* and *trouble-free service,* the Converter is precision manufactured to the same *high standard of quality* demonstrated by Cardwell Products for over 40 years. High gain, very low noise figure and optimum selectivity, characteristics which are most desirable in U.H.F. reception are the result of Cardwell's production know-how and years of research by a staff of skilled engineers.

So simple to operate. Just one switch with 3 positions to select from—"OFF", 2–13 and 14–83. One tuning knob with easy reading dial. High sensitivity and low noise figure provide clear picture even in "fringe" areas. Includes complete, built-in I. F. amplifier stage.

Frequency drift problem has been solved. Picture stability has been assured by the omission of sliding contacts and by the use of a printed circuit oscillator. Compactly designed in a beautiful solid mahogany cabinet available in either light or dark finish. Just 3½ inches high, its trim, low-styled lines will please the most discriminating. Easily serviced. Tubes readily replaced without removing the chassis. No installation costs. Installation is so simple that anyone can do it. No extra parts to buy. A length of 300-ohm twin lead is provided to connect converter to receiver. For receivers located in a strong U.H.F. signal area a special coupling device is supplied to adapt any conventional V.H.F. antenna for U.H.F. reception.

NO STRINGS • NO SLIDING CONTACTS • NO FREQUENCY DOUBLER

CARDWELL PRINTED CIRCUITS



Simplify your wiring assemblies by using printed circuits. Our method of etching copper clad laminates produces conductor patterns at amazingly *low cost* and in extremely compact form, yet retains *high efficiency.* Variations in inter-wiring capacitance are eliminated entirely by the precision reproducibility of the printed pattern. Line widths and line spacings down to 1/64 inch are possible. Both photo-offset and silk screen processes for forming the pattern are available. The choice depends upon quantities involved, production rate and precise definitions required.

For best performance and low cost, we recommend fiberglas mat-reinforced plastic with the following electrical and physical characteristics:

> Peel strength 10 lb. (one inch strip) moisture absorption 0.52%, (after 24 hrs.) dielectric constant (1 Kc.) 3.62, arc resistance 29 sec. power factor (10 Kc.) 0.55%.

One-shot soldering dip. By a special process developed by Cardwell, solder in well formed fillets is deposited only at desired points. This permits rapid assembly of high quality conventional components with no extraneous pick-up of solder on conductor lines. Saves solder and eliminates shorts.

FEATURES

Cut Labor Costs—Assembly time reduced approximately 30%.

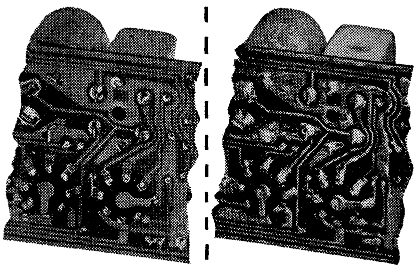
Reduce Weight—Up to 15% less weight.

Less Rejects—Eliminates wiring errors and shorts.

Solve Miniaturization Problems—Requires far less space. Ideal for stacking chassis layers.

Flexible—Circuit changes made with little delay or additional cost.

Eliminates elaborate cabling and tieing of wires



CARDWELL | CONVENTIONAL

Our methods and technique have a wide range of application. Consult us on your special problems

Comparative Standards since Radio's Conception

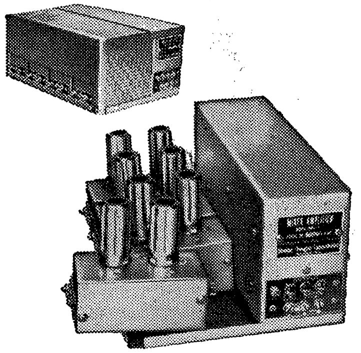
THE ALLEN D. CARDWELL Mfg. Corp., Plainville, Conn.

B-T LABS products for BETTER TELEVISION

by BLONDER-TONGUE LABORATORIES, INC., Westfield, N. J.

The B-T Add-A-Unit SYSTEM

A Successful Plan for Low Cost, Easy-to-Install Master TV Systems for VHF and UHF. Through the use of B-T Units, virtually every known TV problem can be dealt with. And the system is so flexible that it can serve the needs of 1 or 2 or even 2000 sets . . . without outside engineering assistance.

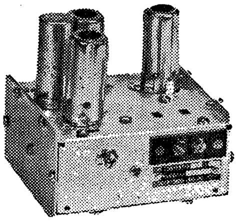


B-T MIXER AMPLIFIER
Model MA4-1

TV signal mixer with built-in power supply. Has 4 receptacles for plug-in, single-channel (VHF) amplifier strips (CS-1) or UHF conversion strips (UC-1), plus one through line.

Model MA4-1. Basic chassis and power supply less plug-in strips.
List Price $52.50

Model CS-1. Single channel amplifier strip specify VHF channel.
List Price $19.50



Model UC-1. UHF conversion strip (occupies space of two CS-1). Converts specified UHF channel to specified VHF channel. Specify UHF and VHF channels.
List Price $54.50

B-T TELEVISION ACCESSORIES

Precision engineered and individually tested for performance and impedance match. For Master Systems and individual installations.

WEATHER-PROOF HOUSING

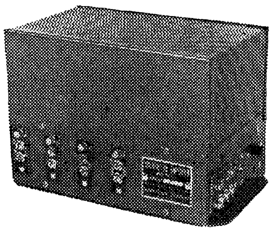
Model WH-1. For outdoor installation of any B-T Unit. Has universal mounting bracket for mast, roof, etc. Size: 9¾" x 7" x 5¾".
List Price $14.50

LINE LOSS EQUALIZER

Model LLE-1. Compensates for differential signal loss in 1000 feet of RG/11U or 500 feet of RG/59U. Attenuates gradually from 1 db. on Channel 13 to 17 db. on Channel 2.
List Price $9.50

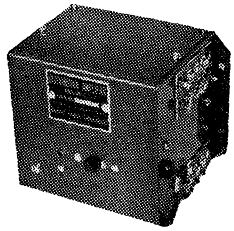
MATCHING TRANSFORMER

Model MT-1. Provides precise impedance match of 75 ohm (unbalanced) and 300 ohm (balanced) lines.
List Price $6.50

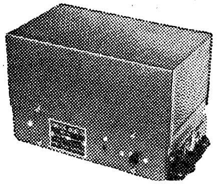


B-T DISTRIBUTION AMPLIFIERS

Model DA8-1. Eight TV receiver outlets and one through line. For multiple set distribution systems. Gain control. Full isolation, with no loss at receiver terminals.
List Price $87.50



Model DA2-1. Two TV receiver outlets and one through line. For multiple set distribution systems. Full isolation, with no loss at receiver terminals.
List Price $39.50



B-T ALL-CHANNEL AMPLIFIER COMMERCIAL ANTENSIFIER

Model CA-1. All-channel VHF amplification in excess of 27 db. Gain control. Ideal line amplifier for master TV systems or as deluxe pre-amplifier.
List Price $77.50

LINE SPLITTERS (Couplers)

Model LS4-1. Divides one 75 ohm line into four 75 ohm lines. List Price $7.50

Model LS4-2. Divides one 300 ohm line into four 75 ohm lines. List Price $7.50

Model LS4-3. Divides one 75 ohm line into four 300 ohm lines. List Price $7.50

Model LS4-4. Divides one 300 ohm line into four 300 ohm lines. List Price $7.50

REMOTE CONTROL

Model RC-1. For automatic 'on/off' operation of any B-T Unit, or other unit drawing up to .5 amp. at 117v. AC. Complete with relay, indicator light, and fuses.
List Price $14.50

ATTENUATOR

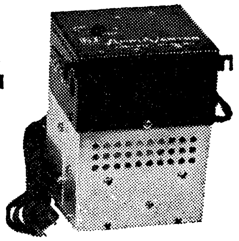
Model AT-1. Provides 0 to 42 db. attenuation on all VHF channels in 6 db. steps. 75 ohm and 75 and 300 ohm terminals.
List Price $12.50

Ultraverter

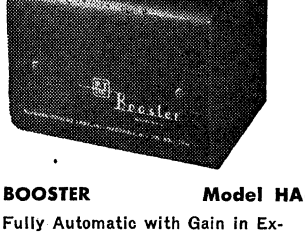
B-T ULTRAVERTER Model BTU-2
All Channel UHF Converter

For highest quality UHF reception on all VHF TV sets. Automatic "ON-OFF." Output to TV set on Channels 5 and 6. Selector switch for VHF and UHF Antennas. High gain, low noise conversion. Employs original B-T Ultratuner. Tubes: 6AF4, 6AB4 and Germanium Diode. Fully shielded. Complete with power supply. Attractive cabinet styling.
List Price $39.95

B-T AMPLIVERTER Single Channel UHF CONVERTER-BOOSTER Model BTU-1



A high-gain UHF converter which mounts behind any TV set. Converts any specified UHF channel (14 to 83) to VHF Channel 5 or 6. Bypass switch permits normal VHF reception. Has Cascode IF amplifier with extra stage for 17 db boost. Highly selective RF circuits provide flat response and efficient rejection of spurious signals. Circuitry assures lowest possible noise factor. Has built-in power supply with automatic 'on/off' control. May be used in series for additional UHF channel. (Specify UHF channel.)
List Price $47.50



B-T BOOSTER Model HA-3

Fully Automatic with Gain in Excess of 16 db on All VHF Channels

Automatic 'on/off' operation with TV set. Requires no tuning or bandswitching . . . operates automatically across the entire VHF band. Can be used with UHF converters. All-triode, cascaded, push-pull circuit (3 6J6) assures lowest possible noise factor. Attenuator switch prevent overloads.
List Price $39.50

FREE INSTALLATION MANUAL AND CATALOG ON REQUEST

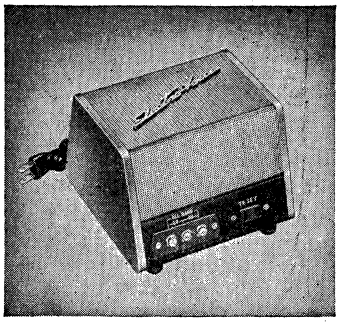
NO FINER CHOICE THAN

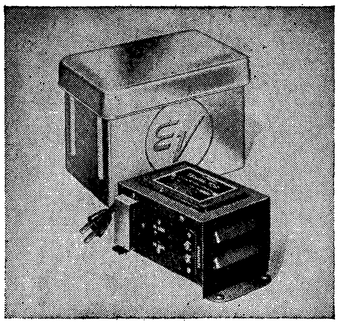
Electro-Voice

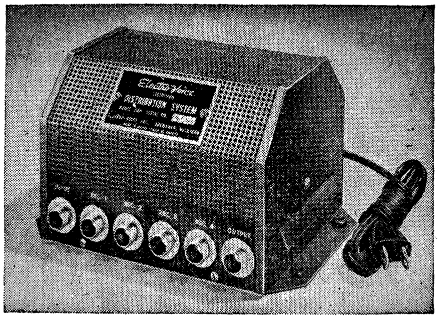
AUTOMATIC SELF-TUNING

TV BOOSTERS

AND DISTRIBUTION SYSTEMS


MODEL 3002A TUNE-O-MATIC


MODEL 3012A TENNA-TOP


MODEL 3100 TELEVIDER-4

TUNE-O-MATIC SELF TUNING TV BOOSTERS

All Channel • Broadband • Low Noise • High Gain • All Electronic

The TUNE-O-MATIC Turns On and Off with your TV receiver switch. Needs no separate manual tuning. Fully electronic, boosts signals instantly, automatically on any channel. Exclusive EV broadband circuit provides uniform gain across entire band width. Extremely low internal noise factor minimizes "snow." The TUNE-O-MATIC assures sharper pictures, clearer sound even in difficult fringe areas. Highly stable, trouble free. Easily concealed in or behind TV set. Handy Hi-Lo gain switch.

Model 3002-A TUNE-O-MATIC. New Multi-power 3 tube, two-stage broadband circuit—one for high bands, one for low. Input and output, 300 ohm. Uses all-band or separate Hi and Low channel antennas. For 105-125 volts, 50-60 cycles AC. Sturdy metal case, in black and gray baked enamel finish. Vertical mounting brackets supplied to fasten on TV set. Rubber feet. 6¾″ x 3⅛″ x 4½″. Complete with tubes and plug-in cord. Shipping weight 4 lbs.

List Price $39.50

Model 3000 SUPER TUNE-O-MATIC. Uses 4 tubes for two separate high and low band 2-stage amplifiers. Input and output for 150-300 ohm twin lead. Maroon and gray hammertone metal case, with rubber feet. 7¾″ x 5½″ x 4½″. Complete with four 6J6 RF tubes, selenium rectifier, and plug-in cord. For 105-125 volt 50-60 cycles AC. Shipping weight 5 lbs.

List Price $57.50

TENNA-TOP ANTENNA-MOUNTED TV BOOSTERS

Low Noise • All Channel • Self-tuning • Permits Long Lead-ins

Mounts at antenna, ahead of lead-in. Amplifies only wanted TV signals, NOT local noise picked up by lead-in. Completely automatic, fully electronic. NO manual tuning necessary. Exclusive EV broadband circuit assures uniform high gain across entire band width. Tapped power transformer in junction box permits satisfactory operation with long lead-ins. Use of high quality wire allows lengths up to 3000′. Extremely stable, no signal drift, no limiting peaks. Easy to install. Single lead-in carries power up, brings amplified TV signal down. Uses all-band or separate hi and low channel antennas. Amplifier unit is rugged, weather-proof, trouble-free. Easily mounted on mast. Junction control box easily hidden in TV set.

Model 3012-A TENNA-TOP. Uses three dual triode tubes in two-stage broadband circuit—one for high bands, one for low, 300-ohm input and output. Booster unit 7⅛″ x 4¾″ x 5″, in sturdy, moisture-proofed housing. Junction control box 6¾″ x 3⅛″ x 4½″ in gray hammertone finish. For 105-125 volts, 50-60 cycles AC. Complete with tubes, mounting brackets and plug-in cord. Shipping weight 9 lbs.

List Price $59.50

Model 3010 SUPER-TENNA TOP. Uses four tubes for two separate high and low band 2-stage amplifiers. Input and output 150-300 ohms. Booster unit 7¼″ x 7⅛″ x 6″ in rugged, moisture-proofed housing. Junction control box 6¾″ x 3⅛″ x 4½″ finished in gray hammertone. For 105-125 volts, 50-60 cycles AC. Complete with four 6J6 tubes, mounting brackets, and plug-in cord. Shipping weight 11 lbs.

List Price $88.00

TELEVIDER-4 DISTRIBUTION SYSTEM FOR MULTIPLE TV INSTALLATIONS

Insures Complete Isolation of Each TV Receiver in a Master Antenna System for Stores, Apartment Buildings, Hotels and Homes

UTILIZES EFFICIENT COAXIAL CABLE. Superior shielding of coaxial cable retains high degree of isolation built into TELEVIDER-4.

COMPLETE ISOLATION BETWEEN RECEIVERS. Prevents interference from local oscillation of poorly shielded TV sets in the system. Isolation as high as 200 to 1.

EASY EXPANSION. One unit can be used for 2, 3 or 4 receivers. More units easily added for larger installations. No individual engineering required.

ALL CHANNEL OPERATION ON EACH LINE. Each TV set in the system can be operated individually at same time on any channel.

USES CINCH-JONES SOCKETS. Assures low insertion loss and greater strain relief.

The EV TELEVIDER-4 is the answer to elimination of inter-antenna interference and unsightly congested roof top TV antenna installations. Designed for effective isolation, dependable performance, flexible installation and minimum servicing. Provides a co-ordinated system at moderate cost that works every time in fringe or primary areas. EV all-channel boosters may be inserted as line amplifiers where needed. Uses 4 6AK5 tubes. Power consumption 25 watts at 110 volts 60 cycle AC. Input and output 72 ohms. Easily connected to 300 ohm TV sets. ON-OFF switch. Six coaxial sockets provided for input, output and 4 receiver outlets. Housed in ventilated gray metal case. May be mounted in any position. Size 7¾″ x 5½″ x 4½″. Complete ready to operate. Shipping weight 5½ lbs.

Model 3100 TELEVIDER-4. List Price $69.50

MODEL 3300 UHF-TV CONVERTER

The Ultimate in UHF TV Conversion

Here, incorporated in one precision instrument, are the finest features to be found in any UHF converter available today!

Designed and built by E-V, the ELECTRO-VOICE 3300 UHF converter permits reception of ALL UHF Channels on TV receivers not having built-in UHF provisions. It features continuous tuning for "pin-point" reception. Dial is calibrated by channels and tuning knob is weighted for easy, effortless finger-tip tuning provided by a 25 to 1 micrometer drive system.

Either Channel 5 or 6 of the TV set is used as the conversion frequency and 300-ohm line may be used for both the input and output circuits. Installation of the EV 3300 is extremely simple, requiring only the use of a screw driver to make the three connections necessary. The EV 3300 UHF CONVERTER is completely self-contained—there is nothing more to buy.

The EV 3300 UHF CONVERTER incorporates fine features proved by many years experience in building E-V electronic products. New high efficiency, low-loss "silver plated" printed circuits are used in the RF and Oscillator stages for maximum sensitivity and highest stability. Coin silver contacts assure quiet operation and long life.

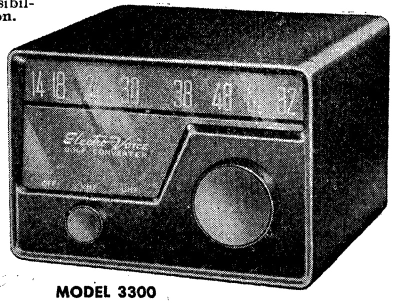
Tubes used in the E-V 3300 UHF CONVERTER are all high-efficiency, low drain miniature types: 6AF4 rf oscillator, 6BC5 if and 1N72 diode mixer. Unusually thorough internal shielding is built-in to the EV 3300 to minimize radiation interference.

The built-in power supply uses a selenium rectifier for long life and trouble-free service. Power consumption is only 18 watts from the 110V-AC line. Operation is extremely simple. One control knob turns the converter and receiver on and switches from VHF to UHF. Second knob is for tuning dial.

The handsome case, of sturdy metal is attractively finished to perfectly complement all cabinet woods. The added shielding provided by the metal case, further reduces possibility of external radiation. The EV 3300 is engineered inside and out for efficient, stable operation. Only highest quality components are used in this exceptionally small and compact converter. The EV 3300 measures only 5″ high, 7⅝″ wide, 6½″ deep. Shipping wt. 6 lbs.

Model 3300 UHF CONVERTER—Complete ready to use—

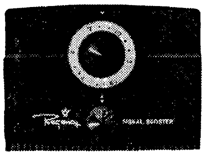
List Price $39.50



MODEL 3300

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Regency THE LINE WITH BETTER PERFORMANCE ENGINEERED-IN!



LIST $32.50

REGENCY BOOSTER MODEL DB-520

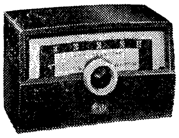
WORLD-FAMOUS REGENCY BOOSTER— LARGEST SELLING BOOSTER AT ANY PRICE

First choice across the nation for "pepping up" old TV sets, pulling in far-off VHF stations, improving reception in TV "trouble spots." Smartly designed plastic cabinet looks well with any style TV set. Easy to install — you just plug it in! Single tuning knob is large, easy-to-grip. On-off switch controls TV set—capacity 3 amps 12 OV AC. Precision engineered with quality features like the push-pull triode in balanced circuit, and link coupling for optimum impedance matching. Exclusive circuit stabilizer for inductive as well as capacitive neutralization assure maximum stability on all 12 VHF channels. Improved circuit control for even greater tracking accuracy.

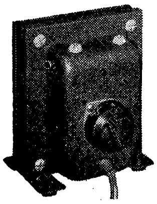
IN EVERY FIELD THERE'S ONE LEADER— IN UHF CONVERTERS, IT'S REGENCY

Simply plug in—and you're ready for UHF! Advanced electro-mechanical design minimizes warm-up drift. Hi-pass filter rejects unwanted signals—prevents cross interference between UHF and VHF stations. Trimly styled plastic cabinet features full view slide rule dial and large, easy-to-grasp control knobs.

REGENCY CONVERTER MODEL RC-600



LIST $49.95



LIST $19.95

REGENCY VB-1 VOLTAGE BOOSTER

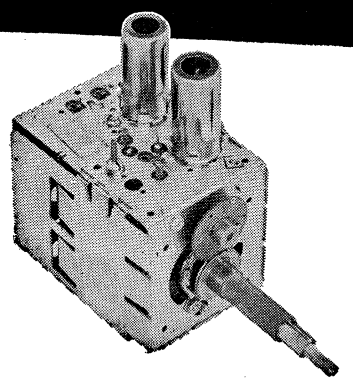
FOR FULL POWER POTENTIAL

For any electrical device drawing 350 watts or less. This manually operated autoformer maintains full 116 volt power supply. Insures full-size TV picture when low line voltage shrinks picture size.

I.D.E.A., INC., REGENCY DIVISION
7900 Pendleton Pike, Indianapolis 26
Cherry 2466

Now Available for the Replacement Market

TARZIAN TUNER, Model TT-4

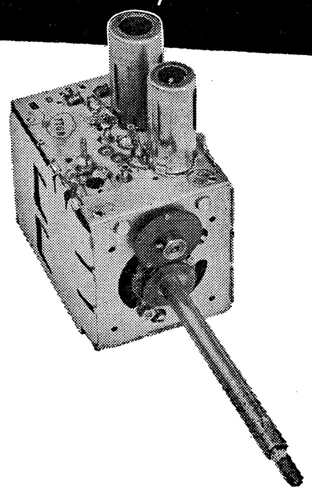


The Model TT-4 is the best of the Pentode type tuners. Features high performance at low cost. A 12-channel tuner developed to provide best possible performance, consistent with lowest cost. For 21 mc. or 41 mc. IF systems.

SPECIFICATIONS:	
RF AMPLIFIER:	6BC5
OSC. MIXER:	6J6
POWER SUPPLY:	135 volts at 22 ma. 6.3 volts ac at 0.75 amps.
GAIN:	Into a 10,000 ohm IF grid load, series tuned circuit: 26 db min. for high channels 32 db min. for low channels
NOISE FACTOR:	As measured into a 3.0 to 3.5 mc. △ f IF— 12.5 db max. for high channels 9.5 db max. for low channels
IMAGE REJECTION:	40 db min. high channels 46 db min. low channels
IF REJECTION:	50 db min.*
RF BALANCE:	20 db min.
VERNIER RANGE:	Plus or minus 1 mc. min. or plus or minus 2 mc. max.

* Except channels 2-3 and 4 of 41 mc. tuners.

TARZIAN TUNER, Model TT-6



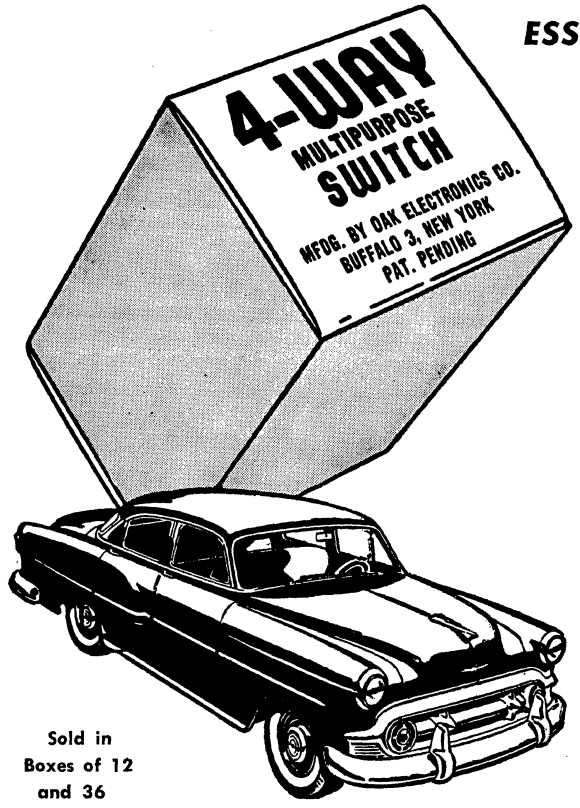
The Model TT-6 is the best of the cascode type tuners. Absolute minimum noise factor. A 12-Channel tuner at a price slightly higher than pentode tuners. Made for 21 mc. or 41 mc. IF systems.

SPECIFICATIONS:	6 BZ7
RF AMPLIFIER:	6J6
OSC. MIXER:	135 volts at 11 ma.
POWER SUPPLY:	250 volts at 14 ma. 6.3 volts at 0.85 amps.
GAIN:	Into a 10,000 Ohm IF grid load circuit, series tuned circuit: 30 db min. for high channels 32 db min. for low channels
NOISE FACTOR:	As measured into a 3.0 to 3.5 mc. △ f IF— 9.5 db max. for high channels 8.0 db max. for low channels
IMAGE REJECTION:	40 db min. high channels 46 db min. low channels
IF REJECTION:	50 db. min.*
RF BALANCE:	20 db. min.
VERNIER RANGE:	Plus or minus 1 mc. min. Plus or minus 2 mc. max.

* Except channels 2-3 and 4 of 41 mc. tuners.

SARKES TARZIAN, Inc. *TUNER DIVISION • BLOOMINGTON, IND.*

OAK *AUXILIARY SPEAKER SWITCH*



Sold in Boxes of 12 and 36

ESSENTIAL IN CARS or with REMOTE TV or JUKEBOX SPEAKERS

Does all that the old style 3 way rear seat speaker switch could do . . . Plus: the advantage of the best impedance match to the radio at any volume setting used . . . Plus: sound distribution as you want it.

Either speaker can be made the louder, by the flip of a switch, while both continue to play together.

4 SWITCH POSITIONS

- Front Speaker
- Rear Speaker
- Both Speakers In Parallel
- Both Speakers In Series

LIST PRICE $1.50

Patent Pending

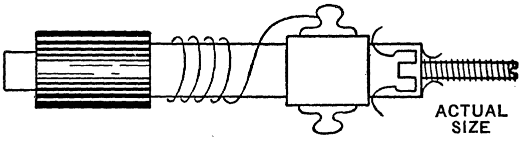
—TENNALOOP—

Greater — Selectivity-Sensitivity
Compact — Durable — Efficient

The Neatest little BIG VALUE package. TENNALOOP is a tiny antenna made possible in this size and form by the use of a ferrite-magnetic core. No longer is it necessary to use the old-fashioned 'loop' antenna.

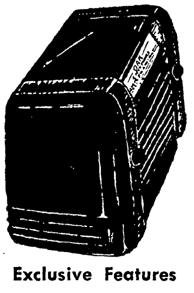
$.95 LIST PRICE

"Tennaloop" is "all" directional



ACTUAL SIZE

OAK *U.H.F. CONVERTER* *For better performance on UHF Channels*



Exclusive Features

- Installed in Seconds
- Use with any T.V. Set
- Built-in U.H.F. Antenna
- No Sacrifice of V.H.F. Channels
- High Quality Picture Definition
- ONE OAK U.H.F. Converter will supply up to 50 V.H.F. Sets with strong signal, simultaneously.

$49.95 LIST

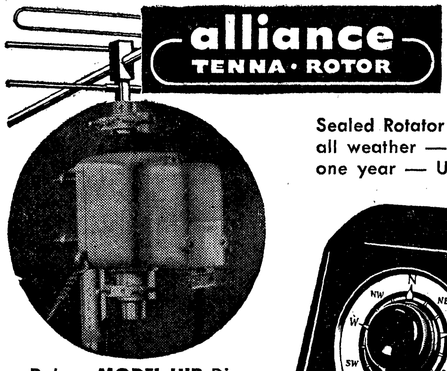
Manufacturers of Electronic Specialties

OAK ELECTRONICS COMPANY • BUFFALO 3, NEW YORK

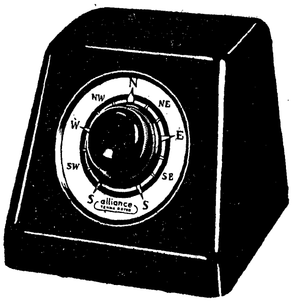
ALLIANCE TV PRODUCTS — Antenna Rotators • Boosters

ALLIANCE TENNA-ROTOR - 3 MODELS

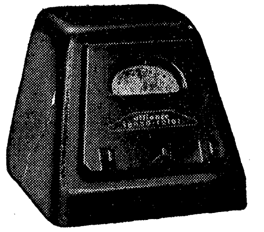
ALLIANCE TENNA-SCOPE • NEW BOOSTERS



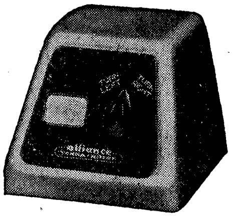
Sealed Rotator — works in all weather — guaranteed one year — UL approved.



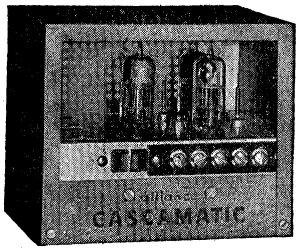
Deluxe **MODEL HIR** Directional. Fully Automatic . . . Rotator! "Just set it and forget it!"
List **$44.95**



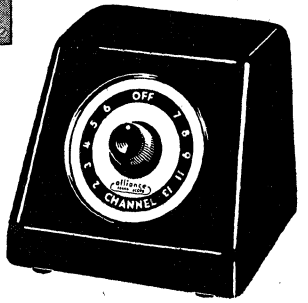
MODEL DIR has N-E-W-S direction indicator dial! Especially noted for its extreme accuracy. UL approved!
List **$44.95**



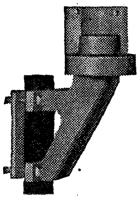
MODEL ATR — this standard model with illuminated screen. Shows when limit of travel in either direction is reached. One year guarantee — UL approved.
List **$34.95**



ALLIANCE CASCAMATIC — automatic TV Booster. Has three tubes. Fits on back of set, out of sight. No manual controls.
List **$29.95**



ALLIANCE TENNA-SCOPE BOOSTER — unusually high gain — one simple control — interference-rejecting — automatic on-off switch — performs on all channels.
List **$29.95**



THRUST BEARING BRACKET — (Model TBB) new design, recommended for heavier installations, transfers antenna weight from rotor to ground. Also used for most 3-element 10 meter beams.
List **$4.95**

National TV Advertising Assures Consumer Preference

- MODEL HIR — Fully automatic Alliance Tenna-Rotor. Simply set pointer — antenna turns by itself and stops. Moving light on dial shows position while rotating. No fumbling or "hunting." N-E-W-S directions shown. Practical — convenient — automatic — accurate! Handy control box connections make for fast installation.

- MODEL DIR — provides positive accurate instant control of rotation — has N-E-W-S direction indicator dial.

- NEW ALLIANCE "CASCAMATIC"—Automatic TV Booster. Has three tubes, features famous *California circuit;* quickly installed on back of set — out of sight. Pre-tuned to all VHF channels — no manual controls.

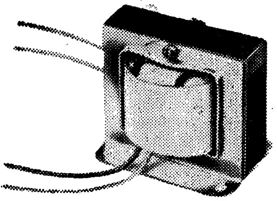
- ALLIANCE TENNA-SCOPE (TV Booster) — manually controlled. Has two tubes. Exceptional high-channel reception — permits tuning to each VHF channel. Superbly styled walnut plastic case blends with all furniture.

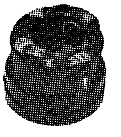
- ALLIANCE boosters have low noise factor. Bring in more stations, stronger signals, feature exceptional uniformity of picture and sound.

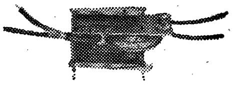
- Special Alliance 4-conductor "ZIP" cable can be used with all Alliance Tenna-Rotors to speed installation. Alliance TV products are backed by more national advertising than any other TV accessories! Alliance Tenna-Rotor is the universal rotator!

FOR COMPLETE DETAILED SPECIFICATIONS, BOTH ELECTRICAL AND MECHANICAL, ON EACH ALLIANCE PRODUCT — WRITE THE FACTORY FOR CATALOG SHEETS.

ALLIANCE MANUFACTURING COMPANY
ALLIANCE, OHIO

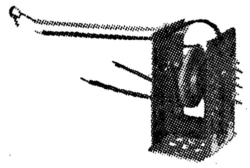


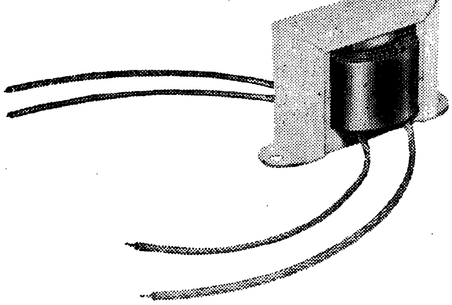




RAM ELECTRONICS SALES CO.

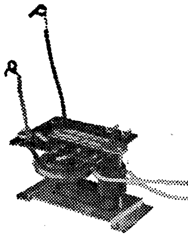
IRVINGTON, N. Y.

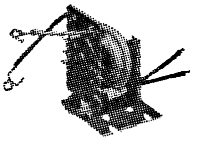




TRANSFORMERS

MODEL	DESCRIPTION	MOUNTING	KV OUTPUT	LIST
X032	Side mount, RCA, Admiral, Arvin, CBS, etc.	A	13.0	$10.00
X036	Same as X032 Lower H. V. output	A	11.0	10.00
X045	GE type circuit, GE, Crosley, Capehart, etc.	B	14.0	10.00
X047	Dewald exact duplicate with bottom mount	C	13.0	10.00
X048	Dumont exact doubler type	D	12.0	10.50
X049	Fada replacement has separate width winding	C	15.0	10.50
X050	RCA type with isolated keyed AGC winding	A	13.0	10.50
X051	Majestic GE type operates on lower B+ voltage	B	16.0	10.50
X054	CBS replacement. Autoformer with feedback winding	A	14.0	10.00
X064	Emerson autoformer	C	14.0	10.50
X065	Emerson autoformer later models	C	15.0	10.50
X066	Similar to X032 with lower retrace time	A	15.0	10.00
X068	Air-Core type, RCA, Emerson, Capehart	E	11.5	6.50
X069	GE RT0101, Stromberg Carlson autoformer	B	16.5	11.50
X070	Zenith under chassis universal	F	13.0	10.00
X071	Admiral direct replacement	G	15.0	10.50
X072	Admiral direct replacement	G	15.0	10.50
X073	Zenith smaller tubes universal	F	11.0	10.00
X074	RCA, Dumont, Arvin, Silvertone, etc.	H	16.0	10.00
X075	CBS with separate comparison voltage winding	A	15.0	10.50
X076	Muntz, split winding autoformer	A	16.0	10.00
X077	Doubler type, RCA, Stromberg, Crosley	J	14.0	10.00
X078	Trav-ler direct replacement	K	13.5	10.00
X079	Trav-ler direct replacement with no second anode load	K	13.5	10.00





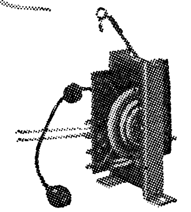
DEFLECTION YOKES

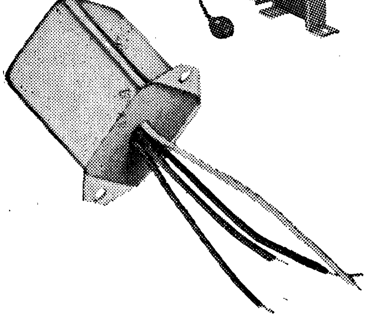
TYPE	INDUCTANCE Horizontal	INDUCTANCE Vertical	LIST
Y70108	8.3 mh	50.0 mh	$ 9.00
Y70F08	8.3 mh	50.0 mh	10.00
Y70F10	10.3 mh	50.0 mh	10.00
Y70F14	14.0 mh	50.0 mh	10.00
Y70F14/33	14.0 mh	33.0 mh	10.50
Y70F17	17.0 mh	50.0 mh	10.00
Y70F20	20.0	50.0 mh	10.00
Y70F25	25.0	50.0 mh	10.00
Y70F25/3	25.0	3.3 mh	10.50
Y70F30	30.0	50.0 mh	10.00
Y70F30/3	30.0	3.3 mh	10.50

All yokes are supplied with leads and networks.

LINEARITY & WIDTH COILS

TYPE	DESCRIPTION	INDUCTANCE	D. C. RESISTANCE	LIST
201R1	Width Coil	.05-.25 mh	0.53	$1.00
201R1A	Width Coil	.05- .5 mh	0.53	1.00
201R3	Linearity Coil	5- 20 mh	32.0	1.00
201R3A	Linearity Coil	5- 40 mh	32.0	1.25
201R4	Width Coil	.17-.61 mh	1.0	1.00
201R5	Tapped Linearity Coil	.55-2.3 mh	8.3	1.25
201R10	Width-Linearity Coil	3.5-29.5 mh	30.0	1.25
201R11	Width Coil with AGC winding	Pri. .16-.7 mh Sec. 3.2- 9 mh	1.0 28.0	1.75
201R12	Tapped Linearity Coil	1.3-4.1 mh	5.6	1.25
201R13	Width Coil	.5-3.5 mh	2.3	1.25
201R13A	Width Coil	.5-1.7 mh	2.3	1.25
201R14	Width Coil with AGC winding	Pri. 2.6-7.5 mh Sec. 4.0- 28 mh	1.2 32.0	1.75
201R15	Width Coil	1.0-10.0 mh	8.0	1.75





VERTICAL SCANNING OUTPUT TRANSFORMERS

RAM #	TURNS RATIO PRI/SEC.	PRIMARY IMPEDANCE	*MOUNTING TYPE	MOUNTING CENTERS	DIMENSIONS H	DIMENSIONS W	DIMENSIONS D	SHIPPING WEIGHT	LIST PRICE
V301	10:1	19,000Ω @ 13MADC	V1	1 19/32 x 2	3 1/16	2 1/2	2 1/2	2 1/2	6.00
V302	8:1	19,000Ω @ 13MADC	V2	2 3/8 x 1 5/8	2 9/16	2, 7/8	2 1/4	2 1/2	5.00
V303	8:1	19,000Ω @ 13MADC	V1	1 19/32 x 2	3 1/16	2 1/2	2 1/2	2 1/2	5.75
V304	10:1	18,000Ω @ 10MADC	V1	1 19/32 x 1¼	3 1/16	2 1/2	2 1/4	2	5.50
V305	10:1	14,000Ω @ 15MADC	V3	3 1/8	2 1/4	3 9/16	1 3/16	2	4.25
V306	44.6:1	11,250Ω @ 15MADC	V1	1 19/32 x1 7/8	3 1/16	2 1/2	2 3/8	2 1/4	6.25
V307	9:1	11,000Ω @ 19MADC	V4	Spl. Frame	2 9/16	2 3/16	2 1/4	2	6.50
V308	11:1	15,000Ω @ 18MADC	V3	2 13/16	2	3 1/4	1 1/4	1	4.25
V309	10:1	13,000Ω @ 22MADC	V3	2 13/16	2	3 1/4	2	1 1/4	4.75
V310	10:1	18,000Ω @ 15MADC	V3	3 1/2	2 1/2	4	2 1/4	2 1/2	6.00
V311	10:1	18,000Ω @ 10MADC	V1	1 19/32x1 5/8	3 1/16	2 1/2	2 1/8	2	5.00
V312	18:1	27,500Ω @ 10MADC	V3	3 1/8	2 1/4	3 3/4	3 1/4	1 1/2	5.75

RAM CONVERSION KITS

- Universal matched component kits
- Specifically designed kits for manufacturer's models complete with flyback, yoke, width and linearity coils and instructions.

VERTICAL BLOCKING OSCILLATOR TRANSFORMERS

RAM #	TURNS RATIO PRI/SEC	# MOUNTING TYPE	MOUNTING CENTER	DIMENSIONS H	DIMENSIONS W	DIMENSIONS D	SHIPPING WEIGHT	LIST PRICE
V401	1:4.2	V5	1 15/16	2 1/8	2 1/4	1 17/32	1	3.25
V402	1:4.2	V6	1 7/32	1 25/32	1 5/32	1 5/32	1/2	4.00
V403	1:4	V5	2	1 21/32	2 3/8	1 13/32	1	3.50
V404	1:1.5	V3	2	1 11/32	2 3/8	1 3/8	1/2	3.00
V405	1:4.2	V3	1 3/4	1 1/8	2 1/16	1 3/8	1/2	2.75

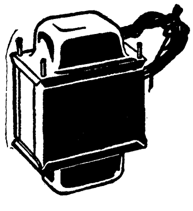
RAM *manufacturers of* **TEST-PATTERN TESTED** *components for television*

TRADE DISCOUNT APPLIES TO *LIST* PRICES ONLY

RCA ELECTRONIC COMPONENTS

TELEVISION PARTS

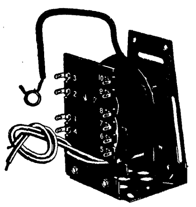
TV POWER TRANSFORMERS



RCA Power Transformer Type 201T6

Type	Description
201T6	Power Transformer (30 tube) 385 volts 295 ma Sugg'd List: **$26.00**
201T7	Power Transformer (24 tube) 385 volts 230 ma Sugg'd List: **$21.00**
201T8	Power Transformer (21 tube) 360 volts 250 ma Sugg'd List: **$19.00**
201T9	Power Transformer (27 tube) 390 volts 260 ma Sugg'd List: **$21.00**
201T10	Power Transformer (27 tube) 390 volts 260 ma Sugg'd List: **$21.00**

HORIZONTAL OUTPUT & HIGH VOLTAGE TRANSFORMERS



RCA "Universal-Type" Horizontal Deflection Output and High Voltage Transformer Type 231T1

Type	Description
204T1*	Hor. Defl. Output Transformer for 5TP4, 5820, 5WP15. Sugg'd List: **$20.00**
204T3*	Hor. Defl. Output Transformer for 7GP4 and 10BP4. Sugg'd List: **$12.00**
211T1	Hor. Defl. Output & HV Transformer for 10BP4 (50°-57°) Sugg'd List: **$6.10**
211T2	Hor. Defl. Output & HV Transformer for 5TP4 proj. Sugg'd List: **$19.00**
211T3	Hor. Defl. Output & HV Transformer for 10BP4 (50°-57°) Sugg'd List: **$6.10**
211T5	Hor. Defl. Output & HV Transformer for 16AP4 (13KV, Doubler) Sugg'd List: **$9.50**
217T1	Hor. Defl. Output & HV Transformer for 10BP4 & 12LP4 (50°-57°) Sugg'd List: **$6.10**
218T1	Hor. Defl. Output & HV Trans- for 16GP4 (70°) Sugg'd List: **$6.10**
223T1	Hor. Defl. Output & HV Transformer for 16GP4 (70°) Sugg'd List: **$7.65**
224T1	Hor. Defl. Output & HV Transformer for 14EP4 & 17CP4 (66°-70°) Sugg'd List: **$7.65**
225T1	Hor. Defl. Output & HV Transformer for 17CP4 & 20CP4 (66°-70°) Sugg'd List: **$7.65**
230T1	Hor. Defl. Output & HV Transformer for 21AP4 (66°-70°, 16-18KV) Sugg'd List: **$8.00**
231T1	"UNIVERSAL-TYPE" Hor. Defl. Output & HV Transformer. (50° to 66°) Supplies high voltages to 15 kilovolts, matches yoke inductances from 8 to 30 millihenries, for "B" supplies of 250 to 350 volts. Sugg'd List: **$9.95**

*For use with a separate HV Supply.

DEFLECTING YOKES

RCA 211D2 "Anastigmatic" Deflecting Yoke

Type	Description
201D2	Deflecting Yoke for 5TP4 Sugg'd List: **$14.00**
201D12	Deflecting Yoke for 10BP4 and 16AP4 (50°-57°) Sugg'd List: **$7.50**
205D1	Deflecting Yoke for 10BP4 and 12LP4 (60°) Sugg'd List: **$7.50**
206D1	Deflecting Yoke for 16GP4 (70°) Sugg'd List: **$9.00**

DEFLECTING YOKES (Cont'd)

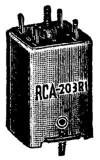
Type	Description
207D1	Deflecting Yoke for 10BP4, 12LP4, and 16AP4 (60°) Sugg'd List: **$7.50**
209D1	Deflecting Yoke for 16GP4 (Ferrite Core 70°) Sugg'd List: **$9.00**
211D2	"ANASTIGMATIC" Deflecting Yoke. (66°-70°) Includes 12 inch leads, damping and neutralizing elements. Sugg'd List: **$9.75**
219D1	Deflecting Yoke for use with 27-inch, 90° kinescopes. Sugg'd List: **$20.00**

WIDTH & LINEARITY COILS

RCA Width Control Type 201R4

Type	Description
201R1	Width Control 0.054-0.245 mh) Sugg'd List: **$0.75**
201R2	Width Control 0.085-0.240 mh) Sugg'd List: **$2.30**
201R3	Hor. Linearity Control (5.5-20 mh) Sugg'd List: **$0.85**
201R4	Width Control (0.17-0.61 mh) Sugg'd List: **$1.05**
201R5	Hor. Linearity Control (0.55-2.30 mh) Sugg'd List: **$1.25**
206R1	Width Control (0.47-1.7 mh) Sugg'd List: **$1.05**
207R1	Hor. Linearity Control 1.3-4.3 mh) Sugg'd List: **$1.25**
208R1	Width Control (.51-1.7 mh) Sugg'd List: **$1.05**
209R1	Hor. Linearity Control (1.3-4.1 mh) Sugg'd List: **$1.25**
211R1	Width Control (1.65-9.2 mh) Sugg'd List: **$1.30**
212R1	Width Control (2.9-16 mh) Sugg'd List: **$1.33**
213R1	Hor. Linearity Control (1.5-8.3 mh) Sugg'd List: **$1.25**

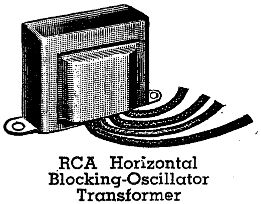
HORIZONTAL OSCILLATOR & SYNC COILS



RCA Horizontal Oscillator and Sync Control Coil Type 203R1

Type	Description
203R1	Hor. Osc. and Sync. Control Coil Sugg'd List: **$1.90**
205R1	Hor. Osc. and Sync. Stab. Coil Sugg'd List: **$2.40**
208T8	Hor. Sync. Discr. Transformer Sugg'd List: **$2.45**

HORIZONTAL BLOCKING—OSCILLATOR TRANSFORMERS



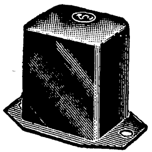
RCA Horizontal Blocking-Oscillator Transformer Type 208T3

Type	Description
208T1	Hor. Blocking Osc. Transformer Sugg'd List: **$3.90**
208T3	Hor. Blocking Osc. Transformer Sugg'd List: **$2.75**

RCA ELECTRONIC COMPONENTS

TELEVISION PARTS

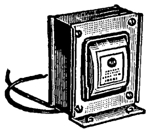
VERTICAL BLOCKING—OSCILLATOR TRANSFORMERS



RCA Vertical Blocking-Oscillator Transformer Type 208T2

Type	Description
208T2	Vert. Blocking Osc. Transformer Sugg'd List $2.75
208T9	Vert. Blocking Osc. Transformer Sugg'd List: $2.50
209T1	Vert. Blocking Osc. Transformer Sugg'd List: $2.75

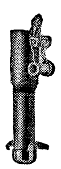
VERTICAL OUTPUT TRANSFORMERS



RCA Vertical Deflection Output Transformer Type 204T2

Type	Description
204T2	Vert. Output Transformer for 10BP4 and 16AP4 10:1 Sugg'd List: $5.00
204T9	Vert. Output Transformer for 10BP4 and 16AP4 10:1 Sugg'd List: $4.50
222T1	Vert. Output Transformer for 16GP4 (use with 206D1) 11.4:1 Sugg'd List: $3.00
226T1	Vert. Output Transformer (use with 209D1, 211D1) 18:1 Sugg'd List: $5.65

VIDEO PEAKING COILS & TRAPS



RCA Video Circuit Trap Type 203L5

Type	Description
*203L1	Video Series Peaking Coil (180 Microhenries) Sugg'd List: $0.45
*203L2	Video Shunt Peaking Coil (250 Microhenries) Sugg'd List: $0.45
*203L3	Video Series Peaking Coil (120 Microhenries) Sugg'd List: $0.45
*203L4	Video Shunt Peaking Coil (93 Microhenries) Sugg'd List: $0.45
203L5	Video Circuit Trap (4.5 MC) Sugg'd List: $0.95

ION TRAPS

RCA Ion-Trap Magnet Type 203D3

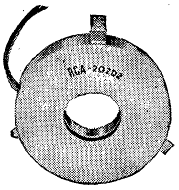
Type	Description
203D1	Ion-Trap Magnet (Double Pole, Field Coil Type) Sugg'd List: $6.50
203D3	Ion-Trap Magnet (Double Pole, PM Type) Sugg'd List: $2.10

IF TRANSFORMERS

RCA Convertor Transformer Type 202K5

Type	Description
*201K1	1st and 2nd Sound IF Transformer (21.25 MC) Sugg'd List: $2.30
*202K1	Converter Transformer (21.8 MC) Sugg'd List: $2.30
*202K2	1st Picture IF Transformer (25.3 MC) Sugg'd List: $2.50
*202K3	2nd Picture IF Transformer (22.3 MC) Sugg'd List: $1.90
*202K4	Cathode Circuit Trap (21.25 MC) Sugg'd List: $2.30
202K5	Converter Transformer (24.6 MC) Sugg'd List: $1.40
202K6	1st Picture IF Transformer (24.6 MC) Sugg'd List: $2.25
202K7	2nd Picture IF Transformer (25.5 MC) Sugg'd List: $1.75
202K8	3rd Picture IF Transformer (22.0 MC) Sugg'd List: $1.90
202K9	4th Picture IF Transformer (24.6 MC) Sugg'd List: $1.65
202K10	5th Picture IF Transformer (22.7 MC) Sugg'd List: $2.05
202K11	Cathode Circuit Trap (21.25 MC) Sugg'd List: $1.50
*202L1	3rd (25.2 MC) or 4th (23.4 MC) Picture IF Coil Sugg'd List: $0.70
*203K1	Sound Discriminator Transformer (21.25 MC) Sugg'd List: $2.95
204X1	Picture and Sound IF & Video Coil Kit Sugg'd List: $20.65
206K1	Sound IF Transformer (21.25 MC) Sugg'd List: $2.05
207K1	Sound Discriminator Transformer (21.25 MC) Sugg'd List: $2.15

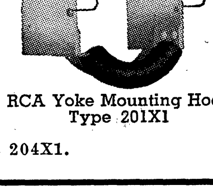
FOCUSING COILS



RCA Focusing Coil Type 202D2

Type	Description
202D1	Focusing Coil for 10BP4 Sugg'd List: $7.50
202D2	Focusing Coil for 16AP4, 16GP4, and 17CP4 (14KV) Sugg'd List: $11.00

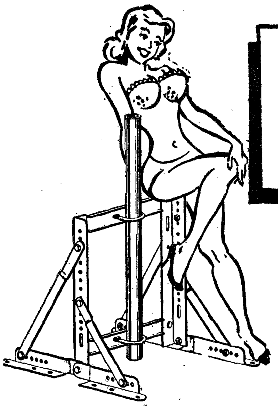
MISCELLANEOUS



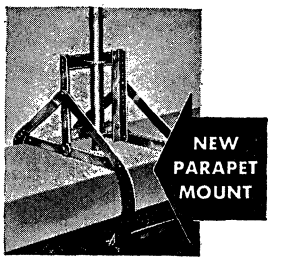
RCA Yoke Mounting Hood Type 201X1

Type	Description
201X1	Yoke Mounting Hood Sugg'd List: $1.40
204L1	Filament Choke (Standard Package 5) Sugg'd List: $0.20 ea.

*Included in Kit 204X1.

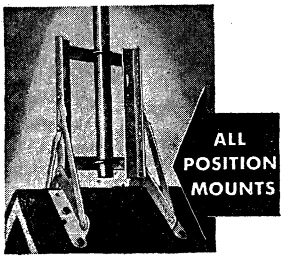


KENCO TELEVISION ANTENNA MOUNTS AND ACCESSORIES



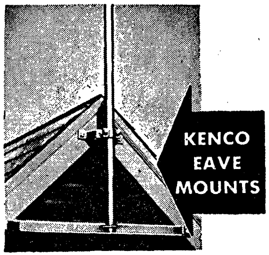
Gives positive anchorage to apartment house walls without damage to building. Shipped assembled. Hot dip galvanized.

Model	List
106	$11.95



A strong, self supporting mount for peak, slope, sidewall corner or flat mountings. Heavy zinc plate.

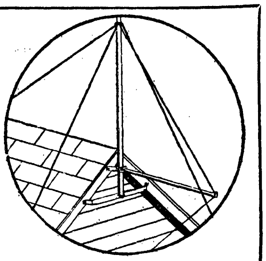
Model		List
105	Masts up to 1½″ o.d.	$6.55
101	Masts up to 2″ o.d.	9.85



Easily mounted on hanging rafters or trim boards of eave. Ideal for buildings with extended roofs. Hot dip galvanized.

Available in 3 sizes

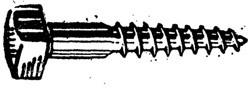
Model		List
122	22″ eave mount	$3.95
128	28″ eave mount	4.50
148	48″ eave mount	5.95



SKY STRUT

Made of tubular steel—welded construction, 40″ long. Built-in cable clamp on outer end of strut locks guy wire in place giving rigid support to mast. Weather resistant finish.

Model 40S....................List $3.95



LAG SCREWS

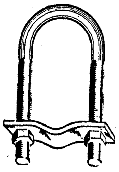
(Zinc Plated)

¼ x 1¼　¼ x 1½　¼ x 2
¼ x 2½　¼ x 3　5/16 x 1¼
5/16 x 1½　5/16 x 3　⅜ x 1½
Special low prices.　⅜ x 3
Write for quotations.

EXPANSION SHIELD

Dia. of Lag	List
¼″	$15.00 per 100
5/16″	18.00 per 100

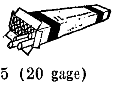
U-BOLT Mast Joiner



Easily joins two masts up to 1½″ o.d. Heavy zinc plate.

List $0.30 ea.

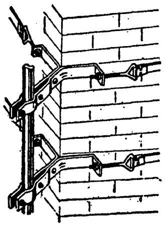
J & L PERMA TUBE



10 ft. lengths

- 1¼ o.d. x .035 (20 gage) plain end
- 1¼ o.d. x .049 (18 gage) fitted joint
- 1¼ o.d. x .064 (16 gage) fitted joint
- 1½ o.d. x .049 (18 gage) fitted joint

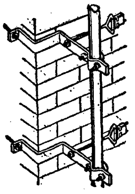
SNAP-IN CHIMNEY MOUNTS



Snap-in feature eliminates holding of mast while applying hardware. Carriage bolts throughout—for easy installation.

Model		List
4C	Galvanized bands	$3.25
4C-SS	Stainless bands	4.95

CHIMNEY MOUNT (Z TYPE)

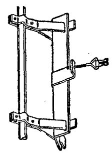


Made of heavy gage steel. One piece construction, zinc plated. Square corners provide snug fit.

Model	List
3C	$2.69

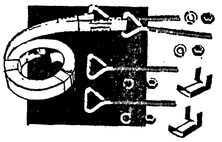
MINUTE MOUNT

ONE PIECE CHIMNEY MOUNT



Exclusive Y construction on offsets for maximum strength. Bearing feet top and bottom prevent rocking on irregular chimneys. Snap-in feature holds mast while applying hardware. Carriage bolts throughout. One piece welded construction. Heavy gage steel-hot dipped galvanized.

12 ft. stainless steel band and stainless steel seals. 3-Easy-slide corner guards for uniform tightening and protection of bands. Model 5C-SS List $5.95



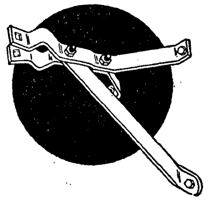
REPLACEMENT KIT

Stainless Steel Strap

You get: 2-12 ft. stainless steel straps, 2 stainless steel seals, 2 stainless E-Z seals, 4 heavily plated triangular eyebolts, lockwashers & nuts.

Model 1RK　List $3.00

SNAP-IN WALL BRACKETS

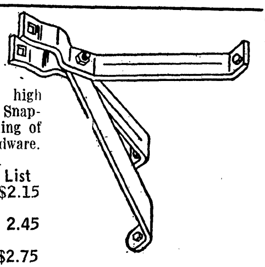


Available in
7″ - 12″ - 18″ - 24″ Sizes

Snap-in feature eliminates holding of mast while applying hardware. Carriage bolts throughout. Heavy gage steel, zinc plated.

Model	List
7W—7″ (less tripod legs)	$2.15
7W-1—7″ (1 tripod leg)	2.45
7W-2—7″ (2 tripod legs)	2.75
12W—12″ (less tripod legs)	3.89
12W-1—12″ (1 tripod leg)	4.25
12W-2—12″ (2 tripod legs)	$4.65
18W-1—18″ (1 tripod leg)	5.50
18W-2—18″ (2 tripod legs)	5.95
24W-2—24″ (2 tripod legs)	6.95

Aluminum SNAP-IN WALL BRACKET



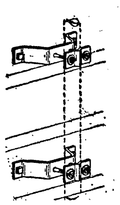
Made of heavy gage high strength aluminum alloy. Snap-in feature eliminates holding of mast while applying hardware. Carriage bolts throughout.

Model	List
6W-AL—6″ (less tripod leg)	$2.15
6W1-AL—6″ (1 tripod leg)	2.45
6W2-AL—6″ (2 tripod legs)	$2.75

STAINLESS STEEL STRAPPING

Heavy ¾″ stainless steel strapping.
100 ft. lengths.
(Ind. boxed)　List $10

2" WALL BRACKET



Heaviest bracket made, 3/16″ x 1¼″ steel. Locking nuts in front of bracket for easy installation. Hot dip galvanized.

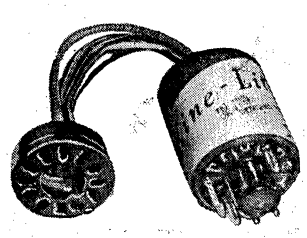
Model	List
2W	$1.85

ALL KENCO ITEMS AVAILABLE AT COMPETITIVE PRICES!

KENWOOD ENGINEERING CO., INC.

KENILWORTH, NEW JERSEY

Vidaire TV Accessories



VIDAIRE KINE-LITE

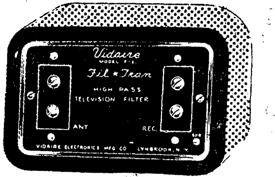
TV PICTURE TUBE BRIGHTENER AND REJUVENATOR

Renews brilliance and contrast of picture.
Prolongs life of old picture tube.
No soldering, just connect two plugs.

May be used on all standard picture tubes.
For any size tube, 10" to 30".

STANDARD WARRANTY

Model K-1: For magnetic deflection and focus tubes in parallel filament circuits.
Model K-2: For parallel filament circuits using both magnetic deflection and electrostatic focus tubes.
Model K-3: Same as K-2 except to be used in series filament circuits.
Model K-4: Same as K-2 except for isolation of cathode and filament.



Model F-1

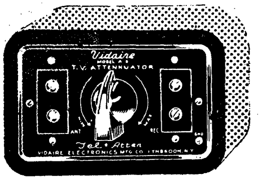
FIL-TRAN

HIGH-PASS FILTER

Reduces effects of interfering signals for all TV sets.

Printed circuit high Q coils used for high efficiency.

Removes most interference in picture and sound caused by amateur radio, ship-to-shore transmissions, foreign broadcasts, diathermy, etc.



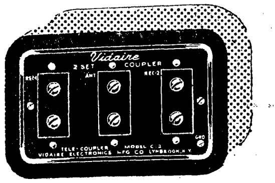
Model A-2

TELE-ATTEN

ELIMINATES OVERLOADING DUE TO STRONG SIGNALS

Reduces buzz in intercarrier sets.
Reduces most cross-modulation effects.
1000 to 1 (60db) change in signal reaching antenna posts.

Vernier adjustment for all signal areas.
Simple mounting, 2 screws needed.
Attractive 2-color finish for mounting on wall or set.



Model C-2

TELE-COUPLER

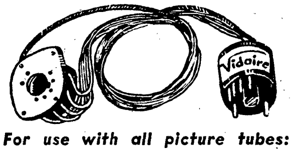
PERMITS USE OF ONE ANTENNA WITH TWO TV SETS

Reduces effect of local oscillator radiation from one TV set to another.
Filter action reduces interference at IF frequencies.
For most TV sets with 300 or 72 ohm leads.

Excellent matching reduces reflections.
Uses high efficiency transformers.
Attractive 2-color finish for mounting on wall or set.

Specially designed transformers give maximum signal from antenna lead to the sets with a minimum of interaction from one set to another.

C.R.T. EXTENSION

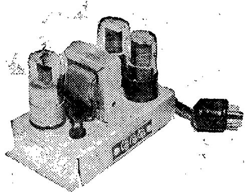


For use with all picture tubes:
Model SE-3 — 36" long, 6-wire
Model SE-4 — 72" long, 6-wire

For use with magnetic focus tubes only:
Model SE-1 — 36" long, 5-wire
Model SE-2 — 72" long, 5-wire

VIDAIRE TV AMPLIFIER

HI-FI PUSH PULL SOUND AMPLIFIER



Flat within 1.5 db from 80-20,000 cycles.
Adds beautiful tone quality to most TV and radio receivers.
Output matched for most Hi-Fi speakers.

Tubes: 1-6J5GT, 2-6K6GT.
Simple installation, remove output tube and insert plug.

Model A-130

Push-pull amplifier adds new, glorious tone to TV and radio sets utilizing one sound output tube.

All VIDAIRE products are attractively packaged, suitable for display. For complete line, write for Catalog D.

VIDAIRE

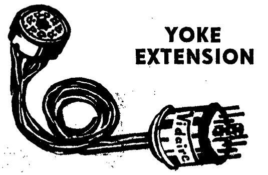
KINE-TEST

Kine-Te
PAT. PEND.
DESIGNS

Model KT-1

ACCURATELY DETERMINES IF PICTURE TUBE IS DEFECTIVE

Simultaneously checks: Filament voltage, First anode voltage, Bias voltage, and Video signal at picture tube socket. Compact, pocket size. Simple operation, just plug into picture tube socket. Low cost, great time-saver.

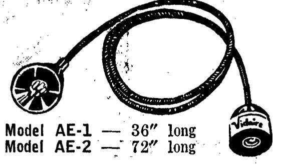


YOKE EXTENSION

Model YE-1 — 36" long
Model YE-2 — 72" long

A handy extension for many late type TV receivers.

ANODE EXTENSION



Model AE-1 — 36" long
Model AE-2 — 72" long

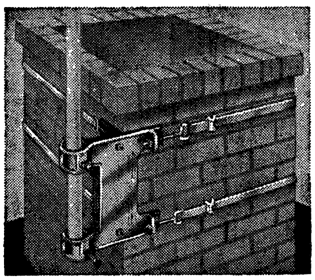
For maximum hard wear. Rated for minimum of 25,000 volts breakdown.

Manufacturers of:
- **ELECTRONIC DEVICES**
- **TV AMPLIFIERS**
- **TV COLOR EQUIPMENT**

Vidaire ELECTRONICS MFG. CO.

***Factory:* LYNBROOK, N. Y.**
***Nat'l Sales Office:* 6 E. 39th ST., N. Y. 16, N. Y.**
• ***Phone No.:* LE 2-7372**

The Famous South River Quality Line of Antenna Mounting Accessories



CHIMNEY MOUNT ANTENNA BASE

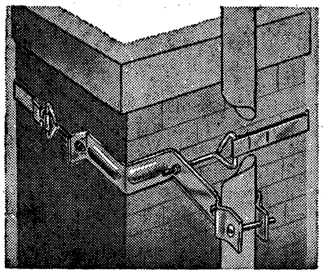
(U.S. Pat. 2482575)
(Can. Pat. 463261)

Model SR-10A $6.50
****Model SR-10A ST (with stainless steel banding)..$8.40**

One-piece chimney mount of aircraft type aluminum. Mounts by means of **galvanized steel strapping. Exclusive "Kwik Klip" provides convenient means of fastening loose end of banding. Will accommodate any size tube from ½"-1½" O.D. Complete with all necessary installation hardware.

Also Available in 2-Section Mount . . . . Model SP-12A
Model SP-12A Two-Piece Mount for High Masts..$6.50
Model SP-12A ST (with stainless steel banding) $8.40

CHIMNEY MOUNTS



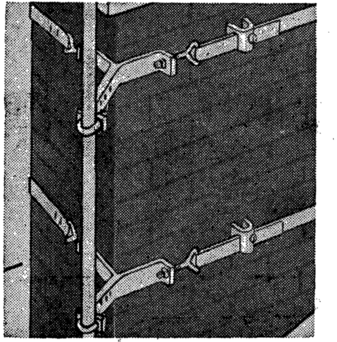
THRIFT MOUNT

(U.S. Pat. 2482575)
(Can. Pat. 463261)

Model T-15 ....$2.50
Model T-15 ST (with stainless steel banding) ...$4.25

One-piece embossed, heavy gauge steel, hot-dip galvanized. Accommodates masts to 1½" O.D. NOTE: Model T-15 consists of 2 brackets, one of which is shown on illustration.

*South River Metal Products Co., Inc., are the inventors and original manufacturers of the chimney mount antenna base. All other chimney mounts using a pliable band are infringements of Patent No. 2482575.

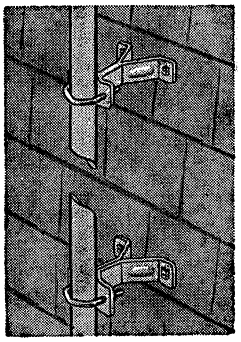


DUO-MOUNT ANTENNA BASE

(U.S. Pat. 2482575)
(Can. Pat. 463261)

Model DM-36 ....$3.95
Model DM-36 ST (with stainless steel banding) ... $5.00
Model DM-LKK (same as DM-36 but without "Kwik-Klip") $3.50
Model DM-LKK ST (with stainless steel banding) $4.75

Two-piece mount of alloy steel rivet construction, finished in a hot-dip, everlasting, galvanized finish. Specially designed "U" bolts accommodate masts from ⅝-1½" O.D. Exclusive "Kwik Klip" feature provides convenient means of fastening loose end of banding.

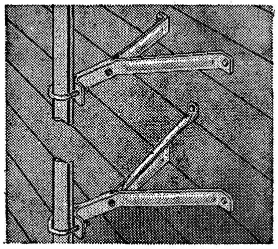


3" WALL BRACKET

Model WB-3 ....$2.00

Made of aluminum, embossed for extra strength. Accommodates masts up to 1½" O.D. Complete with installation hardware.

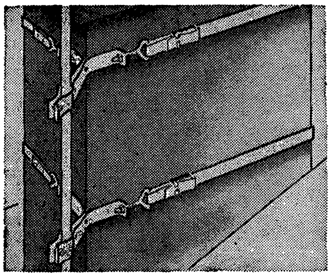
WALL BRACKETS



12" WALL BRACKET

Model WB-6 (6") $2.50
Model WB-12 (12") .. 4.20
Model WB-15 (15") .. 4.50
Model WB-18 (18") .. 4.85
Model WB-24 (24") .. 6.50

Constructed of heavy-gauge, embossed steel, hot-dipped in an everlasting, rust-proof, galvanized finish. Complete with installation hardware.



"SNAP-IN" TYPE CHIMNEY MOUNT

(U.S. Pat. 2482575)
(Can. Pat. 463261)

Model SN-50 ....$3.50

A heavy-gauge steel, hot-dipped galvanized. Rounded wide-flared lips on mast holder facilitate antenna mounting. Has two 12' lengths of galvanized strapping. Also available with heavy-gauge STAINLESS STEEL strapping.

Model SN-50-ST $4.75

South River Metal Products Co., Inc.

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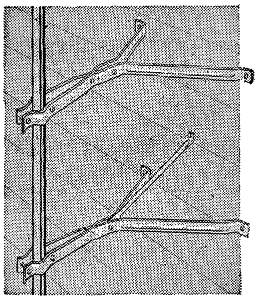
The Famous *South River* Quality Line of Antenna Mounting Accessories



12" WALL BRACKET (Snap-In Type)

Model SN-12

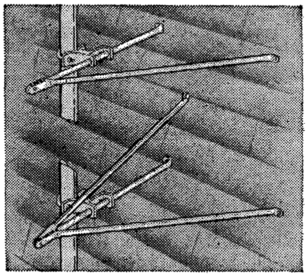
$4.00

Features snap-in type mast socket permitting the mast to be held temporarily while screws are tightened. With hardware. Available in 6", 12", 15", 18" and 24" sizes.

Model SN-6	**$2.50**
Model SN-15	**4.40**
Model SN-18	**4.75**
Model SN-24	**6.25**

(A) Extra support legs available for use with unusually high and heavy masts.

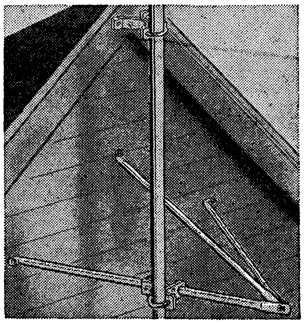
WALL BRACKETS (Cont'd)



ADJUSTABLE WALL BRACKET

Model WB-18A $6.50

All aluminum tubular construction. Adjusting slides are made of one-piece aluminum extrusions. Fits all size masts up to 1½" O.D. Complete with installation hardware.

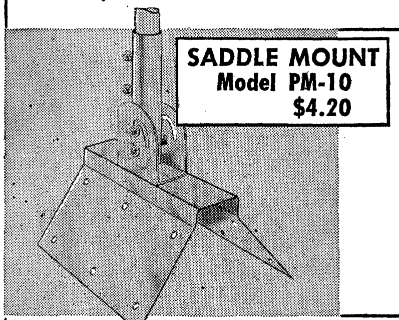


COMBINATION ADJUSTABLE WALL BRACKET

Model WB3-18A $4.50

All aluminum construction. Eave bracket is of extruded aluminum as is the slide of the tubular adjusting wall bracket. Accommodates masts up to 1½" O.D. Furnished complete with all necessary hardware.

ROOF MOUNTS



SADDLE MOUNT

Model PM-10

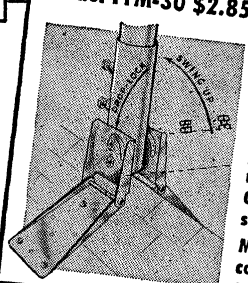
$4.20

Mounts on roof peak without using screws. One man can hold the base in place while another man "walks the mast up" to a vertical position at which point the mast socket drops and locks into place. Accommodates masts up to 1½" O.D. Complete with installation hardware. Assembled.

Model PM-10 LM accommodates masts up to 2" O.D. $4.75

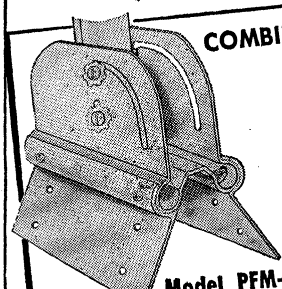
PEAK & FLAT ROOF MOUNT

Model PFM-30 $2.85



A well-constructed, low-priced, roof mounting featuring the exclusive South River drop lock, mast socket. Assembled. for easy installation on either peak, flat or pitched roofs. Accommodates masts to 1½" O.D. Complete with installation hardware.

Model PFM-30 LM accommodates masts up to 2" O.D. $3.50

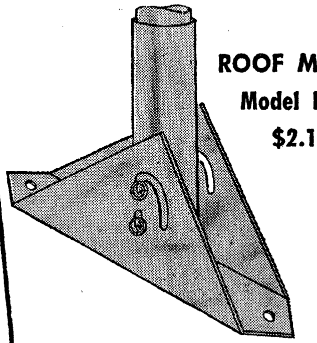


COMBINATION PEAK AND FLAT ROOF MOUNT

Model PFM-2....$6.25

(New Improved Model with Drop Lock Feature)

Extruded aluminum construction. Provides for adustment of flaps to conform to the slope of peak of roof. Mast socket can be "walked up" to the vertical position at which point it drops and locks securely. Accommodates masts to 1½" O.D. With installation hardware.



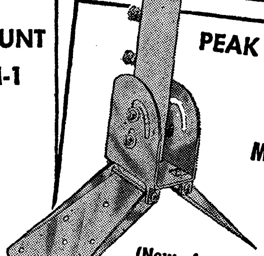
ROOF MOUNT

Model RM-1

$2.10

(New Improved Model with Drop Lock Feature)

Of heavy-gauge steel, embossed at all critical points. Mast socket can be "walked up" to the vertical position at which point it drops and locks securely. Accommodates masts to 1½" O.D. Assembled.



PEAK & FLAT ROOF MOUNT

Model PFM-1

$2.95

(New Improved Model with Drop Lock Feature)

Heavy-gauge steel, embossed for extra strength. Adjustable flaps permit mounting on any type roof. Mast socket can be "walked up" to the vertical position at which point it drops and locks securely. Permits one man roof installations.

MODEL PFM-1 LM available to accommodate masts up to 2" O.D. ....$3.60. Assembled.

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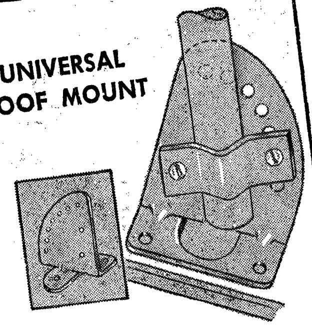
ROOF MOUNTS (Cont'd)

UNIVERSAL ROOF MOUNT



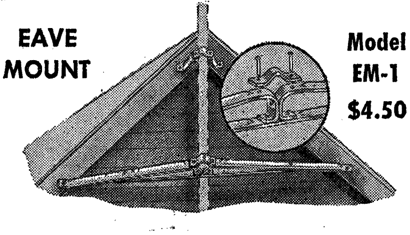
Model UR-1....$.55

Constructed of heavy gauge steel. Will accommodate masts up to 1½" O.D.

EAVE MOUNT

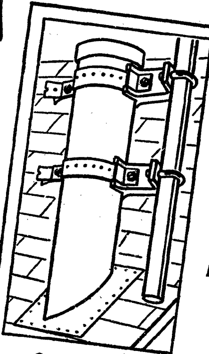
Model EM-1

$4.50



Constructed of heavy gauge steel, embossed for extra strength and hot-dip galvanized for an everlasting rust-proof finish. Unique bridge-type truss construction of lower bracket provides extra strength and rigidity. Generous 48" spread of lower bracket provides proper spacing between brackets insuring good mechanical support. Complete with installation hardware.

DUO-PIPE MOUNT

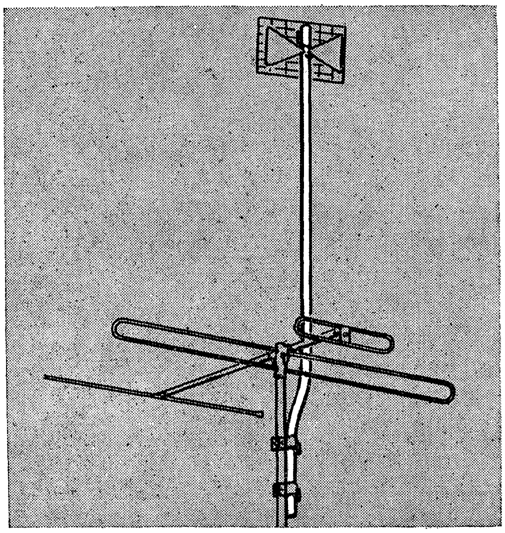


Model P-1

$2.50

Constructed of an aluminum extrusion. Fits all size masts up to 1½" O.D. Positive adjustment for all size pipes up to 6" in diameter. Complete installation hardware included.

ULTRA-HIGH FREQUENCY ANTENNA MOUNTING ADAPTERS

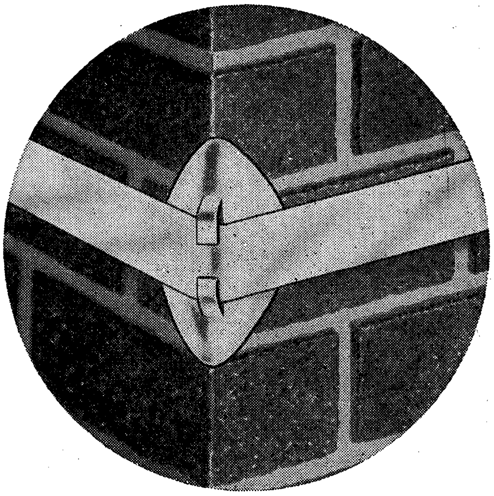


MODEL UHM-1 . . . . $3.00

Mounts UHF antenna without disturbing present installation. Of magnesium; extends 5' *above* present antenna.

Also available in Model UHM-2 which fastens *below* present antenna, 30" away from mast........$3.00

CORNER-GUARD



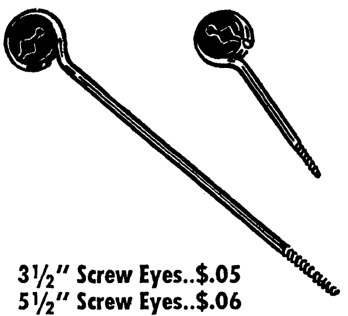
Box of Six . . . . 49¢

An exclusive South River device for protecting, strengthening, and safeguarding chimney and strapping. Prevents chipping of chimney. Permits uniform tightening of banding. Safeguards mounting equipment. Guards snap in behind banding.

South River Metal Products Co., Inc.

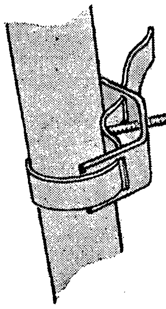
PIONEER MANUFACTURER AND OUTSTANDING PRODUCER OF THE FINEST LINE OF ANTENNA MOUNTING ACCESSORIES IN THE TELEVISION INDUSTRY

The Famous *South River* Quality Line of Antenna Mounting Accessories



3½" Screw Eyes..$.05
5½" Screw Eyes..$.06
7½" Screw Eyes..$.07
4" Mach. Screw..$.06

STAND-OFFS

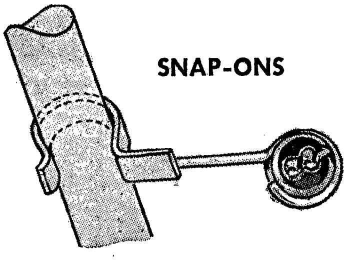


ADJUSTABLE MAST STAND-OFF

Model AMS-4"......$.15
Model AMS-7½"..$.20

Duplex stand-offs also available. Write for complete catalog.

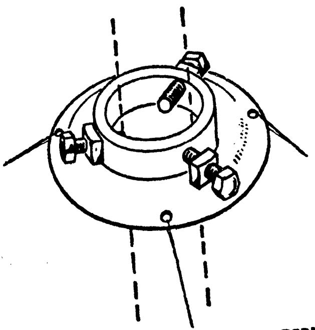
SNAP-ONS



Model SO-1¼"..........$.10
Model SO-1⅜"..........$.12
Model SO-1½"..........$.12

GUY RING

Model GR-1 $1.25



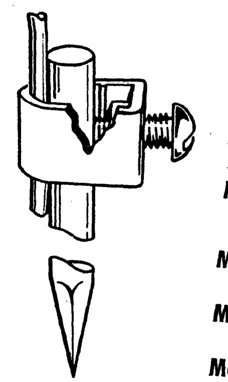
Of heavy gauge, galvanized steel, embossed for extra strength. Set screws provide positive fit for all masts ranging from 1" O.D. to 2" O.D. Complete with installation hardware.

CHIMNEY MOUNT REPLACEMENT KIT

Kit A consists of ¾" galv. steel strapping & hardware	$1.38
Kit B consists of ½" stainless steel strapping & hardware	2.48
Kit C consists of ¾" stainless steel strapping & hardware	3.38

GROUND ROD

Model GND 4'—6'—8'



Made of tough, ⅜" O.D., steel rod, pointed on one end. Furnished with either copper or hot-dip galvanized finish. The extruded aluminum wire clamp provides a simple means of attaching all sizes of ground lead wire up to ¼" O.D. Available in 4', 6' and 8' lengths.

Model GND-4CP—4' copper plated	$1.00
Model GND-6CP—6' copper plated	1.50
Model GND-4HD—4' hot-dip galv.	$1.15
Model GND-6HD—6' hot-dip galv.	1.60
Model GND-8HD—8' hot-dip galv.	2.20

GUY WIRE CLAMP

Model GC-1 .... 30¢

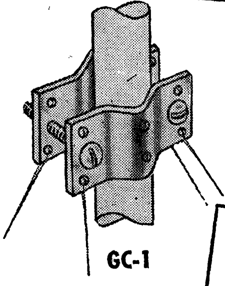
Clamps on mast with a sure grip . . . 12 holes provided for guy wire attachment. Accommodates masts to 1½" O.D.

Model GC-2 .... 35¢

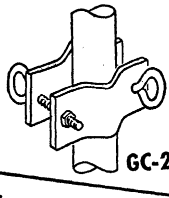
Similar to Model GC-1 with 2 eyebolts for guy wire attachment.

Model GC-3 .... 45¢

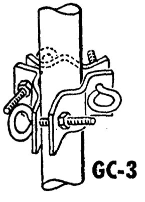
Accommodates mast to 2" O.D. Features 3 eyebolts for guy wire attachment.



GC-1

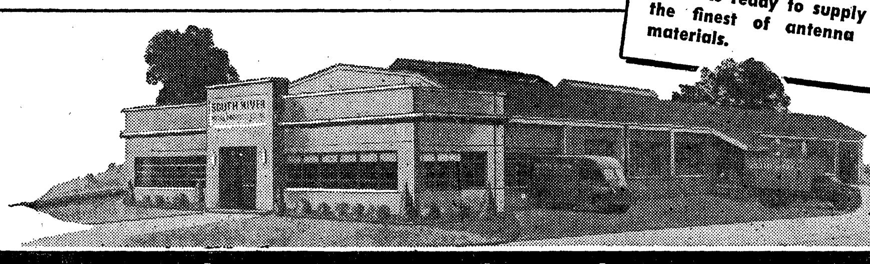


GC-2



GC-3

In its new, magnificently equipped plant, staffed with specialists in the production of its line, SOUTH RIVER is ready to supply you with the finest of antenna mounting materials.



South River Metal Products Co., Inc.

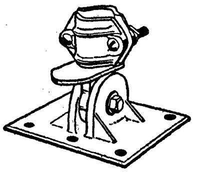
PIONEER MANUFACTURER AND OUTSTANDING PRODUCER OF THE FINEST LINE OF ANTENNA MOUNTING ACCESSORIES IN THE TELEVISION INDUSTRY

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

PENN TELEVISION PRODUCTS CO.

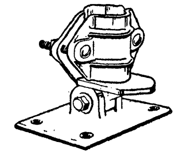
engineered precision engineered precision engineered precision engineered precision engineered precision engineered precision

TELEVISION ACCESSORIES



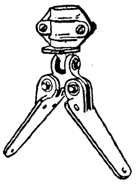
BMA-138

Sturdy Universal Base Mount, made of "PENN-ALLOY," strong, weather-resistant. Patented bearing locks in any position with turn of Hex Head Bolt. Patented tongue supports masts from 1" to 2" O.D. Individually boxed 12 to master carton. Shipping Wt. 22 lbs. **List Price $4.25 ea.** Set of 1½" wood screws $.25 additional



BMA-136

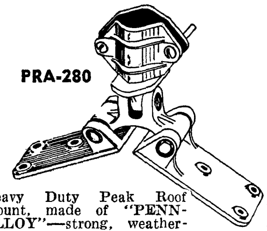
Universal Base Mount, made of "PENNALLOY"—strong, weather-resistant. Patented bearing locks in any position with turn of Hex Head Bolt. Patented tongue supports masts from 1" to 1½" O.D. Individually Boxed 20 to master carton. Shipping Weight 22 lbs. **List Price $3.55 ea.** Set of 1½" wood screws $.17 additional



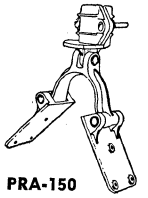
PRA-148

Universal Peak Roof Mount, made of "PENNALLOY"—strong, weather-resistant. Patented bearings lock at any angle pitch with turn of Hex Head Bolts. Patented tongue supports masts from 1" to 2" O.D. Individually boxed 12 to master carton. Shipping Weight 21 lbs. **List Price $5.25 ea.** Set of 1½" wood screws $.25 additional

PRA-280

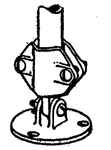


Heavy Duty Peak Roof Mount, made of "PENN-ALLOY"—strong, weather-resistant. Patented bearings lock at any angle to pitch of peak or flat roof, with turn of Hex Head bolts. Patented tongue supports masts from 1" to 2" O.D. Ideal for telescopic masts. Individually boxed 12 to master carton. Shipping Wt. 28 lbs. **List Price $6.95 ea.** Set of 1½" wood screws $.25 additional



PRA-150

Universal Peak Roof Mount, arches over crown tile. Made of "PENNALLOY"—strong, weather-resistant. Patented bearings lock at any angle and pitch of roof with turn of Hex Head bolts. Patented tongue supports masts from 1" to 2" O.D. Individually boxed 12 to master carton. Shipping Weight 35 lbs. **List Price $6.95 ea.** Set of 1½" wood screws $.25 additional

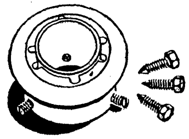


BMA-192

Economy cast aluminum Base Mount. Takes up to 1¼" O.D. Masts. Packed in bulk—24 to master carton. Shipping Wt. 20½ lbs. **List Price $1.90 ea.**

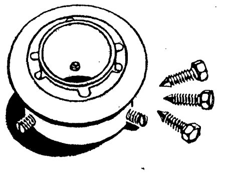
BMA-192-B

Economy cast aluminum Base Mount. Has patented bearing. Takes up to 1¼" O.D. masts. Packed in bulk—24 to master carton. Shipping Wt. 19½ lbs. **List Price $2.70 ea.**



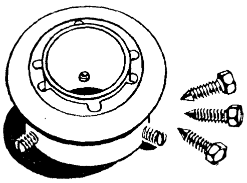
GRA-140

Patented Floating Guy Wire Ring and Collar, made of "PENNALLOY"—strong, weather-resistant. Permits orientation of masts while permanently guyed. Lubricated. Fits masts up to 1⅜" O.D. Included for your choice—3 headless set screws—3 hex head set screws. Individually boxed—24 to master carton. Shipping Weight 8½ lbs. **List Price $1.80 ea.**



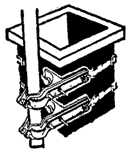
GRA-141

Same as GRA-140, except that GRA-141 takes up to 1¾" O.D. mast. Individually boxed—24 to master carton. Shipping Weight 11 lbs. **List Price $1.90 ea.**



GRA-142

Same as GRA-140, except that GRA-142 takes up to 2" O.D. masts. Individually boxed—24 to master carton. Shipping Weight 15 lbs. **List Price $2.50 ea.**

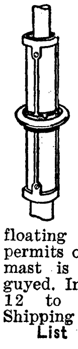


CMA-500

Pair of Chimney Mounts, made of "PENNALLOY" — strong, weather-resistant. Two 12 ft. lengths of galvanized strapping. 6 corner brackets. Eyebolts permanently sealed at one end of strapping. Seals for opposite end of straps easily fastened. Mounts hold masts up to 2" O.D. Complete with heavy plated hardware. Individually boxed—12 to master carton. Shipping Weight 49 lbs. **List Price $6.95 pair**

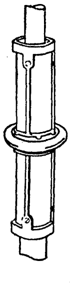
CMA-500 S.S.

Same as CMA-500, except CMA-500S.S. has stainless steel strapping and seals. Individually boxed 12 to master carton. Shipping Wt. 49 lbs. **List Price $8.95 pr.**



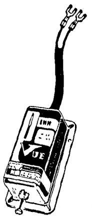
MCA-743

Universal Mast Coupler, made of "PENN-ALLOY" — strong, weather-resistant. Couples mast sections up to 1⅜" O.D. Set screws fasten coupler securely. Patented floating guy wire ring permits orientation while mast is permanently guyed. Individually boxed 12 to master carton. Shipping Wt. 11½ lbs. **List Price $3.50 ea.**



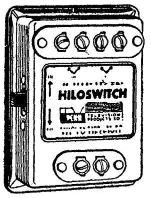
MCA-744

Same as MCA-743, except MCA-744 is larger to accommodate up to 1¾" O.D. masts. Individually boxed 12 to master carton. Shipping Wt. 16 lbs. **List Price $4.25 ea.**



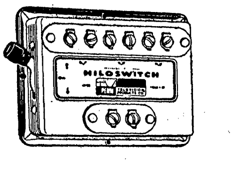
"PENNVUE" MODEL WT-39

An FM-TV Interference Eliminator for FM band interference. Adjusts to give clear vision, uncluttered sound. Easily installed. Packed 12 on display card. 1 card to carton. Shipping Weight 3 lbs. **List Price $1.98 ea.**



TS-551 "HILOSWITCH"

2 Channel TV-FM Antenna Transfer Switch. Permits easy changing from high frequency bands to low frequency bands. No soldering, positive contacts, minimum leakage. Individually boxed 12 to master carton. Shipping Weight 4 lbs. **List Price $2.75 ea.**

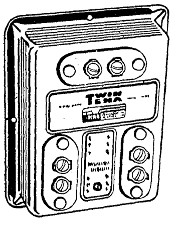


TS-587 "HILOSWITCH"

3 Channel TV-FM Antenna Transfer Switch. Permits easy changing from high frequency bands to intermediate frequency bands to low frequency bands. Easy to install. No soldering, positive contacts, minimum leakage. Individually boxed 12 to master carton Shipping Weight 4 lbs. **List Price $3.75**

TC-313 TWINTENA

Two set Antenna Coupler permits 2 TV sets with 300 ohm input to be connected to one antenna. Allows simultaneous reception on both sets with no interference from either, on or off. Easy to install, no soldering, positive contacts, minimum leakage. Individually boxed 12 to master carton. Shipping Weight 4 lbs. **List Price $3.95**

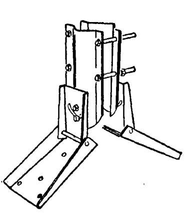


TC-374 TWINTENA

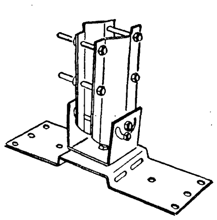
Deluxe two set Antenna Coupler —permits 2 TV sets with 300 ohm input to be connected to one antenna. Allows simultaneous reception on both sets with no interference from either, on or off. Easy to install, no soldering, positive contacts. Minimum leakage. Has ground connection. Individually boxed 12 to master carton. Shipping Weight 4 lbs. **List Price $4.95 ea.**

TELEVISION ACCESSORIES

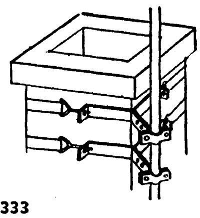
PENN TELEVISION PRODUCTS CO.



PRS-111
Heavy gauge steel Peak Roof Mount. Heavy zinc plated. Accommodates up to 2" masts. Easily rotated. Makes "walking up" easy. Packed in bulk 24 to master carton. Shipping Weight 60 lbs. **List Price $2.50 ea.**

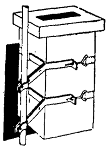


BMS-115
Heavy gauge steel Base Mount, heavy zinc plated. Accommodates up to 2" mast. Permits easy "walking up." Packed in bulk 24 to master carton. Shipping Weight 60 lbs.
List Price $2.75 ea.

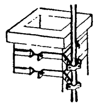


CMS-333
"Y" Type Chimney Mount made of ⅛" steel, 1⅛" wide. Hot dipped galvanized. Two 12 ft. lengths heavy galvanized steel strapping with complete hardware. Individually boxed 12 to master carton. Shipping Weight 45 lbs.
List Price $3.00 ea.

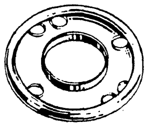
CMS-333 S.S.
Same as CMS-333, except CMS-333 S.S. has stainless steel strapping and seals. Individually boxed 12 to master carton. Shipping Wt. 45 lbs.
List Price $4.50 ea.



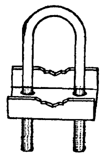
CMS-333 SNAP-IN
Chimney Mount made of ⅛" hot dipped galvanized steel, 1⅛" wide. Mast snaps easily into bracket. Complete with hardware and two 12 ft. lengths of heavy galvanized steel strapping. Individually boxed 12 to master carton. Shipping Weight 45 lbs.
List Price $3.00 ea.



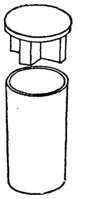
CMA-684 S.S.
"Y" Type Chimney Mount made of ⅛" tough bar stock aluminum, 1¼" wide. 2 12 ft. lengths stainless steel strapping and seals. Individually boxed 12 to master carton. Shipping Weight 32 lbs.
List Price $4.50 ea.



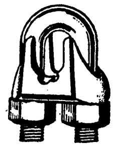
GW-135
Heavy gauge steel Guy Wire Ring with plated rolled edge. Fits 1¼" mast. Packed in bulk, 100 to master carton. Shipping Weight 13¾ lbs. **List Price $.42 ea.**



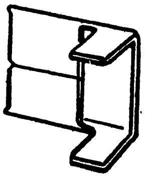
UC-22
"U" bolt with clamp, heavy plated gauge steel. Packed in bulk — 100 to master carton. Shipping Wt. 19 lbs.
List Price $.33 ea.



MK-29
"PENNALLOY" tube cap fits 1¼" tubing; prevents wind howls, rain and snow accumulation in mast tubing. Packed in bulk—100 to carton. Shipping Weight 7 lbs. **List Price $.20 ea.**

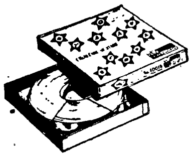


GT-30
Guy Wire Thimble made of aluminum with plated U bolt and hex nuts. Swift, vise-like tightening and joining of guy wires insures permanent grip. Packed in bulk — 100 to carton. Shipping Weight 7 lbs.
List Price $.25 ea.



GS-24
EZ Seals. Galvanized. Fits ¾" strapping. Easy to use. Packed in bulk — 100 to carton. Shipping Weight 2 lbs.
List Price $.06 ea.

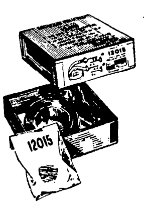
SS-25
EZ Seals. Stainless steel. Fits ¾" strapping. Easy to use. Packed in bulk — 100 to carton. Shipping Wt. 2 lbs.
List Price $.18 ea.



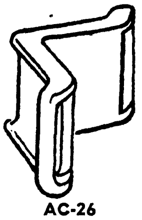
CSG-27
¾" Heavy galvanized strapping. Strong, durable. 100 ft. rolls, 6 to carton. Individually boxed. Shipping Weight 35 lbs.
List $4.60 per roll

CSS-28
¾" Heavy stainless steel strapping. Weather resistant. 100 ft. rolls, 6 to carton. Individually boxed. Shipping Weight 35 lbs.
List $11.80 per roll

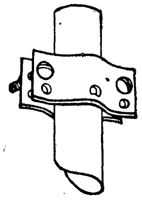
10015
Same as CSS-28 except that 10015 is lighter gauge stainless steel. Individually boxed, 6 to carton. Shipping Weight 26 lbs.
List $9.00 per roll



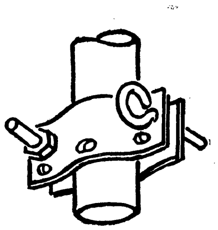
12015
Stainless Steel Strap Replacement Kit for Chimney Mounts. Individually boxed —12 to carton. Shipping Weight 15½ lbs.
List Price $2.75 ea.



AC-26
Heavy Corner Protector made of "PENNALLOY" — holds strapping in proper place, protects and prevents breaking chimney corners. Packed in bulk 100 to master carton. Shipping Weight 11½ lbs.
List Price $.17 ea.

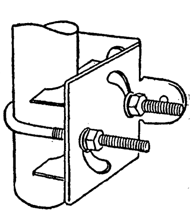


GW-134-A
Guy Wire Clamp, ⅛" tough bar stock, 1¼" wide. Accommodates antenna masts up to 1⅝" O.D. Packed in bulk 100 to master carton. Shipping Weight 13½ lbs.
List $.40 ea.

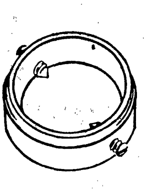


GW-134
Same as GW-134-A, except GW-134 is heavy plated steel. Packed in bulk, 100 to master carton. Shipping Weight 30 lbs.
List $.35 ea.

GW-137
Guy Wire Clamp, ⅛" heavy plated steel, 1¼" wide. Zinc plated eye bolt. Packed in bulk, 100 to master carton. Shipping Weight 34 lbs.
List Price $.45 ea.



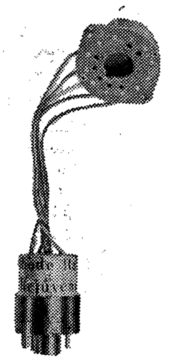
BM-133
Adjustable Base Mount. Rotates easily to fit flat, slope roofs and side walls. Made of heavy plated gauge steel. Packed in bulk, 25 to master carton. Shipping Weight 12 lbs.
List Price $.45 ea.



153
Collar to hold steel guy wire ring. Made of "PENNALLOY" — strong, weather-resistant. Universally adapted to fit various size masts up to 1⅝". Individually packed in cellophane bags—100 to carton. Shipping Weight 8 lbs.
List Price $.47 ea.

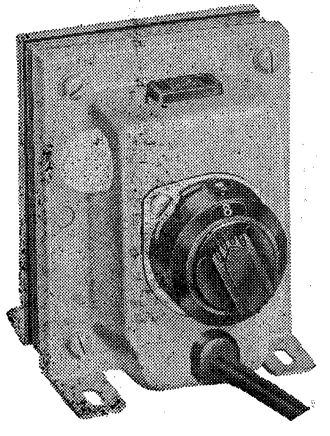
CREST LABORATORIES, INC.

Rockaway Beach 93, New York



Picture Tube Rejuvenator: Simple plug-in installation for use as a flasher type reactivator or as a permanent rejuvenator. Amazing results are achieved with this sturdy CRT rejuvenator. Steps up filament voltage slightly, raising cathode temperature to increase the electron kinetic energy, thus increasing cathode emission. Relieves contamination of barium oxide coated cathode as caused by occluded gases. Result: Brighter picture.

Model "B"	heavy duty unit for standard as well as Electrostatic focus tubes. Dealer Net $2.25
Model "C"	for standard tubes. Dealer Net $2.10
Model "D"	for AC-DC series filament receivers. Dealer Net $2.25
Model "51"	Isolation type rejuvenator for parallel wired electrostatic or electromagnetic cathode ray tubes. Dealer Net $2.40



LVB-117. A unique Line Voltage Booster engineered to restore peak performance to any TV set or electrical equipment. Insures full strength, width, and height of the picture when low line voltage weakens or shrinks picture. Corrects intermittent sync and oscillator drift caused by low line voltage.

350 Watt Rating . . . ample for most requirements on line voltages from 90 to 135 Volts.

Simple external Plug-in . . . 10 second installation aids over the counter sales.

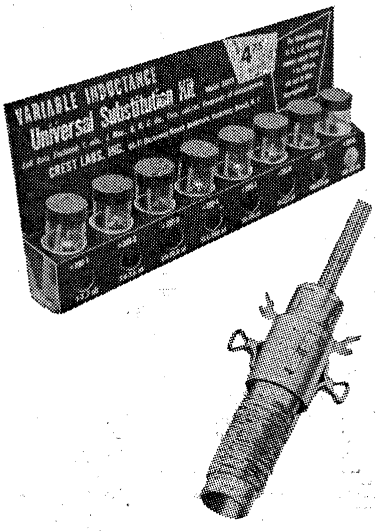
Automatically operated . . . turns on and off with set or appliance. Multi-tap selector switch . . . permits exact voltage boost.

Visual Indicator . . . assures exact selection of required boost.

Overload fuse protection . . . minimizes hazards of unsafe line increases.

Dealer Net Price $10.77 List Price $17.95

LVB "Jr." 10 volt boost only. . Dealer Net Price 5.85 List Price 9.75



TO SAVE VALUABLE SERVICE AND DEVELOPMENT TIME . . .

Now available for the first time . . . a complete Variable Inductance . . . Universal Substitution Kit.

For Vidio Peaking . . . IF Circuits.

The unique replacement set of 8 variable inductance coils cover a range from 1 to 590 uh.

Q-Max impregnation.

Full data enclosed on L min., L max., Q's, R, C dis., Freq. self-res.

***Individual Calibration Charts* permit adjustment to requirements of inductance value without test equipment.**

Complete set Model 200K . . . Net Price $4.75

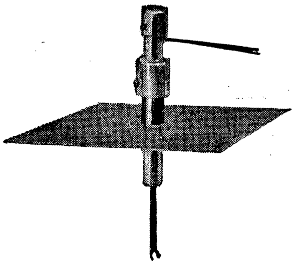
Single Set Replacements Available (listed below)

Coils	L min.	L max.	NET PRICE	Coils	L min.	L max.	NET PRICE
#200-1	1	2.7 µh	$ .60	#200-5	33	110 µh	$.65
#200-2	2.4	7.6 µh	.60	#200-6	74	225 µh	.65
#200-3	6.6	20.0 µh	.60	#200-7	100	310 µh	.65
#200-4	16.0	55.0 µh	.60	#200-8	200	590 µh	.65

MOSLEY *Electronics, Inc.*

LOW LOSS TV ANTENNA TRANSMISSION LINE ACCESSORIES

ROOF-THRU



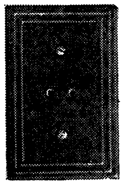
Consisting of a low-loss sturdy plastic feed-through bushing and an 8" x 9" copper flashing, the MOSLEY ROOF-THRU permits direct entrance of TV transmission line and rotator control cable through the roof without allowing weather leaks.

- Permits shorter TV lead-in. This means less loss of signal energy and less pick-up of electrical interference.
- Prolongs life of transmission line by keeping it out of weather.
- Eliminates unsightly rambling lead-in wires.
- No danger of future roof leaks around ROOF-THRU.
- Easy to install in any type roof.
- Long lasting. Weather can't hurt ROOF-THRU.

Cat. No. 624 MOSLEY ROOF-THRU for standard flat 300 ohm transmission line........**List Price $5.84**

Cat. No. 623 MOSLEY ROOF-THRU for all tubular and oval types 300 ohm transmission line........**List Price $5.84**

SINGLE FLUSH SOCKET



For terminating single 300 ohm transmission line lead-in concealed in wall. Socket and attractive face plate molded of low-loss polystyrene. Fits standard electrical outlet box. For installations not utilizing rotator. Mates with Cat. No. 301 Plug. In brown or ivory.

Cat. No. F-1 MOSLEY SINGLE FLUSH SOCKET. **List Price $1.67**

Cat. No. F-1PK Flush Socket packaged with mating plug and mounting brackets........**List Price $1.95**

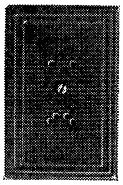
DUAL FLUSH SOCKET

Similar to F-1, above, but provides two receptacles for installations where two separate lead-in lines must be terminated.

Cat. No. F-11 MOSLEY DUAL FLUSH SOCKET.....**List Price $2.09**

Cat. No. F-11PK Dual Flush Socket packaged with mating plug and mounting brackets........**List Price $2.67**

FLUSH MOUNTED LEAD-IN and ROTATOR CABLE SOCKET



A combination socket for use with rotator installation. One socket provides constant impedance connection for 300 ohm transmission line lead-in, other socket may be used for three or four wire rotator control cable connection. Mates with Cat. No. C-104 4-Conductor Polarized Plug. In brown or ivory.

Cat. No. F-14 MOSLEY FLUSH MOUNTED LEAD-IN and ROTATOR CABLE SOCKET. ....**List Price $2.09**

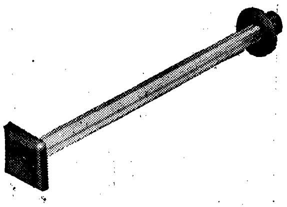
Cat. No. F-14PK As above but packaged with mating plugs and mounting brackets. ....**List Price $3.51**

FLUSH SOCKET MOUNTING BRACKET

Provides easy mounting of flush socket in any wall without use of outlet box. Quickly installed.

Cat. No. F-9 MOUNTING BRACKETS........**List Price (per set) $.35**

WALL-THRU



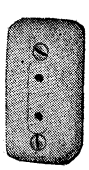
Sturdy extruded polystyrene tube with precision molded polystyrene inside and outside wall plates. Weather-proof wall entrance for tubular, oval, and flat lines. Available in brown or ivory.

- For TV, FM and Amateur Transmission Line!
- Fits Any Wall Up to 13" Thick!
- Completely Weather-Proof!
- MOSLEY Lead-in Socket Can Be Mounted Direct to Inside Plate!
- Easily, Quickly Installed!

Cat. No. 625 MOSLEY WALL-THRU........**List Price $1.95**

Cat. No. 625-PK WALL-THRU, complete with MOSLEY Universal TV Lead-in Socket and Plug........**List Price $3.00**

UNIVERSAL TV LEAD-IN SOCKET



A compact, constant impedance socket designed so that standard 300 ohm transmission line may enter from sides or back or may pass straight through. Thus the unit may serve as line tap or terminal socket and wiring may be hidden within wall or brought along baseboard. Ideal for TV antenna lead-in, test bench, ham shack, dealer display, etc. Molded of low-loss polystyrene. In brown or ivory. Mates with Cat. No. 301 MOSLEY Transmission Line Plug.

Cat. No. 343 MOSLEY UNIVERSAL TV LEAD-IN SOCKET. **List Price $.80**

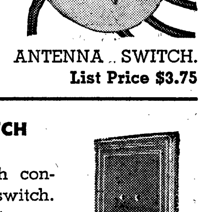
Cat. No. 343-PK Same as above, but packaged with one MOSLEY Transmission Line Plug. ....**List Price $1.05**

UNIVERSAL TV LEAD-IN RECEPTACLE

Similar to No. 343. Mates with No. 311 Transmission Line Socket. Available in brown or ivory.

Cat. No. 344........**List Price $.80**

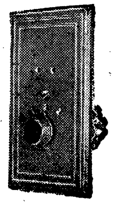
3-WAY TV ANTENNA SWITCH



Constant impedance rotary type switch, making silver-to-silver contact, provides quick, easy selection of any one of three TV antennas. Enclosed in attractive sturdy plastic case for easy mounting in set, on wall, baseboard or window sill. May be supported by its own leads. Four sections of standard 300 ohm transmission line are factory wired to switch and Cat. No. 27-S Solderless Transmission Line Splicers supplied for speedy installation. Knob extension rod may be removed if not needed. In ivory or brown.

Cat. No. F-20 MOSLEY 3-WAY TV ANTENNA SWITCH. **List Price $3.75**

FLUSH MOUNTED SOCKET-SWITCH



Single lead-in socket combined with constant impedance 3 position rotary switch. Easy change-over to any one of 3 antennas or to switch 1 antenna to 3 different TV sets. Available in brown or ivory.

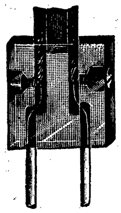
Cat. No. F-10 MOSLEY FLUSH MOUNTED SOCKET-SWITCH........**List Price $3.75**

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

MOSLEY *Electronics, Inc.*

LOW LOSS SOLDERLESS CONNECTORS for STANDARD 300 OHM TRANSMISSION LINE and ROTATOR CONTROL CABLE

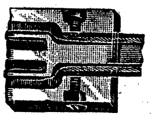
UNIVERSAL TRANSMISSION LINE PLUG



Mates with all MOSLEY Transmission Line Sockets including Flush Sockets. Low loss, constant impedance. Installed without solder. Precision molded polystyrene.

Cat. No. 301 MOSLEY TRANSMISSION LINE PLUG. **List Price $.30**

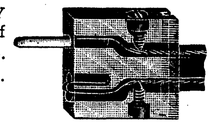
TRANSMISSION LINE SOCKET



Mates with Cat. No. 301 Plug, Cat. No. 344 Universal Transmission Line Receptacle and with Cat. No. 304 Input Adapter. Provides low-loss constant impedance connection. Use where mounted socket not feasible. Solderless.

Cat. No. 311 MOSLEY TRANSMISSION LINE SOCKET. **List Price $.30**

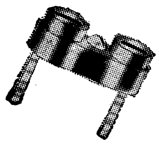
POLARIZED TRANSMISSION LINE CONNECTORS



Maintains impedance and polarity when used to connect sections of standard 300 ohm transmission line. Made of low-loss plastic. Solderless. Use in pairs.

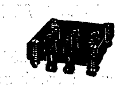
Cat. No. 321 MOSLEY POLARIZED TRANSMISSION LINE CONNECTORS. ....**List Price, per pair $.60**

MOSLEY CRYSTAL HOLDER SOCKETS



SINGLE CRYSTAL HOLDER SOCKET molded of special high temperature polystyrene. Takes ½" spaced pins, .095" dia. Has phosphor bronze contacts. Mounts under chassis or behind panel by means of single plated brass machine screw supplied. Template supplied for cutting two ⅜" dia. holes, spaced ⅝" center to center. Fits chassis or panels up to ⅛" thick. One piece contact and solder lug.

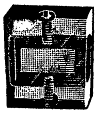
Cat. No. 500..**List Price $.35**



Cat. No. 53 3-GANG MULTI-SOCKET accommodates three holders with small pins spaced ½". Ideal for use with selector switch to provide rapid frequency change in crystal controlled transmitters. Use with Cat. No. 301 Plugs to provide terminal connector for multi-channel TV antenna lead-in lines..**List Price $1.08**

Cat. No. 56 6-GANG MULTI-SOCKET. Similar to Cat. No. 53, above, but designed to permit insertion of six crystal holders or plugs..**List Price $2.08**

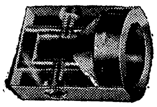
SOLDERLESS TRANSMISSION LINE SPLICER



A low-loss, constant impedance splicer for joining sections of standard 300 ohm transmission line. Easily and quickly installed without solder. Precision molded of polystyrene.

Cat. No. 27-S MOSLEY SOLDERLESS TRANSMISSION LINE SPLICER. ....**List Price $.18**

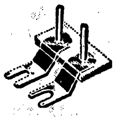
SOLDERLESS UHF TRANSMISSION LINE SPLICER



Precision molded of crystal clear polystyrene, designed so ends of polyethylene line insulation are completely covered for maximum strength and weather protection. Provides constant impedance splice of popular UHF tubular or oval 300 ohm line to flat types.

Cat. No. 29-S MOSLEY UHF TRANSMISSION LINE SPLICER. **List Price $.20**

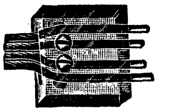
INPUT ADAPTER



An ideal connector for TV and FM sets, boosters, etc. Attaches to screws on antenna terminal strip. Mates with Cat. No. 311 Line Socket on end of 300 ohm transmission line lead-in to provide greater convenience and efficiency. Solderless. Low loss.

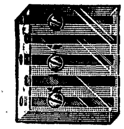
Cat. No. 304 MOSLEY INPUT ADAPTER............**List Price $.30**

ROTATOR CONTROL CABLE PLUGS and SOCKETS



Sturdy polarized connectors for three or four wire rotator control cable. Many other low voltage applications. Solderless.

Cat. No. C-104 4-CONDUCTOR PLUG mates also with Cat. No. F-14 Flush Socket. ....**List Price $.84**

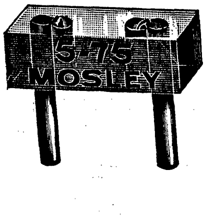


Cat. No. C-134 4-CONDUCTOR LINE SOCKET. Mates with Cat. No. C-104 Plug, above. ....**List Price $.84**

Cat. No. C-114 4-CONDUCTOR BASE SOCKET. Mates with Cat. No. C-104 Plug. May be mounted on wood or metal. **List Price $1.16**

Cat. No. C-124 4-CONDUCTOR PLUG and SOCKET COMBINATION consisting of one Cat. No. C-104 Plug and one Cat. No. C-114 Base Socket. ....**List Price $2.00**

MOSLEY CRYSTAL HOLDER ADAPTERS



Cat. No. 5-75 CRYSTAL HOLDER ADAPTER receives small pin ½" spaced crystal holder and plugs into ¾" spaced sockets or in any 5 or 6 prong socket. ....**List Price $.58**

Cat. No. 75-5 CRYSTAL HOLDER ADAPTER receives pins spaced ¾" and plugs into standard ½" spaced sockets or octal sockets. **List Price $.58**

MOSLEY *Electronics, Inc.*

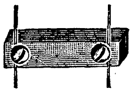
LOW LOSS ACCESSORIES for OPEN WIRE LINE and DIPOLE ANTENNAS

MOSLEY Open-Wire Line Accessories are especially designed to provide Better TV Pictures in areas of weak signal strength.

Open-wire line made with MOSLEY accessories has less than one-sixth the loss of new standard 300 ohm ribbon line. It is easy to make with MOSLEY accessories and its use will often result in good, consistent TV pictures even in fringe areas where TV reception had previously been considered impossible.

Open-wire line made with MOSLEY accessories will not increase in loss with age and will withstand weather and adverse atmospheric conditions indefinitely.

OPEN-WIRE SPACER

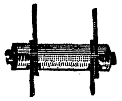


Place one of these MOSLEY SPACERS every 12" along open-wire line to maintain constant 1" spacing. Strong, lightweight spacers made of low loss acrylic plastic with non-rusting set screws. Screw heads countersunk to provide firm grip on wire.

Open-wire line is becoming increasingly popular for VHF and UHF TV service due to its extremely low loss under all weather conditions. A line constructed of #18 wire, using low loss MOSLEY spacers will provide an excellent match from antenna to TV receiver.

Cat. No. 450-3 MOSLEY OPEN-WIRE SPACER. **List Price $.10 each**

OPEN-WIRE SPLICER

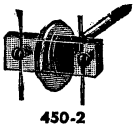


450-1

Low-loss molded polystyrene splicer for joining sections of open-wire transmission line. Maintains correct wire spacing with no impedance change. Ideal for splicing open-wire line to 300 ohm Flatline. Split flat line 24" back from splice to provide impedance match. No soldering required.

Cat. No. 450-1 MOSLEY OPEN-WIRE SPLICER. **List Price $.16 each**

OPEN-WIRE ANCHOR BAR

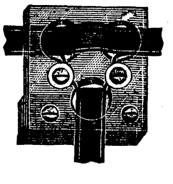


450-2

Designed to be used with TV screw-eye stand-offs of most all popular sizes and shapes. Holds open-wire line secure with proper wire spacing. Made of low-loss acrylic plastic with non-rusting screws. Supplied less screw-eye stand-off.

Cat. No. 450-2 MOSLEY OPEN-WIRE ANCHOR BAR. **List Price $.30**

DIPOLE ANTENNA CONNECTOR



For connecting transmission line to dipole antenna without use of solder. Ideal for use with Cat. No. 251 End Insulator, below, to make up efficient FM or other high frequency antenna. No strain on connection. Low-loss, sturdy acrylic plastic.

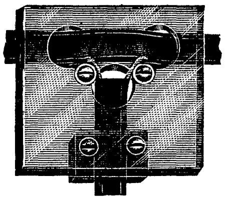
Cat. No. 261 MOSLEY ANTENNA CONNECTOR. **List Price $.58**

DIPOLE END INSULATOR

Especially designed for use with dipole type antenna made with standard 300 ohm ribbon transmission line. Plated machine screw and washer holds wires securely and connects them together. No solder required. No strain on connection.

Cat. No. 251 MOSLEY END INSULATOR. ....**List Price $.50**

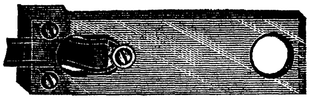
HEAVY DUTY DIPOLE ANTENNA CONNECTOR



Similar to Cat. No. 261 but intended for use with heavier copperweld type 300 ohm transmission line. Ideal for ham transmitting antennas.

Cat. No. 262 MOSLEY HEAVY DUTY DIPOLE ANTENNA CONNECTOR. ....**List Price $.83**

HEAVY DUTY END INSULATOR



Similar to Cat. No. 251 but designed for use with heavier copperweld type 300 ohm transmission line. An extra clamping member is added to help hold line and take strain off connection. Ideal for ham dipoles.

Cat. No. 252 MOSLEY HEAVY DUTY END INSULATOR. **List Price $.67**

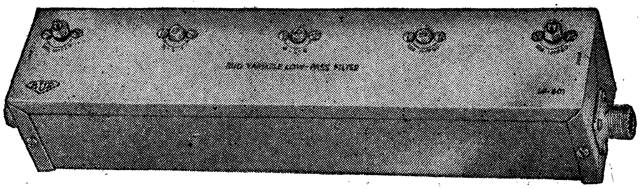
MOSLEY Products are sold only through Jobbers

MOSLEY ELECTRONICS **A single source of supply for precision made plugs, sockets, connectors and other low loss accessories for TV transmission line.**

NEW BUD FILTERS TO REDUCE OR ELIMINATE TELEVISION INTERFERENCE

The sources of television interference are most often short wave broadcasting stations, amateur radio transmitting stations, diathermy equipment, X-ray equipment, automotive ignition noises or similar sources. The basic problem of eliminating this interference is that of rejection of the signals received from these sources.

BUD LF-601 LOW PASS FILTER



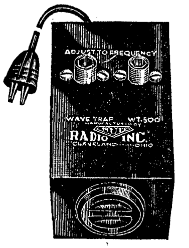
Interference to television receiver reception caused by transmissions from an amateur station can be caused by harmonics or by shock from the transmitter. The shock from the transmitter fundamental can be cured at the television receiver with a Bud HF-600 high pass filter. Harmonics can be greatly reduced or eliminated at the transmitter by use of a Bud LF-601 low pass filter.

The LF-601 high attenuation low pass filter has the following characteristics:

1. Minimum attenuation of 85 decibels on all frequencies above 54 megacycles and a minimum of 93 decibels above 70 megacycles.
2. Maximum rejection is adjustable from 55 to 90 megacycles. This tunable feature provides two slots at least 100 decibels down.
3. The cut-off frequency is 42 megacycles.
4. The unit will easily handle a full kilowatt modulated on a reasonably flat line.
5. The insertion loss is less than one DB.
6. Since the design of this filter provides an adjustable feature, the unit can be used with either 52 ohm or 72 ohm coax.
7. Each inductance is in an individually shielded compartment.
8. All capacitors used are variable.

LF-601 Dealer Cost **$13.95**

BUD WAVE TRAP



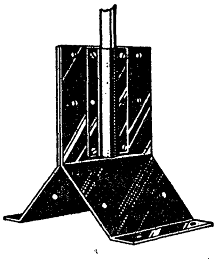
Bud Wave Traps are designed to eliminate interference caused by amateur radio transmission received through the AC line. Bud Wave Traps can be used in connection with any TELEVISION, AM or FM receiver. The three point installation method is simplicity in itself.

1. Plug the cord from the receiver into the receptacle in the wave-trap.
2. Plug the cord from the wave-trap into the AC receptable.
3. Adjust the condensers, by means of hand tuning extensions, until the interference has disappeared. The entire unit is small, compact and completely encased.

Model WT-500 to be used to eliminate interference caused by a transmitter operating on the 10, 15, or 20 meter bands. Model WT-501 will eliminate interference caused by a transmitter operating on the 40 or 80 meter bands. Size of case 4¼" x 2¼" x 1¾".

WT-500 or WT-501 Dealer Cost **$3.96**

BUD COMBINATION ANTENNA MOUNT



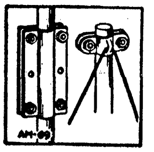
This new Combination Mount is the latest addition to Bud's complete line of television antenna mounts for every location . . . to meet any condition.

Made of two sheets of extra heavy gauge, tough steel, the upright portion is welded together for a permanent bond. Spread portion is accurately formed for peak or wall installation. Sturdy construction guarantees permanent, trouble-free mast installation.

The Combination Mount has a baked, black enamel finish to prevent rust. Furnished complete with plated mounting hardware. Will accommodate up to 1¼" mast.

AM-83 .... Dealer Cost **$1.50**

GUYING CLAMPS AND MAST COUPLERS



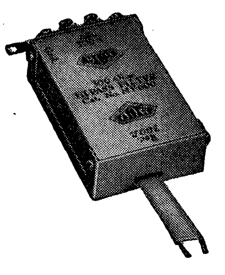
GT-68 Guytie—A vise grip clamp to hold guy wire at any point.

AM-66 Mast Coupling — Used to extend antenna height.

GT-68 .... Dealer Cost **$ .33**

AM-69 .... Dealer Cost **$ .99**

BUD HF-600 HIGH PASS FILTER

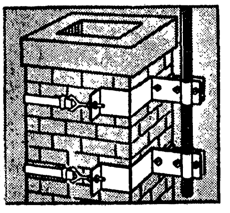


The HF-600 high pass filter is designed to have a cut off frequency at 42 megacycles, thus this filter rejects signals from 0 to 42 megacycles. It is within this range that the majority of signals causing interference would be received. Since there is no attenuation above 42 megacycles, picture strength or quality is not affected.

This unit is easily installed and complete installation instructions are included. The filter is housed in an attractive aluminum case 3¼" x 2⅛" x 1⅛".

HF-600 Dealer Cost **$3.00**

ADJUSTABLE CHIMNEY MOUNTS



Very easy to install on any size chimney without use of special tools. The NEW BUD STRAP CLAMP simplifies and speeds up installation. A rugged antenna installation is assured.

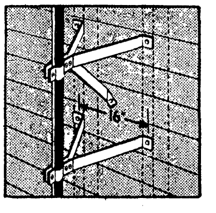
The Twin Mounts design allows unlimited spacing between the brackets, thus providing maximum strength.

AM-86—Heavy Duty Chimney Mounts —Made from ⅛" steel — 2½" wide enabling the overlapping of more than one brick and can be used to support any size antenna mast from ⅞" to 1½" diameter.

AM-88 — Economy Model Chimney Mount — Construction and design same as AM-86 except for the width of the bracket which is 1¼". Also made from ⅛" steel and will support mast up to 1-5/16" in diameter. These chimney mounts are supplied complete with 24 feet of strapping, and all necessary hardware. The brackets are finished by painting with a black rust-resisting paint and all hardware is plated, assuring a long lasting installation.

AM-86 ....Dealer Cost **$2.40** **AM-88** ....Dealer Cost **$1.59**

HEAVY DUTY WALL MOUNTING BRACKETS



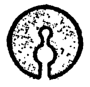
For an installation requiring maximum strength and weather resistance. The 16/ spacing on the wall allows lag bolts to enter 2 x 4 joists under the wall siding, making a solid support for the antenna. Made of ⅛" steel 2" wide. Painted with a black rust-resisting paint. A steel brace is furnished for use as a brace on the upper bracket and permits the supporting of heavy television antenna. Brackets are adjustable to accommodate masts 1½" in diameter. The AM-60 will allow a 12" space between the mast and the wall. The AM-89 will separate the mast from the wall by a space of 16". Supplied complete with lag screws and all other hardware.

AM-60 ....Dealer Cost **$3.00** **AM-89** ....Dealer Cost **$3.60**

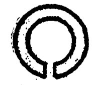
Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

TELCO TELEVISION HARDWARE

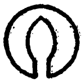
TELCO TV STAND-OFFS are made with genuine Polyethylene inserts and heavy gauge screw eyes. Supplied in five styles of inserts to take all VHF and UHF cables; specify by letter indicated, otherwise Universal Type (for 300-ohm flat lines and R.G.U. cables) will be furnished.



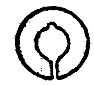
UNIVERSAL TYPE



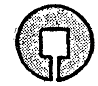
ROUND OR CO-AX TYPE
Specify with "X" after part number.



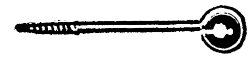
OVAL CABLE TYPE
Specify with "V" after part number.



HOLLOW LINE TYPE
Specify with "H" after part number.

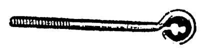


SQUARE TYPE
Specify with "A" after part number.



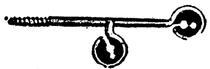
WOOD SCREW TYPE

8027	$5.50C	3½" lg. (100 pack carton)
8027SS	$50.00M	3½" lg. (1000 bulk pack)
8028	$8.25C	5½" lg. (100 pack carton)
8029	$9.25C	7½" lg. (100 pack carton)
8030	$0.18 each	12" lg. (100 pack carton)



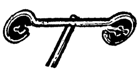
MACHINE SCREW TYPE

8031	$6.00C	3½" lg. (100 pk. ctn)
8032	$8.25C	5½" lg. (100 pk. ctn)
8035	$9.25C	7½" lg. (100 pk. ctn)



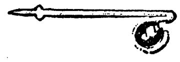
DUPLEX INLINE TYPE

8225	$0.25 ea.	7½" lg. Wood Screw
8226	$0.25 ea.	7½" lg. 10/32 M. S.



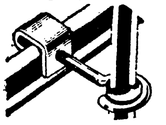
DUPLEX T-TYPE

8809	$0.25 ea.	7½" lg. W. S.
8810	$0.25 ea.	7½" lg. 10/32 Mach. Screw



NAIL-IN TYPE

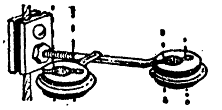
8343	$7.85C	3½" lg. (100 std ctn)



EAVE TYPE

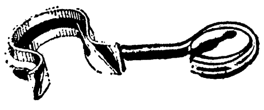
Clamps on eaves, brackets and mounts.

8811	$0.35 ea.	3½" lg. — Single
8812	$0.40 ea.	7½" lg. - Inline Duplex
8815	$0.40 ea.	7½" lg. - T-Type Duplex



GUY WIRE CLAMP-ON TYPE

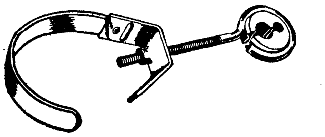
8255	$0.19 ea.	3½" lg. - Single
8256	$0.30 ea.	7½" lg. - Inline Duplex



NEW SNAP-ON MAST TYPE

Extra wide reinforced band — stays on.

8797	$0.10 ea.	To fit 1" Masts
8798	$0.10 ea.	To fit 1¼" Masts



STRAP-ON MAST TYPE

With galvanized strap.

8253	$0.19 ea.	3½" lg. - 9" strap
8254	$0.22 ea.	5½" lg. - 9" strap
8257	$0.25 ea.	7½" lg. - 9" strap
8258	$0.30 ea.	7½" lg. Inline Duplex
8259	$0.30 ea.	7½" lg. - T-Type Duplex

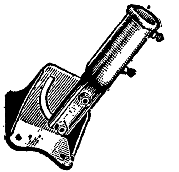
With stainless steel strap.

8353	$0.25 ea.	3½" lg. - 9" strap
8354	$0.30 ea.	5½" lg. - 9" strap
8357	$0.35 ea.	7½" lg. - 9" strap
8358	$0.35 ea.	7½" lg. Inline Duplex
8359	$0.35 ea.	7½" lg. T-Type Duplex

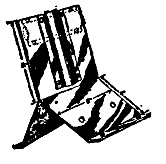
STAND-OFF MAST STRAPS ONLY

	per 100	
8251-C	$16.00	9" long straps
8252-C	$18.00	18" long straps

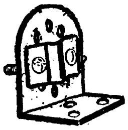
TELEVISION ROOF MOUNTS



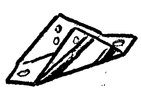
DELUXE ALUMINUM BRACKETS
for masts to 1¼"
No. 8000 List $8.25



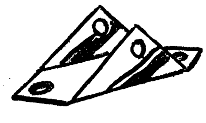
ALL-PURPOSE MOUNT
for masts to 1¾"
No. 8575 List $2.75



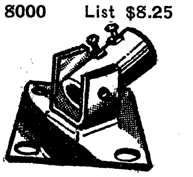
ALL-ANGLE MAST MOUNT
for masts to 1¾"
No. 8620 List $0.65



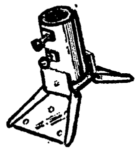
PIVOT MOUNT BASE
for masts to 1¼"
No. 8621 List $0.45



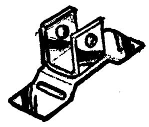
PIVOT MOUNT BASE
No. 8921 List $0.65
for masts to 1¾"
No. 8922 List $0.65
for masts to 2¼"



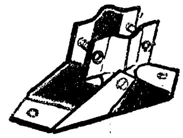
SWING-UP JR. MOUNT
No. 8626 List $2.95
for masts to 1¾"
No. 8627 List $3.50
for masts to 2"



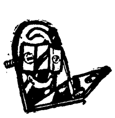
RIDGE MOUNTS
No. 8630 List $3.25
for masts to 1¾"
No. 8632 List $3.75
for masts to 2"



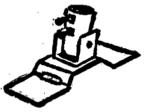
BASE FOR TELE-MAST will hold 2" masts.
No. 8792 List $2.75



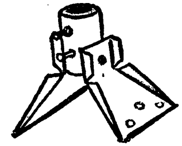
PIVOT SWING MOUNT
for masts to 1¼"
No. 8622 List $0.75



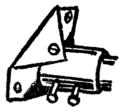
SLOTTED SWING-UP MOUNT
for masts to 1¾"
No. 8800 List $0.65



FITZ-ALL MOUNT
for masts to 2"
No. 8804 List $2.95



UNIVERSAL RIDGE MOUNT
No. 8906 List $1.95
for masts to 1½"
No. 8907 List $2.85
for masts to 2"



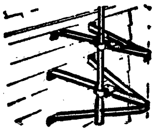
UNIVERSAL TILT MOUNT
No. 8908 List $1.35
for masts to 1½"
No. 8909 List $2.15
for masts to 2"

TELCO TELEVISION HARDWARE MFG. CO. ROCKFORD, ILL., U.S.A. **TELCO**
DIVISION OF GENERAL CEMENT MFG. CO., ROCKFORD, ILL., U.S.A.

TELCO TELEVISION HARDWARE

TELEVISION ANTENNA MOUNTS

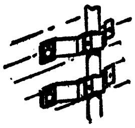
WALL MOUNTS



DELUXE ADJUSTABLE WALL MOUNT

1" to 19" Clearance. For masts to 1½" diameter.

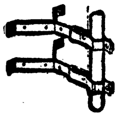
No. 8230 List $6.25



CLOSE WALL MOUNT

4" Clearance. For masts to 1¾".

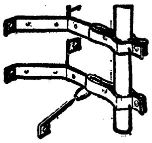
No. 8302 List $1.50



SNAP-IN WALL MOUNT

6" Clearance. For masts to 1¾".

No.		List
8306		$2.00
8308	8" clearance	3.50

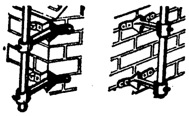


MASTER DELUXE SNAP-IN WALL MOUNTS

for masts to 1¾"

No.		List
8312	12" clearance	$3.95
8318	18" clearance	4.95
8324	24" clearance	6.25

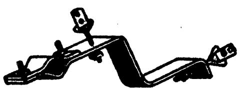
CHIMNEY MOUNTS



DELUXE ALUMINUM CHIMNEY MOUNT

for masts to 1¼"

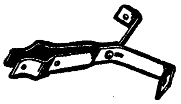
No. 8001 with stainless straps List $8.25



POPULAR CHIMNEY QUICK MOUNT

for masts to 1¾"

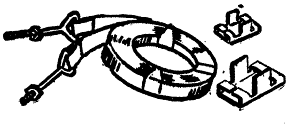
No. 8005 with galvanized straps List $2.50



SNAP-IN CHIMNEY MOUNT

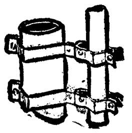
for masts to 1¾"

No.		List
8610	with galvanized straps	$3.00
8930	with stainless straps	$4.50



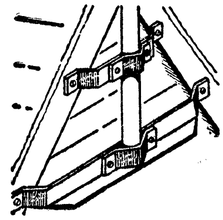
CHIMNEY STRAPPING REPAIR KIT

No.		List
8931	galvanized straps, complete	$2.00
8932	stainless straps, complete	$3.50



VENT MOUNTS

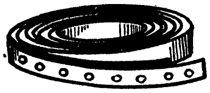
No.		List
8802	2" to 4" vents	$2.25
8803	4" to 6" vents	$2.25



PEAK AND MAST MOUNTS

No.		List
8625	30" lower member	$3.95
8933	48" lower member	$5.95
8934	New ground-up type 48" lower member	$6.50

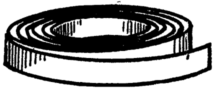
INSTALLATION ACCESSORIES



GALVANIZED PUNCHED STRAPPING

¾ x .015"

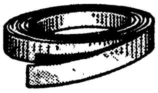
No.		List
8051	12' Coil	$0.85
8052	100' Coil	$5.50



GALVANIZED STRAPPING

¾ x .015"

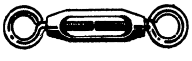
No.		List
8807	25' Coil	$1.25
8808	100' Coil	$4.75



STAINLESS STEEL STRAPPING

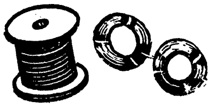
¾ x .020"

No.	List
8805 25' Coil	$2.50
8806 100' Coil	$9.50



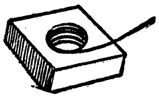
TELEVISION TURNBUCKLES

No.		
8056	3⅜" closed, 4⅝" open	$0.27 ea.
8057	4" closed, 5⅝" open	$0.28 ea.
8058	4½" closed, 6⅜" open	$0.30 ea.
8365	5½" closed, 7⅝" open	$0.45 ea.
8366	6¾" closed, 9¼" open	$0.70 ea.
8367	7½" closed 10½" open	$0.95 ea.



TELEVISION GUY WIRE

No.		
8107-C	4-20 x 100' Coil	$1.30
8107-M	4-20 x 1000' Spool	$13.30
8109-C	6-20 x 100' Coil	$1.75
8109-M	6-20 x 1000' Spool	$18.65
8375-C	6-18 x 100' Coil	$3.00
8375-M	6-18 x 1000' Spool	$25.00



APPROVED ALUMINUM GROUND WIRE

No. 8830

List $13.00

500' Box,
No. 8 Solid

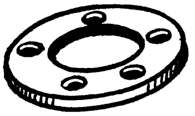
TELCO TELEVISION HARDWARE MFG. CO. ROCKFORD, ILL., U.S.A. **TELCO**

DIVISION OF GENERAL CEMENT MFG. CO., ROCKFORD, ILL., U.S.A.

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

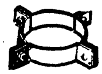
TELCO TELEVISION HARDWARE

INSTALLATION ACCESSORIES



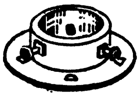
FIVE-HOLE FLOATING GUY RINGS

No.	Mast Size	Ring I.D.	List
8055	¾″-1″	1⅛″	$0.22
8313	1⅛″	1¼″	0.24
8314	1¼″	1⅜″	0.24
8315	1⅜″	1½″	0.24
8316	1½″	1⅝″	0.24
8317	2″	2⅛″	0.24



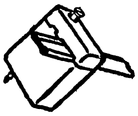
UNIVERSAL GUY RING AND MAST CLAMP

to 3″ diameter
No. 8374
List $1.00



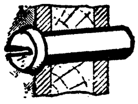
ALUMINUM FLOATING GUY RING FOR MASTS

for masts to 2″
No. 8650
List $2.95



PORCELAIN 300-OHM NAIL-IN STAND-OFFS

No. 8260
List $0.18 ea.

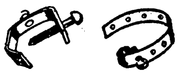


PORCELAIN 300-OHM LEAD-IN TUBE

No.	Length	List
8264	4″	$0.22
8266	6″	0.34
8268	8″	0.50

NEW UHF PORCELAIN HOLLOW-LINE LEAD-IN TUBE

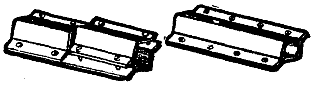
No.	Length	List
8914	4″ for UHF	$0.30
8916	6″ for UHF	0.50
8918	8″ for UHF	0.60



GROUND WIRE CLAMPS

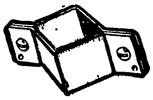
No.	Type	List
8120	C-Type Clamp	$0.30
8121	Copper Strap Clamp	0.25
8936	Alum. Strap Clamp	0.25

(for alum. ground wire only)



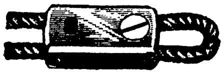
MAST COUPLERS

9⅝″ long
for masts ¾″ to 1¾″
No. 8371 2-piece List $1.25
for masts to 1¾″
No. 8645 3-piece List $1.25



GUY WIRE CLAMPS

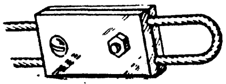
No. 8372
for masts to 1½″
List $0.35



CAST MALLEABLE GUY WIRE CLAMPS

for ⅛″ wire
No. 8081 List $0.55 ea.

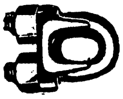
for $\frac{3}{16}$″ wire
No. 8082 List $0.55 ea.



STAMPED STEEL GUY WIRE CLAMPS

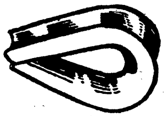
for ⅛″ to ¼″ wire

No.	List
8347	$0.20



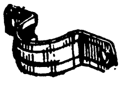
U-TYPE GUY WIRE CLAMPS

No. 8131
List $0.25 ea.



GUY WIRE THIMBLES

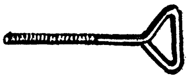
No. 8132
List $0.06 ea.



GALVANIZED MAST STRAPS

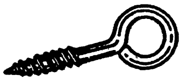
for 1″ and 1¼″ masts

No.	List
8130	$0.05



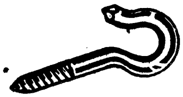
TRIANGULAR EYE BOLTS

for chimney straps
No. 8049
List $0.10



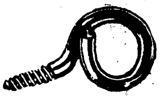
SCREW EYES

No.	Length	List
8078	1″	$0.05
8342	3″	0.10
8486	5″	0.11



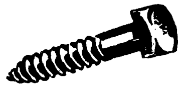
OPEN SCREW HOOKS

No.	Size	List
8732	4½″ lg. x #2 w.	$0.12
8735	3½″ lg. x #5 w.	$0.08



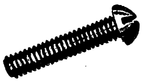
BRIDLE RINGS

No. 8153
List $0.10 ea.



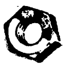
LAG SCREWS

No.	Size	List
8064	¼″ x 1¼″ long	$0.08
8065	¼″ x 2″ long	$0.08
8937	¼″ x 3½″ long	$0.12
8938	$\frac{5}{16}$″ x 3½″ long	$0.15



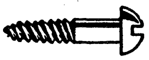
MACHINE SCREWS

¼-20 x 1¾″ long
No. 8251-C
List $3.60C



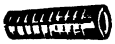
HEXAGON NUTS

¼-20
No. 7235-C
List $1.80C



HEAVY DUTY WOOD SCREWS

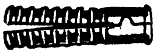
No.	Size	List
8071-C	#8 x 1¼″ long	$2.00C
8073-C	#10 x 1½″ long	$3.45C
8075-C	#12 x 1½″ long	$4.00C
8076-C	#14 x 1¾″ long	$4.45C



EXPANSION SHIELDS

for ¼″ Lag Screws

No. 8088
List $0.27 ea.



LEAD ANCHORS

for #10 to #14 wood screws

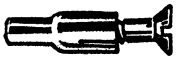
1″ long
No. 8084
List $0.10 ea.

1½″ long
No. 8085
List $0.16 ea.

NAIL DRIVE-IN ANCHORS

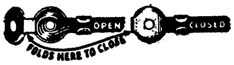
will fit ¼″ holes

No. 8083
List $0.20 ea.



PLASTIC HOLTITE SCREW ANCHORS

No. 8841 List $5.50
Box, 100 assorted
No. 8842 List $0.04
#8 for #8 screw
No. 8843 List $0.05
#12 for #12 screw
No. 8844 List $0.06
#16 for ¼″ screw
No. 8845 List $0.09
#20 for $\frac{5}{16}$″ screw



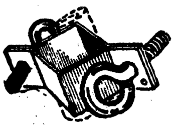
TV-LINE SOLDERLESS TERMINALS

No. 8633-C
List $3.65C

TELCO TELEVISION HARDWARE MFG. CO. ROCKFORD, ILL., U.S.A. **TELCO**
DIVISION OF GENERAL CEMENT MFG. CO., ROCKFORD, ILL., U.S.A.

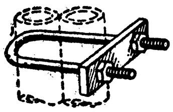
TELCO TELEVISION HARDWARE

INSTALLATION ACCESSORIES



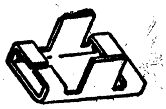
GUY WIRE AND GUY RING SUPPORT

with screw eyes
No. 8939 List $0.50
Will fit 1½" masts



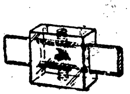
U-TYPE CLAMPS

No. 8370 List $0.35
clamp for 2 1¼" masts



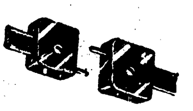
CHIMNEY STRAP CLIPS

easy to use, fold over
No. 8648 List $0.05 ea.



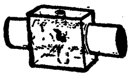
300-OHM UNIVERSAL SCREW TYPE CONNECTORS

No. 8095 List $0.20



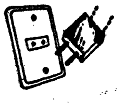
300-OHM POLARIZED TV-LINE CONNECTORS

No. 8220 List $1.40
No. 8221 List $1.50
Duplex



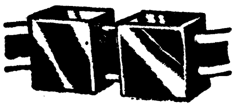
UHF PLASTIC CONNECTORS

No. 8223 List $0.25
for hollow line
No. 8224 List $0.25
for oval line



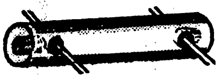
300-OHM TWIN LINE TV WALL PLATE

No. 8595 List $1.25
Walnut Plate and Plug
No. 8595-I List $1.25
Ivory Plate and Plug



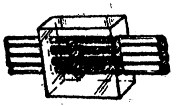
POLARIZED UHF-VHF TV LINE PLUGS

No.	Color	List
8596	Brown	$0.60



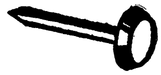
OPEN LINE CONNECTORS

No. 8824 List $0.25



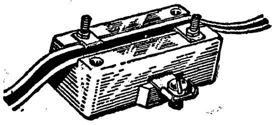
4-CONDUCTOR CABLE CONNECTORS

No. 8839 List $0.25



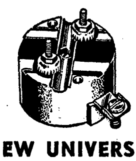
300-OHM FIBRE HEAD WIRING NAILS

No. 8020-C List $1.00C
package 100



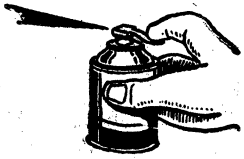
VHF-UHF LIGHTNING ARRESTER

No. 8640 List $1.00
Underwriters-approved



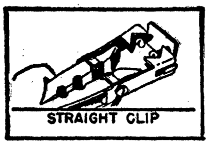
NEW UNIVERSAL LIGHTNING ARRESTER

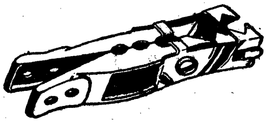
No. 8642 List $1.25
for UHF and VHF



POWER SPRAY-KOAT

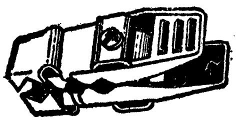
No.		List
8660	Aluminum	$1.79*
8665	Acrylic Plastic	$1.79*





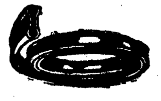
NEW 3-WAY ANTENNA KLIP

No. 8744 Regular Size List $ 0.50
No. 8744-D Display 20 Klips List $10.00



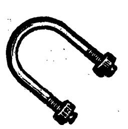
NEW 3-WAY SHORTY TV KLIP

No. 8899 List $0.50
Short Size
No. 8899-D List $10.00
Display 20 Klips



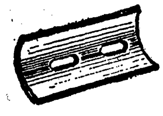
300-OHM PLASTIC TUBING

No. 626 List $23.60
250-foot Coil
No. 627 List $79.00
1000-foot Coil



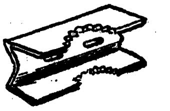
U-BOLTS

No. 8123
1⅜" I.D.
List $0.20



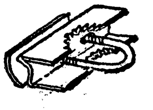
HALF-MOON REINFORCING PLATE

for 1" tube
No. 8941 List $0.10



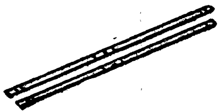
TOOTHED ANTENNA SUPPORT BRACKET

No. 8942 List $0.30



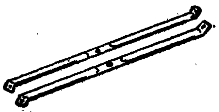
U-BOLT MAST CLAMP ASSEMBLY

Serrated edges
No. 8718 List $0.75



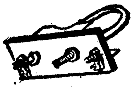
2-BAY STACKING BARS

44" long
No. 8701 List $1.25



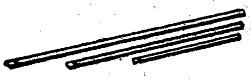
4-BAY PHASING BARS

No. 8706 List $2.10



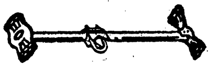
OFFSET 4-BAY INSULATOR ASSEMBLY

No. List
8707 ....$1.40



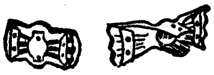
ALUMINUM TUBING

No.	Size	List
8711	⅜" x 48"	$0.65
8712	⅜" x 44"	0.60
8713	⅜" x 20"	0.35
8715	1 complete set, 10 ele.	5.50



CONICAL CROSS-BAR ASSEMBLY

No.		List
8705	12-elements, complete	$4.50



CONICAL HARDWARE

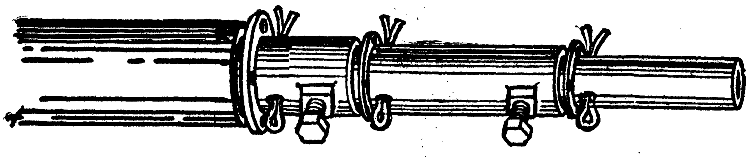
No.		List
8716	Insulator Assembly	$1.50
8719	Reflector Assembly	0.65
8857	Insulator only	0.65

*Special Dealer's Discount Applies.

TELCO TELEVISION HARDWARE MFG. CO. ROCKFORD, ILL., U.S.A.
DIVISION OF GENERAL CEMENT MFG. CO., ROCKFORD, ILL., U.S.A.

TELCO TELEVISION HARDWARE

INSTALLATION ACCESSORIES



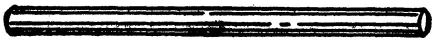
MAST TUBING—16 GAUGE

Galvanized outside, enamel inside

No.	Size	List	No.	Size	List
8793	1¼" x 10 ft.	$4.72	8795	1¾" x 10 ft.	$6.65
8794	1½" x 10 ft.	6.38	8796	2" x 10 ft.	7.22

TELESCOPING MASTS — HEAVY DUTY 16 GAUGE

Galvanized outside, enamel inside

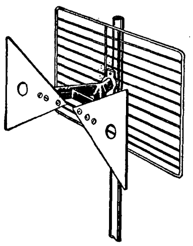


No.	Size	List	No.	Size	List
8789	20 ft. with base	$15.25	8790-NB	30 ft. no base	$22.08
8789-NB	20 ft. no base	12.50	8791	40 ft. with base	37.47
8790	30 ft. with base	24.83	8791-NB	40 ft. no base	34.72

UHF WISHBONE BUTTERFLY ANTENNA

No.	List
8965	$7.50

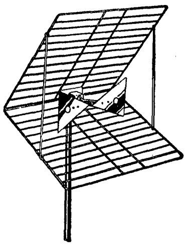
Includes 1 stacking bar



Features "Wishbone" High Di-Electric Insulator . . . with free air space that prevents shorting. Sturdy vibration - proof reflector . . . aircraft aluminum elements. Very high gain on all channels.

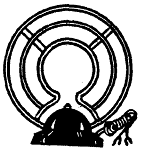
UHF WISHBONE CORNER REFLECTOR

No.	List
8984	$14.50



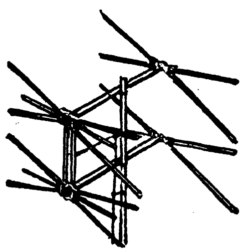
Also features "Wishbone" High Di-Electric Insulator. High gain, 14 db. Front to back ratio, 15 to 1. For difficult UHF locations — ghosts, reflections, interference, etc.

TELCO "GOLDEN HALO" INDOOR UHF ANTENNA



Gold plated. Highly efficient indoor UHF antenna.

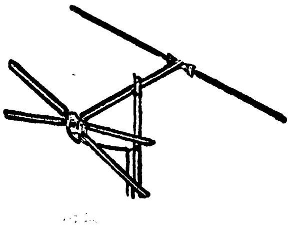
No.	List
9000	$4.95



NEW MASTER-LINE CONICALS

With Black Unbreakable Insulator

No.	Description	List
Single Bay:		
8700-6S	6-element, 1-bay	$8.35
8700-8S	8-element, 1-bay	8.75
8700	10-element, 1-bay	9.25
Two Bay:		
8702-6S	6-element, 2-bay	$18.25
8702-8S	8-element, 2-bay	19.00
8702	10-element, 2-bay	19.85



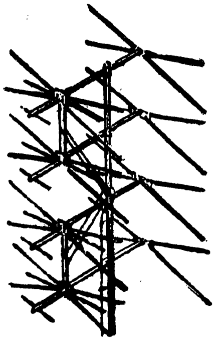
CONICAL SPECIAL

6 Element Only

Green Insulator

Doweled Elements

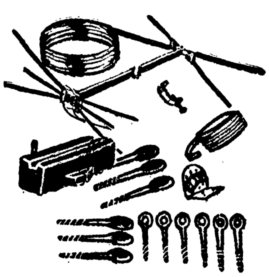
No. 8708 **List $5.42**



NEW SUPER CONICAL FLYING GOOSE

Excellent for all Channels 1 to 13

No.	Description	List
8900	10-element, 1-bay	$ 9.25
8902	10-element, 2-bay	19.85
8903	10-element, 3-bay	29.75



TELCO TV ANTENNA PACKS

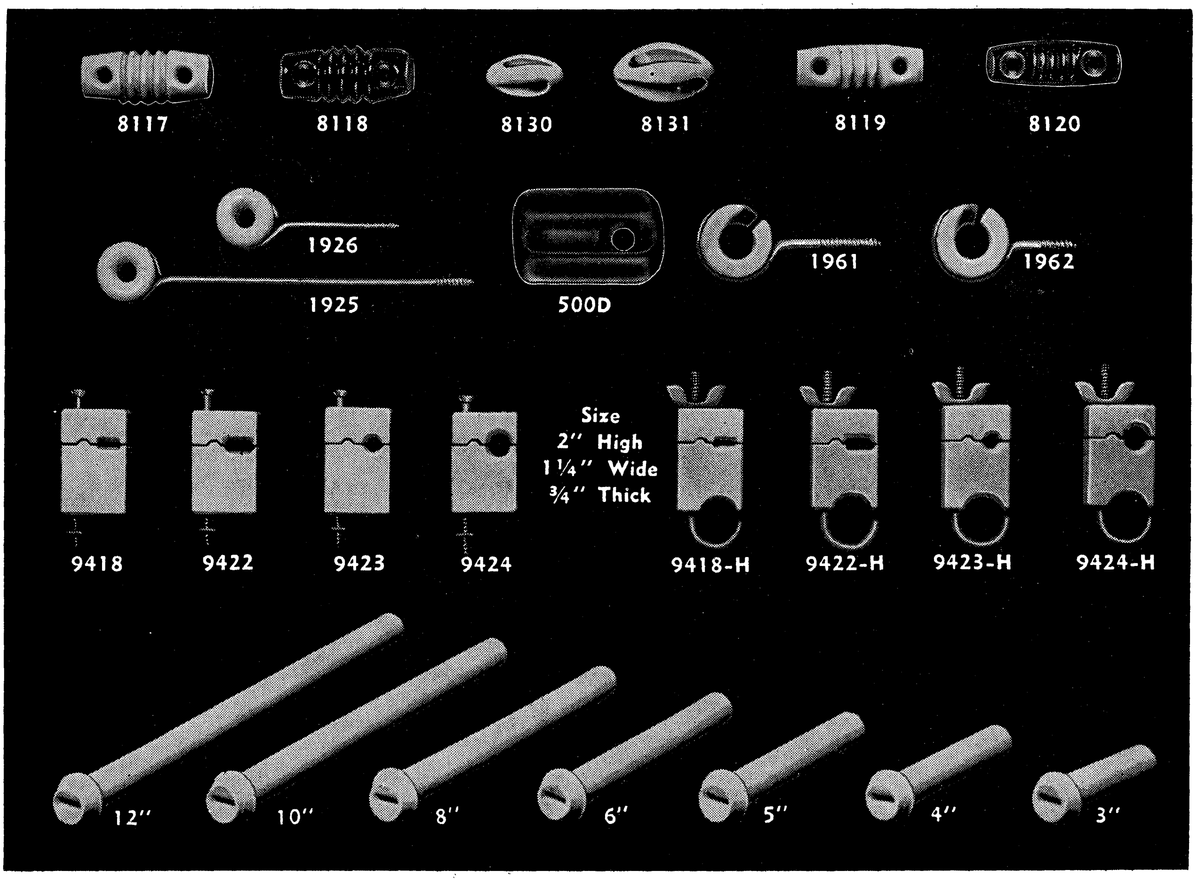
Conical Antennas Complete with Installation Hardware (as shown)

No.	Description	List
8940	10-element, 1-bay	$16.50
8944	10-element, 2-bay	27.50

QUANTITY USERS — Write for attractive special prices — See your Distributor

TELCO TELEVISION HARDWARE MFG. CO. ROCKFORD, ILL., U.S.A. TELCO
DIVISION OF GENERAL CEMENT MFG. CO., ROCKFORD, ILL., U.S.A.

Porcelain Product's RADIO & TELEVISION INSULATORS



TV-FM LEAD-IN SUPPORTS

The perfect insulator. Easy to install. Holds lead-in positively and rigidly. Size — 2" high, 1-1/4" wide, 3/4" wide. Supports lead-in 1-7/16" from surface. Weight 170 lbs. per M.

SCREW TYPE	HOOK TYPE
No. 9418	No. 9418-H
For light-weight 3/8" wide flat 300 Ohm twin lead-in.	
No. 9422	No. 9422-H
For heavy-weight 1/2" wide oval 300 Ohm twin lead-in.	
No. 9423	No. 9423-H
For 1/4" round 72 Ohm Coaxial Cable.	
No. 9424	No. 9424-H
For 3/8" round 72 Ohm Coaxial Cable.	

TV-FM LEAD-IN TUBES

Provide essential insulation and neatness of appearance for 3/8" flat twin-wire lead-ins going through walls, partitions, etc. Outside diameter 11/16". Will fit hole made by standard 3/4" bit. Seven lengths from 3" to 12".

LENGTH	Wt. per M	LENGTH	Wt. per M
3"	110 Lbs.	8"	275 Lbs.
4"	143 Lbs.	10"	330 Lbs.
5"	175 Lbs.	12"	395 Lbs.
6"	210 Lbs.		

ANTENNA INSULATORS

Made of highest quality electrical Porcelain. Pressure molded to assure dense strong body. Glazed.

No. 8117 — Round, White glaze. Size 2-1/2" long, 1" diameter, 1/4" holes. Weight 146 Lbs. per M.

No. 8118 — Same as No. 8117 but brown glaze. Weight 146 Lbs. per M.

No. 8119 — Oval, White glaze. Size 2-/2" long, 1" diameter, 1/4" holes. Weight 130 Lbs. per M.

No. 8120 — Same as No. 8119 but brown glaze. Weight 130 Lbs. per M.

No. 8130 — Small airplane type, oval, white glaze. Size 1-3/8" long, 7/8" diameter, 7/32" holes. Weight 60 Lbs. per M.

No. 8131 — Large airplane type, oval, white, glaze. Size 2" long, 1-1/8" diameter, 9/32" holes. Weight 90 Lbs. per M.

No. 500D — Strain type, brown glaze. Size 2-1/8" long, 1-9/16" diameter, 3/8" holes. Weight 250 Lbs. per M.

INSULATED SCREW EYES

No. 1925 — Seven and one-quarter inches long over-all. White glaze insulator with 5/16" hole. Weight 110 Lbs. per M.

No. 1926 — Same as No. 1925 but 3" long over-all. Weight 90 Lbs. per M.

No. 1961 — Split bridle-ring type. Insulator has diagonal slot 1/4" wide to facilitate quick threading of conductor. Over-all length 3-5/16". White glaze insulator has 5/8" hole. Weight 100 Lbs. per M.

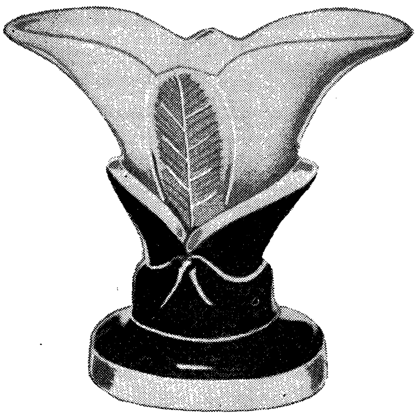
No. 1962 — Same as No. 1961 but 2-5/8" long over-all. Weight 100 Lbs. per M.

PORCELAIN PRODUCTS, INC. • FINDLAY, OHIO

THE ONLY TELEVISION LAMP DESIGNED TO PREVENT GLARE AND ELIMINATE EYESTRAIN

ESCO-LITE
EASIER VISION
T-V LAMPS

DECORATIVE —
SMART —
USEFUL —



THE LILY

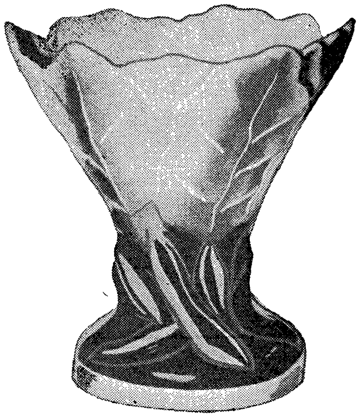
A true replica of the majestic Lily in full bloom. The bud of the flower in a glistening gorgeous Mother of Pearl finish. The stem in a beautiful blending color. Available in Tu-Tone color combinations, as well as solid colors.

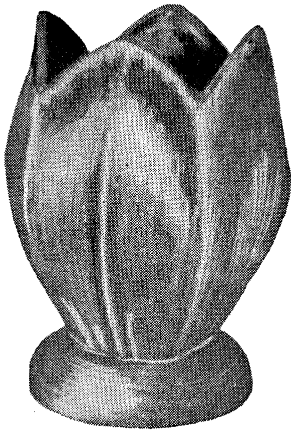
		LIST	DEALER'S NET
Green and Mother of Pearl	#1100TT	**7.95**	**4.77**
Black and Mother of Pearl	#1101TT	**7.95**	**4.77**
Chartreuse and Mother of Pearl	#1102TT	**7.95**	**4.77**
White	#1103	**7.95**	**4.77**
Green	#1105	**7.95**	**4.77**
Dubonnet and Mother of Pearl	#1106TT	**7.95**	**4.77**
Brown and Mother of Pearl	#1107TT	**7.95**	**4.77**

THE LEAF

All the details of magnificent leaves, created in California pottery. This new design blends with and adds charm to the particular furnishings in any home. Available in Tu-Tone combinations, beautifully decorated with a rich gold trim.

		LIST	DEALER'S NET
Green and Mother of Pearl	#1200TT	**7.95**	**4.77**
Chartreuse and Mother of Pearl	#1202TT	**7.95**	**4.77**
Dubonnet and Mother of Pearl	#1206TT	**7.95**	**4.77**
Brown and Mother of Pearl	#1207TT	**7.95**	**4.77**





THE TULIP

A completely new creation. A gorgeous Tulip bud finished in three popular Tu-Tone colors. Heavy porcelain glaze will assure long lasting beauty. This decorative lamp produces a soft diffused light throughout the interior of your room and eliminates glare to your eyes while viewing television. Available in green, brown, and dubonnet tone combination. Same design also furnished in a natural rosewood color.

		LIST	DEALER'S NET
Green and White	#1600TT	**8.95**	**5.37**
Dubonnet and White	#1606TT	**8.95**	**5.37**
Brown and White	#1607TT	**8.95**	**5.37**
Woodrose	#1657	**7.95**	**4.77**

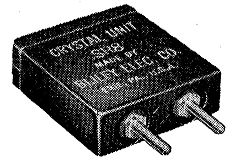
Individually Packed — 6 to Master Carton

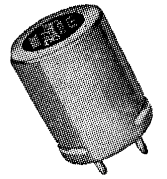
UL APPROVED

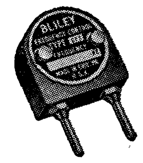
ESCO-LITE
Design Copyright

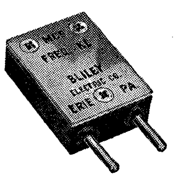
LOS ANGELES 15, CALIFORNIA

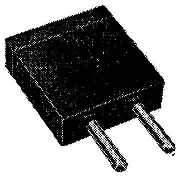
Here all similarity ends...
from this point on, it's craftsmanship!


SR8 CODE NO. E7

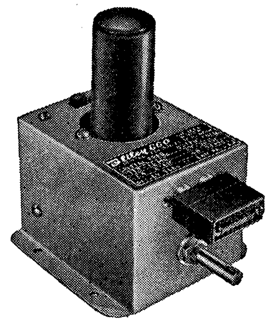

KV3 CODE NO. E10

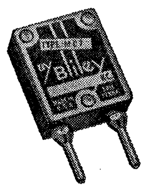

CF3 CODE NO. E14

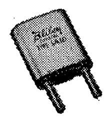

MC9 CODE NO. E3-E8-E9-E13-E22

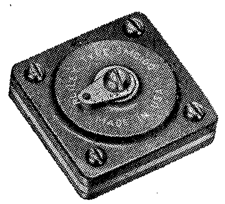

SR5 CODE NO. E6

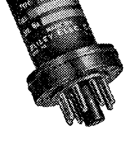
CF6 CODE NO. E15

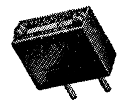

CCO-2A CODE NO. E16


MC7 CODE NO. E5


SR10 CODE NO. E2-E4


SMC100 CODE NO. E12


MS433 CODE NO. E11


AX2
AX3 CODE NO. E17-E18-E19-E20-E21

Bliley CRYSTALS

BLILEY ELECTRIC COMPANY

TV SERVICE CRYSTALS

SOUND CHANNEL MARKER UNITS (Sub-Multiple Frequencies ± .05%)

CODE	TYPE	CHANNEL #	CHAN. FREQ. (mc)	SOUND CHAN. (mc)	CRYS. FREQ. (kc)	PRICE
E2	SR10	2	54-60	59.75	19916.666	$6.95
E2	SR10	3	60-66	65.75	16437.500	$6.95
E2	SR10	4	66-72	71.75	17937.500	$6.95
E2	SR10	5	76-82	81.75	16350.000	$6.95
E2	SR10	6	82-88	87.75	17550.000	$6.95
E2	SR10	7	174-180	179.75	17975.000	$6.96
E2	SR10	8	180-186	185.75	18575.000	$6.95
E2	SR10	9	186-192	191.75	19175.000	$6.95
E2	SR10	10	192-198	197.75	19775.000	$6.95
E2	SR10	11	198-204	203.75	18522.727	$6.95
E2	SR10	12	204-210	209.75	19068.181	$6.95
E2	SR10	13	210-216	215.75	19613.636	$6.95

i—f ALIGNMENT CRYSTALS

CODE	TYPE	FREQUENCIES	TOLERANCE	APPLICATION	PRICE
E4	SR10	18-22 mc	±.05%	video channel markers	$8.50
E4	SR10	19-27.5 mc	±.05%	video i-f alignment	$8.50
E4	SR10	21-22 mc	±.05%	sound i-f alignment	$8.50
E4	SR10	19-27.5 mc	±.05%	trap frequencies	$8.50
E3	MC9	4.5 mc	±.02%	intercarrier	$3.95

SHIP-TO-SHORE

CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E5	MC7	radiotelephone 2-3.5 mc	±.02%	$6.00
E6	SR5	radiotelephone 2-3.5 mc	±.02%	$6.00
E7	SR8	radiotelephone 2-3.5 mc	±.02%	$6.00

STANDARD FREQUENCIES

CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E8	MC9	signal generator—5.0 mc	±.02%	$ 2.80
E9	MC9	FM i-f alignment—10.7 mc	±.05%	$ 3.95
E10	KV3	reference frequency 100 kc	±.005%	$ 6.95
E11	MS433	reference frequency 1000 kc	±.005%	$17.00
E12	SMC100	100 kc (exact by ckt. adjust.) 1000 kc	±.05%	$ 8.75

SPECIAL PURPOSE

CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E13	MC9	13.560 mc(multiplier to 27.12 mc) or 13.6275 mc(multiplier to 27.255 mc)	±.04%	$5.50
E14	CF3	455 kc—456 kc—465 kc SINGLE SIGNAL FILTERS	± 5 kc	$5.00
E15	CF6	455 kc—456 kc—465 kc SINGLE SIGNAL FILTERS	± 5 kc	$4.50
E22	MC9	3.0 mc—10 mc experimental frequencies	±.05%	$6.95

AMATEUR

CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E16	CCO-2A	packaged oscillator for 2-6-10-11 meters		$9.95
E17	AX2	1803—1822 kc; 1878—1897 kc; 1903—1922 kc; 1978—1997 kc	± 1 kc	$3.75
E18	AX2	3500—3997 kc	± 2 kc	$2.80
E19	AX2	7000—7425 kc; 8000—8222 kc	± 2 kc	$2.80
E20	AX2	12.5—13.61 mc; 14—14.85 mc	± 30 kc	$3.95
E21	AX3	24—24.33 mc; 25—25.5 mc	± 5 kc	$3.95

DIMENSIONS

CODE	TYPE	LENGTH	WIDTH	THICKNESS	PIN SIZE	PIN SPACE
E2	SR10	51/64″	3/4″	11/32″	.093″	.486″
E3	MC9	1 11/64″	13/16″	7/16″	.093″	.486″
E4	SR10	51/64″	3/4″	11/32″	.093″	.486″
E5	MC7	1 39/64″	1 1/8″	21/32″	.125″	.750″
E6	SR5	1 1/4″	1 9/64″	7/16″	.125″	.500″
E7	SR8	1 1/4″	1 1/8″	7/16″	.093″	.486″
E8	MC9	1 11/64″	13/16″	7/16″	.093″	.486″
E9	MC9	1 11/64″	13/16″	7/16	.093″	.486″
E10	KV3	1 9/32″	1 3/16″(dia.)	—	.093″	.486″
E11	MS433	1 31/32″	1 25/64″(dia.)	—	.093″	OCTAL
E12	SMC100	1 3/8″	1 3/8″	1.039″	—	—
E13	MC9	1 11/64″	13/16″	7/16″	.093″	.486″
E14	CF3	1 13/32″	1 3/16″	3/4″	.125″	.750″
E15	CF6	17/32″	15/16″	.695″	—	—
E16	CCO-2A	2 1/4″	3 1/8″	3″	—	—
E17	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E18	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E19	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E20	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E21	AX3	15/16″	1 1/16″	7/16″	.093″	.486″
E22	MC9	1 11/64″	13/16″	7/16″	.093″	.486″

Net

PR Crystals

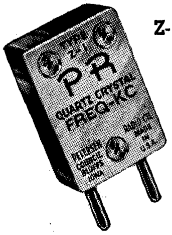
Since 1934

USE PR AND KNOW WHERE YOU ARE

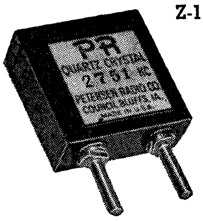
COMMERCIAL TYPES—SPECIFICATIONS

Type		Frequency Range	Pin Spacing	Pin Diameter	Height Above Pins	Width	Depth
Z-1	Fundamental	900 Kc. to 1600 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"
Z-1	Harmonic	1601 Kc. to 30000 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"
*Z-1A	Fundamental	500 Kc. to 2000 Kc.	¾"	.125"	1⅜"	1⅜"	½"
Z-1B	Fundamental	1000 Kc. to 12000 Kc.	¾"	.125"	1⅜"	1-3/16"	½"
Z-1B	Harmonic	12001 Kc. to 30000 Kc.	¾"	.125"	1⅜"	1-3/16"	½"
Z-1D	Same as Z-1	Same as Z-1	½"	.125"	1-3/16"	13/16"	7/16"
Z-1E	Same as Z-1	Same as Z-1	½"	.125"	1¼"	1⅛"	7/16"
Z-1H	Single or dual unit Fundamental	500 Kc. to 12000 Kc.	3-Pin W.E.	.157"	2-1/16"	1-19/32"	1-3/16"
Z-1K	Same as Z-1A except has .157" dia. pins	500 Kc. to 12000 Kc.	¾"	.157"	1⅜"	1⅜"	½"
Z-1M	Fundamental	1000 Kc. to 10000 Kc.	⅞"	Std. Banana	2-3/32"	1-19/32"	¾"
Z-1R	Fundamental	500 Kc. to 1600 Kc.	½"	.093"	1¼"	1-3/32"	7/16"
Z-4	Fundamental	1601 Kc. to 12000 Kc.	¾"	.125"	.650"	Diameter	.995"
Z-4	Harmonic	12001 Kc. to 30000 Kc.	¾"	.125"	.650"	Diameter	.995"
Z-7	Fundamental	Same as Z-1 Fundamental	¾"	Std. Banana	1.660"	1.192"	.518"
Z-8	Fundamental	500 Kc. to 1600 Kc.	¾"	⅛"	1¾"	1-9/16"	1-11/16"
E-1	Fundamental	500 Kc. to 7000 Kc.	Interchangeable with FT-164 and AC-95				

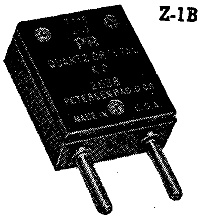
* Can be Supplied with Standard Banana Pins.


TYPE Z-1
PR
QUARTZ CRYSTAL
FREQ-KC
PETERSEN RADIO CO.
COUNCIL BLUFFS IOWA
MADE IN U.S.A.

Z-1


PR
QUARTZ CRYSTAL
2751 KC
PETERSEN RADIO CO.
COUNCIL BLUFFS, IA.
MADE IN U.S.A.

Z-1A


PR
QUARTZ CRYSTAL
KC
PETERSEN RADIO CO
MADE IN U.S.A.

Z-1B

Prices Under Revision at Time of Printing

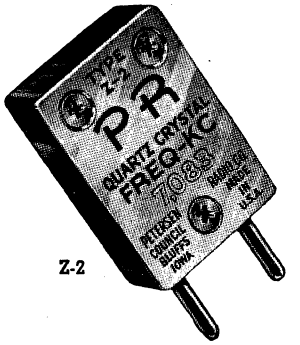
PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

PR Crystals

Since 1934

USE PR AND KNOW WHERE YOU ARE

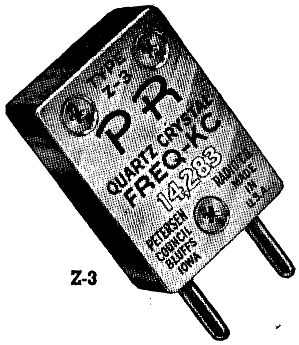
AMATEUR—Specifications and Frequencies



Z-2

TYPE Z-2

- 1800 to 1825 Kc. for 160 meters.
- 1875 to 1900 Kc. for 160 meters.
- 1900 to 1925 Kc. for 160 meters.
- 1975 to 2000 Kc. for 160 meters.
- 3500 to 4000 Kc. for 80, 40, 20 and 10 meters.
- 6250 to 6750 Kc. for 2 meters.
- 6740 to 6807 Kc. for 11 meters.
- 7000 to 7425 Kc. for 40, 20 and 10 meters.
- 8000 to 8222 Kc. for 2 meters.
- 8334 to 9000 Kc. for 6 meters.
- 9000 to 9250 Kc. for 2 meters.



Z-3

TYPE Z-3

- 12000 to 12333 Kc. for 2 meters.
- 12500 to 13500 Kc. for 6 meters.
- 13480 to 13615 Kc. for 11 meters.
- 14000 to 14850 Kc. for 20 and 10 meters.

Prices Under Revision at Time of Printing

CHECK SUPERIORITY OF PR Crystals

Stability . . .

Drift characteristics of PR Crystals limited to less than 2 cycles per MC per degree. You get low drift, combined with high output, dependable frequency control. X-Ray orientation guarantees uniform cut for maximum low-drift performance.

Accuracy . . .

Guaranteed accurate within .01 per cent of specified frequency or better. When doubling and quadrupling accuracy is absolutely essential. You KNOW where you are with PRs.

Power Output . . .

PRs are designed to give maximum power output from the exciter stage when operating at the highest permissible voltages. PR Crystals can "take it."

Activity . . .

PRs give you high activity. They "come in" instantly on phone . . . key without chirps, even at high bug speeds, without excessive "backing off."

Unconditional Guarantee . . .

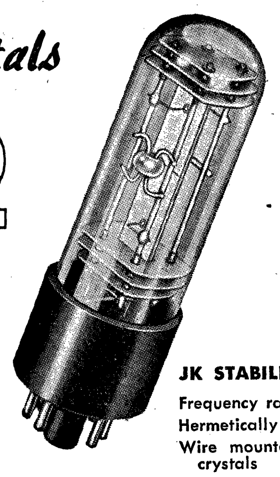
Every PR Precision CRYSTAL is guaranteed unconditionally, by the makers of fine crystals since 1934.

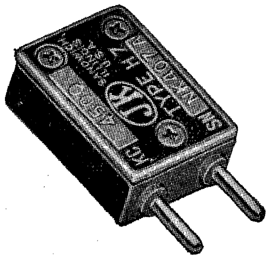
PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

For further information

Write the **JAMES KNIGHTS COMPANY,** ***Sandwich, Ill.***

Crystals for the critical





JK STABILIZED H-7

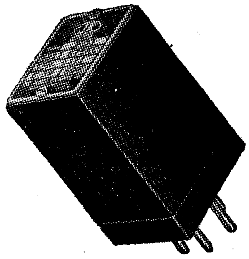
Frequency Range 3 to 16 mc
Holder material black phenolic
Pressure mounting, stainless steel electrodes
Water and Dust Proof
Military type FT243 holder, CAATC No. 3R1-1

JK STABILIZED G-9, G-9J

Frequency range 1.20 KC to 300 KC
Hermetically sealed glass holder
Wire mounted, gold or silver plated crystals
6V6GT envelope, octal base
MIL HC-15/U

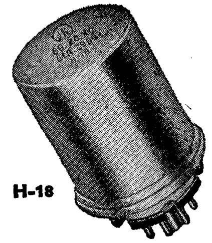
JK STABILIZED HEAT JKO-3

Holds one type H-17 unit (Military HC6/U)
Temperature adjustable 50 to 70°C
Ambient range depends on operating temperature desired
Heater 6.3 volts at 1½ amp.
Standard 5 pin base

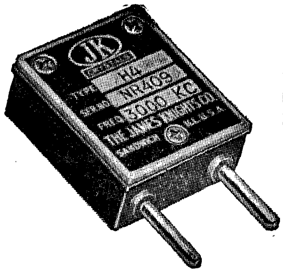


JK STABILIZED H-18

Frequency range 80 kc to 2 mc
Hermetically sealed metal holder
Wire mounted, plated crystals
H18 has octal base, H18-L has 2 pins ⅛" dia. on ¾" centers, H-18-5 has standard 5 pin tube base.

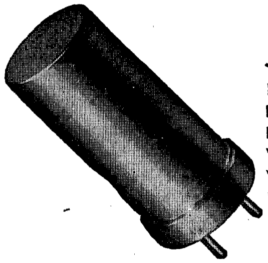


H-18



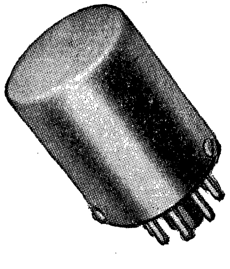
JK STABILIZED H-4

Frequency Range 1800 kc to 16 mc
Holder Material Black Phenolic
Pressure Mounting, Stainless Steel Electrodes
Water and Dust Proof
Military Type HC1/U Holder



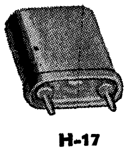
JK STABILIZED H-9

Frequency Range 80 kc to 2 mc
Holder base Black Phenolic
Holder can Anodized aluminum
Wire mounted silver plated crystal
Water and Dust proof
Especially light and compact.



JK STABILIZED HEAT JKO-2

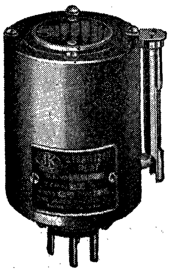
Holds two type H17 units (Military HC6/U)
Normal temperature 75° ± 5°C.
Ambient range — 55 to 70°C.
Heater 6.3 volts, under 1 amp.
Standard octal base



H-17

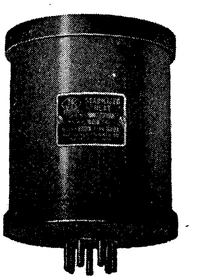
JK STABILIZED H-17

Frequency Range 200 to 500 kc and 1 to 75 mc
Hermetically sealed metal holders
Wire mounted, plated crystals
Two type H-17 holders fit loctal socket
H-17 is military type HC6/U, CAATC No. 3R1-3



JK STABILIZED BROADCAST UNIT JK57M & JK87M

Frequency range 400 kc to 1750 kc adjustable ± .01%
Normal temperature 60°C ± 2°C (adjustable ± 10°C)
Ambient range for 60°C operation, —20 to + 58°C
Heater 6.3 volts at 1½ amp
JK57M has standard 5 pin base, JK87M has octal base
Low temperature coefficient plate will stay within FCC tolerance during warmup from normal room temperature
F.C.C. approved for broadcast use.
JK57MT & JK87MT have thermometer



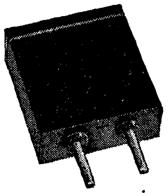
JK STABILIZED HEAT JKO7, JKO7E

Will hold any JK type crystal except H-6, H-18T and H-19
Normal operating temperature 50°C ± 2°C
Will hold temperature as much as 75°C above the ambient.
Supplied complete with Johnson No. 237 socket.
JKO-7E has sealed-in-glass thermostat for greater precision and longer life.
Available as JKO7 or JKO7E with 6.3 volt 10 watt heater or 115 volt 12 watt heater on either model
Ideal for frequency standards and broadcast (FM & TV) FCC approved.

MONITOR *Crystals*

OVER 7 MILLION PRECISION CRYSTALS SINCE 1931

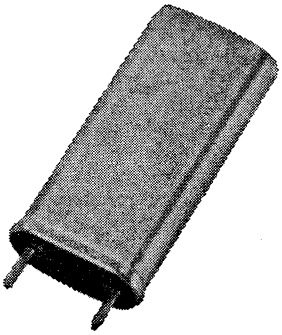
HERE ARE A FEW OF THE MANY TYPES IN OUR COMPLETE LINE.



MC-20

Pressure mounted crystal having a range of 2000 KC to 10,000 KC on the fundamental frequency.

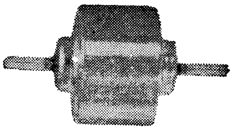
Holder size 1⅛" x 7/16" x 1-5/32" high with 3/32" or ⅛" pins spaced either ½" or ¾".



MC-13

Plated crystal, wire mounted having a range of 16 KC to 100 KC and 90 KC to 250 KC on the fundamental frequency.

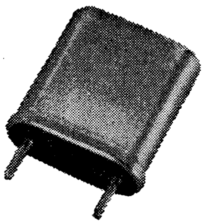
Holder size .750" x .343" x 1.516" high with .050" pins ½" apart.



MC-10

Pressure mounted crystal having a range of 15 MC to 50 MC on the 3rd and 5th mechanical overtone.

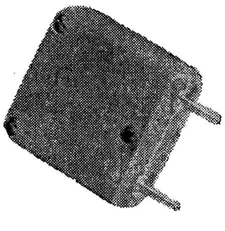
Holder size 9/16" diameter ½" long with .050" pins extending ¼".



MC-6

Plated crystal, wire mounted having a range of 200 KC to 16,000 KC on the fundamental frequency and 10 MC to 75 MC on the 3rd and 5th mechanical overtone.

Holder size .750" x .343" x .765" high with .050" or .093" pins ½" apart, also furnished with pigtails.



MC-96

Pressure mounted crystals having a range of 5000 KC to 11,000 KC on the fundamental frequency and 10 MC to 75 MC on the 3rd and 5th mechanical overtone. Being pressure mounted this unit gives superior performance in the higher frequency ranges.

Holder dimensions are the same as the MC-6.

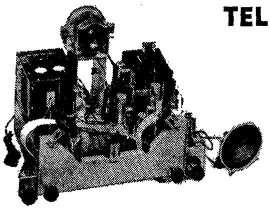
WE MANUFACTURE ALL TYPES OF MILITARY AND COMMERCIAL CRYSTALS, CUSTOM CRYSTALS AND CRYSTAL OVENS.

Write for Complete Descriptions, Prices and Deliveries.

Monitor Products Company **815 Fremont Ave., So. Pasadena, Calif.**

Philmore GUARANTEED *Electronic* PRODUCTS

CUSTOM-BUILT 31-TUBE* TELEVISION KIT



These kits utilize the popular RCA 630 basic circuit, and feature the famous Philmore High Fidelity 70° Deflection System, with more than enough power to operate up to 24-inch Picture Tubes!

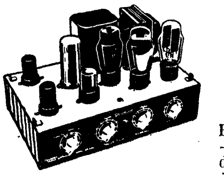
No. UP731-DL 31-tube TV Chassis Kit less Pix Tube, wire and solder................**Dealer's Net Price $157.50**

*Including rectifiers and Video Tube.

HI-FIDELITY 20-WATT SOUND AMPLIFIER KIT

Including Preamplifier

20-30,000 Cycles



Features "Clean-Sound —Crisp Tone." Up to date circuiting, embodying simplicity, economy, ease of construction. Famous Peerless High Fidelity Output Transformer gives full frequency response from 20 to 30,000 cycles. Pictorial wiring diagrams, detailed step-by-step instructions.

DeLuxe Model AA620DL—including tubes. **Dealer's Net Price $51.95**

Standard Model, similar, except with standard hi-fi Output Transf., flat from 30 to 20,000 cycles.

Standard Model AA620S—including tubes. **Dealer's Net Price $44.95**

Matching Cover for either Amplifier.

Model MC620 ....**Dealer's Net Price $3.50**

RADIO *Remote Control* KITS

TRANSMITTER - RECEIVER

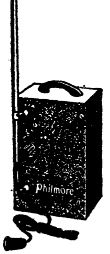
For PLANES BOATS TRAINS

Perfect for Hobbyists! This Model Radio Control Device is easy to build . . . Economical . . . Foolproof and Stable in Operation . . . No License Required.

The TRANSMITTER

Operates on 27.255 Mc. Uses one 3A4 tube. Surprisingly wide control with only 2.75 watts power input. Metal cabinet 9"x6"x5". 3½ lbs. less batteries.

No. RC222T (less batteries). **List Price $33.50**



The RECEIVER

Compact, only 3½ oz.! 2⅞"x1⅛"x1¾". Complete instructions, pictorial, schematic diagrams included.

No. RC222R (less batteries). **List Price $26.50**

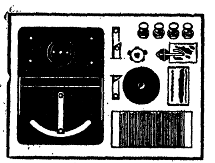
ESCAPEMENT UNIT

Optional equipment, for receiver, wired. **List Price $5.50**

COMBINATION

Transmitter and Receiver Kits, purchased together. **List $57.95**

"*Supertone*" *Crystal Radio Receiver* KIT

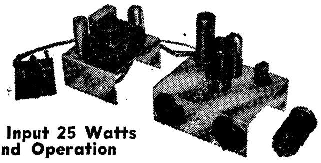


Consists of all necessary components, ready wound tuning coil, single phone, with headband, hardware, instructions.

Cat. No. 7001A.........................**List Price $4.90***

*Plus Federal Excise Tax

NOVICE TRANSMITTER AND POWER SUPPLY KIT *Including Key*



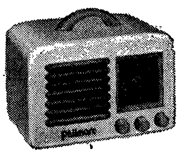
Power Input 25 Watts
2-Band Operation

Designed for ease of assembly, ease of operation, simple tuning, and simple antenna system. Features include: UNTUNED PIERCE TYPE CRYSTAL OSCILLATOR, uses 1-6V6 tube; TUNED OUTPUT AMPLIFIER, with Pi type tuning system. Uses 1-6L6 tube; PHILMORE PICTORIAL DIAGRAMS, specially planned, really foolproof; TRANSMITTER TYPE TUNING CONDENSERS; POWER SUPPLY provides 370 volts DC at 100 Ma. With tubes and standard key.

Model NT-200....................**Amateur Net Price $29.40**

5-TUBE AC-DC RADIO KITS

1 and 2 Band Models



Latest model compact high fidelity quality radio receivers. Schematic, pictorial and step-by-step instructions included. Two-tone cabinets, built-in loop antenna, punched and formed chassis, sockets rivetted. Tubes included: 12SA7GT, 12SK7GT, 12SQ7GT, 50L6GT, 35Z5GT. Size: 8¾"x5⅞"x5½".

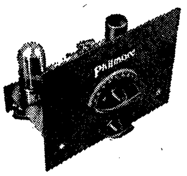
SINGLE BAND 550-1600 Kc.

Model	Cabinet	List
100-1A	Ivory & Green	$34.00
100-1B	Ivory & Red	34.00
100-1C	Walnut & Ebony	32.50

2-BAND 550-1600 Kc 5.5-16 Mc.

Model	Cabinet	List
100-2A	Ivory & Green	$39.50
100-2B	Ivory & Red	39.50
100-2C	Walnut & Ebony	38.00

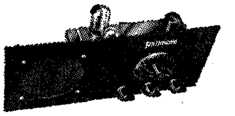
1-TUBE (Plus Rectifier Tube) AC-DC RADIO KIT



Designed purposely for easy construction yet uses the most efficient type of circuit. Kits are replicas of parts and circuits used and thoroughly tested in master models and standardized. Simple instructions and diagrams. Uses 1 each 35Z5GT and 12SJ7 tubes. Supplied with punched and formed chassis—sockets already rivetted to chassis. Attractively packaged in sturdy box.

No. 7001B—Complete, less tubes and headset..................**List Price $12.50**

2-TUBE (Plus Rectifier Tube) AC-DC RADIO KIT

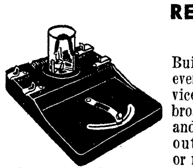


More elaborate than the one-tube and much greater in signal strength—permitting use of a 4" P.M. speaker. Simple instructions with pictorial, schematic diagrams. Supplied with punched and formed chassis—sockets rivetted. Superior in tone and selectivity to many manufactured radios! Uses 1 each 35Z5GT, 50L6GT and 12SJ7 tubes. Completely assembled, you have a TWO-BAND set, covering standard broadcast (550-1700 Kc) and SHORT WAVE (6-18 Mc).

Cat. No. 7001C—Complete with Speaker, less tubes ....**List Price $20.00**

(NOTE: Wire and Solder not included with 7001B and 7001C).

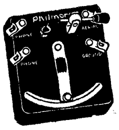
"*Supertone*" RADIO RECEIVING SET



Built to give everlasting service. Brings in broadcasting loud and clear without distortion or noises. Equipped with a Philmore Super-sensitive Crystal which will give excellent results.

Cat. No. 7001.............**List Price $2.25**
Plus Federal Excise Tax

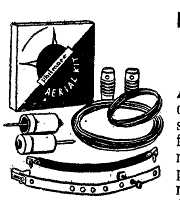
"LITTLE WONDER" RADIO RECEIVING SET



Compact in size but big in results. The open type detector permits fine adjustments. Includes Philmore Super-sensitive Crystal.

Cat. No. 7000.............**List Price $1.75**
Plus Federal Excise Tax

PHILMORE AERIAL KIT

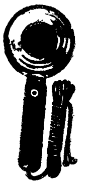


A complete kit of parts for assembly of a professional antenna. Attractively packaged in a multi - colored display box.

1 coil 50 ft. stranded copper aerial wire.
1 coil 25 ft. rubber covered lead-in wire.
1 Ground clamp. 2 Nail-it knobs.
1 Lead-in strip. 1 Instruction sheet.
2 Porcelain insulators.

Cat. No. 2103.............**List Price $1.50**

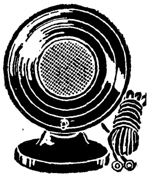
HAND MICROPHONE *Carbon Type*



Talk or sing through the radio speaker. Button switch cuts mike in and out of broadcast. Simple to install. Equipped with 9 ft. cord.

Cat. No. 500H...........**List Price $3.15**

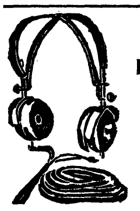
Junior MICRO-PHONE *Carbon Type*



For home broadcasting. Push button switch cuts off radio programs and brings in the home broadcaster's voice very clearly. Sensitive, with excellent volume, shock-proof. Easily attached to any set without rewiring and can remain attached without interfering with regular broadcasting.

Cat. No. 500................**List Price $2.15**

PHILMORE DOUBLE HEADPHONES



Accurately matched. Each unit consists of "double high flux" magnets. Ruggedly constructed of lightweight metal. Polished bakelite ear caps. Concealed terminal type. Braid covered adjustable headband and cord 4½ feet long. 2000 ohm impedance.

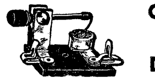
Cat. No. 2260.............**List Price $4.40**

SINGLE HEADPHONES

Same construction, head band is of spring steel. 1000 ohm impedance.

Cat. No. 2261.............**List Price $2.50**

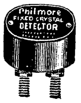
Open Type CRYSTAL DETECTOR



Universal joint on swivel arm provides quick, accurate adjustment. Completely assembled. Includes crystal.

Cat. No. 7003...............**List Price $.45**

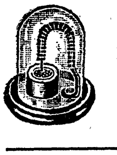
Fixed CRYSTAL DETECTOR



Ideal for reflex or crystal sets. Sensitivity fixed permanently. Enclosed in a bakelite case.

Cat. No. 7002.............**List Price $1.10**

Glass Enclosed CRYSTAL DETECTOR



Delicately adjustable. Includes Super - sensitive Crystal. Dustproof.

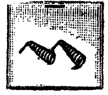
Cat. No. 7008
List Price $.65

METER TESTED CRYSTAL

No. 7004 Galena Crystal Indiv. boxed....**List $.20**

No. 7005 Galena Crystal Display Card....**List $.20**

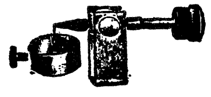
CAT'S WHISKER



Display card.

No. 7006—Set of 2.
List Price $.20

Unmounted DETECTOR



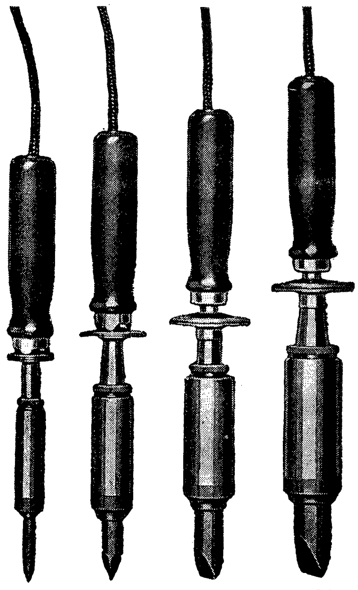
Includes stand, crystal cup, arm with cats-whisker, hardware. Less crystal.

Cat. No. 7010...............**List Price $.25**

PHILMORE MFG. CO. INC. — *"Pioneer Manufacturers of Electronic Kits Since 1921"*

American Beauty

ELECTRIC SOLDERING IRONS


3138 **3158** **3178** **3198**

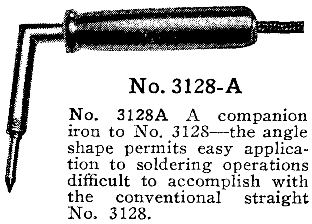
Embodied in these Electric Soldering Irons are features of construction and design that specialized experience — since 1894 — has demonstrated to be desirable for efficient and lasting service. Hundreds of thousands are in use throughout the world in a wide variety of manufacturing plants; in service, maintenance and repair shops; Army and Navy Services; in telephone, telegraph, radio and TV stations. Because of their proven efficiency and durability, they are preferred by those who measure the value of a tool by the service it renders.

No. 3138 Designed primarily for production and maintenance in radio, telephone, telegraph, ignition, switchboard and telephone installation work and similar industrial applications.

No. 3158 For the same purposes as the No. 3138 but for work requiring an iron of greater capacity.

No. 3178 For use on still heavier work; for light commutators, service and production work. A very useful iron for general purposes.

No. 3198 For heavy work of all kinds. Supplies a large volume of heat at high temperature. Used by manufacturers in many different lines; for shop, service, production work, etc.



No. 3128-A

No. 3128A A companion iron to No. 3128—the angle shape permits easy application to soldering operations difficult to accomplish with the conventional straight No. 3128.

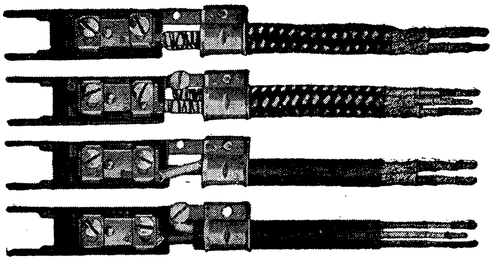
No. 3128

No. 3128 For servicing TV, electronic and radio equipment and similar light work.

SPECIFICATIONS

Available in standard voltages and for 32 volts. No. 3138 also made for 6, 12, 24 and 64 volts.
All irons can be equipped with three-conductor cord, one wire grounded, at slight additional charge.
Separate heat-insulating stand supplied with each iron.

Cat. No.	Diameter of Tip	Watts	Net Weight	Length Over All	Casing Diameter	Approx. Ship. Wt.	List Price Each	Net Price Each (Less than 6)	Net Price Each (6 or more)
3128	1/4"	60	7½ oz.	12¼"	9/16"	1 lb.	$5.50	$3.67	$3.51
3128-A	1/4"	60	10 oz.	——	9/16"	1 lb.	6.00	4.00	3.83
3138	3/8"	100	16 oz.	12⅞"	7/8"	2 lbs.	8.75	5.83	5.58
			(3138 is made also in 130- and 150-watt input.)						
3158	5/8"	200	28 oz.	13⅝"	1¼"	3 lbs.	10.25	6.83	6.53
3178	7/8"	300	42 oz.	14⅜"	1 9/16"	4 lbs.	13.50	9.00	8.61
3198	1⅛"	550	60 oz.	15 "	1¾"	5¾ lbs.	17.50	11.66	11.16



TERMINAL CONDUCTOR ASSEMBLY

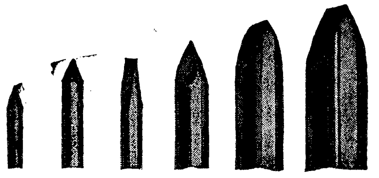
This illustration shows the Terminal Connector Assembly used in all American Beauty electric soldering irons. It is designed for use with either 2- or 3-conductor standard heater cord or rubber-covered cord—Types SJ, HSJ, etc.

This assembly permits easy grounding for safety by a third conductor—particularly desirable when irons are used on 220-volt circuits or on metal benches accommodating groups of operators.

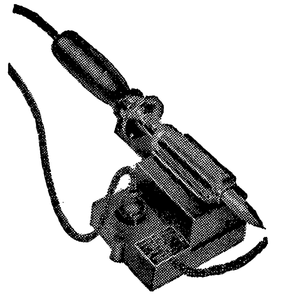
The cord is held firmly in place by a strain-clamp.

American Beauty COPPER TIPS

American Beauty Copper Tips are made from commercially pure, drawn bar copper rod and are heavily nickeled to resist corrosion and oxidation. Standard shaped tips with which various models are equipped are shown in illustration but pyramidal, instead of chisel type, and vice versa can be supplied when so specified without additional charge. For No. 3138 a special long, semi-chisel shaped tip (No. 3738-S) can be supplied for telephone, switchboard, television and radio work.



3728	3738	3738S	3758	3778	3798
for	for	for	for	for	for
3128	3138	3138	3158	3178	3198
Iron	Iron	Iron	Iron	Iron	Iron



American Beauty TEMPERATURE REGULATING STAND

For use on (AC) Alternating Current Only

This is a thermostatically controlled device for the regulation of the temperature of an Electric Soldering Iron while at rest. Through an adjustment on bottom of stand the thermostat may be set for maintenance of any desired heat—from very low, or warm, to full working temperature. It is designed for use with Electric Soldering Irons up to 660 watts capacity and on circuits up to 240 volts.

Cat. No.	Net Weight	List Price	Net Price
475	27 oz.	$6.25	$4.41

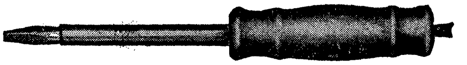
HEXACON

ELECTRIC SOLDERING IRONS

Voltage Range: 12 to 250—Operates on A.C. or D.C., Any Cycle

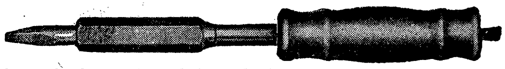
Nickel-chromium replaceable elements, insulated with finest mica obtainable, protected by rugged outer housing. Replaceable tips. Approved, 6 ft. 10,000 cycle heater cord (twine braid for extra long wear). **Standard voltages 110/120, 121/130, 220/250.**

SCREW TIP IRONS



No. 50—For light soldering on radio, telephone and electrical apparatus. 50 Watts. Tip diam., 7/16". Ship. wt., 1 lb. Equal to ½-lb. old style copper ....each **$5.25**

No. 60—Medium light soldering on telephone, radio, apparatus and linemen's kits. 60 Watts. Tip diam., ½". Ship. wt., 1⅛ lb. Equal to 1-lb. old style copper..each **$7.50**

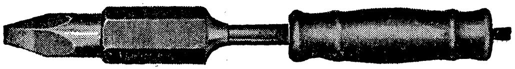


No. 85—A high speed tool for telephone, radio and home use. 90 Watts. Tip diam., ½". Ship, wt., 1¼ lb. Equal to 1½-lb. old style copper ....each **$8.25**

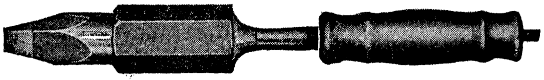
No. 120—Light tinware, toys, typewriter, light auto, etc. A high speed iron. 120 Watts. Tip diam., ⅝". Ship. wt., 1⅜ lb. Equal to 2-lb. old style copper..each **$9.00**

No. 130—Same as No. 120 except has larger tip and 10 more watts capacity. 130 Watts. Tip diam., ⅞". Ship. wt., 1⅝ lb. Equal to 2-lb. old style copper.. each **$10.00**

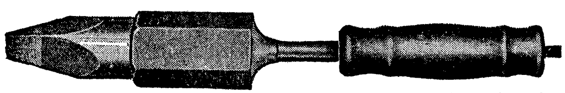
No. 170—Medium tinware, small cans, auto repairs, pipes, gutters, toys, small motors. 175 Watts. Tip diam., 1". Ship. wt., 2¼ lb. Equal to 2½-lb. old style copper..each **$11.25**



No. 225—Medium tinware, cans, auto repairs, metal patterns, light roofing, small branders. 250 Watts. Tip diam., 1⅛". Ship wt., 2⅝ lb. Equal to 3-lb. old style copper .... each **$13.25**



No. 350—Heavy tinware, large cans, autos, roofing, refrigerators, ship and airplane. 350 Watts. Tip diam., 1⅜". Ship wt., 3⅜ lb. Equal to 4-lb. old style copper ....each **$15.00**

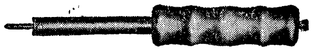


No. 500—Auto repairs, sinks, roofs, cans, armatures, large branders, tinsmiths, etc. 500 Watts. Tip diam., 1⅝". Ship. wt., 4 lb. Equal to 5-lb. old style copper ....each **$17.00**

No. 700—For extra heavy soldering and large branders. 700 Watts. Tip diam., 1¾". Ship. wt., 5 lbs. Equal to 7-lb. old style copper. each **$32.00**

OPERATE ON A.C. OR D.C., ANY CYCLE

PLUG TIP IRONS



No. P-25—Smallest Full-fledged Industrial Iron. Weight less cord 3 oz. Length 8". For extremely light soldering on finest wire, delicate instruments, jewelry, etc. 25 Watts. Tip ⅛". Ship. wt. ¾ lb. each **$5.00**

No. P-30—For light soldering on radio, telephone and electrical apparatus. 40 Watts (can also be furnished in 50 or 60 Watts if specified). Tip dia. ¼". (⅛" tip also furnished with each iron). Ship wt. ⅞ lb..each **$5.25**

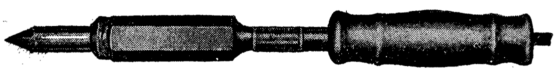
No. P-70—For light soldering on radio and telephone apparatus and electrical instruments. 80 Watts. Tip diam., ⅜". Ship. wt., 1⅛ lb. Equal to 1-lb. old style copper..each **$7.50**

No. P-100—A high speed tool for telephone switchboards, electrical instruments, etc. 100 Watts. Tip diam., ⅜". Ship. wt., 1¼ lb. Equal to 1½-lb. old style copper..each **$8.25**

No. P-125—For light tinware, toys, typewriter type bars, small cans, auto, etc. 130 Watts. Tip diam., ⅝". Ship. wt., 1½ lb. Equal to 2-lb. old style copper..each **$9.75**

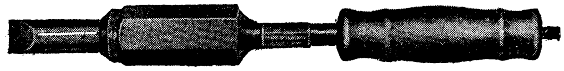
No. P-150—Extra high speed iron for radios, electrical apparatus and where a light iron with small diameter is required. 150 Watts. Tip diam., ⅜". Ship. wt., 1¾ lb. Equal to 2-lb. old style copper each **$9.00**

No. P-151—Same as No. P-150, except where a larger tip is desired. 175 Watts. Tip diam., ½". Ship. wt., 1¾ lb. Equal to 2½-lb. old style copper..each **$9.50**

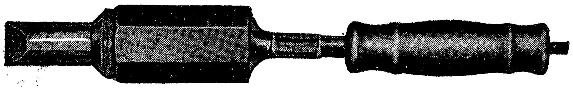


No. P-200—For medium tinware, cans, auto repairs, light roofing, sheet metal, etc. 200 Watts. Tip diam., ⅝". Ship wt., 2⅛ lb. Equal to 2¾-lb. old style copper..each **$10.00**

No. P-250—Same as No. P-200, except where greater speed is required for manufacturing. 250 Watts. Tip diam., ⅝". Ship. wt., 2¼-lb. Equal to 3-lb. old style copper..each **$11.50**



No. P-300—For heavy tinware, large cans, auto, roofing, refrigerator work, etc. 300 Watts. Tip diam., ⅞". Ship. wt., 2⅞ lb. Equal to 4-lb. old style copper ....each **$13.25**

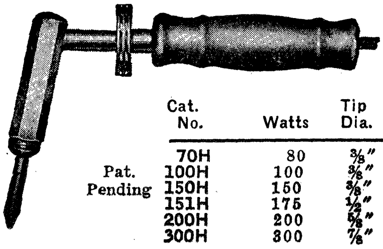


No. P-550—For auto radiators, copper sinks, roofs, heavy armatures, large branders, etc. 550 Watts. Tip diam., 1⅛". Ship. wt., 4⅛ lb. Equal to 5-lb. old style copper .... each **$17.50**

SPECIFY VOLTAGE WHEN ORDERING

HEXACON HATCHET TYPE IRON

For same use as Plug Tip irons of equal wattage, shown above. Replaceable elements and all other features of Plug Tip Irons.



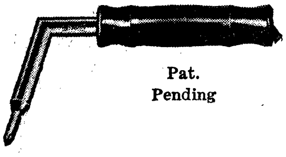
Perfect Balance
Less Fatigue
Better Soldered Joints

Pat. Pending

Cat. No.	Watts	Tip Dia.	Ship. Wt.	Price
70H	80	⅜"	1⅜ lbs.	$ 9.50
100H	100	⅜"	1½ lbs.	10.25
150H	150	⅜"	2 lbs.	11.00
151H	175	½"	2 lbs.	11.50
200H	200	⅝"	2⅜ lbs.	12.00
300H	300	⅞"	2⅞ lbs.	15.25

HEXACON FEATHERWEIGHT HATCHET IRON

So light its weight is hardly noticeable (5½ ozs. less cord), but more powerful than the wattage rating indicates. Hatchet design makes iron effortless to use. No transformer or other cumbersome and expensive equipment required.



Pat. Pending

No. 30H — Price $5.75

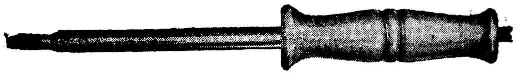
40, 50, or 60 Watts (Specify Watts). Both ⅛" and ¼" dia. tips furnished with each iron. Ship. wt., 1 lb.

SOLDERMASTER Royal Blue Line
ELECTRIC SOLDERING IRONS

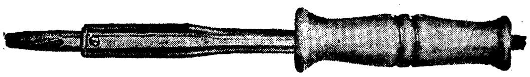
GENERAL INFORMATION—Replaceable elements. Best grade of Madagascar mica for insulation. No. 55 has brass-sheathed cartridge element. Best grade nickel-chrome resistance wire. Replaceable hard drawn copper tips. All one piece swaged cases gun metal finish. Equipped with 6 ft. Underwriters' Approved heater cord, rubber plug. Continental or English type plug 25c extra list. Stand for resting iron furnished.

VOLTAGES 110/120 220/250 A.C. or D.C., ANY CYCLE
SPECIFY VOLTAGE WHEN ORDERING

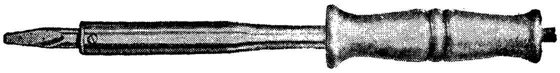
SCREW TIP IRONS



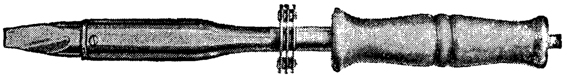
No. 55B—For light soldering, radio apparatus, etc. 55 Watts. Tip diam., 7/16". Ship. wt., 13 oz. .... each **$3.00**



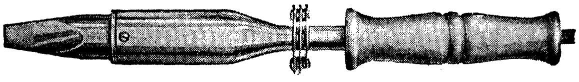
No. 76B—For light work, electrical instruments, etc. 75 Watts. Tip diam., ½". Ship. wt., 15 oz. .... each **$5.00**



No. 100B—Same as No. 76B except used where more speed is required and heavier work is done. For home use. 90 Watts. Tip diam., ½". Ship. wt., 16 oz. .... each **$5.50**

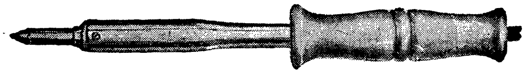


No. 150B—Ideal size for garage and repair work. For home use. 170 Watts. Tip diam., ⅞". Ship wt., 24 oz. .... each **$7.50**

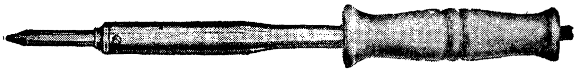


No. 300B—For heavy steel metal, auto radiators, etc. 275 Watts. Tip diam., 1⅛". Ship wt., 38 oz. .... each **$10.50**

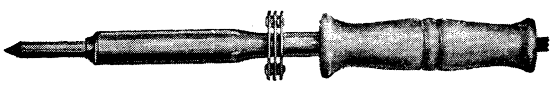
PLUG TIP IRONS



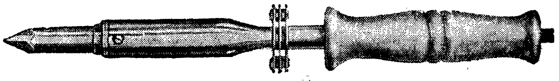
No. 71B—For light work, radio repairs, etc. 75 Watts. Tip diam., ⅜". Ship. wt., 16 oz. .... each **$5.00**



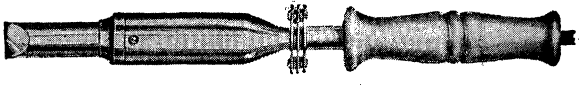
No. 101B—For same work as No. 71B, but where more speed is required or heavier work is done. For home use. 100 Watts. Tip diam., ⅜". Ship wt., 18 oz. .... each **$5.50**



No. 121B—High speed iron for radio and electrical repairs. 125 Watts. Tip diam., ⅜". Ship. wt., 1¾ lbs. .... each **$6.50**



No. 201B—For same work as No 150B, except where plug tip is desired. 200 Watts. Tip diam., ⅝". Ship wt., 34 oz. .... each **$8.50**



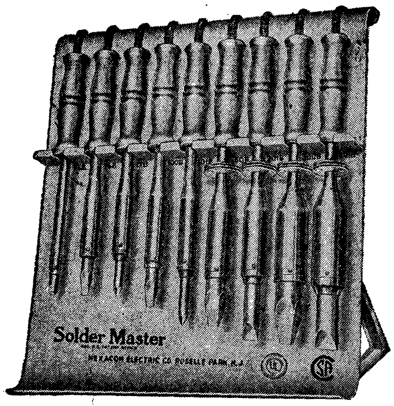
No. 301B—For same work as No. 300B, except where plug tip is desired. 300 Watts. Tip diam., ⅞". Ship wt., 46 oz. .... each **$10.50**

DISPLAYS

Increase your sales with these silent salesmen. Irons securely mounted, but readily removable for sale. Individually packed in cartons ready for shipment. Catalog number and wattage shown on front of display. Complete catalog information and price list on back.

SCROLL TYPE DISPLAY

Striking, Modernistic, All Metal Panel



No. 1 DISPLAY Illustrated

Size 15" x 17½" (Nos. 1B, 2B, and 3B also same size)

This Display Panel Also Furnished With Five or Seven Irons (See Below)

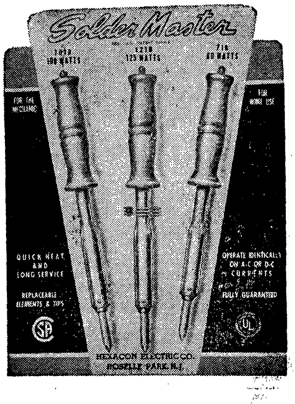
	Ship. Wt.	List Price
No. 1B—Nine Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B, 201B, 301B....	20 lbs.	$61.00
No. 2B—Seven Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B..........	17 lbs.	42.00
No. 3B—Five Iron with Nos. 55B, 76B, 100B, 150B, 300B..........	15 lbs.	31.50
No. 4B—Five Iron with Nos. 71B, 101B, 121B, 201B, 301B..........	16 lbs.	36.00

ATTRACTIVE THREE COLOR CARDBOARD DISPLAY

This same display card also furnished with No. 5B and No. 5DB, but mounted with irons listed below.

No. 6B DISPLAY Illustrated

Size 12" x 16½"
(Nos. 5B, 5DB also same size)



	Ship. Wt.	List Price
No. 5B—Three Iron with Nos. 55B, 76B, 100B....	4 lbs.	$13.50
No. 5DB—Three Iron with Nos. 55B, 100B, 150B on display and 2 No. 55B and 1 No. 100B for stock..........	8 lbs.	27.50
No. 6B—Three Iron with Nos. 71B, 101B, 121B....	5 lbs.	17.00

SOLDERING IRONS

With Calrod* Heaters

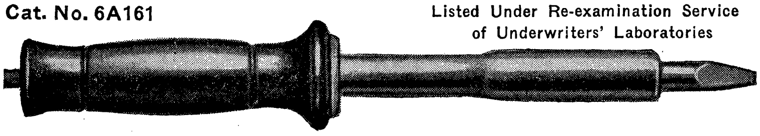
FOR EVERY RADIO REQUIREMENT MANUFACTURING — SERVICE

*Registered trade-mark of General Electric Co.

- **HIGH-SPEED SOLDERING.** You can solder as fast and continuously as the nature of the work will allow.
- **UNIFORM PERFORMANCE.** Operating characteristics remain constant day after day. No appreciable decrease in efficiency even after months of service.
- **EASY, LOW-COST REPAIR.** Assembling and disassembling are easy.
- **LONG LIFE AND LOW MAINTENANCE.** Life is lengthened, and over-all costs are kept low because sturdy construction eliminates need of frequent repairs.
- **THEY NEED NOT BE RETURNED TO THE FACTORY FOR REPAIR.** Irons can be repaired on the job without special tools or skill.

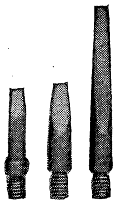
Cat. No. 6A161

Listed Under Re-examination Service of Underwriters' Laboratories



Watts	Volts			Tip diam.
75	115	Calorized tip	$11.80*†	See note below*
		IRONCLAD tip	12.50*†	

*Cat. No. 6A161 and Cat. No. 6A162 can be supplied with either a ⅜- or ½-inch diameter tip at prices given. The long ½-inch diameter tip projects 3⅜ inches from the shell. Price of iron with long calorized tip—$12.30 with long IRONCLAD tip—$13.40.

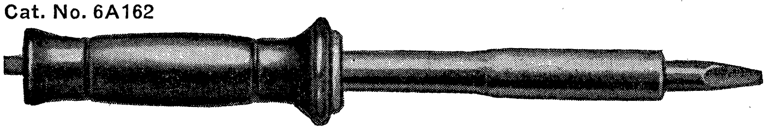


For light, intermittent soldering such as radio assembly and repair and installation, switchboard, ignition, wiring devices, meters and instruments, or very light high-speed soldering of similar products

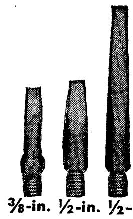
WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz.
Equal to old-style copper—1¼-lb.

For light, high-speed soldering, such as assembly of radios, telephones, switchboards, appliances, meters, and instruments, and installation and repair of wiring and wiring devices, ignition. Excellent for service and repair men.
WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz.
Equal to old-style copper—1¾ lb.

Cat. No. 6A162

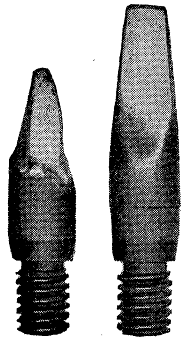


Watts	Volts			Tip diam.
100 to 125	115 or 230	Calorized tip	$11.80*†	See note at left*
		IRONCLAD tip	12.50*†	



For light, high-speed soldering, such as assembly of radios and switchboards, medium intermittent soldering on tinware, wiring, plumbing, and tinsmithing. Excellent general-purpose iron for shop and farm.

WEIGHTS: Less cord, 16 oz.
With cord, 21 oz. Shipping, 27 oz.
Equal to old-style copper—2-lb.



ASK ABOUT IRONCLAD TIPS

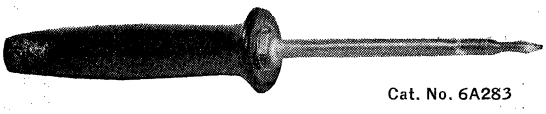
IRONCLAD TIPS MEAN

- No Filing
- Less Maintenance
- Longer Life
- Lower Upkeep Cost

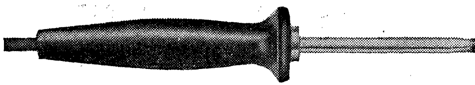
At the left, effect of solder (250 C for 363.5 hours) on plain copper (left) and Ironclad copper (right) soldering tips.

Note—230-volt irons available on request. Same prices apply. Above prices include supporting stand.
†Mfgr's suggested retail price. ASK YOUR G-E DISTRIBUTOR FOR A COPY OF BULLETIN GEA-4519.

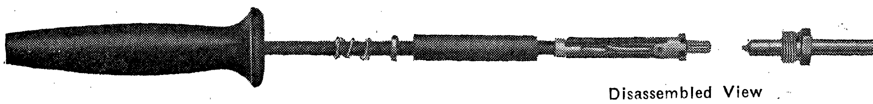
LIGHTWEIGHT INDUSTRIAL IRONS



Cat. No. 6A283



Cat. No. 6A273



Disassembled View

Soldering Iron, Including Tip and Heater Assembly						Tip and Heater		Tip Only‡		
Cat. No.	Rating		Tip Dia. in Inches	List Price, Each	Stantard Package Quantity	Cat. No.	List Price, Each	Cat. No.	Size in Inches	List Price, Each
	Volts	Watts								
6A273	120	60	¼	$11.40	6	6A300	$5.60	326A964P21	¼	$1.60
6A283	120	60	$\frac{3}{16}$	11.40	6	6A301	5.60	326A964P22	$\frac{3}{16}$	1.60

‡ Tips must be brazed on. See instructions included with irons.
§ Mfgr's suggested retail price.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

MIDGET SOLDERING IRONS

FOR MANUFACTURING AND SERVICE OF RADIO AND ELECTRONIC EQUIPMENT

APPLICATION

This 8-inch, 1¾-ounce featherweight iron for close-quarter soldering with pin-point precision is used where conventional irons might cause damage . . . be clumsy to handle . . . be more expensive to operate. The Midget literally goes places with greater efficiency and less power . . . with no sacrifice in heat or speed. With its fingertip operation, this iron will help make an expert out of any solderer in a short time.

The Midget has Ironclad copper tips either ⅛- or 3/16-inch diameter, as desired.

THIS MIDGET DOES A BIG JOB IN

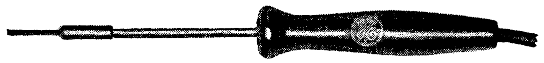
- Boosting Production Rates
- Increasing Operator Efficiency
- Cutting Down Employee Fatigue
- Saving on Repair and Maintenance
- Reducing Rejects
- Manufacturing and Repairing:
  - Radios and other electronic equipment
  - Meters
  - Instruments
  - Jewelry
  - Appliances

. . . and many other products requiring precision soldering

RATING: 6 VOLTS, 25 WATTS

Description	Cat. No.	Price†
⅛-in. Ironclad copper tip (pyramid-shaped)	6A212	$6.60
¼-in. Ironclad copper tip (chisel-shaped)	6A210	6.60
3/16-in. Ironclad copper tip (pyramid-shaped)	6A214	6.60
⅛-in. Renewal tip and heater assembly	6A213	3.60
¼-in. Renewal tip and heater assembly	6A211	3.60
3/16-in. Renewal tip and heater assembly	6A215	3.60

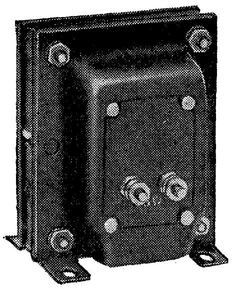
Net weight iron less cord 1¾ oz.
Net weight iron including cord 5 oz.
Shipping weight complete iron 8 oz.
Standard package consists of 6 irons of one tip size. Tip and heater assemblies can be purchased in any quantities.



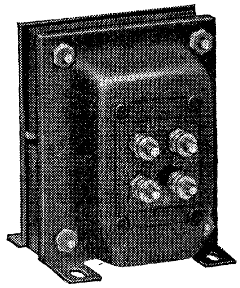
⅛- and 3/16-in. dia. tip, Cat. Nos. 6A212 and 6A214

¼-in. dia tip, Cat. No. 6A210

SPECIAL TRANSFORMERS (OPTIONAL) FOR G-E MIDGET SOLDERING IRONS



Single-tap, Cat. No. 6A362



Four-tap, Cat. No. 6A364

Specially designed 115-volt transformers are available as optional equipment in two types:

1. Single-tap 115/6 volts—for use where only one soldering heat is required
2. Four-tap 115/6.3/6/5.7/5.4 volts — gives wide range of heats (from 20 to 35 watts) for close temperature control of tips

Transformers are small, lightweight, but sturdy. Their 6-foot extension cords can be plugged in any 115-volt a-c circuit.

Description	Cat. No.	Price†
Single-tap	6A362	$5.30
Four-tap	6A364	7.90

Publication Reference GEA-4519

THE MIDGET OFFERS MAJOR ADVANTAGES

Low-cost soldering—Solders more efficiently, using only approximately one-fourth wattage normally used.

Fingertip operation—Only 8 inches long, weighs but 1¾ ounces. Styled for fingertip grip.

Quick, continuous heat—Famous G-E Calrod* heater built into Ironclad copper tip for rapid heat transfer.

Easy renewal—Ironclad tip and heater can be replaced as a unit merely by unscrewing from handle.

Long life, low maintenance—Low voltage permits use of heavy, long-lasting resistant wire. Reduced servicing with long-lasting Ironclad copper tip.

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* Registered trade-mark of General Electric Co.
† Manufacturers' suggested retail price.

KWIKHEAT THERMOSTATIC SOLDERING IRONS

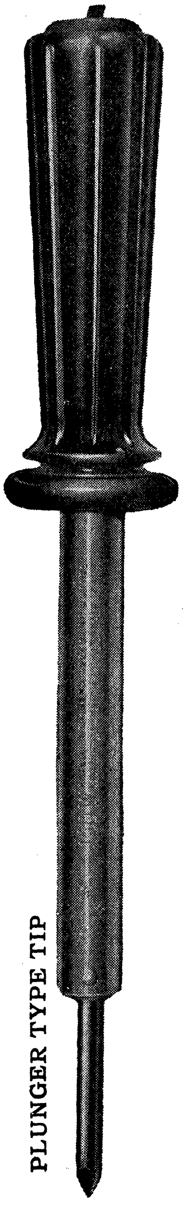
Built-in Vanatta Automatic Thermostat

KWIKHEAT TYPE NO. 200

HOT IN 80 SECONDS

150 Watts — 115 Volts AC Only

Weight of Iron with Tip	7½ oz.
Shipping Weight per Iron with ⅜" x ¼" Dia. Tip and resting stand	1 lb. 2 oz.
Length of Iron with ⅜" x ¼" Dia. Tip	12¾"
Length of Heater Cord	6 ft.



HOT IN 80 SECONDS

List Price

Iron complete with tip	**$7.75**
Replacement Elements	**3.15**
Tip ⅜" x ¼" Dia. Pyramid Point	**.55**

CHECK THESE ADVANTAGES

KWIKHEAT JR. has been designed to meet the demand by the electronics industry for a lighter and smaller **PRODUCTION** tool. The element is readily replaced in the field by use of screwdriver, pliers, and small punch or nail.

CORROSION RESISTANT

Core assembly and outer shell are made of **STAINLESS STEEL.**

HOT IN 80 SECONDS

The watt density of the heating element is very high and completely controlled by the thermostat.

TEMPERATURE

While the thermostat is preset at the factory, two standard temperatures are available—Standby Irons, used for intermittent bench work, servicing, and engineering, set at 700°F; **PRODUCTION** Irons, used for constant high speed soldering, set at 800°F.

TIPS

Tips, plunger type ⅜" x ¼" diameter x 4" long, plated to reduce corrosion. It is advisable to keep tips inserted completely in the cavity of the element for complete temperature control.

KWIKHEAT TYPE NO. 300

HOT IN 90 SECONDS

225 Watts — 115 or 230 Volts AC Only

Weight of Iron with Standard No. 1 Tip	14 oz.
Shipping Weight per Iron with No. 1 Tip and resting stand	1½ lb.
Length of Iron with No. 1 Tip	13"
Length of Heater Cord	6 ft.

HOT IN 90 SECONDS

List Price

Iron complete with tip	**$12.25**
Available in other AC Voltages add	**.75**
Available with 3 Conductor Cord add	**2.50**
Replacement Elements	**8.60**
Tips, any style	**1.50**

TEMPERATURE

The Kwikheat Element can be set at the factory to any desired tip temperature between 275° and 875° F. Additional charges for this service:

1 to 49	$1.00 ea.
50 to 99	.50 ea.
100 or more	standard price

CORROSION RESISTANT

Tips and core are forged of tellurium copper alloy and plated for resistance to corrosion.

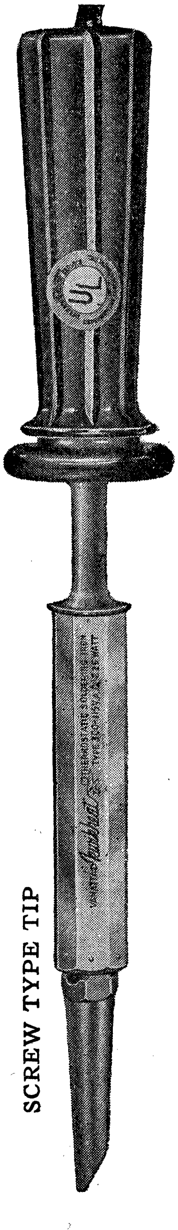
HOT IN 90 SECONDS

Kwikheat Thermostatically controlled soldering irons are the only irons containing built-in thermostats, allowing a much greater watt density with less radiation of heat.

TEMPERATURES ARE PRE-SET

The use of recently developed alloys have permitted the increase of thermostat temperatures with reduced creep.

WHEN IRONS ARE TO BE USED FOR HEAVY OR HIGH SPEED SOLDERING — SPECIFY A PRODUCTION IRON.



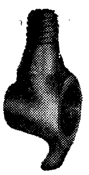
#20 ANTIFREEZE COMPOUND

A lubricant for all soldering iron tips. Prevent sticking, increases conductivity between tip and core.

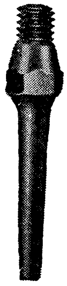
Please contact your jobber for trade discounts.

6 INTERCHANGEABLE TIPS FOR TYPE 300

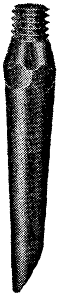
#5 Solder Pot



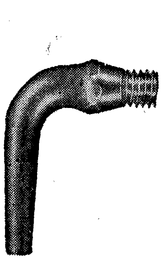
#0 - ¼"



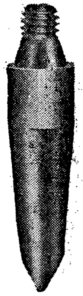
#1 - ⅜"



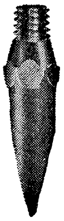
#3 - ⅜" 90°



#4 - ½"



#9 $\frac{1}{16}$ x $\frac{7}{16}$



KWIKHEAT MFG. CO. **Glendale 4, California**

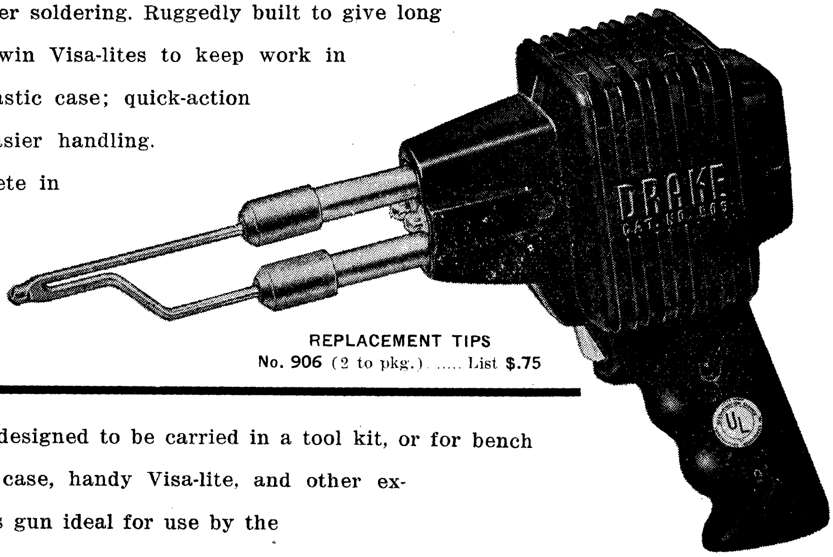
DRAKE ELECTRIC SOLDERING EQUIPMENT

LISTED UNDER REEXAMINATION SERVICE UNDERWRITERS' LABORATORIES, INC. UL

insta-heat soldering guns...

No. 905—250 WATTS For heavier soldering. Ruggedly built to give long satisfactory service. Features twin Visa-lites to keep work in sight; durable heat-resistant plastic case; quick-action trigger; perfect balance for easier handling. Underwriters' Approved. Complete in box with 6 ft. cord. Shipping weight 4 lbs.

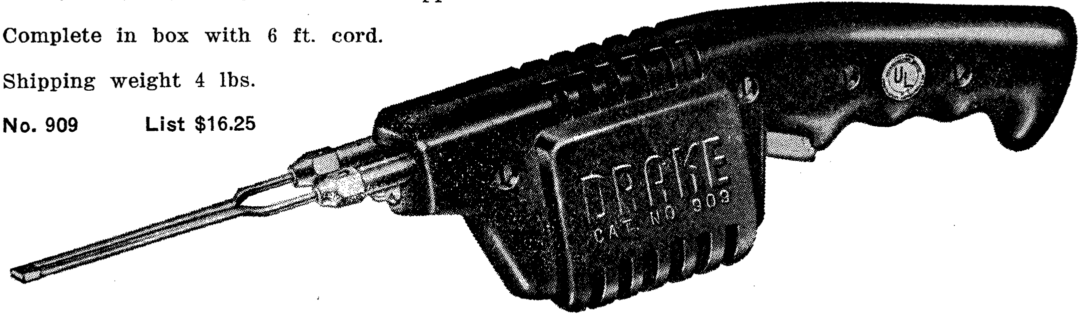
No. 905......................**List $18.75**



REPLACEMENT TIPS
No. 906 (2 to pkg.) ..... List $.75

No. 909—135 WATTS Specially designed to be carried in a tool kit, or for bench use. (Stands upright.) Durable case, handy Visa-lite, and other exclusive Drake features make this gun ideal for use by the service technician. Underwriters' Approved. Complete in box with 6 ft. cord. Shipping weight 4 lbs.

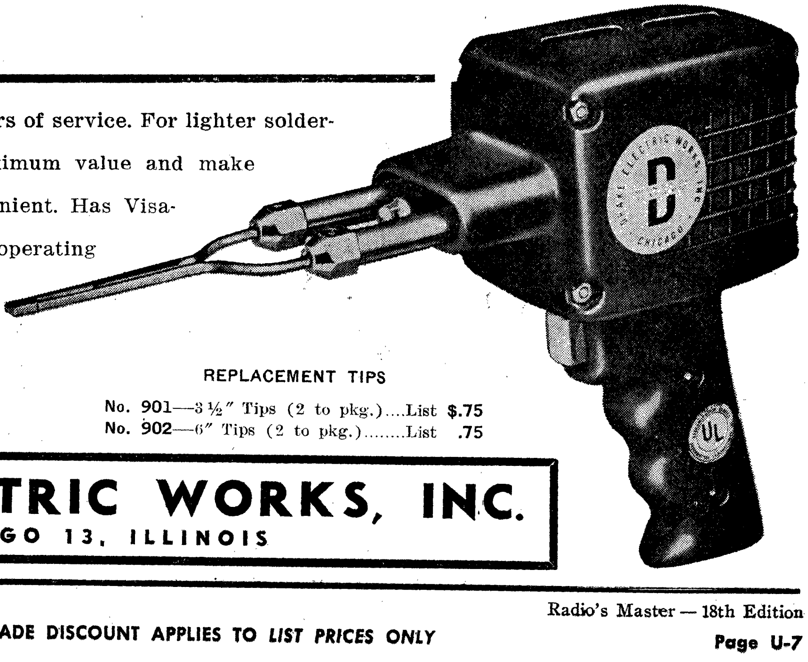
No. 909 List $16.25



REPLACEMENT TIPS
No. 901—3½" Tips (2 to pkg.)....List $.75
No. 902—6" Tips (2 to pkg.)........List .75

No. 900—135 WATTS Proved in years of service. For lighter soldering applications. Built to give maximum value and make soldering easier, faster, more convenient. Has Visa-lite, durable plastic case, smooth-operating trigger. Underwriters' Approved. Complete in box with 6 ft. cord. Shipping weight 4 lbs.

No. 900......................**List $15.00**

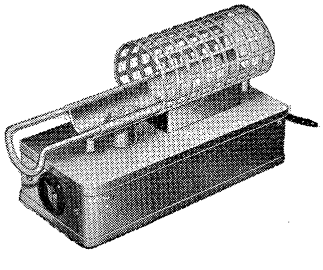


REPLACEMENT TIPS
No. 901—3½" Tips (2 to pkg.)....List $.75
No. 902—6" Tips (2 to pkg.)........List .75

DRAKE ELECTRIC WORKS, INC.
CHICAGO 13, ILLINOIS

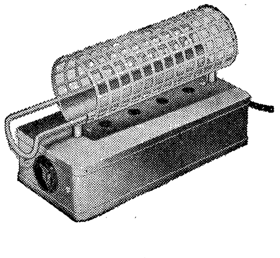
DRAKE

VAPOR-PROOF SOLDERING IRONS SOLDER POTS HEAT CONTROLS



No. 305H (as shown)
List **$8.50**
No. 305 (without hood)
List **$7.50**

Drake bonus-built Thermostat Heat Controls add extra life to any iron—mean extra convenience in soldering—by keeping the iron at correct soldering temperature at all times.
Operates on voltages up to 240 AC; with 660 watts capacity. Takes any iron, and gives dependable heavy-duty service—day in and day out.
Available with or without hood. Both stands furnished with "Magic Cup." "A twist of the wrist" removes all oxide. Shipping weight, 3 lbs.

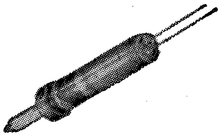


No. 300H (as shown)
List **$6.00**
No. 300 (without hood)
List **$5.50**

Variable Resistor Heat Control. Keeps any soldering iron preheated for use at a moment's notice. Ideal for use on test benches, production lines, laboratories, etc. Variable resistor allows individual temperature control to suit any application. For 100 watt irons only. Complete with 6 ft. cord and plug. Shipping weight, 3 lbs.

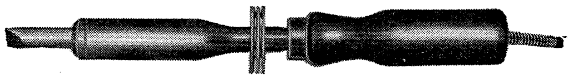
DRAKE *Vapor proof*

industrial soldering irons



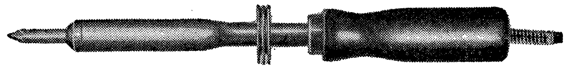
Exclusive sealed element in Drake Vapor-Proof Soldering Irons greatly increases their service life—effectively seals out flux vapors. Perfected after four years of development and testing.

No. 825—225 Watts—⅝" Tip



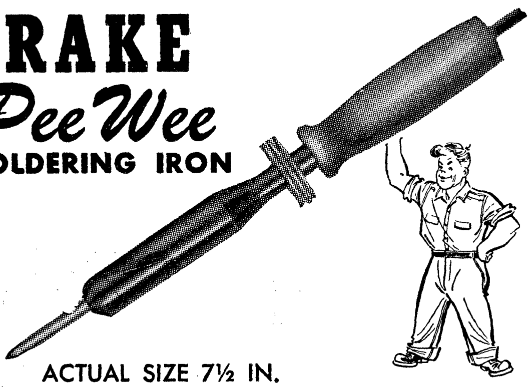
Recommended for heavy duty industrial soldering work. Equipped with exclusive Drake Vapor-Proof Element for greatly increased service life. List **$12.50**

No. 625—125 Watts—⅜" Tip



Popular sized iron for lighter industrial soldering jobs. Heavy duty construction throughout . . . with exclusive Drake Vapor-Proof Element. Handy 10" length possible due to radiating fins which keep handle cool.
List **$10.00**

DRAKE *PeeWee* SOLDERING IRON

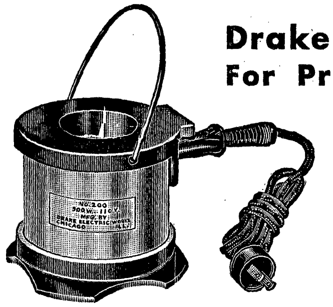


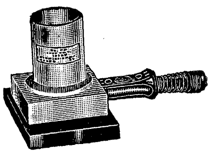
ACTUAL SIZE 7½ IN.

Designed specifically to be carried in a tool kit for "on the job" soldering. Excellent for all fine work—small, compact size makes it easy to handle. A full 35 watts with 3/16" tip. Operates on 110-120 volt, 60-cycle A. C. Baffle plates keep handle cool. Blued finish. Shipping weight, complete with stand, 1 lb.

Element............List **$3.00** Tip............List **$ .30**
Shipping weight 1 lb.
No. 360..List Price **$5.00**

Drake Solder Pots For Production Lines





Model No. 200—300 Watt Unit

An ideal electric solder pot for production use. Used in factory production of tinned wire ends, terminal tinning and countless other volume tinning applications. Holds 2 lbs. of bar solder in 2½" diameter 2" deep cast iron well. Complete with detachable Underwriters' Approved cord and plug, and bale type carrying handle. Genuine nichrome element. Shipping weight 6 lbs.
No. 200..List Price **$9.00**

Model No. 100—150 Watt Unit

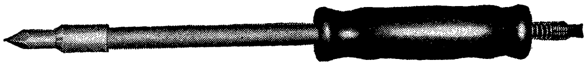
Designed for light tinning. Ideal for occasional jobs. Suited especially for tinning ends of stranded wires to prevent fraying. Can also be used for soldering cord tips to cables. One piece cast iron construction holds heat longer. Size of pot 1½" diameter 1" deep. Holds 1 lb. of bar solder. Complete with Underwriters' Approved cord and detachable plug. Shipping weight 3 lbs.
No. 100..List Price **$7.00**

DRAKE ELECTRIC WORKS • • CHICAGO 13, ILLINOIS

TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

DRAKE RADIO IRONS

Suggested for Maintenance Work and for the Radio Service Man

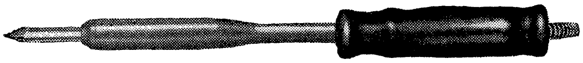


60 Watt Iron with ⅜″ Tip. An excellent iron for light work. Porcelain element. Six ft. cord and small stand.

No. 315 .... List **$2.50**
Element........ List **$1.00** Tip........ List **$ .90**
Shipping Weight 1 lb.

100 Watt Iron with ⅜″ Tip. An ideal iron for those who require a hotter iron than our No. 315. Porcelain element. Six ft. cord and small stand.

No. 316 .... List **$3.40**
Element........ List **$1.50** Tip........ List **$1.80**
Shipping Weight 1 lb.

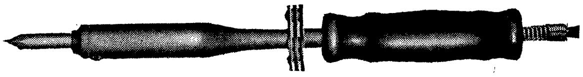


80 Watt Iron with ⅜″ Tip. Recommended for light radio work. Mica wound element. Six ft. cord and large stand.

No. 225 .... List **$6.00**
Element........ List **$3.40** Tip........ List **$ .60**
Shipping Weight 1½ lbs.

100 Watt Iron with ⅜″ Tip. Recommended for general radio work. Mica wound element. Six ft. cord with large stand.

No. 325 .... List **$6.50**
Element........ List **$4.00** Tip........ List **$ .60**
Shipping Weight 1½ lbs.



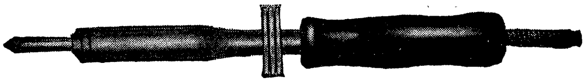
125 Watt Iron with ⅜″ Tip. An extra hot iron for the serviceman. Mica wound element. Six ft. cord and large stand.

No. 326 .... List **$7.00**
Element........ List **$5.00** Tip........ List **$ .60**
Shipping Weight 2 lbs.

200 Watt Iron with ⅝″ Tip. Recommended for medium heavy work. Mica wound element. Six ft. cord and large stand.

No. 425 .... List **$12.00**
Element........ List **$9.00** Tip........ List **$ 2.00**
Shipping Weight 2 lbs.

INDUSTRIAL IRONS



60 Watt Iron with ¼″ Tip. An extra small iron for midget sets. Only 9″ long.

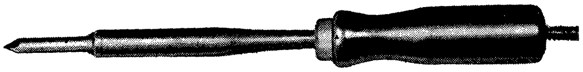
No. 400 .... List **$6.50**
Element........ List **$4.50** Tip........ List **$ .40**
Shipping Weight 1 lb.

100 Watt Iron with ⅜″ Tip. Only 10 inches over all. Ideal for close work on radio sets.

No. 600-10 .... List **$9.00**
Element........ List **$7.00** Tip........ List **$ .60**
Shipping Weight 2 lbs.

140 Watt Iron with ⅜″ Tip. An extra hot iron for high speed work on production lines.

No. 600 Special .... List **$9.50**
Element........ List **$7.50** Tip........ List **$ .60**
Shipping Weight 2 lbs.



80 Watt Iron with ⅜″ Tip. Recommended for fine instruments, light telephone and other light soldering.

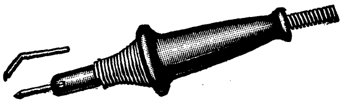
No. 450 .... List **$7.00**
Element........ List **$5.00** Tip........ List **$ .60**
Shipping Weight 2 lbs.

100 Watt Iron with ⅜″ Tip. The standard 100 watt iron. Ideal for switchboards and radio sets.

No. 600 .... List **$8.50**
Element........ List **$6.50** Tip........ List **$ .60**
Shipping Weight 2 lbs.

200 Watt Iron with ⅝″ Tip. For general factory work such as art glass, medium tin work.

No. 800 .... List **$12.00**
Element........ List **$9.00** Tip........ List **$ 2.00**
Shipping Weight 3 lbs.



MODEL 350 MIDGET

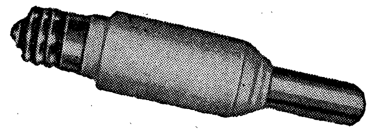
Recommended for voice coil leads on speaker cones, meter connections, test equipment, hearing aids, crystal pickups, headphone leads, etc. This iron is a continuous duty 35 watt iron with a nickel-chromium element wound over mica insulation on a steel core.

No. 350 .... List **$6.00**
Element........ List **$4.00** Tips, ea........ List **$ .25**
Shipping Weight 1 lb.

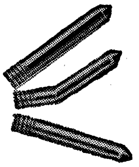
DRAKE ELECTRIC WORKS • • CHICAGO 13, ILLINOIS

Get *TRIPLE* soldering efficiency with

Ungar Elkaloy Tiplets



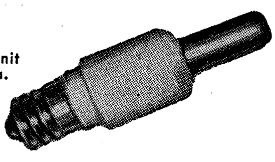
No. 1235 Thread-in Unit —$1.35 ea.



No. 331 Pencil Tiplet—15c ea.

No. 332 Offset Pencil Tiplet— 15c ea.

No. 333 Chisel Tiplet—15c ea.



No. 535 Thread-in Unit —$1.10 ea.

Now a Single Heating Unit Does the Work of THREE!

Now — more versatility with Ungar ELKALOY TIPLETS plus two thread-in heating units: No. 535 for general soldering (23½ watts) and the new No. 1235 (37½ watts) for production-line industrial soldering where more heat is required. Now— Ungar Elkaloy Tiplets make the famed Ungar Soldering Pencil 3 times more efficient. They save (1) Time (2) Money (3) Strategic Copper. Made of Elkaloy "A" for perfect tinning, stepped-up heat conductivity, and extra resistance to pitting and corrosion, each of the three tips threads into either of the heating units. In turn the heating unit fits the famed light-as-a-feather Ungar Handle. YOU CONTINUE TO USE THE HEATING ELEMENT WITH TIP AFTER TIP!

UNGAR ELKALOY TIPLETS SCORE THESE ADVANTAGES:

CONSERVES STRATEGIC MATERIALS. By substituting Elkaloy "A" for the tips, and iron for the heating units, we have helped solve the copper problem — and can assure you immediate delivery of heating units and Elkaloy Tiplets IN ANY QUANTITY. (Note: Nos. 537S, and 537C and 538 Tips have been discontinued until further notice.)

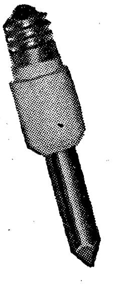
SAVES YOU MONEY because you no longer discard the heating unit when the tip has worn down. Long-lived heating units can be used over and over again.

EASIER TINNING. Elkaloy "A" requires no special tinning procedure. Does not oxidize as rapidly as copper. No flux or paste ever required. Eliminates unnecessary and costly maintenance.

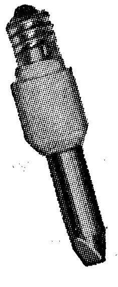
EXCELLENT HEAT CONDUCTIVITY. Elkaloy "A" absorbs heat from heating unit — delivers it directly to point of contact.

INTERCHANGE TIPS EASILY AND QUICKLY. When Elkaloy Tiplet is worn down, simply unthread used tip with pliers and screw in new tip. Difference in co-efficient of expansion assures maximum heat conductivity — eliminates corrosion and gumming.

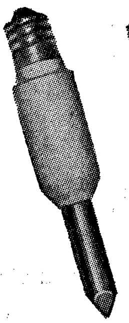
PLUS 5 INTERCHANGEABLE TIPS



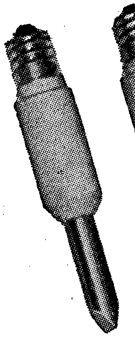
No. 536 Tellurium Pyramid Tip, 5/16", 20-Watts $1.10 ea.



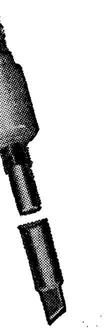
No. 539 Tellurium Chisel Tip, 3/8", 20-Watts $1.10 ea.



No. 1236 HI-HEAT Pyramid Tip, 5/16", 37½-W. $1.35 ea.



No. 1239 HI-HEAT Chisel Tip, 3/8", 37½-W. $1.35 ea.



No. 540 Comb. of #267 Heating Unit & #122 Brass Knife Tip for Plastics — 20-Watts $1.10 ea.
No. 267 85¢ ea.
No. 122 25¢ ea.

DISCOUNTS: $1.10 — $9.90, 20%; $10 — $99, 35%; $100 or more, 40%.
PLEASE CONTACT YOUR JOBBER — WE DO NOT SELL DIRECT.

Check These Improvements in the Famous No. 776

Ungar Handle

Now Better Than Ever!

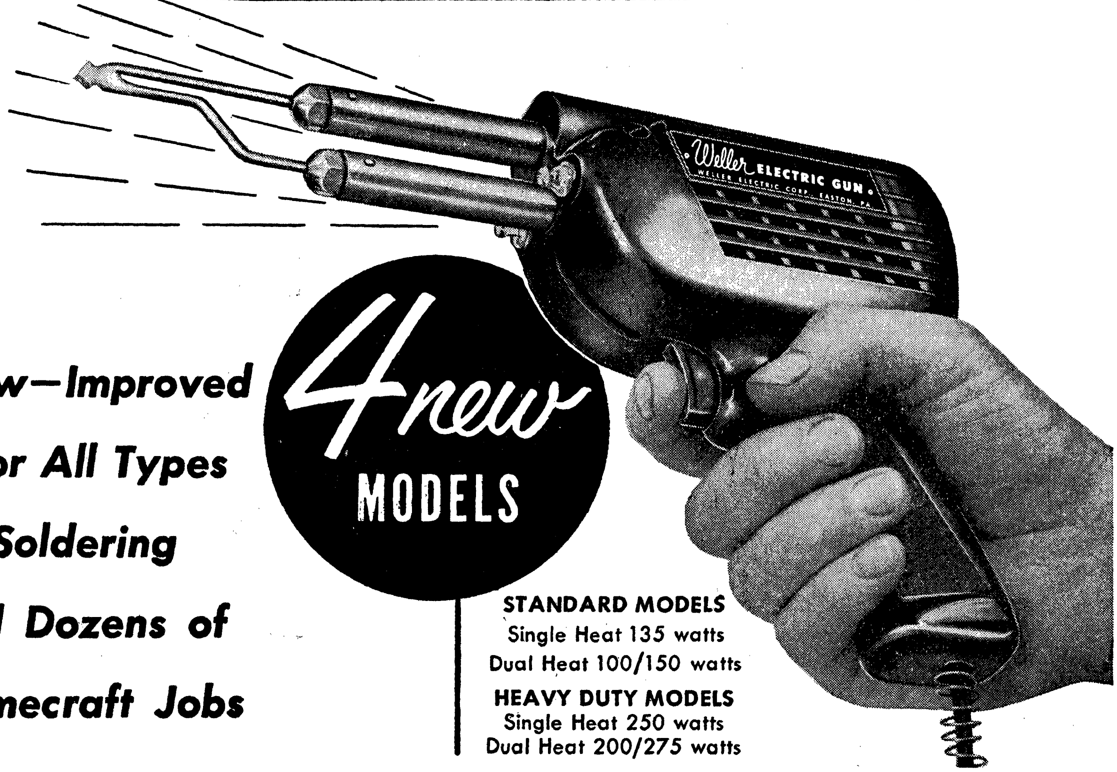
Check these features: Extra length brass shell firmly engages all threads, keeps heating unit tight; Spring action rivet assures positive contact; Extra flexible cord protected with molded Neoprene sleeve; Cooler handle of durable molded plastic, perfectly balanced; Form-fit cork grip; Ceramic insulation for double safety; Underwriters' listed (110-120V. 37½ watts). No. 776 Handle & Cord Set only $1.15 ea.

NEW PROTECTIVE RUBBER SLEEVE fits over cord and prevents wear.

NEW FORM-FITTED CORK BUSHING keeps handle tilted at 10-degree angle — eliminates need for extra handle-rest — keeps hot tip pointed up, away from bench surface.

Ungar Electric Tools, Inc.
P. O. Box 312
Venice, Calif.

WELLER ELECTRIC GUNS



New—Improved —for All Types of Soldering and Dozens of Homecraft Jobs

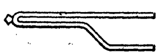
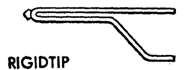
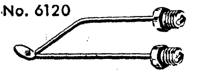
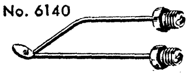
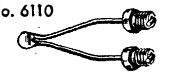
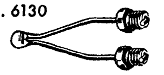
STANDARD MODELS
Single Heat 135 watts
Dual Heat 100/150 watts
HEAVY DUTY MODELS
Single Heat 250 watts
Dual Heat 200/275 watts

- **INSTANT HEAT.** No wasted time or current. Weller Guns pay for themselves in a few months.
- **DUAL HEAT SAVES TIME AND MONEY.** Tip life greatly increased by using high heat only when necessary. Switch instantly to high or low heat as job requires.
- **EXCLUSIVE TIP-GRIP.** Wiping action of tip-fastening nut eliminates contact resistance and oxidation. Assures full constant heat.
- **DUAL SPOTLIGHTS ON ALL MODELS.** Locate work quickly—even in dark corners.
- **HIGH-IMPACT HOUSING—PERFECT BALANCE.** Rugged Hycar phenolic plastic housing protects against damage. Streamlined design and built-in transformer give pistol balance and soldering convenience.
- **SLIDES EASILY INTO TIGHT SPACES.** Longer reach slips easily between wiring—handles difficult, deep-corner jobs with ease. Speeds work and ends damage to insulation.
- **LOW-COST, REPLACEABLE WELLERTIPS.** Change tips in a jiffy. Chisel shape for faster heat transfer.

U.S. Pat. No. RE-23619, Other Pat. Pending. Printed in U.S.A.

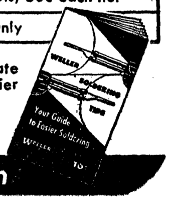
For Homecraft Jobs...

Cut plastic tile. Fix home appliances and wiring. Heat-seal home-freezer packages. Build model railroads. Make costume jewelry. Regroove tires. Remove old, hardened putty from windows. Melt stick-wax or stick-shellac for furniture refinishing.

MODEL	S-400	D-440	S-500	D-550
WATTS	Single Heat 135	Dual Heat 100/150	Single Heat 250	Dual Heat 200/275
NET PRICE	$8.95	$10.95	$9.95	$11.95
SOLDERING TIP	 STURDITIP No. 7135—Pkg. 2—25c net		 RIGIDTIP No. 7250—Pkg. 2—35c net	
SMOOTHING TIP	No. 6120  (with nuts) 35c each net		No. 6140  (with nuts) 35c each net	
CUTTING TIP	No. 6110  (with nuts) 35c each net		No. 6130  (with nuts) 35c each net	

All Models for 60 Cy. 120 V. AC Only

"SOLDERING TIPS" New, revised, fully up-to-date edition. 20 illustrated pages show ways to faster, easier soldering. 10c at your Distributor—or order direct.

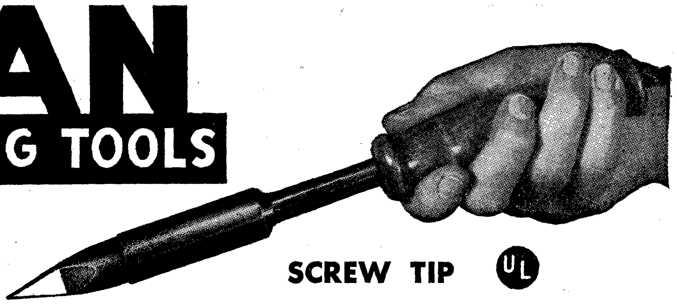


Better From Grip to Tip

Weller ELECTRIC GUNS

The Finest Tools for the Finest Craftsmen

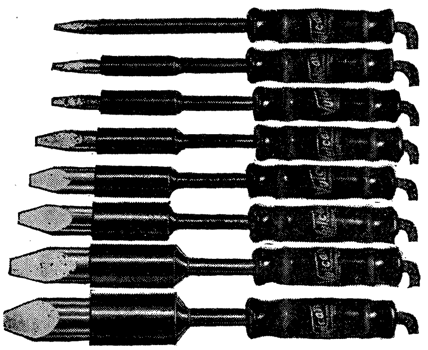
VULCAN
ELECTRIC SOLDERING TOOLS



High-powered Soldering Tools, designed for fast soldering, with low operating cost.
Tips are of finest forged copper.
The "Hang" or balance good mechanics appreciate, plus light weight.
Cool handles of selected birch, shaped to fit the hand.
6 ft. heater cord, with unbreakable rubber plug.
Fireproof terminals.
Heating elements easily replaced.
Operate equally well on AC or DC.

SCREW TIP

CAT. No.	WATTS	TIP	LIST
20	50	7/16"	$6.25
30	60	1/2"	7.50
40	90	1/2"	8.50
50	130	7/8"	9.50
60	175	1"	10.75
70	220	1 1/8"	12.50
80	310	1 3/8"	14.50
90	430	1 5/8"	16.50
900	700	1 3/4"	29.50



Pygmy
PENCIL TYPE

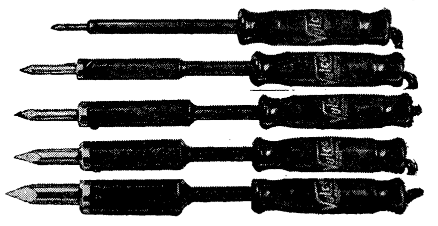
A very efficient tool for fine soldering of instruments, meters, gauges, small radios, etc. or any spots where space is cramped or there is little clearance. The cool, tapering wood handle permits "writing grip." Flexible coil also assures coolness. Equipped with approved cord and unbreakable rubber plug. Standard tip is 1/4" but 3/16" or 1/8" tips are available, as well as special tips, bent to any angle or in various shapes.

Cat. No.	Watts	Tip	Weight	Length	List
Pygmy	25	1/4"	7 oz.	8 1/4"	$4.50

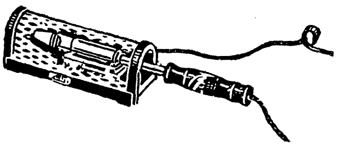
PLUG TIP — All parts replaceable

CAT No.	WATTS	TIP	LIST
* 25	50	1/4"	$5.50
35	100	3/8"	7.75
453	150	3/8"	8.50
45	150	1/2"	8.50
55	200	5/8"	9.75
75	300	7/8"	13.00

*Heating element replaceable at Factory only.



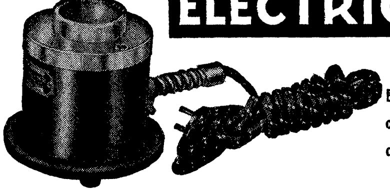
SOLDERING TOOL HOLDER



Holds and guards the Soldering Tool and keeps the tip at soldering temperature as long as it remains in the holder. Has a cord and attached plug cap for connection to current and a receptacle for plugging in the Tool. A convenient adjusting screw sets the Holder thermostat to maintain proper temperature. AC or DC

No. 2100 without thermostat .... $4.00 list
No. 2100T with thermostat .... $6.50 list

ELECTRIC SOLDER POTS



Both single and three-temperature Pots in a variety of sizes and wattages, all with cord and plug approved at Underwriters' Laboratories.

CAT. No.	WATTS HIGH	WATTS MEDIUM	WATTS LOW	CAPACITY SOLDER APPROXIMATE	LIST
1700	200	120	80	1 1/4 lbs.	$20.90
1702	250	150	100	5 lbs.	24.20
1704	500	250	125	10 lbs.	27.80
1600	150	Single Heat		14 oz.	7.65
1606	350	Single Heat		3 lbs.	8.45
1701	250	Single Heat		4 lbs.	16.25
1703	200	Single Heat		14 oz.	11.85

Other sizes up to 6000 watts, single heat.

"DUREVER" Soldering Tips are pure forged copper, shaped to your favorite style, with a special metal coating that will preserve the original shape of the tip by protecting the copper from corrosion and oxidation. Will outlast copper tips, cannot amalgamate with solder, do away with the necessity for dressing or filing. Can be readily tinned without filing and hold their original shape. Circular on request.

VULCAN ELECTRIC CO

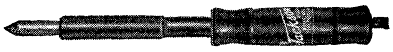
ELECTRIC SOLDERING TOOLS · SOLDER POTS · GLUE POTS · BRANDING IRONS · HEATING UNITS

VULCAN
ELECTRIC SOLDERING TOOLS

LOW PRICE
LONG DISCOUNT

JACKSON

Jackson "Standard" Electric Soldering Irons are scientifically designed for that "balanced feel" which reduces fatigue. All elements used in Jackson Standard Irons are made of the finest quality nichrome wire, wound on precision machined steel cores and insulated with selected high grade amber mica. Equipped with 6 ft. approved heater cords and plugs. Stand included with every iron.

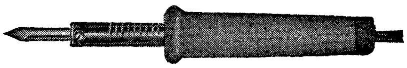


STANDARD SCREW TYPE — Gun Metal Finish

CAT. No.	WATTS	TIP	LIST
141	85	7/16"	$4.20
142	100	5/8"	5.50
0142	125	3/4"	6.25
144	150	3/4"	7.50
143	225	7/8"	9.00
210	350	1 1/8"	9.75

STANDARD PLUNGER TYPE (Plug Tip) — Gun Metal Finish

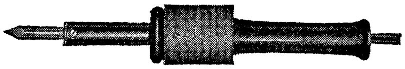
CAT. No.	WATTS	TIP	LIST
149	85	5/16"	$4.20
145	100	3/8"	5.50
0145	125	3/8"	6.25
146	150	1/2"	7.50
147	225	5/8"	9.00
148	350	1 1/8"	9.75



DE-LUXE ELECTRIC SOLDERING PENCIL

A soldering pencil for all light work such as Radio, Television, Jewelry, Instruments and Electronics. Handle is cork-filled composition, 100% air cooled: 1/2" steel tubing, perforated for air cooling. Element is wound on a steel core, for efficient heating. High grade mica and nichrome wire. Underwriters approved 6 ft. rubber cord and plug.

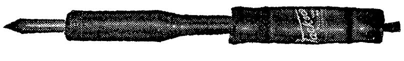
CAT. No.	WATTS	VOLTS	TIP	LENGTH	WEIGHT	LIST
230D	25	115	1/4"	7"	3 oz.	$2.65



STANDARD ELECTRIC SOLDERING PENCIL

Wood handle, rich black finish with cork sleeve. 1/8" steel tubing gun metal finish. Element is wound on steel core. High grade mica and nichrome wire. 6 ft. rubber cord and plug.

CAT. No.	WATTS	VOLTS	TIP	LENGTH	WEIGHT	LIST
230	25	115	1/4"	7"	3 oz.	$2.20
231	40	115	3/8"	8"	4 oz.	3.95



COMET — SCREW TIP

COMET — PLUNGER (PLUG) TIP

Comet Irons are equipped with a 6 ft. approved Heater Cord and Plug. Heating element is made of high quality Nichrome Wire, wound with mica on a core. Handles are black finish. All irons are packed one in a box, stand included. 50 to a standard shipping container. All irons are made for 115 volts. If higher voltage is desired, there will be a slight extra charge.

CAT. No.	WATTS	TIP	LIST
65 S	65	1/2"	$3.00
85 S	85	5/8"	3.50
100 S	100	3/4"	3.95
125 S	125	7/8"	4.75

CAT. No.	WATTS	TIP	LIST
65 P	65	1/4"	$2.20
85 P	85	5/16"	2.60
100 P	100	3/8"	3.25
125 P	125	7/16"	3.95

VULCAN ELECTRIC CO

ELECTRIC SOLDERING TOOLS · SOLDER POTS · GLUE POTS · BRANDING IRONS · HEATING UNITS

ESICO

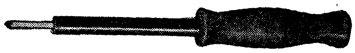
REG. U. S. PAT. OFF.

ELECTRIC SOLDERING IRONS FOR HOME, PROFESSIONAL MECHANIC AND FACTORY

• GREEN LABEL LINE

For intermittent duty. Meets all requirements of the home craftsman.

No. 415—List **$2.15**—⅜″ Tip—55 Watts



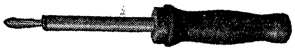
No. 416—List **$3.25**—¼″ Tip—60 Watts

No. 417—List **$4.35**—⅜″ Tip—100 Watts

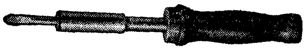
No. 418—List **$5.45**—½″ Tip—130 Watts

• ORANGE LABEL LINE

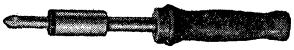
For Professional Mechanics — light or heavy soldering where iron must withstand operation for eight hour periods or more on frequent occasions.



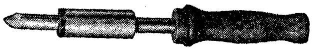
No. 62—List **$5.45**—¼″ Tip—60 Watts



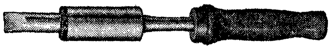
No. 63—List **$6.55**—⅜″ Tip—100 Watts



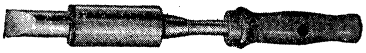
No. 64—List **$7.65**—½″ Tip—130 Watts



No. 65—List **$8.75**—⅝″ Tip—200 Watts



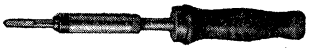
No. 67—List **$9.85**—⅞″ Tip—300 Watts



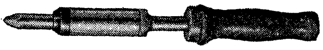
No. 69—List **$12.05**—1⅛″ Tip—500 Watts

• RED LABEL LINE

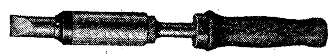
For Production Line Continuous Operations. These Irons are of most rugged construction.



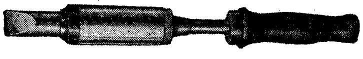
No. 38—List **$7.65**—⅜″ Tip—100 Watts



No. 58—List **$9.85**—⅝″ Tip—200 Watts



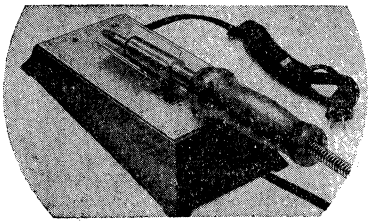
No. 78—List **$12.05**—⅞″ Tip—300 Watts



No. 98—List **$14.25**—1⅛″ Tip—550 Watts

FOR FASTER SOLDERING... LONGER IRON LIFE

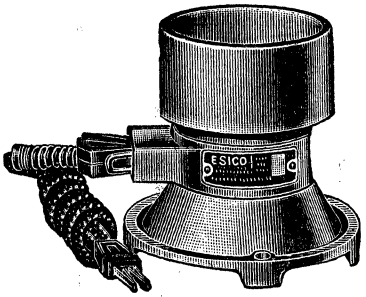
**MAINTAINS DESIRED IRON TEMPERATURE BETWEEN JOBS • PREVENTS OVERHEATING
SAVES ELECTRIC CURRENT • ADJUSTABLE TO ANY SIZE IRON
SAVES TIME • NO LONG WARM-UP PERIOD**



A practical, time and money saving device which accurately regulates and maintains soldering iron temperature between jobs. Lengthens iron life by reducing tip oxidation and amalgamation of tip with solder which increases with over-heating.

When placed on stand, iron rests in a copper cradle which conducts heat of iron and actuates a bimetal to open or close a switch. Temperature is easily regulated by an adjusting slide at bottom of stand. As iron is removed from stand, full current is instantly supplied. Stem rest adjustable to accommodate various lengths of irons. Stand is a heavy gray iron casting—stays firmly fixed without being fastened.

• SOLDERING POTS



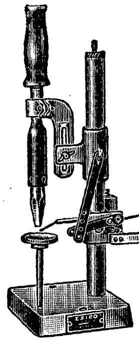
Ruggedly constructed, cast iron pots for production work. Elements are easily replaced even while pots are hot.

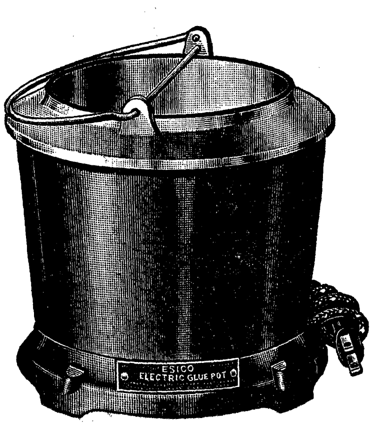
	Net Price
Cat. No. 12—1½″ dia. Cap. ¾ lbs.	**$ 4.95**
Cat. No. 36—2½″ dia. Cap. 2¼ lbs.	**6.05**
Cat. No. 60—3½″ dia. Cap. 3¾ lbs.	**7.15**

• SPOT SOLDERING MACHINE

Model "F" is a treadle operated machine which feeds solder forward as the iron moves away from the work. Suitable for spot soldering where a mechanical connection has first been made. Net price **$16.50**

Model "N" is a treadle operated machine for the advancement of the iron, but without a solder feed attachment. Net price............ **$8.25**



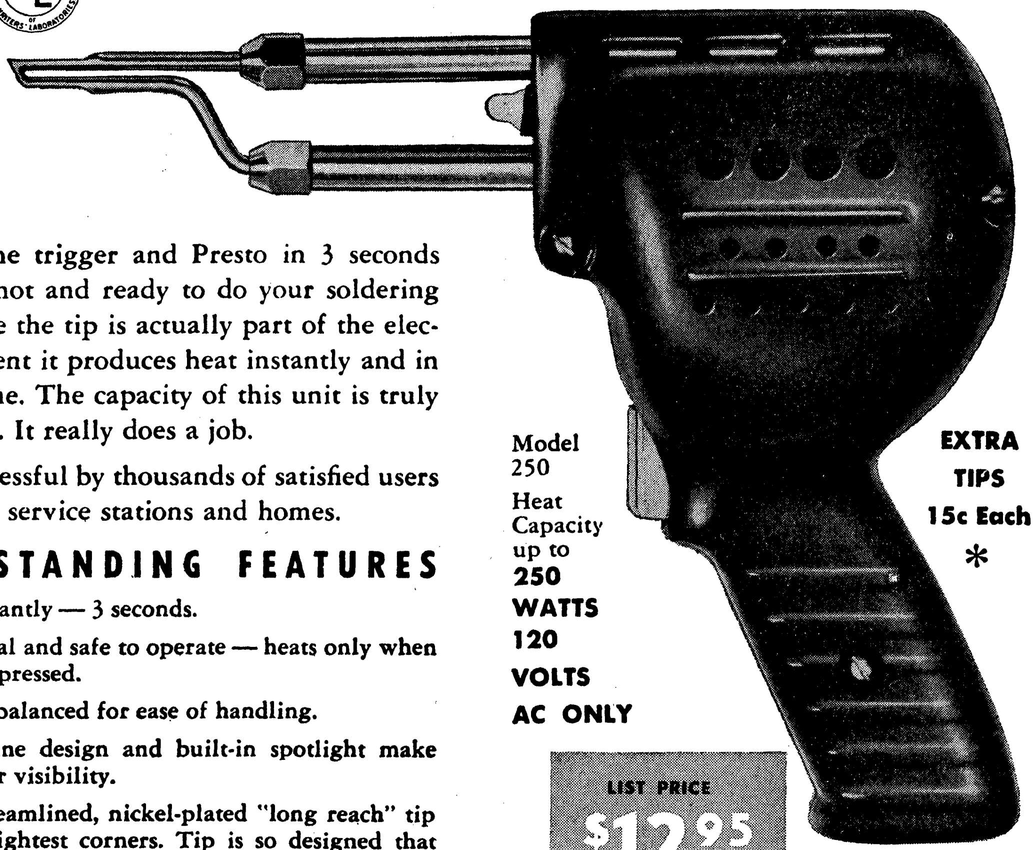


• GLUE POTS

The catalogue No. 700 Glue Pot is of two quart capacity. It is the water jacket type and has a gasket sealed element and thermostat completely protected from moisture. Thermostat is normally set at 150 degrees for use with glue, but can be set at various temperatures for use with wax, etc. Net price **$20.35**

ELECTRIC SOLDERING IRON CO., INC.

WEN ELECTRONIC "Leads the field" SOLDERING GUN



Just pull the trigger and Presto in 3 seconds the gun is hot and ready to do your soldering job. Because the tip is actually part of the electronic element it produces heat instantly and in great volume. The capacity of this unit is truly AMAZING. It really does a job.

Proven successful by thousands of satisfied users in factories, service stations and homes.

6 OUTSTANDING FEATURES

1. Heats instantly — 3 seconds.
2. Economical and safe to operate — heats only when trigger is pressed.
3. Perfectly balanced for ease of handling.
4. Straight-line design and built-in spotlight make for greater visibility.
5. Rigid, streamlined, nickel-plated "long reach" tip fits into tightest corners. Tip is so designed that with normal operation it will remain tinned indefinitely . . . burning and corrosion is materially retarded. Tip can be easily replaced with only 1/4 turn of compression nut.
6. Sturdily constructed throughout—handle and case are both heat and shock resistant.

Model 250
Heat Capacity up to
250 WATTS
120 VOLTS
AC ONLY

EXTRA TIPS 15c Each
*

LIST PRICE
$12.95

GUARANTEE

The WEN Soldering Gun is fully guaranteed against any defects in material and workmanship.

WEN PRODUCTS, INC.
5806 NORTHWEST HIGHWAY • CHICAGO 31, ILL.

**and ask about*

FERALOY EXTRA LONG LIFE TIPS
Last 20 times as long. Price 50¢ each.
PLASTIC TILE CUTTING TIPS
Cut fast, smooth—straight lines, curves, shapes.

Multicore
World's Finest
3 CORE SOLDER

Plus PENTACOL

THE ONLY SOLDER MADE WITH NON-CORROSIVE, EXTRA-ACTIVE ERSIN FLUX

As a result of extensive research in the Multicore Research Laboratories, a "Tailored" molecule PENTACOL was evolved. Now, for the first time incorporated in Ersin Multicore Solder, it provides the following five advantages:

1. The careful formulation of Ersin Flux containing Pentacol has enabled a lower flux percentage to be standardized. You get more solder and less flux per pound, and, with correct soldering technique, dry and H.R. joints are avoided.
2. Pentacol is manufactured by a non-aqueous method which eliminates the possibility of any water being trapped in the rosin and causing corrosion. Ersin Multicore Solder containing Pentacol is guaranteed to be non-corrosive.
3. Pentacol is incorporated in the rosin by an intricate laboratory controlled process to form the Ersin flux. A completely separate process introduces the A.I.D. approved flux into the three cores of solder.
4. The activity of Ersin flux containing Pentacol dissolves the oxides and keeps the surfaces free from oxides until the solder has penetrated.
5. Ersin Multicore Solder containing Pentacol is non-toxic and free from unpleasant odor. The flux residue is non-hygroscopic, non-tacky, has high insulation value and is entirely non-corrosive.

TECHNICAL ADVANTAGES

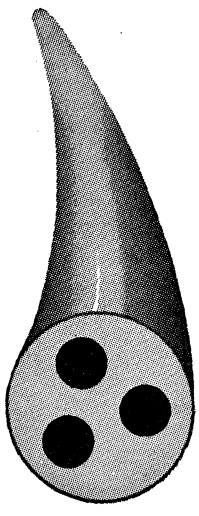
ERSIN FLUX

Ersin Flux is exclusive to Multicore and will not be found in any other solder. It is a high grade, water white rosin, homogeneously activated.

Ersin Flux has a vigorous fluxing action and possesses the non-corrosive and protective features of the original rosin. Soldered joints made with Ersin Flux do not corrode even after prolonged exposure to any degree of humidity. Ersin Flux reduces the surface tension of molten solder, causing it to wet metals rapidly, increasing speed of operation with resultant production economies.

Free from objectionable odor. Non-toxic in use.

Leaves nothing but pure rosin on the work after soldering, and may be used wherever plain rosin is specified.



MULTICORE SOLDER

Three separate cores of flux eliminate possibility of no flux in a portion of the wire, which may occur in single cored solder. Guaranteed continuity of the flux stream prevents "dry" joints, i.e., those having high electrical resistance.

Although there are three cores of flux in Multicore, the total percentage of flux to solder is less than many single cored solders.

Very rapid melting results from the multiple core construction which provides thinner walls of solder than are found in the same gauge single cored solder. Multicore's unique properties make perfect joints possible on difficult metalsand alloys, even if oxidized.

Ability to tin rapidly produces perfect joints with less solder. Greater coverage per pound.

MULTICORE SALES CORPORATION • NEW YORK 13, N. Y.

ERSIN
Multicore
3-CORE SOLDER
ERSIN
Multicore
3-CORE
SOLDER
CONTAINS 3 CORES OF NON-CORROSIVE FLUX
Multicore
World's Finest
3 CORE SOLDER

Standard Wire Gauge	Diam. in Inches	Diam. in M/ms.	Approximate Number of Feet per lb. ALLOY Tin content is shown first					
			60/40	50/50	45/55	40/60	30/70	20/80
10	.128	3.251	24.5	23.6	23.3	22.7	21.6	20.8
12	.104	2.642	37.2	35.7	35.2	34.6	32.7	31.5
13	.092	2.337	47.5	45.6	45	44	41.9	40.4
14	.080	2.032	62.8	60.2	59.4	58	55.2	53.2
16	.064	1.626	98	94.3	93	91	86.5	83.4
18	.048	1.219	174.5	167	165	161	154	148
19	.040	1.016	251	241	238	232	221	212
20	.036	.914	310	298	294	287	273	263
22	.028	.711	512	492	486	474	452	436

ALLOY Tin/Lead	B.S. Grade	MULTICORE Color Code	MELTING TEMPERATURES Solidus of all these alloys is 183° C.–361° F.		Recommended bit temperature	
			° C. Liquidus	° F.	° C.	° F.
60/40	K	Red	189	372	229	444
50/50	F	Yellow	214	417	254	489
45/55	(M)	Crimson/Buff	225	437	265	509
40/60	G	Green	232	450	272	522
30/70	J	White	255	491	295	563
20/80	—	Purple	275	527	315	599

Now Available in

Extra High Melting Point

COMSOL ALLOY

ERSIN MULTICORE SOLDER is now available in Comsol Alloy having a melting point of 296° C. This is 113° above the solidus melting point of usual tin/lead alloys. Comsol is a special soft silver solder. Hitherto it has been available only in ingots or in solid wire. Now, for the first time, it is available in the form of Ersin Multicore Solder.

The usual range of tin/lead alloys in which cored solders are supplied have a solidus melting temperature of 183° C. and liquidus temperatures of between 183° C. and 275° C. It should be noted that joints made with these tin/lead alloys may not possess sufficient strength if the components soldered are subjected to excessively high temperatures.

For this reason, ERSIN MULTICORE COMSOL SOLDER is especially suitable for soldering processes in the manufacture of electric motors, projector lamps and all products which are likely to undergo relatively high temperatures during their working life.

ERSIN MULTICORE COMSOL SOLDER is as easy to use as tin/lead alloys and the same procedure should be employed by applying the solder either simultaneously with the soldering iron or after the components have been heated by a torch or other means.

An outstanding feature of Comsol is a great improvement in resistance to creep by comparison with tin/lead solders, both at normal and at elevated temperatures. At 150° C., for example, a 50-50 tin/lead solder will fail under a load of 100 lbs. per square inch in approximately 10 hours. The following results were obtained with Comsol at the same temperature:

Load, Lb. per sq. in.	Time to failure
500	250 hours
250	about 1 year
100	No creep

PROPERTIES OF COMSOL.

Alloy	Composition	Melting range ° C.	Tensile strength tons/sq. in.	Elongation per cent	Electrical conductivity % IACS
Comsol	Silver-tin-lead	296	2.5	40	8.0

Ersin Multicore Solder in Comsol Alloy is supplied normally in 16 s.w.g. Other gauges are available to special order. The highest melting point Ersin Multicore Solder previously manufactured has been Pure Tin with a melting point of 232 ° C.

MULTICORE SALES CORP. • NEW YORK 13, N. Y.

Two famous KESTER FLUX-CORE SOLDERS

KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
"RESIN-FIVE"

KESTER "RESIN-FIVE" CORE SOLDER

Formulated especially for Radio and TV; will easily solder such metals as brass, zinc and ferrous alloys. It is non-corrosive and non-conductive.

KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
Plastic Rosin-Core

KESTER PLASTIC ROSIN-CORE SOLDER

The most widely used solder in the TV and radio field. All Kester Solders are made from the finest tin and lead available.

- ★ Kester Plastic Rosin-Core Solder
- ★ Kester "Resin-Five" Core Solder
- ★ Kester "44" Resin-Core Solder
- ★ Kester Radio Solder
- ★ Kester Acid-Core Solder
- ★ Kester "A" Flux-Core Solder
- ★ Kester Nosput Flux-Core Solder
- ★ Kester Knorust Flux-Core Solder
- ★ Specialized Flux-Core Solders
- ★ Solid Wire and Bar Solders
- ★ Kester "Solderforms," Rings, Pellets, Washers, Unusual Shapes
- ★ External Rosin Soldering Fluxes
- ★ Other Fluxes
- ★ Kester Soldering Iron Brackets

For Peak Soldering Efficiency, It's Kester!

Kester offers every conceivable type of Solder product. Strand sizes as small as .008" diameter in Flux-Core Solder, unusual alloys and varying Flux contents or Core sizes.

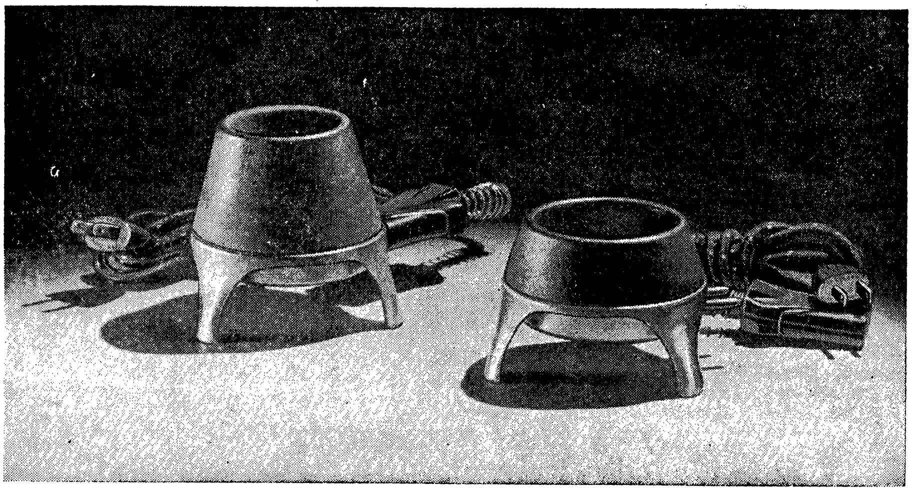
A Technical Service for Manufacturers

If you are not getting peak efficiency or have a specific problem in your soldering operations, take advantage of the facilities of Kester's Technical Department. . . . It costs you nothing.

STANDARD FOR THE TV AND RADIO FIELD KESTER SOLDER **KESTER SOLDER COMPANY**

4253 Wrightwood Avenue, Chicago 39, Illinois • Factories Also at Newark, New Jersey - Brantford, Canada

LECTROHM SOLDER POTS



FOR PRODUCTION-LINE TINNING OF SMALL WIRES and PARTS

- ***Individual Pots for Each Operator***
- ***Sturdy Construction***
- ***Two Sizes — 1¾ and 2 lb. Capacity***

Here at last is an electric solder pot good for long life in production-line tinning yet inexpensive enough for only occasional use. Available in 1¾ and 2 lb. capacities, these pots are ideal for continuous operation in radio, motor and other electrical equipment plants where individual solder pots are required. By using a rheostat, Lectrohm Solder Pots can be used from 100 watts, for melting waxes and compounds, to 450 watts for maintaining solder at 850° F. Only small amounts of solder need be melted at a time, depending upon your requirements.

Lectrohm Solder Pot is composed of cast iron pot mounted by a single screw on a cadmium-plated steel stand. Single-heat, porcelain nickel-chrome heating element (easily and inexpensively replaced) heats the pot. The unit operates on 110 v. AC or DC but can be had for any specified voltage. Furnished with 6′ Underwriters' approved cord and attachment plug. Spare elements of special wattages are available.

SPECIFICATIONS

No.	Solder Cap. in Lbs.	Height Overall	Diam.	Cup Depth	Wattage	Element
200	1¾	2¾″	2⅜″	⅞″	200	A
250	2	3¾″	2″	1¾″	250	B

Price, either pot, $4.98. Spare replacement elements $1.42 each

LECTROHM
INCORPORATED
5560 NORTHWEST HIGHWAY
CHICAGO 30, ILLINOIS

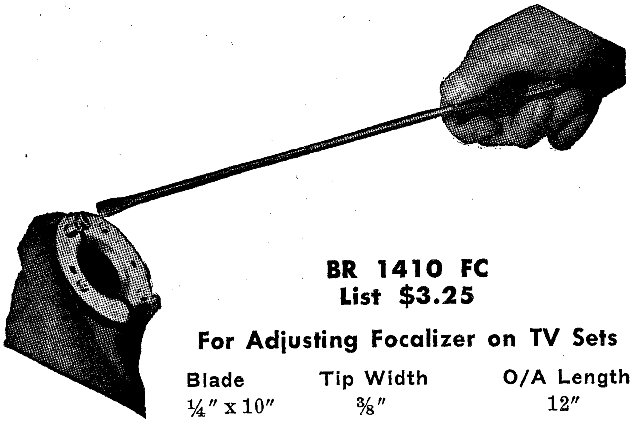
Net

Quality XCELITE *Tools*

REG. TRADE MARK

FOR PINPOINT

FOCALIZER ADJUSTMENT



BR 1410 FC
List $3.25

For Adjusting Focalizer on TV Sets

Blade	Tip Width	O/A Length
¼″ x 10″	⅜″	12″

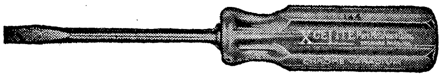
Other Beryllium Copper Sizes		
BR186	⅛ x 6	List $1.25
BR1810	⅛ x 10	List 1.35
BR3168	3/16 x 8	List 2.20
BR146	¼ x 6	List 2.75
BR148	¼ x 8	List 2.95

XCELITE

BERYLLIUM-COPPER SCREWDRIVERS

- Non-magnetic — no disturbance to television image
- Blade needs no continual regrinding as with fibre or plastic
- Better fatigue resistance than steel
- Long 10″ shanks to reach into chassis — wide tapered blade to fit adjustment screw snugly

ROUND BLADES



Number	Size Blade	List	Weight Box of 10
**R-181	⅛″ x 2″	$0.30	½ lb.
*R-183	⅛″ x 3″	.40	½ lb.
*R-184½	⅛″ x 4″	.40	½ lb.
*R-3322	3/32″ x 2″	.30	½ lb.
*R-3323	3/32″ x 3″	.40	½ lb.
*R-3324	3/32″ x 4″	.40	½ lb.
R-182	⅛″ x 2″	.50	½ lb.
R-184	⅛″ x 4″	.55	½ lb.
R-186	⅛″ x 6″	.60	¾ lb.
R-188	⅛″ x 8″	.70	1 lb.
R-1810	⅛″ x 10″	.80	1 lb.
R-5323	5/32″ x 3″	.65	1 lb.
R-5324	5/32″ x 4″	.65	1 lb.
R-5325	5/32″ x 5″	.65	1 lb.
R-5328	5/32″ x 8″	.80	1¼ lb.
R-3163	3/16″ x 3″	.75	1½ lb.
R-3164	3/16″ x 4″	.80	1½ lb.
R-3166	3/16″ x 6″	.95	1¾ lb.
R-3168	3/16″ x 8″	1.00	1¾ lb.
R-31610	3/16″ x 10″	1.15	2 lb.
R-31618	3/16″ x 18″	1.95	¼ lb. (pk. 1) ea.
R-142	¼″ x 2″	.95	1¾ lb.
R-144	¼″ x 4″	1.00	2 lb.
R-146	¼″ x 6″	1.05	2¼ lb.
R-148	¼″ x 8″	1.15	2½ lb.
R-1410	¼″ x 10″	1.25	2¾ lb.
R-5166	5/16″ x 6″	1.35	3½ lb.
R-5168	5/16″ x 8″	1.45	4 lb.

Prices and sizes of XCELITE square bladed screwdrivers on request.

SQUARE BLADE
Stubbies

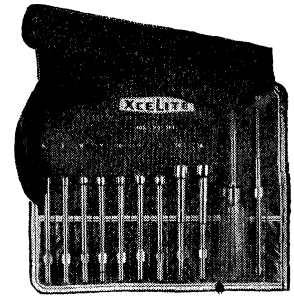
Number	Size Blade	List	Weight Box of 10
S-3161	3/16″ x 1¼″	$0.65	¾ lb.
S-141	¼″ x 1½″	.75	1¼ lb.
S-5161	5/16″ x 1½″	.75	¼ lb.

No. 99 PR MULTI-PURPOSE SET

13

QUICK-CHANGE NUT DRIVERS AND SCREW-DRIVERS IN DURABLE ROLL PLASTIC KIT

FOR ONLY $11.95



Just snap the desired blade into the big XCELITE combination handle. Here's a tremendous time and money saver, in fact, our most popular set. Contains the following:

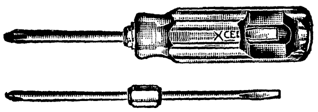
Number	Size	Description	List
99-1		Handle	$1.00
99-6	3/16 in.	Nutdriver	.75
99-7	7/32 in.	Nutdriver	.75
99-8	¼ in.	Nutdriver	.75
99-9	9/32 in.	Nutdriver	.75
99-10	5/16 in.	Nutdriver	.75
99-11	11/32 in.	Nutdriver	.75
99-12	⅜ in.	Nutdriver	.75
99-14	7/16 in.	Nutdriver	1.00
99-16	½ in.	Nutdriver	1.00
99-81	3/16 & 9/32	Reversible SD	1.25
99-82	#1 & #2	Reversible Phillips	1.25
	Also Available		
99-83	Reversible Reed & Prince		1.25

SUBJECT TO CHANGE WITHOUT NOTICE
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Quality XCELITE Tools

REG. TRADE MARK

MULTI-PURPOSE SCREWDRIVERS



"Combination-Detachable" SCREWDRIVER

ORIGNATED BY XCELITE

This original dual-purpose screwdriver has a BIG handle—1 3/16" x 4 1/16" —hollow to receive the dual-blade units. Gives you two screwdrivers for about the price of one, and every additional blade you buy means more savings.

INDIVIDUAL Blade Combinations

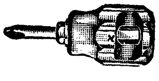
(Please Order by Number)

No. 1—No. 1 Phillips and 3/16" XceLite
No. 2—No. 2 Phillips and ¼" XceLite
No. 3—No. 3 Phillips and 5/16" XceLite

COMPLETE (Regular Type)	List Price	BLADES ONLY (Regular Type)	List Price
No. CR1	$1.90	No. RB1	$1.05
No. CR2	1.90	No. RB2	1.05
No. CR3	1.90	No. RB3	1.05

HANDLES ONLY

	List Price
No. 25 Regular	$0.85



STUBBY TYPE

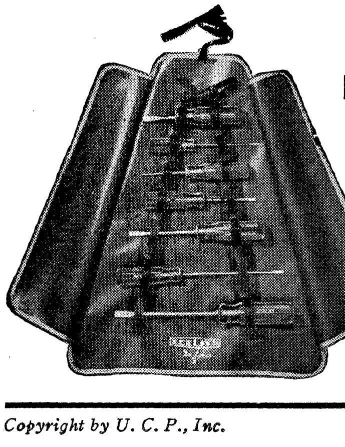
"Combination-Detachable" Screwdrivers

COMPLETE (Stubby Type)		BLADES ONLY (Stubby Type)	
No. CS1	$1.70	No. SB1	$0.90
No. CS2	1.70	No. SB2	.90

HANDLES ONLY

No. 26 Stubby....................$0.80

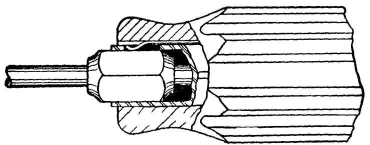
XCELITE No. 3 *De Luxe*



RADIO AND ELECTRICAL PLASTIC ROLL KIT

Set includes: R-142, R-3163, R-5166, R-184, R-144, X-101 and R-3166.

No. 3 $7.85
No. 3C Chrome Plated $8.85

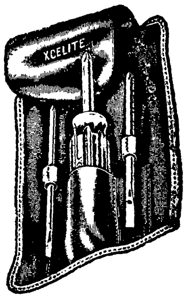


SECTION THRU HEX BUSHING SHOWING LEAF SPRING HOLDING BLADE IN PLACE

Another XCELITE *"First"!*
This New Spring Fastener

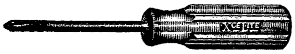
Unique spring-and-bushing assembly makes the simplest and most foolproof fastener yet. It fits all XCELITE ball fastener type blades. Handle is a 7/16" hex NUT DRIVER, and the spring holds the nut from falling.

ROLL KIT Combinations



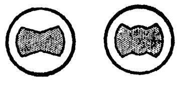
No. CK-3 . . . $4.70 List. Contains RB-1, RB-2, RB3 and Combination Handle.

No. CK-2 . . . $3.65 List. Contains RB-1, RB2 and Combination Handle.



XceLite- Phillips

No.	Point Size	Length Blade	Diameter Blade	Box of Ten Weight	List Price
X-108	1	6"	3/16"	1½ lbs.	$1.15
X-101	1	3"	3/16"	1¼ lbs.	1.05
X-102	2	4"	¼"	2 lbs.	1.35
X-103	3	6"	5/16"	3½ lbs.	1.80
X-104	4	8"	⅜"	5¼ lbs.	2.25
X-1010	1	10"	3/16"	2 lbs.	1.60
X-1020	2	10"	¼"	3 lbs.	1.80
SHORT STUBBY TYPE					
SX-101	1		3/16"	⅞ lbs.	1.00
SX-102	2		¼"	1¼ lbs.	1.10



XCELITE Clutch Head Screwdrivers

Type G No.	Type A No.	Size	Diameter Blade	Length Blade	List Price Each
G-183	A-183	⅛"	3/16"	3"	$1.20
G-5324	A-5324	5/32"	¼"	4"	1.32
G-3164	A-3164	3/16"	¼"	4"	1.32
G-146	A-146	¼"	5/16"	6"	1.75
G-5166	A-5166	5/16"	⅜"	6"	2.15

Note: Both above types are the same size and the same price. **Order by Number.**

XCELITE Pocket Clip Style for Cross Slot (Frearson) Screws

P12S ....List $ .50

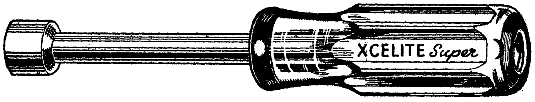
SUBJECT TO CHANGE WITHOUT NOTICE

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Quality XCELITE *Tools*

REG. TRADE MARK

NUT DRIVERS and NUT DRIVER SETS



6″ OVERALL LENGTH

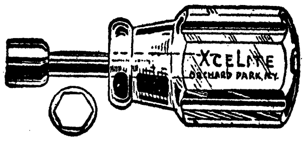
Number	Size	List
6	3/16″	$0.90
7	7/32″	.90
8	¼″	.90
9	9/32″	.90
10	5/16″	.90
11	11/32″	.90
12	⅜″	.90
14	7/16″	1.25
16	½″	1.25

9″ OVERALL LENGTH

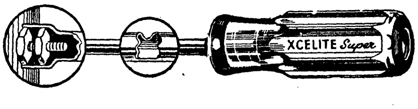
Number	Size	List
A- 6	3/16″	$1.15
A- 7	7/32″	1.15
A- 8	¼″	1.15
A- 9	9/32″	1.15
A-10	5/16″	1.15
A-11	11/32″	1.15
A-12	⅜″	1.15
A-14	7/16″	1.50
A-16	½″	1.50

STUBBIES 3¼″ OVERALL

Number	Nut Size	List
S-8	¼″	$0.80
S-10	5/16″	.80
S-12	⅜″	.80

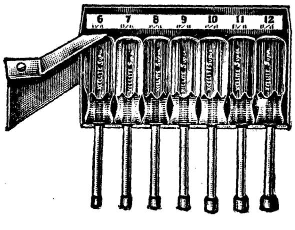


HOLLOW SHAFT NUT DRIVERS

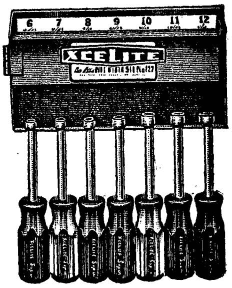


No. and Length Overall	Nut Size	Depth of Hole	Weight per Box	List	Insulated List
HS-8 6″	¼″	5″	1½ lbs.	$1.25	$1.60
HS-10 6″	5/16″	5″	1½ lbs.	1.25	1.60
HS-11 6″	11/32″	5″	1½ lbs.	1.25	1.60
HS-12 6″	⅜″	5″	2 lbs.	1.25	1.60
HS-14 7″	7/16″	5″	2¾ lbs.	1.40	1.75
HS-16 7″	½″	5″	2¾ lbs.	1.45	1.80
HS-18 7″	9/16″	5″	2¾ lbs.	1.50	1.85
HS-20 7″	⅝″	5″	3 lbs.	1.75	2.10

Deluxe No. 127 Set



7 Nut Drivers in Lockable Wall Holder



- COLORED HANDLES FLASH SIZE!
- NEW LARGER HANDLES — BRIGHTER COLORS
- Set contains Nos. 127-6, 127-7, 127-8, 127-9, 127-10, 127-11, and 127-12. Furnished in either full polished or chrome finish.
- Sturdy metal holder in red wrinkle finish.

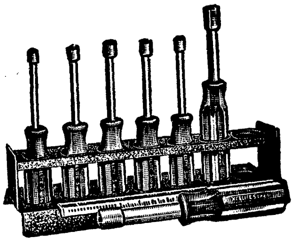
Individual Drivers, Polished	$0.95
Chrome	1.05
No. 127—Polished Finish	7.85
No. 127C—Chrome Plated	8.75

NO. 137 NUT DRIVER SET

With Colored Handles

Consisting of:

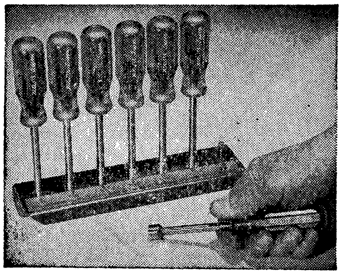
Number		Size	List Pol.	List Chr.
127-6	Black	3/16″	$.95	$1.05
127-8	Red	¼″	.95	1.05
127-10	Yellow	5/16″	.95	1.05
127-11	Green	11/32″	.95	1.05
127-12	Blue	⅜″	.95	1.05
HS-16	Red	½″	1.50	1.60
HS-18	Brown	9/16″	1.55	1.65



No. 137 Polished Finish	$8.95
No. 137C Chrome Plated	9.95

NO. 17 NUT DRIVER SET

Amber Handles — Highly Polished Blades



Consisting of:

Number	Size
6	3/16″
7	7/32″
8	¼″
9	9/32″
10	5/16″
11	11/32″
12	⅜″

Complete with Rack $6.85

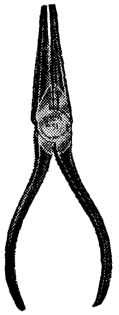
Quality XCELITE Tools

REG. TRADE MARK

PLIERS

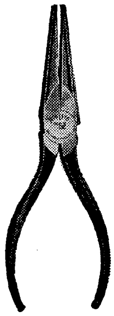
XCELITE Pliers are made specifically for work in the electrical and electronics fields. Each is made of the high grade alloy best suited for the job. Workmanship, materials and inspection are of the highest quality. All blades are hand honed.

No. 51 XCELITE
Long Needle Nose and Side Cutter Plier



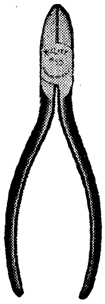
List Price $3.65

No. 52 XCELITE
Long Needle Nose (Without Side Cutter)



List Price $3.00

No. 55 XCELITE
Electricians' Diagonal Plier, 5″

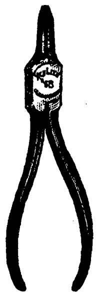


List Price $3.60

No. 60 XCELITE
Side Cutting Plier 6″

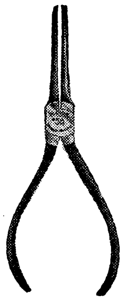
List Price $3.45

No. 58 XCELITE
Radio and TV Plier



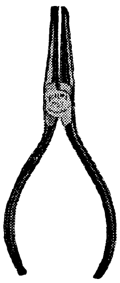
List Price $4.35

No. 56 XCELITE
Slim Needle Nose Plier



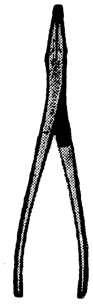
List Price $3.75

No. 57 XCELITE
Long Duck Bill Plier, 7″



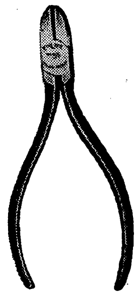
List Price $3.25

No. 59 XCELITE
Chain Nose Electricians' Plier



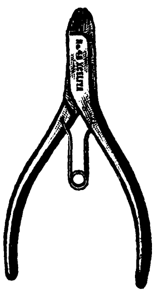
List Price $3.85

No. 54 XCELITE
Electricians' Midget Diagonal Plier, 4″



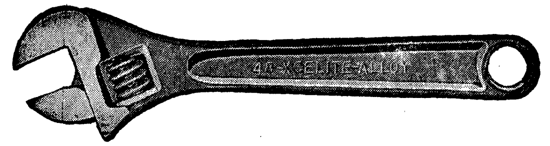
List Price $3.60

No. 49 XCELITE
Electronic Midget Snip (Shear action type)



List Price $3.70

XCELITE ADJUSTABLE WRENCHES



- THIN PATTERN designed by mechanics for mechanics to get into hard-to-reach places!
- EASY TURNING KNURL for quick adjustment.
- AN IDEAL TOOL for securing antenna mounts!
- STRONG! Drop forged from chrome alloy steel!
- BETTER GRIP! Movable jaws has wide bearing surface!

No.	Size	Wgt. Box of 6	List
44	4″	⅞ lb.	$2.65
46	6″	2 lbs.	2.75
48	8″	3¾ lbs.	3.30

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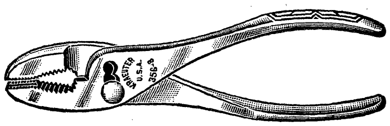
KRAEUTER

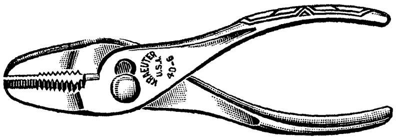
The choice of skilled mechanics



"GRIPTITE" COMBINATION PLIERS

The finest quality combination pliers. Designed for heavy duty. Slightly tapered nose, sharp deep milled teeth and grooved jaws for gripping cotter pins and wire. Knurled handles. The 8″ and 10″ sizes have three slip joint adjustments which give a wide range of parallel grips.

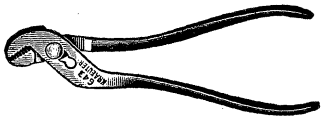
No.	Length	Finish	Wt. per doz.	Price Each
356	5½ in.	Full Nickel	3½ lbs.	**$1.95**
356	6 in.	Full Nickel	5¼ lbs.	**2.20**
356	8 in.	Full Nickel	8¾ lbs.	**2.75**
356	10 in.	Full Nickel	14 lbs.	**3.30**



THIN NOSE COMBINATION PLIERS

The tapered jaws and thin nose of these pliers enable the mechanic to grip objects difficult to reach in tight, narrow working spaces. Knurled handles, milled gripping teeth and wire cutters.

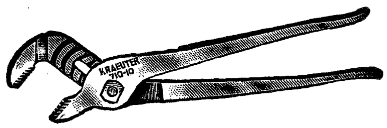
No.	Length	Finish	Wt. per doz.	Price Each
40	6 in.	Nickel Plated	4¼ lbs.	**$1.65**



IGNITION PLIERS

Very narrow head, serrated gripping teeth and well shaped handle grips. Three slip joint positions.

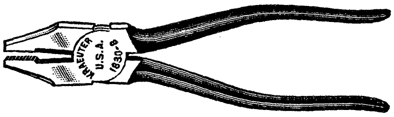
No.	Length	Finish	Wt. per doz.	Price Each
643	5 in.	Blue Temper	1 lb.	**$1.90**



TONGUE-N-GROOVE JOINT PLIERS

Forged fins and grooves give these pliers five parallel adjustments of ¼″, ½″, ¾″, $1\frac{1}{16}$″ and 1½″. The working capacity has a range from $\frac{3}{16}$″ to 1⅝″. Forged "T" section gives added strength to lower jaw.

No.	Length	Finish	Wt. per doz.	Price Each
710	**10 in.**	**Polished**	**9 lbs.**	**$2.85**

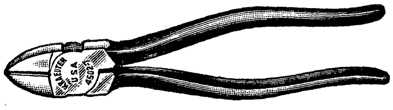


ELECTRICIANS' SIDE CUTTING PLIERS

Used extensively in electric wiring of fixtures, appliances and other general repair work.

Very popular with mechanics on production work where electric wiring is required in the finished product.

No.	Length	Finish	Wt. per doz.	Price Each
1830	4 in.	Blue Temper	1½ lbs.	**$2.35**
1830	5 in.	Blue Temper	2¼ lbs	**2.50**
1830	6½ in.	Blue Temper	4¾ lbs.	**2.75**
1830	7 in.	Blue Temper	6¾ lbs.	**3.00**
1830	8 in.	Blue Temper	8¼ lbs.	**3.40**



NEW KRAEUTER 7-IN. DIAGONAL CUTTING PLIERS WITH FULL-FASHIONED HANDLES

Well balanced, with carefully matched knives and full-fashioned handles, providing proper leverage and comfort for continuous cutting.

No.	Length	Finish	Wt. per doz.	Price Each
4502	7 in.	Blue Temper	6 lbs.	$3.30

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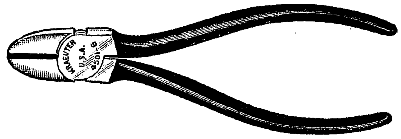
KRAEUTER

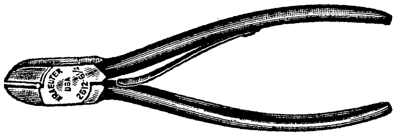
The choice of skilled mechanics



DIAGONAL "OBLIQUE" CUTTING PLIERS

Made especially for close cutting. Used extensively in electrical work, radio manufacturing, telephone and automotive ignition work.

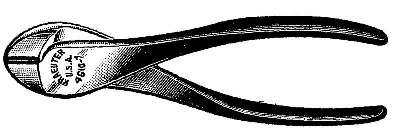
No.	Size	Finish	Wt. per doz.	Price Each
4501	4½ in.	Blue Temper	1½ lbs.	$2.35
	5 in.	" "	2¾ lbs.	2.65
	6 in.	" "	3¾ lbs.	3.00



WIRE STRIPPING DIAGONAL CUTTING PLIERS

Narrow head and notched cutters for stripping fine wire .062 diameter. The spring in the handle makes this a very fast cutting tool. Used by manufacturers of electric fixtures, appliances, radio and radio tubes.

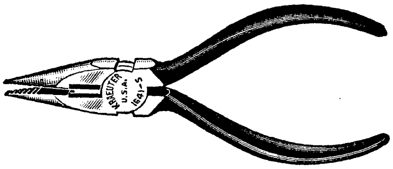
No.	Length	Finish	Wt. per doz.	Price Each
2612	6½ in.	Blue Temper	3 lbs.	$3.40



"HIGH POWER" DIAGONAL CUTTING PLIERS

This type diagonal plier has the joint very close to the end of the cutter to give added leverage which makes cutting easy. A well balanced tool adaptable to the work in many trades.

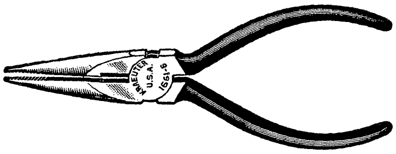
No.	Length	Finish	Wt. per doz.	Price Each
4610	5 in.	Blue Temper	2¼ lbs.	$2.60
4610	7 in.	Blue Temper	5¾ lbs.	3.00



SHORT CHAIN NEEDLE NOSE PLIERS

Short tapered jaws for bending and looping wire. The short nose gives these pliers extra leverage and gripping strength. Used for wiring switches and other open electric work.

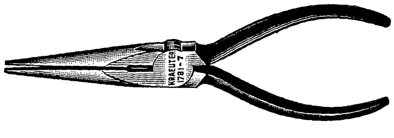
No.	Length	Finish	Wt. per doz.	Price Each
1641	5 in.	Blue Temper	2¾ lbs.	$2.60
1643	Same without Cutter		2¾ lbs.	2.20



LONG CHAIN NEEDLE NOSE PLIERS

Long tapered jaws and needle nose. Used extensively in all industries . . . from switchboard, electric fixture and appliance wiring . . . to motor ignition, aviation and general manufacturing work.

No.	Length	Finish	Wt. per doz.	Price Each
1661	6 in.	Blue Temper	3½ lbs.	$3.00
1671	Same without Cutter		3½ lbs.	2.35



EXTRA LONG CHAIN NOSE PLIERS

Extra long tapered jaws with narrow pointed nose. Used extensively in automotive . . . electric . . . aviation and general production and repair work.

Length of jaw 2¾ in.

No.	Length	Finish	Wt. per doz.	Price Each
1781	7 in.	Blue Temper	3¾ lbs.	$3.40
1771	Same without Cutter		3¾ lbs.	2.60

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KRAEUTER

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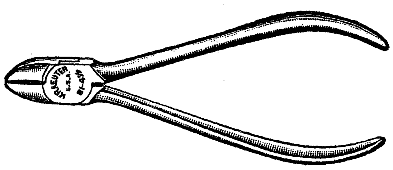
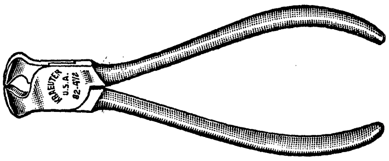


JEWELERS' DIAGONAL CUTTING PLIERS

Carefully edged cutting jaws. Designed for very fine close work.

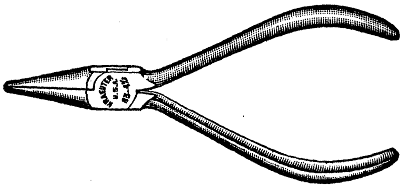
No.	Size	Finish	Wt. per doz.	Price Each
81	4½″	Full Polished	1 lb.	$3.00



JEWELERS' END CUTTING NIPPERS

Carefully edged cutting jaws. Designed for very fine close work.

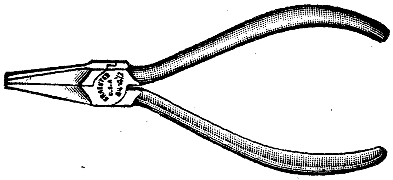
No.	Size	Finish	Wt. per doz.	Price Each
82	4½″	Full Polished	1½ lbs.	$3.60



JEWELERS' CHAIN NOSE PLIERS

Jaws 1/32″ diameter at point of nose. No cutter. 1 1/16″ smooth jaw. Supplied with milled jaws when specified.

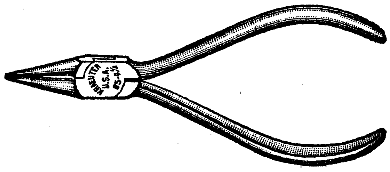
No.	Size	Finish	Wt. per doz.	Price Each
83	4½″	Full Polished	1¼ lbs.	$2.90



JEWELERS' FLAT NOSE PLIERS

Jaws ⅛″ wide at point of nose. No cutter. 1 1/16″ smooth jaw. Supplied with milled jaws when specified.

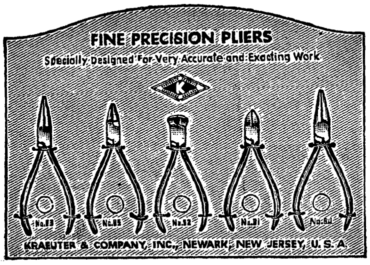
No.	Size	Finish	Wt. per doz.	Price Each
84	4½″	Full Polished	1½ lbs.	$3.00



JEWELERS' ROUND NOSE ROUND JAW PLIERS

Each jaw 1/32″ diameter at point of nose. No cutter. 15/32″ smooth jaw. Supplied with milled jaws when specified.

No.	Size	Finish	Wt. per doz.	Price Each
85	4½″	Full Polished	1¼ lbs.	$3.00

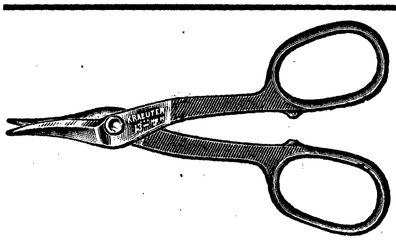

FINE PRECISION PLIERS
Specially Designed For Very Accurate and Exacting Work
No.83
No.85
No.82
No.81
No.84
KRAEUTER & COMPANY, INC., NEWARK, NEW JERSEY, U. S. A.

NO. 88 COUNTER DISPLAY

Size 12½″ x 8¾″ with easel back

One each of Nos. 81, 82, 83, 84, 85. Fine precision made pliers for the hobby crafters—model builders—skilled technicians.

Price, complete $15.50



COMBINATION PATTERN SNIP

Drop forged from solid steel and skillfully heat treated for hard shearing blades. The bolt and nut assembly is machine finished with bearing surfaces properly hardened to resist wear.

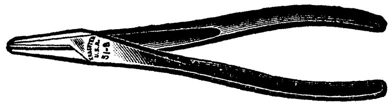
No.	Length	Cut	Finish	Wt. ea.	Price Each
13	7″	1⅝″	Polished head Black handles	5½ oz.	$3.00

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . . SEND FOR CATALOG

KRAEUTER

KRAEUTER & COMPANY, INC. NEWARK, NEW JERSEY, U.S.A.

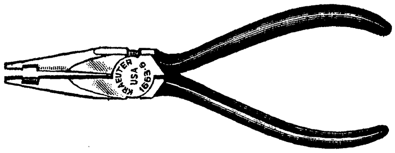
The choice of skilled mechanics



SHORT JAW DUCK BILL PLIERS

Short flat nose — long handles, for greater leverage. Milled jaws. Inside length 1⅜″ tapering to flat nose.

No.	Length	Finish	Wt. per doz.	Price Each
51	8 in.	Blue Temper	5 lbs.	**$2.70**



RADIO AND IGNITION NOSE CUTTING PLIERS

Designed to reach into tight spots and grip or cut small wires. Useful in precision wiring where ordinary pliers are too bulky.

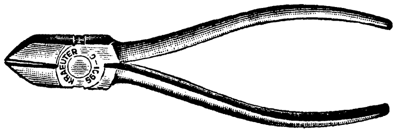
No.	Length	Finish	Wt. per doz.	Price Each
1663	8 in.	Blue Temper	3¼ lbs.	**$3.10**

PROFESSIONAL LINE

SPECIAL NEEDLE POINT PLIERS
FULL POLISHED FINISH

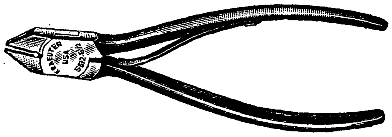
Designed for light, fine professional work. The special needle points of these pliers make them invaluable where delicate adjustments have to be made.

(NOSE OF THESE PLIERS NOT GUARANTEED)



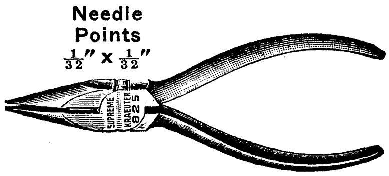
NEEDLE POINT DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5601	4½ in.	Full Polished	2 lbs.	**$3.00**
5601	5 in.	Full Polished	2¾ lbs.	**3.20**
5601	6 in.	Full Polished	3¾ lbs.	**3.60**



NEEDLE POINT DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5612	6½ in.	Full Polished (With Stripping Notch)	3 lbs.	**$4.00**

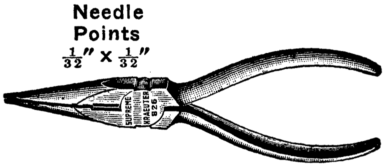


SHORT NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per doz.	Price Each
824	4½ in.	Full Polished	1½ lbs.	**$3.00**
834	Same without cutter			**2.50**

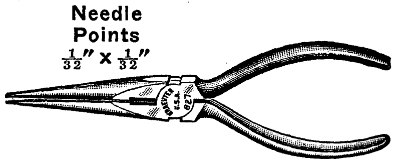
MEDIUM NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
825	5 in.	Full Polished	2¼ lbs.	**$3.25**
835	Same without cutter			**2.75**



LONG NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
826	6 in.	Full Polished	3 lbs.	**$3.50**
836	Same without cutter			**3.00**



EXTRA LONG NOSE NEEDLE POINT PLIERS

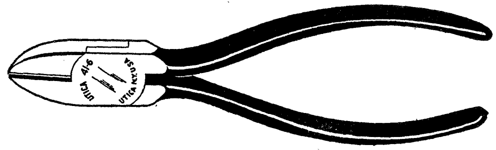
No.	Length	Finish	Wt. per.doz.	Price Each
827	7 in.	Full Polished	3¾ lbs.	**$3.90**
837	Same without cutter		3¾ lbs.	**3.40**

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . . SEND FOR CATALOG

Utica Tools

ADD POWER TO YOUR HANDS

UTICA®

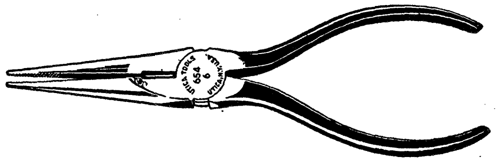


No. 41 • Electricians' Diagonal Pliers—

Hardened and tempered in oil. Narrow nose for radio and electrical work.

Size	4 in.	5 in.	6 in.
List Price	$2.20	$2.54	$2.80

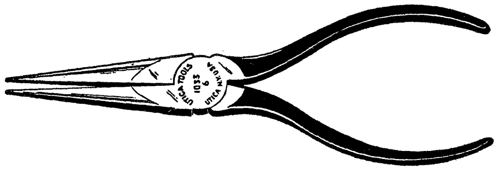
Can be furnished with insulation stripper.



No. 654 • Utica Long Needle Nose Side Cutting Pliers

This is a long, fine, spring-tempered nose, side-cutting pliers, drop forged and with hand-honed cutting knives.

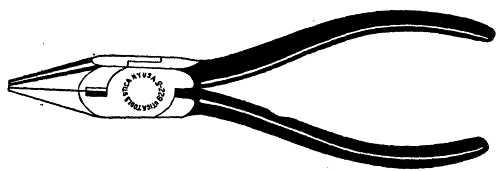
Size	6 in.	7 in.
List Price	$2.80	$3.30



No. 1033 • Utica Long Chain Needle Nose Pliers

This is a long needle nose type of pliers without a side cutter. It has a spring-tempered needle nose with a fine balance for delicate work.

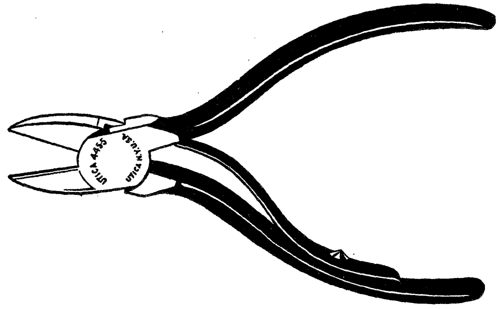
Size	6 in.	7 in.
List Price	$2.20	$2.40



No. 622 • Utica Short Chain Nose Mechanic's Pliers

This pliers is a Short Chain Nose Side Cutting Pliers, hand-honed cutting knives. It makes an all around Electrical Mechanic's pliers.

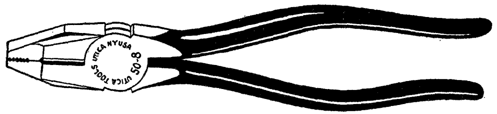
Size	5 inches
List Price	$2.40



No. 44S • Special Diagonal Pliers with Spring

A slim nose cutting pliers designed especially for radio and electrical work. Extra fine hand honed edges permit nearly flush cuts.

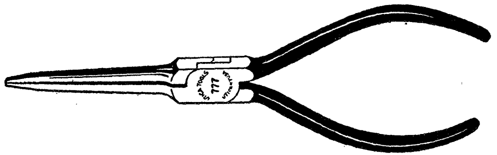
Size	5 in.	6 in.
List Price	$2.86	$3.20



No. 50 • Utica Standard Side Cutting Pliers

An ideal tool for electrical work. Drop forged and skillfully tempered. Its cutting qualities are unsurpassed by any side cutting pliers.

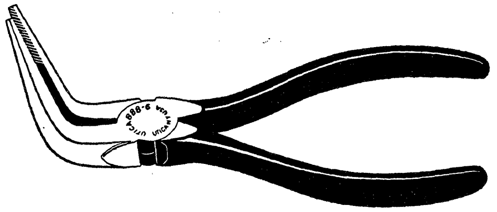
Size	4 in.	5 in.	6 in.	7 in.	8 in.
List Price	$2.10	$2.20	$2.40	$2.70	$3.00



No. 777 • Utica Long Needle Nose Pliers

This pliers has a long, half-round, spring-tempered nose for very fine work in assembling small electrical apparatus.

Size	6 inches
List Price	$2.54



No. 888 • Curved Needle Nose Pliers—

This is a long curved spring-tempered Needle Nose Pliers for use in deep and narrow places. It may be used without turning or twisting the hand in the assembling of small fixtures, electrical apparatus, etc.

Size	6 inches
List Price	$2.90

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Utica Tools

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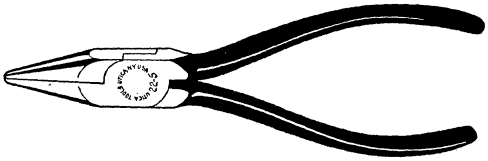
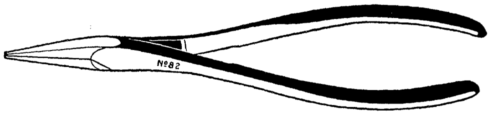


No. 22 • Utica Chain Nose Pliers

This is a Short Chain Nose Pliers forged from a fine quality of steel with fine points particularly adapted for the use of Jewelers, Opticians, Telephone Installers, Electricians and Radio Assemblers.

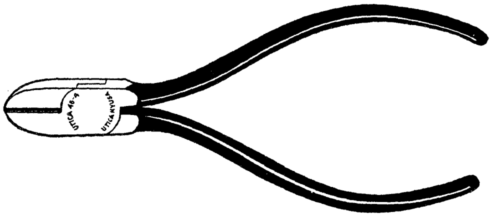
Size	4 in.	4½ in.	5 in.	6 in.
List Price	**$1.80**	**$1.95**	**$2.04**	**$2.20**



No. 82 • Utica Chain Nose Wiring Pliers

This is a special Radio Repair Man's Pliers having a chain nose for those who prefer this type of construction.

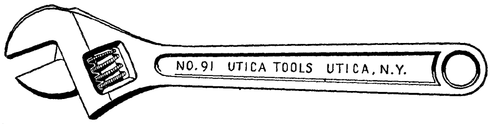
Size	8 inches
List Price	**$2.60**



No. 46 • Midget Diagonal Pliers

A small Diagonal for radio and electrical work. Hand honed edges with a slim nose for use in cramped quarters.

Size	4 inches
List Price	**$2.36**

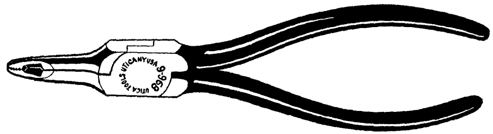

NO. 91 UTICA TOOLS UTICA, N.Y.

No. 91 • Thin Adjustable 22½° Angle Wrenches, Electronically Hardened Steel

Both the handle and jaw are drop forged from a high grade **Alloy Steel**, hardened and tempered in oil. Will not break or wear in the gear teeth and allow play in the wrench, permitting the jaw to slip off the nut.

It will give better service and last longer than any other wrench.

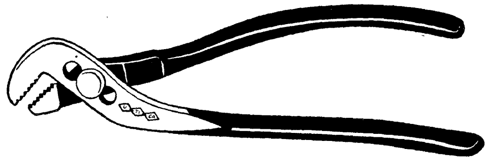
Size	4 in.	6 in.	8 in.	10 in.	12 in.
List Price	**$1.80**	**$1.80**	**$2.10**	**$2.70**	**$3.96**



No. 896 • Utica Radio Pliers

This is a General Radio Repair Man's Pliers. It has a center cutter and flat scored nose for looping and bending.

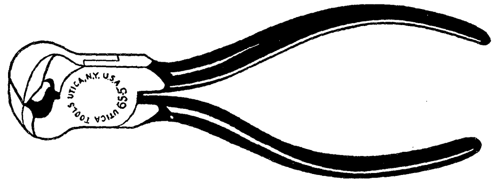
Size	6 inches
List Price	**$3.30**



No. 517 • Utica Midget Slip-Joint

This Slip-Joint Pliers with its unique design will fit many small units, spring tempered. A great little tool for he hard to get at adjustmens.

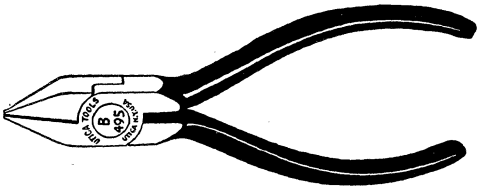
No. 517	5 inches
List Price	**$1.25**



No. 65 • Utica End Cutting Nippers

This Nippers is forged from a fine graed of steel, carefully tempered. The keen cutting edges and "Perfect Fit" handles make this a very popular tool.

Size	4½ in.	5 in.
List Price	**$2.90**	**$3.14**



B495 • Flush Cut Diagonal Pliers

This is a Custom-built pliers designed for flush cutting in confined spaces. Can be furnished with spring in handle.

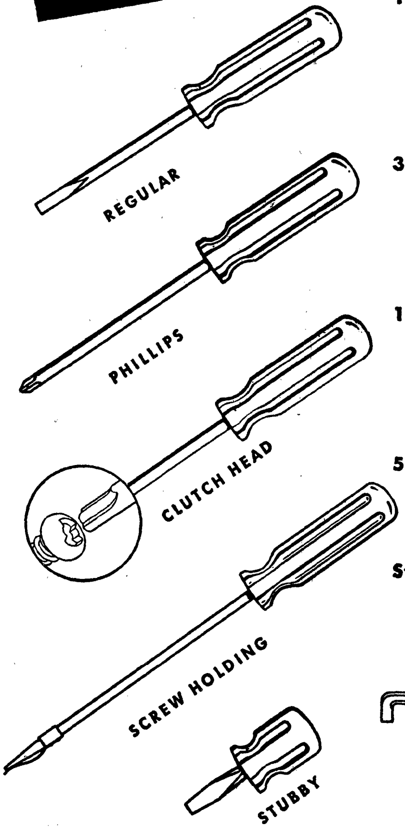
Size	4 inches

List price on request

VACO
BREAK-PROOF SHOCK-PROOF
Screw Drivers

- **Chrome Vanadium Steel Blades**
- **Fire-Safe Amberyl Shock and Break-Proof Handles**

LISTED UNDER REEXAMINATION SERVICE UNDERWRITERS' LABORATORIES, INC.



1/8" Cabinet Style—Round Blades

Stock Number	Blade Diameter and Length
A 216-4	1/8"x4"
A 216-6	1/8"x6"
A 216-8	1/8"x8"
A 216-10	1/8"x10"

3/16" Cabinet Style—Round Blades

A 316-4	3/16"x4"
A 316-5	3/16"x5"
A 316-6	3/16"x6"
A 316-8	3/16"x8"
A 316-10	3/16"x10"

1/4" General Service—Round Blades

A 416-4	1/4"x4"
A 416-5	1/4"x5"
A 416-6	1/4"x6"
A 416-8	1/4"x8"
A 416-10	1/4"x10"

5/16" Heavy Duty—Round Blades

A 516-6	5/16"x6"
A 516-8	5/16"x8"
A 516-10	5/16"x10"

Stubbys

A 132	1/4"x1-1/4"
A 135	5/16"x1-3/4"

Phillips Drivers

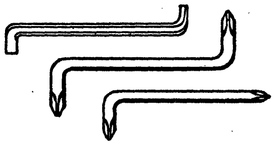
Stock Number	Point No.	Blade Diam. and Length
P 01	0	1/8"x2-1/2"
P 1	1	3/16"x3"
P 2	2	1/4"x4"
P 3	3	5/16"x6"
P 5 (Stub)	2	1/4"x1-3/4"
P 6 (Stub)	1	3/16"x1-1/4"
P 12 (Pocket Clip)	1	1/8"x2-1/2"

Clutch Head Drivers

Stock Number	Bit Point Diameter and Blade Length
CH 43	1/8"x3"
CH 54	5/32"x4-1/4"
CH 64	3/16"x4-1/4"
CH 86	1/4"x6"
CH 106	5/16"x6"
Stub Styles	
CH 51	5/32"x1-1/2"
CH 61	3/16"x1-1/2"

Screw Holding Drivers

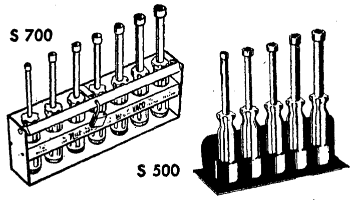
Stock Number	Blade Diam. & Length
OK 23	1/8"x3"
OK 24	1/8"x4"
OK 26	1/8"x6"
OK 28	1/8"x8"
OK 34	3/16"x4"
OK 36	3/16"x6"
OK 38	3/16"x8"

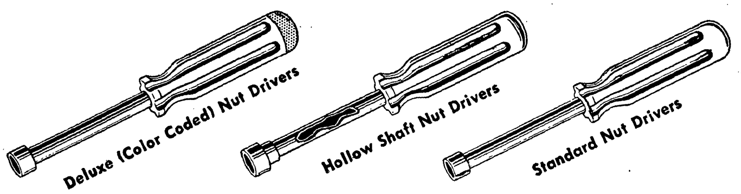


Offset Screw Drivers

Stock No.	Type	Blade
VO 1	Regular	5/32"x3"
VO 2	Regular	1/4"x4"
P 120	Phillips	#1 point one end, #2 point other end
P 111	Phillips	#1 point both ends
P 222	Phillips	#2 point both ends

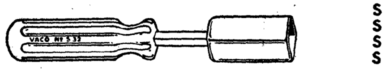
NUT DRIVERS





Wall or Bench Stand Nut Driver Sets . . . 3/16" to 1/2"

Stock No.	Contains:
S 700	7 Nut Drivers, Color Coded Handles
S 500	5 Standard Nut Drivers



Electrolytic Condenser Nut Wrenches

Stock No.	Takes Size:
S 32	31/32"
S 34	1"
S 36	1-5/32"

Deluxe *Super Hard* Nut Drivers (Color Coded)

Stock No.	Hexagon Size (Across Flats)	Overall Length	Color Code
S 61	3/16"	6-3/4"	Brown
S 82	1/4"	6-3/4"	Red
S 103	5/16"	6-3/4"	Green
S 114	11/32"	6-3/4"	Ivory
S 125	3/8"	6-3/4"	Blue
S 146	7/16"	6-3/4"	Orange
S 167	1/2"	6-3/4"	Yellow

All *Hollow Shaft* Nut Drivers

Stock No.	Hexagon Size (Across Flats)	Handle Diam. and Length	Overall Length
S 160	1/2"	1"x3-5/8"	7"
S 180	9/16"	1"x3-5/8"	7"

Standard *Extra Hard* Nut Drivers

Stock Number	Hexagon Size (Across Flats)	Overall Length
S 5	5/32"	6-3/4"
S 6	3/16"	6-3/4"
S 7	7/32"	6-3/4"
S 8	1/4"	6-3/4"
S 9	9/32"	6-3/4"
S 10	5/16"	6-3/4"
S 11	11/32"	6-3/4"
S 12	3/8"	6-3/4"
S 14	7/16"	6-3/4"
S 15	15/32"	6-3/4"
S 16	1/2"	6-3/4"
	Extra Large Size	
S 17	17/32"	8"
S 18	9/16"	8"
S 19	19/32"	8"
S 20	5/8"	8"

Beryllium Copper Drivers

Round Blade, Non-Spark, Non-Magnetic

Stock Number	Blade Diameter and Length
VB 26	1/8"x6"
VB 210	1/8"x10"
VB 38	3/16"x8"
VB 46	1/4"x6"
VB 48	1/4"x8"

Insulated Blade Screw Drivers

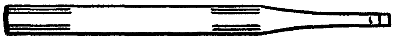
VR 241	1/8"x4"
VR 261	1/8"x6"
VR 281	1/8"x8"
VR 361	3/16"x6"
VR 381	3/16"x8"

Non-Metallic Radio and TV Aligners

Bone Fiber Blade

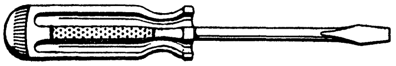
AT 55	5/32"x5"
AT 510	5/32"x10"

Non-Magnetic *Metal Tip* Radio and TV Aligner



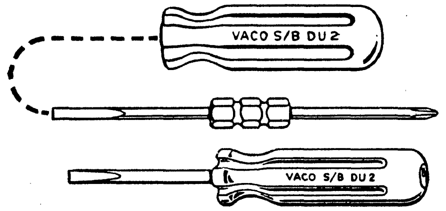
Stock Number	Body Size	Bit Diameter	Capacitance
AT 45	3/8"x5-1/2"	3/16"	Slight

Neon Light Screw Drivers



Stock Number	Blade Diameter and Length
AN 44	1/4"x4"
AN 2 (Pocket Clip)	1/8"x3"

Duplex *"Reversible"* Drivers



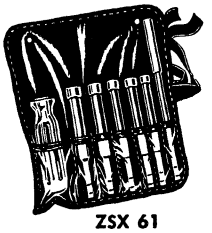
Stock Number	Blade Size and Type
DU 2	No. 1 Phillips, One End 3/16" Regular, Other End
DUH 4	No. 2 Phillips, One End 1/4" Regular, Other End
DUP 12	No. 1 Phillips, One End No. 2 Phillips, Other End

VACO RADIO and TV KITS

ZBX 51

ZBX 51 Screw Driver Kit

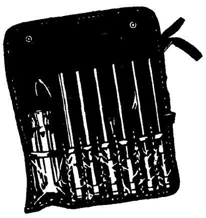
A fine, all-purpose kit of interchangeable regular and Phillips blades that fit same handle. 6" extension makes 10 combinations possible. In durable leatherette bag.



ZSX 61

ZSX 61 Nut Driver Kit

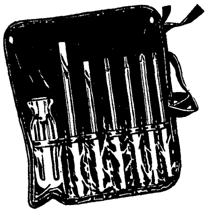
A most versatile and complete hexagon wrench kit for radio, television or any other work requiring speedy nut setting. All sockets are super hard for maximum utility and long life. 6" extension makes 10 blade lengths possible. In handy leatherette tool roll.



ZA 70

ZA 70 Allen Driver Kit

This useful kit consists of 6 hexagon drivers, handle and bag. Will service hexagon recessed opening screws Nos. 4, 5, 6, 8, 10, 1/4", 5/16" and 3/8". Each bit is extra long and may ground back as wear occurs.



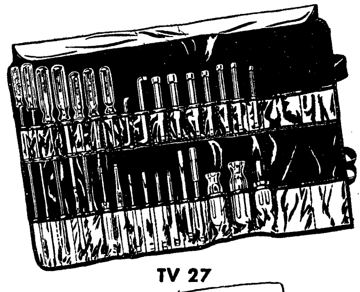
ZU 75

ZU 75 Universal Driver Kit

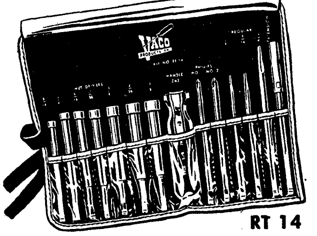
Here is a kit that is universal in its applications since it will serve all three types of the most popular screws in use today—regular slotted, Phillips, and clutch head. All popular size blades are included—3/16" and 1/4" for regular slotted screws; No. 1 and No. 2 Phillips; 5/32" x 3/16" clutch head.

27-Piece TV and Radio Kit

NO. TV 27 KIT—Contains practically every hand tool necessary for television and radio work, *plus* extra pockets for pliers and other personal tools according to individual preferences. Contains one each of the following: ZH 1 medium duty handle; ZH 2 heavy duty handle; ZX 56 extension; A 132 1/4" stub; 1/4", 3/16", 1/8" regular bits; No. 1 Phillips and No. 2 Phillips bits; 3/16", 1/4", 5/16", 11/32", 3/8", 7/16" and 1/2" hex. wrenches; AT 45 metal tip aligner; A 116-2 3/32" pocket clip; P 01 #0 Phillips thin blade; OK 24 1/8" screw holding; VR 261 1/8" insulated blade; OK 38 3/16" screw holding; VR 381 3/16" insulated blade; VB 210 1/8" x 10" non-magnetic adjuster; AT 510 5/32" fiber aligner; VO 2 medium offset; VO 1 small offset.



TV 27



RT 14

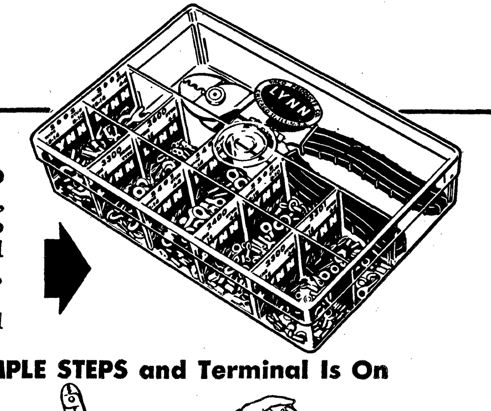
14-Piece TV and Radio Kit

NO. RT 14 KIT—Here's a handy, convenient kit for radio and TV service men. Contains nut drivers, Phillips and regular drivers, plus ZH 2 heavy duty handle and famous Vaco 6" extension which doubles the usefulness of each driver. In durable leatherette tool roll.

VACO PRODUCTS CO., 317 E. Ontario St., Chicago 11, Illinois
In Southwest: 1325 McKinney Ave., Dallas 2, Texas
In Canada: Vaco-Lynn Products Co., Ltd., 204 Laurier Ave. W., Montreal 8, Quebec

LYNN *Lightning* Solderless Terminals by VACO

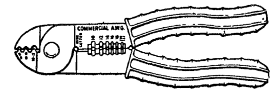
Wide Assortment of Solderless Terminals for General Use, Radio and TV



No. 2195 Service Kit

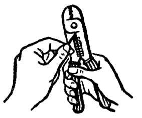
A GENERAL PURPOSE ELECTRICAL, RADIO AND TV KIT containing everything needed for making clean, fast, trouble-free electrical connections. No soldering! No fuss or muss! Kit includes . . . No. 1900 Crimping Tool and Terminals Nos. 2300, 2301, 2302, 2400, 2401, 2402, 2600, 2601, 2602, and 3300 . . . all in a clear plastic box with tight-fitting lid. Individual bins marked with terminal stock number cards.

No. 1900 Crimping Tool

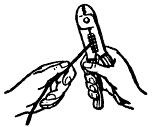


No solder . . . no iron . . . no heating . . . a perfect connection every time with this tool and Lynn Lightning Solderless Terminals by Vaco! Crimping tool has wire cutters, indenting die, wire-stripping die, shock-proof, slip-proof plastic handle sleeves. For No. 22 to No. 10 gauge wire.

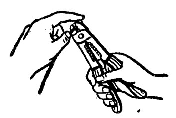
Only 3 SIMPLE STEPS and Terminal Is On



1. Cut Wire. Use the wire cutter built into the crimping tool to cut wire proper length.



2. Strip Wire. Insert end of wire into proper wire stripping opening, close jaws, rotate tool one-half turn, then pull insulation off wire.

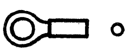


3. Crimp Terminal. Insert stripped portion of wire into terminal barrel, place barrel in proper crimping nest with seam directly opposite crimping tooth and close tool like pliers.

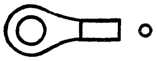
Extra long barrel on terminal provides easy crimp and perfect contact. Only ONE crimp necessary. Barrel *always* remains round.

Quick Reference Chart for Easy Terminal Identification

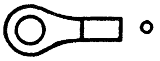
RING TONGUE TERMINALS



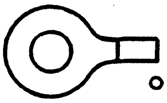
No. 2300
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16



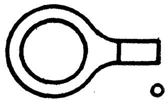
No. 2301
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16



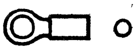
No. 2302
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 22 - 16



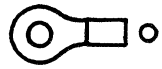
No. 2303
Hole Dia. — 17/64″
Stud Size — 12 - 1/4
Wire Size — 22 - 16



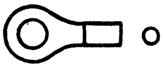
No. 2304
Hole Dia. — 13/32″
Stud Size — 3/8
Wire Size — 22 - 16



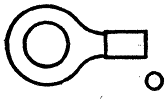
No. 2400
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 16 - 14



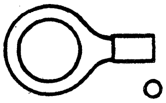
No. 2401
Hole Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 16 - 14



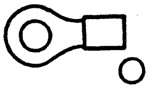
No. 2402
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 16 - 14



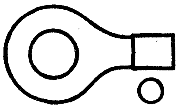
No. 2403
Hole Dia. — 17/64″
Stud Size — 12 - 1/4
Wire Size — 16 - 14



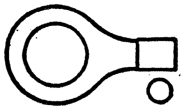
No. 2404
Hole Dia. — 13/32″
Stud Size — 3/8
Wire Size — 16 - 14



No. 2502
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 12 - 10

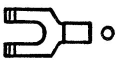


No. 2503
Hole Dia. — 17/64″
Stud Size — 12 - 1/4
Wire Size — 12 - 10

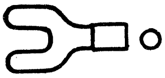


No. 2504
Hole Dia. — 13/32″
Stud Size — 3/8
Wire Size — 12 - 10

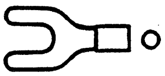
SPADE TONGUE TERMINALS



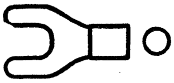
No. 2600
Slot Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16



No. 2601
Slot Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 16 - 14

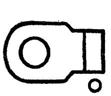


No. 2602
Slot Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 16 - 14

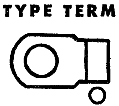


No. 2702
Slot Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 12 - 10

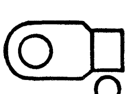
FLAG TYPE TERMINALS



No. 2802
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 22 - 16

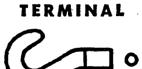


No. 2902
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 16 - 14



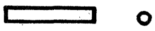
No. 3002
Hole Dia. — 13/64″
Stud Size — 8 - 10
Wire Size — 12 - 10

HOOK TYPE TERMINAL

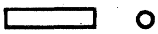


No. 3300
Slot Dia. — 5/32″
Stud Size — 4 - 6
Wire Size — 22 - 16

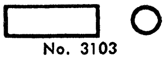
BUTT CONNECTORS



No. 3101
Wire Size — 22 - 16

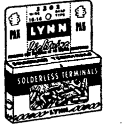


No. 3102
Wire Size — 16 - 14



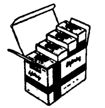
No. 3103
Wire Size — 12 - 10

CONVENIENT $ PAK



All Lynn Lightning Terminals are available in convenient $ Paks. When any of the "bins" of the service kit are empty, user merely purchases a refill just right for replacing stock. Refill Paks are well marked for trouble-free handling, and designed with "window" for easy identification.

BULK PAK



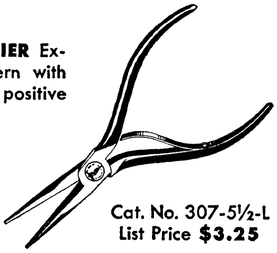
Also available in bulk—packed 250 pieces to a package, 4 packages to master carton of 1,000.

VACO PRODUCTS CO. • 317 East Ontario Street • Chicago 11, Illinois, U.S.A.

KLEIN top quality PLIERS!

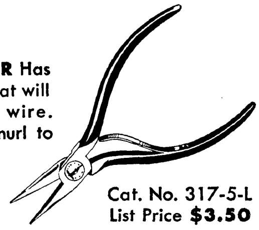
NEW SMALL PATTERNS

Price Includes Leaf Spring



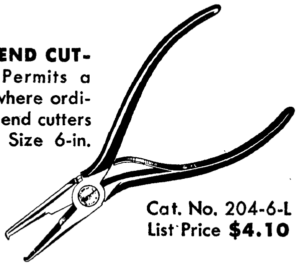
LONG NOSE PLIER Extremely slim pattern with knurled jaws for positive grip. Size 5½-in.

Cat. No. 307-5½-L
List Price **$3.25**



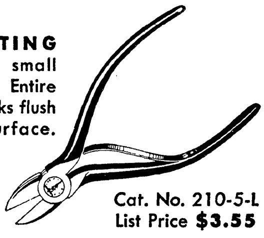
CHAIN NOSE PLIER Has a very fine knurl that will not damage soft wire. Available without knurl to order. Size 5-in.

Cat. No. 317-5-L
List Price **$3.50**



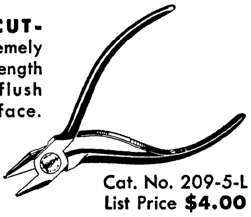
TRANSVERSE END CUTTING PLIER Permits a clean flush cut where ordinary oblique or end cutters are too bulky. Size 6-in.

Cat. No. 204-6-L
List Price **$4.10**



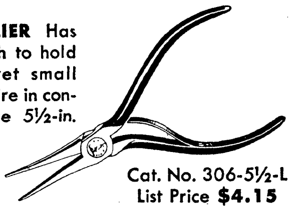
OBLIQUE CUTTING PLIER For cutting small wires and trimming. Entire length of knives works flush against cutting surface. Sizes 5 and 6-in.

Cat. No. 210-5-L
List Price **$3.55**
Cat. No. 210-6-L
List Price **$3.60**



LIGHTWEIGHT CUTTING PLIER Has extremely narrow head. Entire length of knives works flush against cutting surface. Size 5-in.

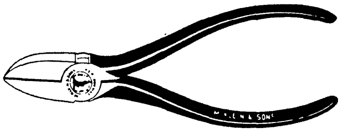
Cat. No. 209-5-L
List Price **$4.00**



DUCK BILL PLIER Has jaws wide enough to hold small springs, yet small enough to form wire in confined space. Size 5½-in.

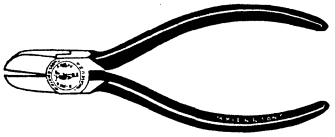
Cat. No. 306-5½-L
List Price **$4.15**

Klein Pliers are hammer forged from high-grade tool steel, individually fitted, tempered, adjusted and tested. All patterns available with tempered steel leaf spring. Prices on request.



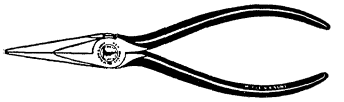
OBLIQUE CUTTING PLIER Has narrow head with knives accurately fitted for close, clean cut. Sizes 5 and 6-in.

Cat. No.	202-5	202-6
List Price	**$2.85**	**$2.90**



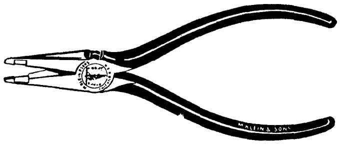
OBLIQUE CUTTING PLIER Ideal for light cutting in confined places. Measures exactly 5-in. long.

Cat. No. 245-5
List Price **$2.85**



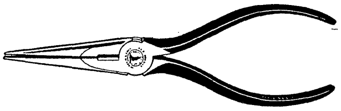
LONG NOSE PLIER Point tapers to 3/32-in. Sizes 5, 6 and 7-in. Specify No. 303-6 for 6-in. plier with 1/16-in. point.

Cat. No.	301-5	301-6	301-7	303-6
List Price	**$2.55**	**$2.60**	**$2.85**	**$2.60**



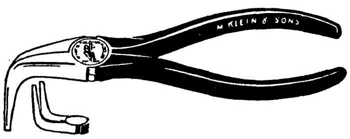
LONG NOSE PLIER Has ¼-in. cutters ¼-in. from point for cutting deep in confined places. Size 6-in.

Cat. No. 301-6-P
List Price **$4.00**



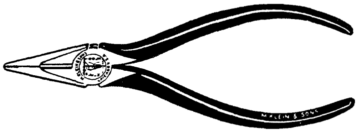
LONG NOSE, SIDE-CUTTING PLIER Has same features as 301 series but with cutting knives. Jaws taper to 3/32-in. round point. Sizes 5, 6 and 7-in.

Cat. No.	203-5	203-6	203-7
List Price	**$3.00**	**$3.15**	**$3.30**



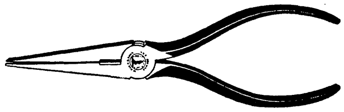
LONG CURVED NOSE PLIER Designed to give full clearance and prevent skinning of knuckles. Size 6-in.

Cat. No. 302-6
List Price **$3.25**



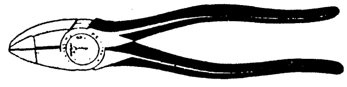
CHAIN NOSE PLIER WITH CUTTERS Made in 6-in. size only. Specify 317 series for 5 and 6-in. sizes without cutters.

Cat. No.	217-6	317-5	317-6
List Price	**$3.15**	**$3.20**	**$2.65**



DUCK BILL PLIER WITH CUTTERS Wide jaws give firm grip. Specify 304-6 for plier without cutters. Sizes 6-in.

Cat. No.	205-6	304-6
List Price	**$3.25**	**$2.75**



SIDE CUTTING PLIER, N. E. TYPE "Streamlined" pattern with full clearance back of knife permitting use on insulated wire. Sizes 5, 6, 7, 8 and 9-in.

Cat. No.	201-5-NE	201-6-NE	201-7-NE	201-8-NE	201-9-NE
List Price	**$3.25**	**$3.50**	**$3.75**	**$4.50**	**$4.75**

"Since 1857"

Mathias KLEIN & Sons
Established 1857 Chicago, Ill., U.S.A.
3200 BELMONT AVE. • CHICAGO 18, ILL.

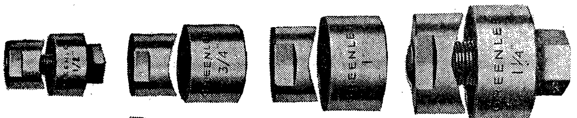
TRADE DISCOUNT APPLIES TO *LIST PRICES ONLY*

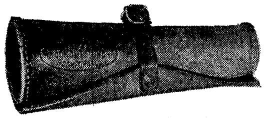
TOOLS FOR CRAFTSMEN

GREENLEE

KNOCKOUT PUNCHES AND CUTTERS

Greenlee Tool Co., Rockford, Illinois

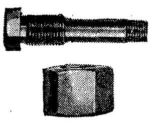




NO. 735 KNOCKOUT PUNCH SET

Designed primarily for the electrical trade to permit fast, easy enlarging of knockouts and cutting of holes for conduit in metal boxes and cabinets. Also excellent for automobile work where holes are needed for heater pipes and other accessories. Simply insert the tool in a knockout or small drilled hole and give the screw a few turns with an ordinary wrench. No. 735 set has four punches for cutting ⅞, 1 3/32, 1 11/32, 1 11/16-inch holes for ½, ¾, 1, 1¼-inch conduit. Set is neatly packed in leather case illustrated. The ½-inch punch will cut a ⅞-inch hole for ½-inch conduit where no standard knockout is provided when a 7/16" hole is drilled.

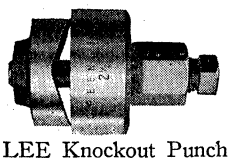
Heavy Duty Drive for ½" Punch



To increase length of service of the ½-inch Knockout Punch in cutting ⅞-inch holes in heavier-gauge sheet metals, the No. 1387 AV Drive Screw with No. 1388 AV Drive Nut illustrated is recommended.

NO. 737 KNOCKOUT PUNCH SET

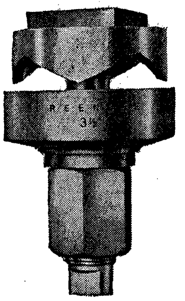
Similar to the No. 735 set, but consists of only two punches for cutting holes to accommodate 1½" and 2" conduit. Packed in leather case.



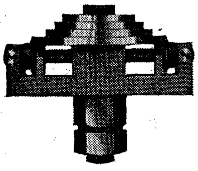
NOS. 738 AND 739 KNOCKOUT PUNCHES

For cutting holes to accommodate 2½" and 3" conduit. Design is similar to that of smaller GREENLEE Knockout Punches: insert in a knockout or drilled hole and turn drive nut with an ordinary wrench. Packed and sold individually.

NOS. 741 AND 742 KNOCKOUT PUNCHES

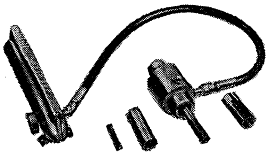


For quickly making smooth openings for 3½" and 4" conduit. Hole is clean, no filing of burrs necessary. Operation is similar to that of other GREENLEE Knockout Punches. Simply insert in hole for 1" conduit and turn drive nut with an ordinary wrench.



No. 740 Knockout Cutter

Companion tool to GREENLEE Knockout Punches. Enlarges knockouts to take 1½, 2, 2½ and 3-inch conduit. Operation is simple since an ordinary wrench drives the tool. Cutting is done by the drive action of two wheel cutters. Special discs can be furnished for cutting odd sizes of holes from 1 15/16 to 3½-inch diameter. Packed in leather case.



NO. 7646 HydraRam KNOCKOUT PUNCH DRIVER

A powerful portable hydraulic unit for driving all GREENLEE Knockout Punches. Also drives GREENLEE Radio Chassis Punches using ⅜" or larger drive screws. Quickly, easily cuts holes in 10-gauge metal. Excellent for use in tight places. Packed in metal case. List price complete, $86.50. Weight, 20 lbs.

KNOCKOUT PUNCHES — LIST PRICES AND WEIGHTS (IN POUNDS)

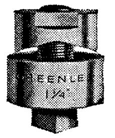
	Hole Size	*Price*	*Weight*
No. 735 Knockout Punch Set Complete..		$10.00	2½
AV121 ½" Punch	⅞"	1.25	1/16
AV122 ½" Die	⅞"	.65	1/16
AV322 ⅜" x 1¾" Drive Screw...		.25	1/16
AV123 ¾" Punch	1 3/32"	1.45	⅛
AV124 ¾" Die	1 3/32"	.80	3/16
AV125 1" Punch	1-11/32"	1.65	3/16
AV126 1" Die	1-11/32"	.95	⅜
AV127 1¼" Punch	1 11/16"	1.90	5/16
AV128 1¼" Die	1 11/16"	1.05	7/16
AV249 ¾" x 2⅞" Drive Screw....		.35	⅜
Heavy Duty Drive for ½" Punch Complete		$1.10	¼
AV1387 Heavy Duty Drive Screw..		.75	⅛
AV1388 Heavy Duty Drive Nut....		.35	⅛
No. 737 Knockout Punch Set Complete...		$10.00	3½
AV439 1½" Punch	1-15/16"	2.30	½
AV440 1½" Die	1-15/16"	2.00	⅝
AV441 2" Punch	2⅜"	3.20	⅞
AV442 2" Die	2⅜"	2.50	1
AV304 ¾" x 3½" Drive Screw....		.50	7/16
No. 738 Knockout Punch Complete.....		$14.00	4¼
AV1429 2½" Punch	2⅞"	5.40	1⅜
AV1430 2½" Die	2⅞"	5.00	1½
AV1433 Drive Nut		1.35	9/16
AV1434 ¾" x 5⅞" Drive Screw...		2.75	⅞
No. 739 Knockout Punch Complete.....		$19.00	6½
AV1431 3" Punch	3½"	8.00	2½
AV1432 3" Die	3½"	7.50	2½
AV1433 Drive Nut		1.35	9/16
AV1434 ¾" x 5⅞" Drive Screw ...		2.75	⅞
No. 741 Knockout Punch Complete.....		$39.00	10⅜
AV2981 3½" Die	4"	14.00	3¼
AV2982 3½" Punch	4"	18.00	3
AV3026 1⅛" x 7½" Drive Screw...		6.00	2¼
AV3036 Drive Nut		2.00	1¼
AV3037 Bushing		2.25	⅝
No. 742 Knockout Punch Complete.....		$48.00	12⅛
AV2983 4" Die	4½"	18.00	3½
AV2984 4" Punch	4½"	24.00	4½
AV3026 1⅛" x 7½" Drive Screw...		6.00	2¼
AV3036 Drive Nut		2.00	1¼
AV3037 Bushing		2.25	⅝
No. 740 Knockout Cutter Complete.....		$15.00	4½
AV323 Lock Screw (2)		.30	
AV324 Wheel Cutter (2)		.50	
AV325 Feed Nut		.20	
AV326 Disc for 1½" Conduit		.70	
AV2021 Disc for 2" Conduit		.80	
AV2022 Disc for 2½" Conduit		1.00	
AV2023 Disc for 3" Conduit		1.20	
AV327 Body		5.00	
AV328 Center Shaft (¾" diameter)		.80	
AV329 Drive Nut		.80	
AV330 Retainer Screw (2)		.45	
AV331 Cutter Bushing (2)		.25	
AV332 Cutter Support (2)		.65	
AV333 Key Washer		.25	
669GB Woodruff Key		.05	

TOOLS FOR CRAFTSMEN
GREENLEE

RADIO CHASSIS PUNCHES

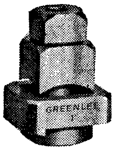
ROUND, SQUARE, "KEY" AND "D" TYPES

Greenlee Tool Co., Rockford, Illinois


No. 730

No. 730 ROUND PUNCH

Swiftly cuts clean, accurate holes in radio chassis for sockets, switches, controls and other equipment. Operates simply with an ordinary wrench for drive power . . . just insert in a small drilled hole and turn drive screw. No reaming or filing . . . hole is smooth, perfect. Thirteen sizes from ½ to 2¼" diameter.


No. 731

No. 731 SQUARE PUNCH

Cuts square or oblong openings as desired. Available in three sizes for making ⅝", ¾" and 1" square holes. Drive screw fits into ½" hole, which can be drilled or made with ½" No. 730 Greenlee Round Punch. Operates with an ordinary wrench for drive power. Individually packed.

No. 732

No. 732 "KEY" PUNCH

Quickly, easily cuts holes for keyed radio sockets. Operates on same principle as other Greenlee Radio Chassis Punches . . . an ordinary wrench supplies the drive power. In four sizes to make openings of 15/16", 1 11/64", 1 17/64", 1 21/64". Drive screw fits into ½" hole. Individually packed.

No. 733

No. 733 "D" PUNCH

Simplifies and speeds the work of making "D" shaped openings for high-frequency, miniature tube sockets and other equipment using this type opening. Available in ½" and ⅝" sizes. Operates on same principle as other Greenlee Radio Chassis Punches with an ordinary wrench supplying the drive power. Drive screw fits into ⅜" drilled hole. Individually packed.

NO. 730 RADIO PUNCHES — LIST PRICES AND WEIGHTS (WTS. IN OZ.)

	Price	Wt.
½" No. 730 Radio Punch Complete	$2.15	1¾
AV-1760 ½" Punch	1.25	¼
AV-1759 ½" Die	.65	¾
AV-1675 ¼" Screw	.25	¾
⅝" No. 730 Radio Punch Complete	2.15	2¼
AV-1742 ⅝" Punch	1.25	½
AV-1743 ⅝" Die	.65	1
AV-1675 ¼" Screw	.25	¾
¾" No. 730 Radio Punch Complete	2.15	3
AV-113 ¾" Punch	1.25	¾
AV-114 ¾" Die	.65	1¼
AV-322 ⅜" Screw	.25	1
⅞" No. 730 Radio Punch Complete	2.15	4¾
AV-121 ⅞" Punch	1.25	1½
AV-122 ⅞" Die	.65	2¼
AV-322 ⅜" Screw	.25	1
1" No. 730 Radio Punch Complete	2.35	6½
AV-87 1" Punch	1.35	1½
AV-88 1" Die	.75	3¾
AV-112 ⅜" Screw	.25	1¼
$1\frac{1}{16}$" No. 730 Radio Punch Complete	2.50	7
AV-1763 $1\frac{1}{16}$" Punch	1.45	2¼
AV-1764 $1\frac{1}{16}$" Die	.80	3½
AV-112 ⅜" Screw	.25	1¼
1⅛" No. 730 Radio Punch Complete	2.50	7¼
AV-91 1⅛" Punch	1.45	2½
AV-92 1⅛" Die	.80	3½
AV-112 ⅜" Screw	.25	1¼
$1\frac{5}{32}$" No. 730 Radio Punch Complete	2.50	7¾
AV-83 $1\frac{5}{32}$" Punch	1.45	2½
AV-84 $1\frac{5}{32}$" Die	.80	4
AV-112 ⅜" Screw	.25	1¼
$1\frac{3}{16}$" No. 730 Radio Punch Complete	2.50	8
AV-115 $1\frac{3}{16}$" Punch	1.45	2¾
AV-116 $1\frac{3}{16}$" Die	.80	4
AV-112 ⅜" Screw	.25	1¼
1¼" No. 730 Radio Punch Complete	2.50	9¾
AV-117 1¼" Punch	1.45	3
AV-118 1¼" Die	.80	5½
AV-112 ⅜" Screw	.25	1¼
1⅜" No. 730 Radio Punch Complete	2.85	10½
AV-119 1⅜" Punch	1.65	3¾
AV-120 1⅜" Die	.95	5½
AV-112 ⅜" Screw	.25	1¼
1½" No. 730 Radio Punch Complete	3.20	12¼
AV-89 1½" Punch	1.90	4¼
AV-90 1½" Die	1.05	6¾
AV-112 ⅜" Screw	.25	1¼
1⅝" No. 730 Radio Punch Complete	$4.75	18
AV-1794 1⅝" Punch	2.80	5
AV-1793 1⅝" Die	1.60	7
AV-249 ¾" x 2¼" Screw	.35	6
1¾" No. 730 Radio Chassis Punch Complete	$5.25	20
AV-1816 1¾" Punch	3.10	6
AV-1815 1¾" Die	1.80	8
AV-249 ¾" x 2¼" Screw	.35	6
1⅞" No. 730 Radio Chassis Punch Complete	$6.00	26
AV-1791 1⅞" Punch	3.50	8½
AV-1792 1⅞" Die	2.00	9½
AV-304 ¾" x 3" Drive Screw	.50	8
2" No. 730 Radio Chassis Punch Complete	$6.20	29
AV-1756 2" Punch	3.70	10
AV-1755 2" Die	2.20	11
AV-304 ¾" x 3" Drive Screw	.50	8
2¼" No. 730 Radio Punch Complete	6.20	37
AV-437 2¼" Punch	3.20	11½
AV-438 2¼" Die	2.50	18
AV-304 ¾" Screw	.50	7½

NO. 731 SQUARE RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
⅝" No. 731 Square Punch Complete	$3.35	4¾
AV-2891 ⅝" Square Punch	1.40	¾
AV-2881 ⅝" Square Die	1.15	1¼
AV-2886 31/64" Drive Screw	.60	1¾
AV-2929 Drive Nut	.20	1
¾" No. 731 Square Punch Complete	3.90	6¾
AV-2882 ¾" Square Punch	1.65	1
AV-2883 ¾" Square Die	1.35	2¼
AV-2914 31/64" Drive Screw	.70	2½
AV-2929 Drive Nut	.20	1
1" No. 731 Square Punch Complete	4.50	8¾
AV-2884 1" Square Punch	1.80	2¼
AV-2885 1" Square Die	1.50	2¼
AV-2887 31/64" Drive Screw	1.00	3¼
AV-2929 Drive Nut	.20	1

NO. 732 "KEY" RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
15/16" No. 732 "Key" Punch Complete	$3.75	8½
AV-2972 15/16" Die	1.00	1¾
AV-2973 15/16" Punch	1.50	2½
AV-2974 31/64" Drive Screw	1.05	3¼
AV-2929 Drive Nut	.20	1
1-11/64" No. 732 "Key" Punch Complete	4.00	10¾
AV-3256 1-11/64" Die	1.10	3
AV-3257 1-11/64" Punch	1.60	2¾
AV-3258 31/64" Drive Screw	1.10	4
AV-2929 Drive Nut	.20	1
1-17/64" No. 732 "Key" Punch Complete	4.25	12½
AV-2975 1-17/64" Die	1.15	3
AV-2976 1-17/64" Punch	1.70	4
AV-2977 31/64" Drive Screw	1.20	4½
AV-2929 Drive Nut	.20	1
1-21/64" No. 732 "Key" Punch Complete	4.50	12½
AV-3262 1-21/64" Die	1.25	4
AV-3263 1-21/64" Punch	1.80	2½
AV-3264 31/64" Drive Screw	1.25	4¾
AV-2929 Drive Nut	.20	1

NO. 733 "D" RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

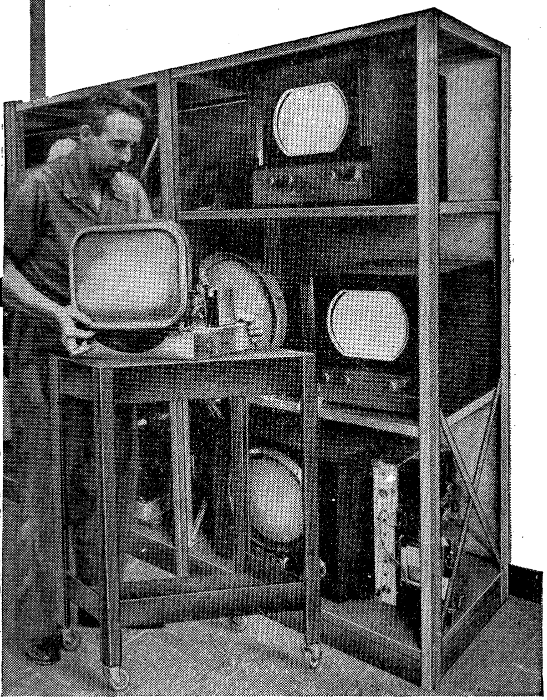
	Price	Wt.
½" No. 733 "D" Punch Complete	$3.50	2
AV-3032 ½" Die	1.00	½
AV-3033 ½" Punch	1.50	¼
AV-3034 $\frac{5}{16}$" Drive Screw	.75	1
AV-3035 Drive Nut	.25	¼
⅝" No. 733 "D" Punch Complete	$3.75	2½
AV-4240 ⅝" Punch	1.60	⅜
AV-4239 ⅝" Die	1.10	⅝
AV-4241 5/16" Drive Screw	.80	1⅛
AV-3035 Drive Nut	.25	⅜

SAVE TIME...EFFORT... AND EQUIPMENT! WITH

Equipto

AURORA, ILLINOIS

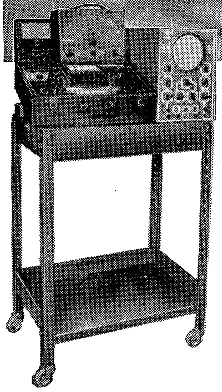
ELECTRONIC CHASSIS and TEST EQUIPMENT STAND



Here's the ideal unit to hold heavy testing equipment. It has a rugged all-steel construction and is the right height for full working convenience. It rolls noiselessly on big 2½" rubber wheels. Use it also as a hand truck for transporting chassis or other heavy equipment. Finished in olive green, polymerized shock-resistant enamel. Available without wheels if desired.

DIMENSIONS & PRICES

No. 710 w/o wheels	18" x 24" x 31"	$12.12
with wheels	18" x 24" x 34"	13.77
No. 711 with wheels and pressed wood top	18" x 24" x 34"	15.27



Above illustrations show the No. 710 Stand used as hand truck for transporting heavy chassis. Adjoining illustration shows it used for holding heavy testing equipment.

No. 710

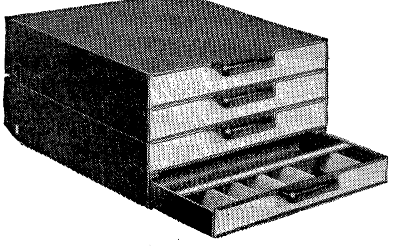
SENSATIONAL NEW

Equipto AURORA, ILLINOIS

LITTLE GEM*

STORAGE CABINETS

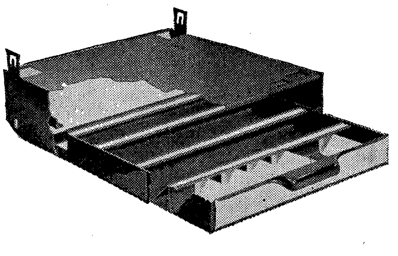
SPEED HANDLING OF TINY PARTS

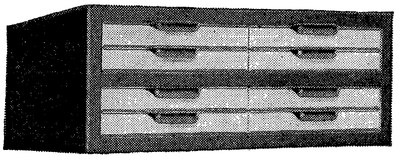


No. 2 Includes 2 Little Gem units in stack. **$17.80**

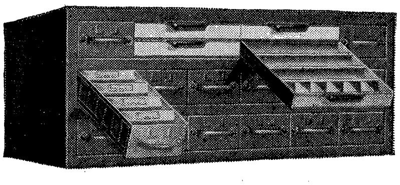
Drawer Is Super-Efficient, Easily Adaptable

Cutaway illustration below shows premium construction features mentioned in adjoining text.





No. 10 Includes 8 Little Gem drawers. Measures 23¼" x 9½" x 11½" deep. **$33.08**



No. 12 Includes 4 Little Gem drawers and 14 3-compartment No. 8505 drawers. Measures 34" x 13¼" x 11½" **$39.14**

Other storage cabinets featuring Little Gem drawers, also available.

These ruggedly built all-steel Little Gem units provide super-efficient facilities for storing capacitors, condensers, phonograph needles, chokes, nuts, bolts, screws, lock washers, and similar items.

The basic Little Gem unit has two drawers and measures 11" x 11" x 3¼". Each drawer may be divided into as many as 28 instantly adjustable compartments through use of flush-fitting dividers. Sides and bottom are fully enclosed to prevent escape of even the tiniest parts. Front of compartment is curved for easy removal of parts . . . rear has ¾" overhang to prevent mixing of items when drawer is jerked open or slammed shut. Label holders identify all parts.

Use the Little Gem individually, in stacks, under counters, on shelving or in countless other locations. Anchoring tabs keep units securely in place no matter how assembled.

See your Equipto jobber today or write for free catalog.

*Trade Mark, Patent Pending

Equipto AURORA, ILLINOIS

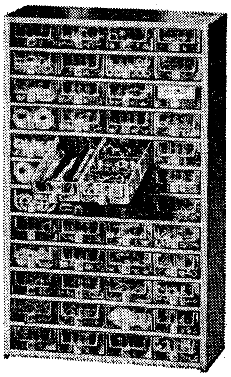
DIVISION OF AURORA EQUIPMENT COMPANY
775 PRAIRIE AVENUE, AURORA, ILLINOIS
STEEL SHELVING... PARTS BINS... DRAWER UNITS

"HAZ-BIN, JR" HAS EVERYTHING!

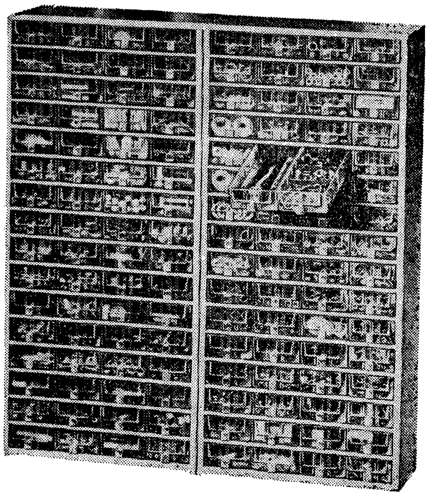
THE HANDIEST CABINET EVER MADE FOR STORING ELECTRONICS PARTS!

What a relief! No more frantic searching for misplaced items. You'll say it's just what you've always wanted. Store electronics parts—free from dust and dirt—and where they can be found instantly. Contents visible! Lifetime guaranteed, crystal-clear plastic drawers. Strong, all-steel cabinet has individual drawer guides, baked-on, silver-gray hammerloid finish. Furnished complete with index cards, removable lengthwise and crosswise drawer dividers, rubber feet. Testimonials from hundreds of users in the electronics field say "it solved small parts storage problems." Drawer size same in all models—2¾" wide x 1-7/16" deep x 5⅞" long. Safety catch anchors open drawers, prevents spilling.

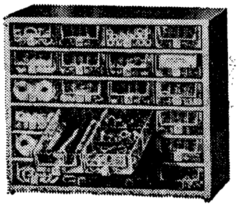
Model	Made in 10 Sizes:	Dimensions High	Wide	Deep	Net Price
J-128	128 drawer	30½"	25⅛"	6"	$55.95
J-96	96 drawer	22½"	25⅛"	6"	42.95
J-64	64 drawer	15¼"	25⅛"	6"	24.95
J-48	48 drawer	22½"	12½"	6"	20.95
J-32	32 drawer	15¼"	12½"	6"	12.95
J-24	24 drawer	12⅛"	12½"	6"	9.95
J-20	20 drawer	10⅛"	12½"	6"	7.95
J-16	16 drawer	8⅛"	12½"	6"	6.95
J-12	12 drawer	6⅛"	12½"	6"	5.95
J-8	8 drawer	4"	12½"	6"	4.25
J-32-SD	24 plastic drawers and 1 large steel drawer (5⅞" long x 3⅜" deep x 11⅝" wide)	15¼"	12½"	6"	12.95
C-32	Carrying Case for J-32 or J-32-SD				7.95
C-16	Carrying Case for J-16				6.95



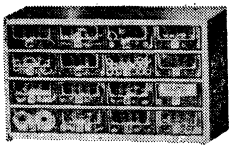
J-48 — 48 DRAWERS
(144 Compartments)



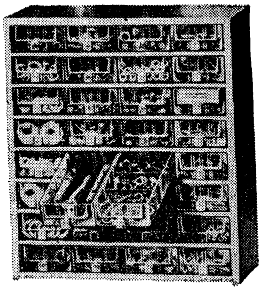
J-128 — 128 DRAWERS
(384 Compartments)



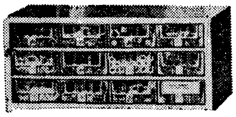
J-24 — 16 DRAWERS
(72 Compartments)



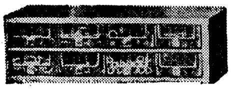
J-16 — 16 DRAWERS
(48 Compartments)



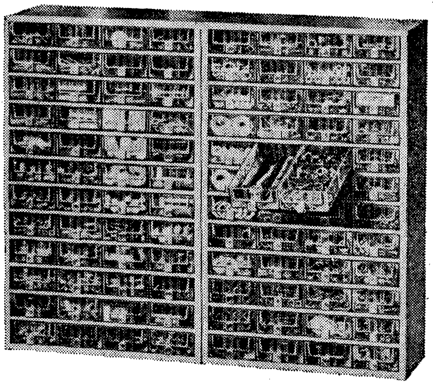
J-32 — 32 DRAWERS
(96 Compartments)



J-12 12 DRAWERS
(36 Compartments)



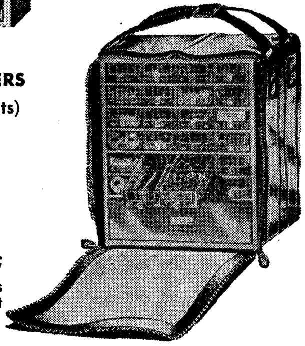
J-8 — 8 DRAWERS
(24 Compartments)



J-96 — 96 DRAWERS
(288 Compartments)

Carrying Cases make On-the-job Service Easy

Makes your small parts case easily portable. Carrying cases made of Textileather's "TOLEX" . . . 100 pound test construction. All vital parts reinforced for long service. Metal studs protect bottoms.

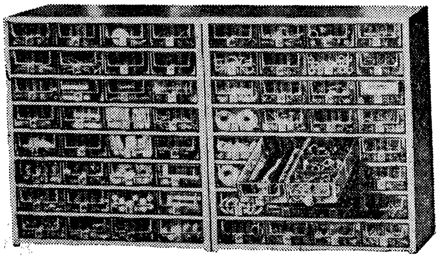


C-32
Carrying Case Illustrated
With J-32-SD Cabinet

FREE ILLUSTRATED FOLDER ON CABINETS WITH LARGER SIZE DRAWERS (10¾L x 2¾W x 2⅞"D)

AKRO-MILS, INC.

P. O. BOX 989-RM AKRON, OHIO



J-64 — 64 DRAWERS
(192 Compartments)

SNAP-ON DRAWER CO. MORROW, OHIO

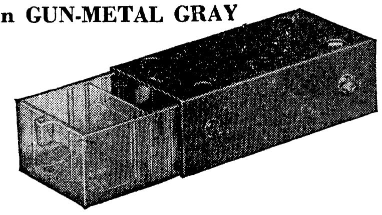
Build Your Own Cabinets

WITH SNAP-ON DRAWERS

The sturdy, steel shells of the SNAP-ON DRAWER snap together on sides, top and bottom, with duplicate shells, to form a strong metal cabinet. No tools are required. Just place the metal buttons of one shell, directly over the holes, in the adjacent shell, and snap the buttons into place, one at a time.

If you wish to change the position of a drawer, the shells can be readily pried apart with a knife blade, and rearranged.

Finished in GUN-METAL GRAY

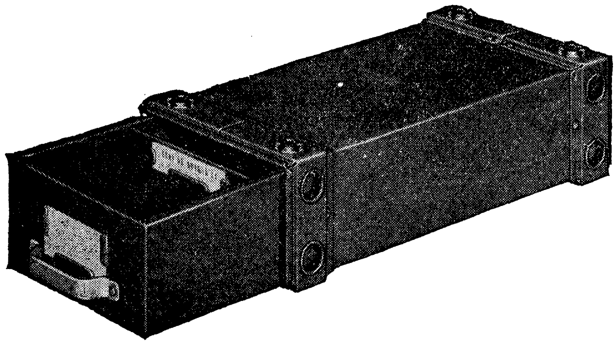


No. 1 SMALL

6-1/16" x 3⅛" x 1⅞"

Plastic & Steel

	Net Price
No. 1 "Small" Snap-On Drawer *Price includes one No. 1D Divider*	$0.54
No. 1-BP "Small" Base Plate	.30
No. 1-D "Small" Divider	.03

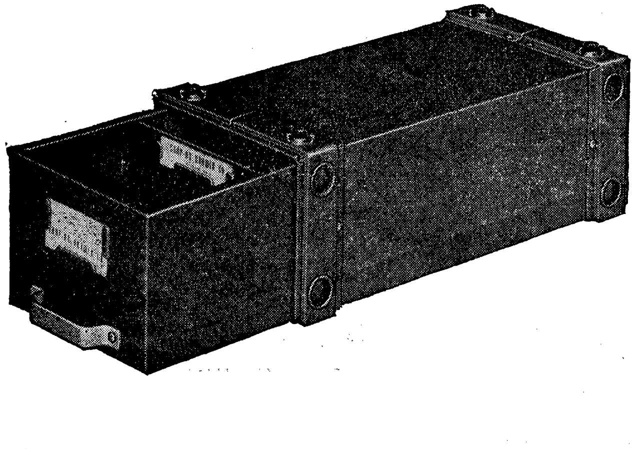


No. 2 JUNIOR

11¾" x 5⅛" x 2½"

All Steel

	Net Price
No. 2 "Junior" Snap-On Drawer *Price includes one No. 2D Divider*	$2.70
No. 2-D "Junior" Divider	.12



No. 3 SENIOR

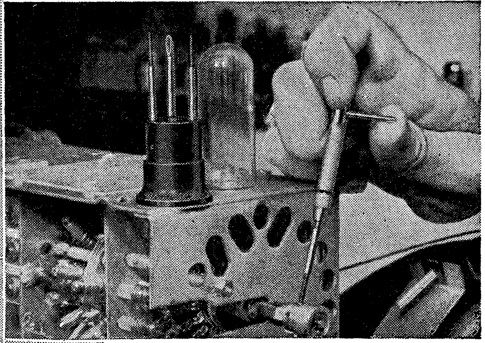
11¾" x 5⅛" x 3½"

All Steel

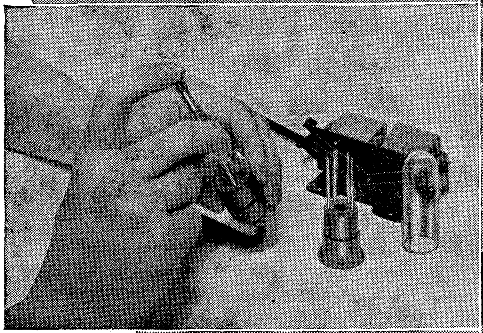
	Net Price
No. 3 "Senior" Snap-On Drawer *Price includes one No. 3D Divider*	$3.00
No. 3-D "Senior" Divider	.12½

THERE'S A THOUSAND AND MORE USES FOR *Moody Kits* IN ELECTRONICS

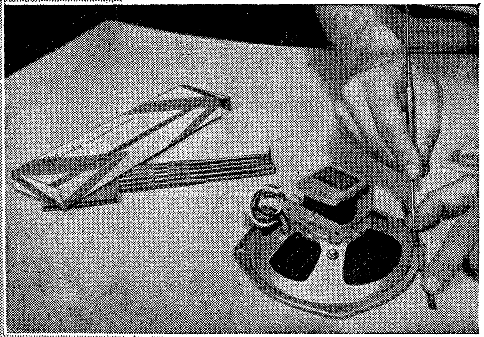
NEW SMALL TOOL SETS FOR YOU



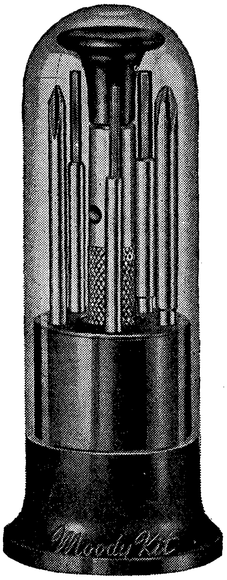
Here's the PA-5 Moody Kit, a combination Allen type wrench and Phillips screw driver set, in action, it's especially made for Radio and T.V. work.



Here's the SC-5 Moody Kit precision screw driver set, just perfect to get at those recessed small screws in electrical work.



Here's the ever handy helper of the electrical technician — the MS-2 Moody Scriber marking metal for close tolerance cutting.



PA-5 ACTUAL SIZE

Moody
TYPE IV
JEWELERS SCREW DRIVERS

You'll find this Set of Six Moody TYPE IV Jewelers' Screw Drivers mighty handy.

Be sure to stock the full line of Moody Precision Small Tools. If you haven't seen the Moody line, ask your jobber to get them for you.

WE'RE SURE YOU'LL DISCOVER THESE ARE NECESSARY TOOLS FOR RADIO, TELEVISION AND ELECTRONICS WORK.

GENERAL CEMENT
TV • RADIO CHEMICALS

Ask your Distributor for Complete G-C 64 Page Catalog

FREE!

or Write Us!

GENERAL CEMENT

G-C RADIO-TV SERVICE CEMENT

RADIO SERVICE CEMENT

The best Cement for repairing radios and speakers. Excellent for repairing and replacing torn cones. Vibration-proof, water-proof and fast drying. Brushes attached.

No.		List
30-2	2-oz.	$0.65
34-2	Tube	.60

G-C VINYLITE CEMENT

VINYLITE CEMENT

Clear transparent adhesive, air drying. For cementing metals, plastics, paper, leather, etc. Used also as thermoplastic cement for non-porous materials. Sets on cooling. Brush attached.

No.		List
58-2	2-oz.	$0.65

G-C WOOD GLUE

New white resin water-proof glue for radio cabinets, furniture, chairs, etc. Will not injure finish. Extra strong.

No.		List
39-2	2-oz.	$0.65

G-C ACRYLIC CEMENT

ACRYLIC CEMENT

Welds and cements lucite, plexiglas, and other acrylic materials. Strong, fast drying. Brush attached.

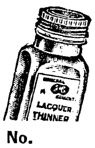
No.		List
40-2	2-oz.	$0.65

G-C CEMENT SAMPLER KIT

What kind of cement shall I use? Get this kit and experiment with all types of cements available. Cements for all applications included so you can try them yourself for your application. 10–2-oz. bottles in Kit.

No.		List
345	Kit	$8.25

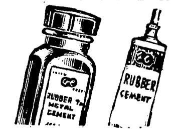
G-C LACQUER THINNER



Will thin all lacquers, lacquer enamels, telephone black or gray, touch-up lacquers, airplane dopes, model cements, etc.

No.		List
29-2	2-oz.	$0.55

G-C RUBBER TO METAL DIAL DRIVE CEMENT



For cementing rubber drives to shafts, rubber mountings, gaskets, hose, weather stripping, for radios, refrigerators, autos, etc.

No.		List
35-2	2-oz.	$0.65
35-3	Tube	.55

G-C HOUSEHOLD & MODEL CEMENT

GENERAL CEMENT
Model Cement

Best cement for model makers, household, and office use. For airplanes, railroads, ships, toys, etc. Will cement wood, paper, plastics, metal, china, ceramics, etc. Fast drying, waterproof. Brush attached.

No.		List
45-2	2-oz.	$0.50
45-3	Tube	.50

G-C PLI-O-BOND CEMENT

Sticks anything to anything. Cold setting, rubber-like, thermoplastic cement that dries rapidly with a flexible and very strong bond. For iron, steel, plastics, glass, cloth, plastic fabrics, etc.

No.		List
43-2	2-oz.	$0.65

G-C NE-O-PRENE CEMENT

New G-C cement for cementing Neoprene rubber to Neoprene or Neoprene to other materials, such as metals, wood, paper, etc. Easy to use, fast drying.

No.		List
52-2	2-oz.	$0.65

G-C CEMENT THINNER

Radio CEMENT THINNER

Made of same solvents as G-C Service Cement. Best thinner for all cements.

No.		List
28-2	2-oz.	$0.55

G-C No. 67 PAINT THINNER

No. 10 THINNER

For Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish, Rubber Cements, and ordinary paints.

No.		List
67-2	2-oz.	$0.55

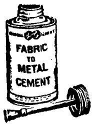
G-C BAKELITE CEMENT

B-K BAKELITE CEMENT

For cementing bakelite to bakelite and bakelite to other materials. For repairing knobs, cabinets, panels, for inserts in moldings, attaching labels to plastics, etc. Brush attached.

No.		List
32-2	2-oz.	$0.70

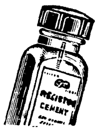
G-C FABRIC TO METAL CEMENT



For cementing cloth and felt to metal or plastics. Best for grille cloth, phono turntable felts, upholstering, fabrics, etc. Fast drying, water-proof.

No.		List
22-2	2-oz.	$0.65

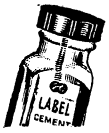
G-C ELECTRICAL AND RESISTOR CEMENT



Heat-proof cement, hardens like porcelain. Same as on resistors, flat irons, etc.

No.		List
27-2	2-oz.	$0.65

G-C LABEL CEMENT



Sticks labels to anything—metal, glass, wood, tin, bakelite, plastics, etc. Good for cementing labels to bins, racks, water-proofing labels, etc.

No.		List
46-2	2-oz.	$0.65

G-C RADIO SERVICE SOLVENT

RADIO SERVICE SOLVENT

Best Solvent for loosening cement on speaker cones, frames, etc. Will dissolve all cements on speakers. Brush attached.

No.		List
31-2	2-oz.	$0.55

G-C PLASTIC CEMENT

PLASTIC CEMENT

For cementing broken plastic cabinets, knobs, dial and crystal assemblies, grille cloth, etc. Fast drying. Brush attached.

No.		List
32-2A	2-oz.	$0.65

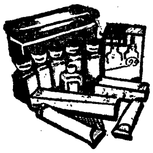
G-C Q-DOPE THINNER

Q-DOPE
THINNER

Will cut and dissolve Q-Dope and other polystyrene coil dopes and cements. Will soften and weld polystyrene rods, tubes, sheets, etc.

No.		List
41-2	2-oz.	$0.55

G-C TELEVISION CHEMICAL KIT



Complete kit of essential chemicals needed for TV set servicing. Saves time and money. Handy metal box contains 9 chemicals such as Corona Dope, Tube-Koat, Tenna-Koat, De-Ox-Id, Lens Cleaner, etc.

No.		List
904	Kit	$9.50

G-C TELEVISION HIGH VOLTAGE CORONA DOPE

CORONA
DOPE

Used by manufacturers and servicemen to prevent corona shorts on high voltage circuits in Television sets. Easy to apply, air-drying. It has very excellent high voltage insulating qualities.

No.		List
47-2	2-oz.	$1.20

G-C TV LENS & TUBE CLEANER

TELE-LENS
CLEANER

Specially prepared for cleaning TV lenses and CR tubes. Eliminates finger marks and spots, restores sharp, clear picture. Good item to sell every TV set owner.

No.		List
216-2	2-oz.	$0.60

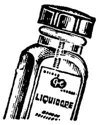
G-C SILVER PRINT

SILVER PRINT

Same "Pure Silver" compound as used by manufacturers in Printed Circuit design. You need G-C Silver Print to repair those Printed Circuits, to touch up the circuit around eyelets, rivets, parts, etc. Also handy for experimenters, engineers, laboratories, etc.

No.		List
21-2	1-Troy oz.	$7.75

G-C LIQUIDOPE



All wave nitrocellulose base dope for coils. Air dries fast to tough film that insures toughness and firmness. Use for sealing, doping, supporting coils, etc.

No.		List
36-2	2-oz.	$0.65

G-C ELECTRONIC HYPODERMIC NEEDLE INJECTOR

A handy applicator on the hypodermic principle; for injecting cleaners and oils into tight places. Supplied with 2-oz. bottle.

No.		List
8383	Hypodermic Needle	$0.75

G-C RADIO CHASSIS CLEANER

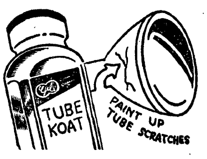
RADIO CLEANER

Clean the chassis and make extra money on every repair job. Satisfy your customer. For radio chassis, panels, testers, etc. Non-explosive cleaner.

No.		List
123-8	8-oz.	$0.95

G-C GENERAL CEMENT
TV • RADIO CHEMICALS

G-C TELEVISION TUBE KOAT



A black conductive coating for outside of glass TV tubes and for interior of cabinets to ground high potential, built up for TV tubes.

No.		List
49-2	2-oz.	$0.95

NEW G-C RED-X CORONA DOPE

Prevent corona shorts on high voltage TV circuits with this all-new G-C product. Easy to apply. Air dries faster. Excellent high voltage insulating qualities.

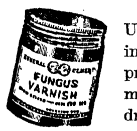
No.		List
50-2	2-oz.	$1.20

G-C MAG-NETIK HEAD CLEANER

Cleans tape and wire recorder head mechanisms. Does not leave scum or film. Should be used regularly for best recordings.

No.		List
53-1	1-oz. bottle	$0.85
53-2	2-oz. bottle	1.60

G-C FUNGUS VARNISH



Used on radio equipment and instruments to insulate and prevent fungus growth in moist or humid climates. Air dry, brush or spray.

No.		List
57-2	2-oz.	$0.65

G-C INSULATING & DIPPING VARNISH

INSULATING AND DIPPING
VARNISH

For treating field coils, noisy or buzzing transformers and chokes. Air dries to a tough insulating film. Can be brushed or dipped.

No.		List
56-2	2-oz.	$0.65

G-C DE-OX-ID KIT

"Ideal for Television Controls"

DE-OX-ID
INTRODUCTORY OFFER

Handy kit contains 2-oz. of De-Ox-Id and hypodermic injector in box.

No.		List
8460	Kit	$1.65

G-C GRAFOLINE

Noiseless lubricant for air exposed switch contacts, rheostats, relays, wire volume controls, tube prongs, etc. Increases current capacity of switch controls. Cleans also.

No.		List
120-2	2-oz.	$0.65

G-C TV TENNA-KOAT

Clear plastic coating to minimize TV antenna corrosion, maintain strong signal. Also coat lead connections, retard moisture. Apply with brush. Fast drying.

No.		List
24-2	2-oz.	$0.65

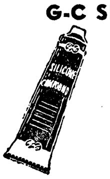
G-C NO-NOIZ TV CONTACT & DETENT CLEANER

NO-NOIZ CLEANER

New secret ingredients dissolve corrosion and oxidation on contacts, stops noise on contacts, volume controls, tuners, detents, switches, relays, etc.

No.		List
51-1	1-oz. bottle	$0.85
51-2	2-oz. bottle with Applicator	1.60

G-C SILICONE COMPOUND



"The miracle moisture and water-proofing compound for Television and FM"

A permanent water-proofing material for TV and FM leads.

No.		List
8100	1-oz. Tube	$1.65

G-C Q-DOPE

Liquid polystyrene ultra low loss coil dope for RF, UHF, and VHF components. Will not change R.F. circuit values. Performs — 70°F. to 160°F. Use as Polystyrene Cement, too.

No.		List
37-2	2-oz.	$0.65

G-C DE-OX-ID

"Television Contact Cleaner"

Liquid chemical for all electronic contacts and controls. It cleans, lubricates, and preserves. Recommended for volume and tone controls, relay contacts, push-buttons, etc. Dissolves corrosion and oxidation.

No.		List
19-1	1-oz.	$0.85
19-2	2-oz.	1.60

G-C RED ELECTRONIC CONTACT CLEANER

Electronic CONTACT CLEANER

The best and only all-purpose cleaner. Dissolves the dirt and removes corrosion. Leaves protective film on contacts to prevent corrosion.

No.		List
210-2	2-oz.	$0.55

G-C VINYL PLASTIC FABRIC CEMENT

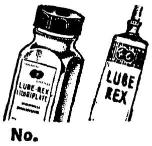
VINYL CEMENT

Made for cementing vinyl plastic sheets together. Ideal for vinyl insulating tubings, patching plastic raincoats, etc. Dries fast.

No.		List
16-2	2-oz. bottle	$0.65

GENERAL CEMENT
TV • RADIO CHEMICALS

G-C LUBE-REX



Lubriplate—white lubricant for push buttons, phonographs, Philco mystery controls, guns, fishing reels, dials, etc. Prevents corrosion, repels water.

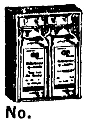
No.		List
1206	2-oz. Tube	$0.65
1209	2-oz. Bottle	.65

G-C CONTACT & CRYSTAL CLEANER

Extra pure cleaner. Fast drying for cleaning contacts and crystals. Will not injure delicate parts.

No.		List
127-2	2-oz.	$0.55

G-C COIL DOPE KIT

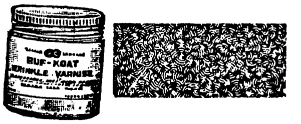


For high frequency coils, ultra low loss. Contains 2-oz. bottle Polystyrene Q-Dope, 2-oz. Thinner, and 2 brushes. The best!

No.		List
888	Kit	$1.10

G-C RUF-KOAT WRINKLE VARNISH

Air Dry or Bake



The only finish that will air dry and give professional wrinkle job without baking. Same as used by leading manufacturers. Apply and let dry. Colors: Black, Gray, Brown. (Specify Color.)

No.		List
60-2	2-oz.	$0.65

G-C KRYSTAL KOAT CRYSTAL LACQUER

Makes beautiful floral pattern when dry. Strictly air drying. For chassis, panels, decorations on metal, etc. Colors: Black, Gray. (Specify Color.)

No.		List
63-2	2-oz.	$0.65

G-C DIAL LITE COLOR KIT

Long lasting coloring for dials, signals, lamps, panels, hobby work, etc. Red, Green, Blue, Amber, Purple and Solvent in kit.

No.		List
66-5	Kit - 5 small bottles	$1.00
66-6	Kit - 6 small bottles	1.20
66-2	2-oz. (Specify Color)	.65

G-C CARBON CONTROL CLEANER

Fix noisy carbon controls without taking apart. Just squirt cleaner along shaft and job is done. Save money. Applicator supplied.

No.		List
212-2	2-oz.	$0.65

G-C CONTACT DOPE

Ideal cleaner and lubricant for switches, controls and contacts. Resists corrosion and oxidation. Eliminates noise.

No.		List
1213	Tube	$0.45
1214	2-oz.	.65

G-C SPIRIT VARNISH

Fast drying walnut spirit varnish for touching up nicks and scratches. Will not raise the finish.

No.		List
161-2	2-oz.	$0.65

G-C RUF-COAT UNDERCOAT

Necessary when applying Ruf-Koat on porous surfaces, or on previously finished surfaces.

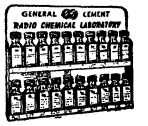
No.		List
60-X-4	4-oz.	$1.10

G-C KROME-KOAT ALUMINUM PAINT

Fast drying, ready mixed, leaves chrome-like finish. For PA equipment, speakers, chassis, towers, antennas, etc.

No.		List
61-2	2-oz.	$0.65

G-C CHEMICAL LABORATORY



Complete assortment of 20 popular radio chemicals and cements in 2-oz. bottles put up on steel rack. Very neat for radio bench and home work shop. Steel rack FREE.

No.		List
997	Lab	$12.75

It's

G-C

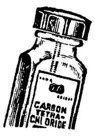
for All TV!

G-C CARBON-X

New improved formula. Fix those old noisy carbon controls, touch up noisy spots on worn controls. Brush in bottle.

No.		List
1204	1-oz.	$0.80
1205	2-oz.	1.20

G-C CARBON TETRA-CHLORIDE



100% pure for cleaning and degreasing electrical contacts, controls, motors. Absolutely safe—will not burn. Also kills bugs, roaches, etc.

No.		List
211-2	2-oz.	$0.55

G-C PENETRATING STAIN

Spirit type stain, penetrates and will not injure finish. Cover scratches, dents, darken corners on cabinets, etc. Walnut and Mahogany. Specify.

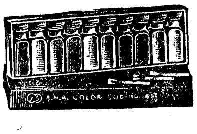
No.		List
162-2	2-oz.	$0.55

G-C TELEPHONE BLACK OR GRAY

High grade lacquer enamel covers well, dries fast. Black is satin ebony finish similar to telephones. Gray is pleasing shade. For panels, racks, parts, etc. (Specify Color.)

No.		List
62-2	2-oz.	$0.65

G-C RMA COLOR CODING KIT



Complete kit of all standard RMA colors to code resistors, condensers, parts, etc. Chart included. Ten bottles.

No.		List
677	Kit	$2.15

G-C DELUXE CHEMICAL LAB

Practical larger laboratory of popular chemicals and cements to fit needs of average shop—2-oz., 4-oz., and 8-oz. bottles. Larger bottles of more popular items. Steel rack is FREE.

No.		List
998	Lab	$17.45

Ask Your Distributor for Complete G-C Catalog FREE . . . or Write Direct!

It's

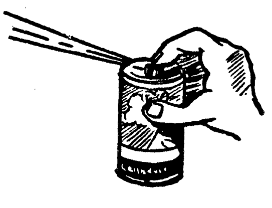
G-C

for All TV!

G-C GENERAL CEMENT
TV • RADIO CHEMICALS

G-C POWER SPRAY-KOAT

No brush — no muss — no fuss. Your choice of eight fine finishes in handy spray containers. Just press the special nozzle cap. Aluminum: Coat and protect antenna masts, speakers, PA equipment, etc.; dries to bright, chrome-like finish. Plastic: Corrosion-proof antennas, connectors, all metals, etc.; dries fast, transparent. Cover 100 square feet approximately.



No.		List
8660	Aluminum	$1.79
8665	Plastic, clear	1.79
8754	Gray	1.79
8755	Black	1.79
8756	Brown	1.79
8757	White	1.79
8758	Gold	1.79
8759	Coppertone	1.79

G-C DIAL OIL

For lubricating dials, drives, and fine mechanisms. Long lasting.

No.		List
1245	4 oz.	$0.50

G-C NON-STICK IRON TIP COMPOUND

Prevents soldering iron tips from burning into iron. Saves your iron and tips.

No.		List
1201	2 oz.	$0.65

G-C LIQUID SOLDER FLUX

Non-corrosive flux for radio and electrical work. Solders faster, smoother.

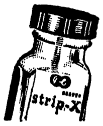
No.		List
42-2	2 oz.	$0.65

G-C SOLDERING PASTE

The best non-corrosive paste for radio and electrical work. Solders faster and smoother.

No.		List
1207	2 oz. can	$0.45

G-C STRIP-X



Strips enamel from magnet wire. Dip wire in and wipe insulation off—ready for soldering.

No.		List
26-2	2 oz.	$0.65

G-C NON-SLIP COMPOUNDS

Powder Compound

For dial cords, pulleys, belts. Prevents slipping.

No.		List
1210	2 ozs.	$0.55

Liquid

Penetrating liquid shrinks fibers, prevents slipping on dial cord and belts.

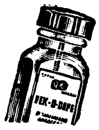
No.		List
1215	2 oz.	$0.65

G-C RECORD-LIFE LUBRICANT

Simply wipe record with "Record-Life" and the needle will glide over the record smoothly. Prevents record and needle wear; also eliminates noises and scratching sounds. Use also for making records.

No.		List
125-2	2 oz.	$0.65

G-C REK-O-DOPE



Required lubricant when recording and cutting records. All purpose, it cools, cleans, lubricates, and hardens grooves when cut. Rek-O-Dope will give better tone and longer life.

No.		List
126-2	2 oz.	$0.65

G-C STA-PUT PHONO-GEAR LUBRICANT

New "Sta-Put" lubricant for phonomotors, gears, shafts, etc. Will not run or drip-it "Stays-Put." Recommended by RCA, G-E, and others.

No.		List
1223	Tube	$0.65
122-2	2 oz.	.65

G-C "RECO" STATIC CHASER

Developed specially for vinylite records, it eliminates static electricity on plastic records and keeps records dust free. Also stops crackling and static discharge noises. Simply wipe it on and the job is done. Can be used on any type records.

No.		List
48-2	2 oz.	$0.75

G-C PORCELAIN GLAZE

Fills in nicks and dents on porcelain and duco refrigerators, sinks, washing machines, etc. Fill in and let dry.

No.		List
911	2 oz.	$0.75

G-C SPEAKER CONE RECONDITIONER

Apply to old dried out cones to restore plasticizer and bring back original tones.

No.		List
25-8	8 oz.	$1.00

G-C TV LINE SEAL for UHF and VHF

Outdoor special acrylic sealer for sealing TV wires, terminals, screws, antennas, TV Lines, etc. Seal it with G-C TV Line Seal and forget it. It will avoid trouble as it seals and prevents corrosion and loosening of contacts, screws, etc.

No.		List
17-2	2 oz. Line Seal	$0.65

G-C GENERAL CEMENT
CABINET REPAIR MATERIALS

G-C LUMINOUS KITS

LUMINOUS
LITE-KOAT FINISH KIT

Complete kits of luminous paint that glows in the dark. Many uses in shop and home. See it at night. Easy to use — apply and let dry.

No.		List
184-0	DeLuxe Kit contains Powder, Mix-Koat. Top Koat and Brush.	$3.25

G-C FRENCH VARNISH

FRENCH VARNISH

Used by craftsmen to repair furniture and blend in the finish. Can be applied with pad, brush or spray. Dries fast.

No.		List
160-2	2 oz.	$0.65

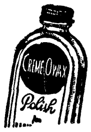
G-C RUBBING OIL

RUBBING OIL

Rub down newly finished or repaired cabinets to produce rich satin sheen finish.

No.		List
163-16	16 oz.	$0.95

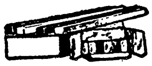
G-C CREME-O-WAX POLISH



White non-staining hard wax base polish produces a hard glossy finish. Excellent for radios, pianos, refrigerators, furniture, etc.

No.		List
95-2	2 oz.	$0.50

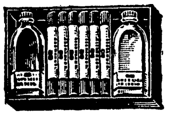
G-C SHELLAC STICK KIT



Handy assortment of 10 colors to take care of any shade of wood. Same as in G-C Kits.

No.		List
925	Kit	$2.25

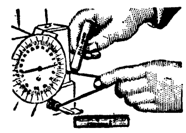
G-C MAGIC SCRATCH KIT



Combination of 6 shades fillers and light and dark scratch fluid. Easy to use on emergency jobs.

No.		List
915	Kit	$1.65

NEW G-C DIAL CORD DRESSING STICK



A new, easy way to treat slipping cords on dial mechanisms. Simply rub the stick on cord and job is done! Prevents and stops slipping. Carry a stick with you and save time.

No.		List
1212	Dressing Stick	$0.28

G-C FRENCH EMULSION

FRENCH EMULSION

Best pad lubricant to use with French Varnish Polishing Method.

No.		List
164-4	4 oz.	$0.85

G-C SCRATCH REMOVER POLISHES

Scratch Remover
Polish

Dark

Polish contains stains to remove scratches. Sell to housewives.

No.		List
92-2	2 oz.	$0.50

Light

For light woods; polishes and removes scratches at same time. Popular with housewives.

No.		List
93-2	2 oz.	$0.50

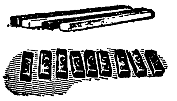
G-C PORCELAIN PATCH STICK

PATCH STICK

Made for white porcelain refrigerators, sinks, ranges, fixtures, etc. Simply melt into nick and smooth off.

No.		List
908	Stick	$0.50

G-C SHELLAC STICKS



High grade sticks for filling dents and nicks in wood cabinets and furniture. Sticks 7" long.

No.		List	No.		List
929	Lt. Walnut	$0.55	979	Dk. Oak	$0.55
930	Dk. Walnut	.55	980	Transparent	.55
933	Black	.55	981	Lt. Transparent	.55
934	White	.55	982	Walnut	.55
935	Maple	.55	983	Mahogany	.55
978	Lt. Oak	.55	984	Blonde Maple	.55

G-C GENERAL SCRATCH STICK

Scratch STIK

Removes scratches. Simply run over scratches and they will disappear. Handy to carry in your pocket or tool box for emergency repairs. Also sell to housewives.

No.		List
909	Scratch Stik	$0.50

G-C SCRATCH REMOVER LIQUID

SCRATCH REMOVER LIQUID

New liquid! Removes scratches instantly. Simply wipe over scratches. Handy to have in tool box.

No.		List
917	2 oz.	$0.55

**SPECIAL PRICES TO QUANTITY USERS . . .
ASK YOUR G-C DISTRIBUTOR FOR
COMPLETE INFORMATION AND PRICES.**

G-C FLOCK BLOWER GUN

It's easy to apply flock and be sure to get a good job with the G-C Patented Gun. Gun can also be used for dusting and cleaning.

No.		List
180-3	Gun	$4.80
180-4N Cleaning Nozzle for Gun		.35

GENERAL CEMENT
CABINET REPAIR KITS
GRILLE CLOTH

G-C MASTER DELUXE CABINET REPAIR KIT

Complete cabinet repair kit in a permanent metal box. All finishes are spirit soluble and will not cut or damage surrounding finishes on cabinets, etc. Kit contains 10 shellac sticks, alcohol lamp, French varnishes, rubbing felt and fluid, enamels, glue, steel wool, sandpaper, polish, directions, etc.

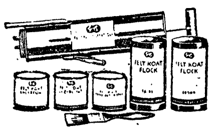
No.		List
900	Kit	$10.95

G-C MASTER CABINET TOUCH-UP KIT

A complete, fast touch-up kit for repairing scratches and dents. Works on wood and plastic cabinets. The spirit finishes will not cut into the adjoining surface or injure surrounding finish. Contains French varnish, emulsion, colored enamels, stains, polishes, and filler. Sandpaper, steel wool, rubbing cloth and directions included. Brushes attached to caps of all finish bottles. Put up in metal box.

No.		List
907	Kit	$4.75

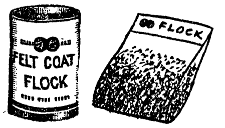
G-C FELT KOAT FLOCK KIT



New G-C kit with special blower gun. Distribues flock evenly and applies a thick velvet-like coat. Kit is complete with gun, brown and ivory flock, brown and ivory undercoat, thinner, brush, etc. Gives professional job on turntables, cabinets, grilles, tool boxes, toys, signs, etc. Has thousands of applications.

No.		List
180-2	Kit	$12.95

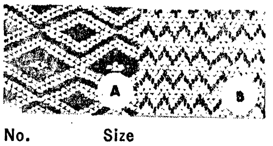
G-C FELT-KOAT FLOCK



Genuine Rayon Flock, 1/8" length fibers accurately cut, give beautiful even finish. One pound covers approximately 90 sq. ft. Colors: Brown, Taupe, Blue, Black, Ivory, Red, Green, Silver, and Gold. (Specify Color.)

No.		List
180-5	2 oz. Can	$1.35
180-7	1 lb. Bag	6.00

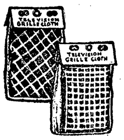
G-C TELEVISION GRILLE CLOTH



New television metallic grille cloth specially made for TV cabinets.

Specify "A" or "B" style

No.	Size	List
8656	18" x 24"	$2.50
8657	24" x 36"	4.75
8658	36" x 36"	7.50
8659	36" wide per yard, bulk	7.25



G-C TV PLASTIC SARAN WOVEN GRILLE CLOTH

Beautiful plastic cloth in a beautiful pattern. Ideal material for custom-built cabinets and commercial sound installations.

No.	Size	List
8736	12" x 18" - Bronze & Gold	$1.65
8739	36" x 36" - Bronze & Gold	$9.25
8737	12" x 18" - Ecru & Ivory	$1.65
8740	36" x 36" - Ecru & Ivory	$9.25

G-C DELUXE CABINET REPAIR KIT

Comes in handy metal box. Contains ten shades of shellac sticks, bottles of light and dark oil stain, bottles of metal shading varnish, polish, General Skratch Stik, alcohol lamp (with alcohol), spatula, small brushes, steel wool, sandpaper, and wiping cloth. No special skill required. Directions included.

No.		List
901	Kit	$7.50

G-C CABINET REPAIR KIT MATERIALS

No.		List
908	Porcelain Patch Stick	$0.45
992	Shellac Stick Rubbing Fluid 2 oz.	.55
900-11R	Sandpaper, 4/0 Sheet	.11
900-12R	Sandpaper, 7/0 Sheet, very fine	.17
900-14R	Steel Wool Pads, box of 16	2.00
936	Spatula, for Shellac Stiks	.28
990	Rubbing Felt Pad, 3 x 4 x ½	.28
937	Alcohol Lamp with Alcohol	.50
938	Lamp Fluid, pint	1.00
161-2	Varnish Stain, Walnut, 2 oz.	.65
162-4	Spirit Stain, Walnut or Mahogany (specify color), 4 oz.	.95
900-13R	Touch-Up Brush	.60

G-C FELT KOAT KITS

Complete flock kit with flock undercoat, thinner and brushes and shaker type can for applying flock. Colors: Brown, Blue, Taupe, Black, Red, Green and Gold. (Specify Color).

No.		List
180-0	DeLuxe Kit	$3.75
180-1	Reg. Kit (No Brush or Thinner)	2.75

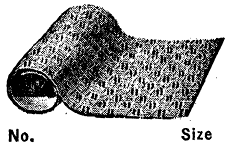
G-C FLOCK UNDERCOAT

FELT-KOAT UNDERCOAT

Material is first applied on surface to be flocked. Then flock is applied. Used on metal, wood, paper, etc. Neutral color, can be used with all colors of flock.

No.		List
180-4	4 oz.	$1.20

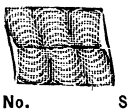
G-C METAL FLOCKED GRILLE SCREEN



Very popular. Both sides flocked with rayon over galvanized metal screen. Used on radios, P.A. speakers, intercoms, auto radios, etc. Waterproof, durable. Colors: Brown, Ivory, Maroon.

No.	Size	Color	List
951-1	8" x 11"	Brown	$0.95
951-3	8" x 11"	Ivory	.95
951-5	8" x 11"	Maroon	.95
952-1	18" x 24"	Brown	3.20
952-3	18" x 24"	Ivory	3.20
952-5	18" x 24"	Maroon	3.20
953-1	36" x 36"	Brown	9.85
953-3	36" x 36"	Ivory	9.85
953-5	36" x 36"	Maroon	9.85

G-C CABINET SPEAKER GRILLE CLOTH



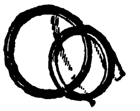
Beautiful modern patterns of Brown, Gold and light colors to match Walnut, Mahogany and Ivory Cabinets. Specify "Ivory" when ivory is wanted.

No.	Size	List
940	18" x 20"	$1.50
941	9" x 18"	.75
942	12" x 12"	.70
943	14" x 18"	1.00
944	24" x 13"	1.35
945	18" x 13"	.90
949-2R	50" Wide Cont. lgth., per yd.	6.50

G-C GENERAL CEMENT RADIO • TV ACCESSORIES

It's G-C for Quality

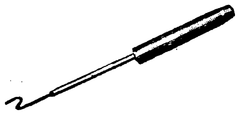
G-C RCA TELEVISION TUNING BELT



New belt for RCA Television Tuner. Used on models series numbers 8TC, 8TK, 9TC, etc. (Belt Part No. 73465.)

No.		List
195	Tuner Belt	$0.50

G-C DIAL CABLE TOOL

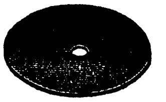


Handy tool to aid in stringing new dial cord and replacing cables slipped off pulleys and drums. It's like an extra hand. Speeds up the job.

No. 5096 **List $0.85**

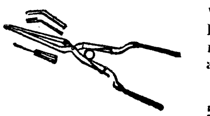
G-C RECORD TURNTABLE FELT

Re-cover phono turntables with ready cut felts. Dark brown.



No.	Dia.	List
1292	7⅞"	$0.50
1293	9⅞"	.70
1294	11⅞"	.80
1295	15⅞"	1.45

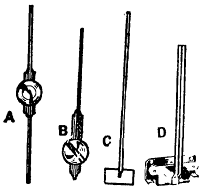
G-C LONG NOSE PLIERS



Very handy pliers to reach into places and hold parts. It's very handy for installing radio dial cords. Available in straight nose and curved nose styles.

No.		List
5192	Straight Nose Pliers	$1.00
5193	Curved Nose Pliers	1.00

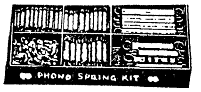
G-C DIAL POINTERS



Popular Replacement Pointers

No.		List
(a) 6801	3" Rotary Pointer for ¼" shaft, gold	$0.40
(b) 6802	5" 360° Rotary Pointer for ¼" shaft, gold and red	$0.40
(c) 6803	2" Slide Pointer, red translucent	$0.40
(d) 6804	2¼" Slide Pointer, white enamel	$0.40

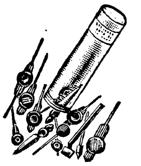
G-C PHONO SPRING KIT



Kit contains assorted springs same as are used on phono turntables. With this kit you can replace the broken or weak spring without waiting or delay in service.

No.		List
6478	Kit of 50	$2.75
6479	Kit of 100	4.85

G-C DIAL POINTER KITS



A complete kit of assorted dial pointers. Pointers come in a clear transparent plastic case which keeps the pointers in perfect condition.

No.		List
6810	Kit - 10 pointers	$3.25
6805	Kit - 25 pointers	5.50

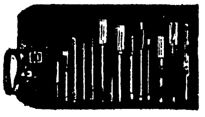
G-C HANDY PICK-UP TOOL

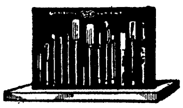
Very handy for every one. Picks up pieces in hard-to-get-at places. Will hold and start screws, nuts, etc. Will pay for itself in short time.

No. 5089 **List $1.65**

GENERAL G-C CEMENT ALIGNMENT KITS

G-C TELEVISION ALIGNMENT TOOL KITS



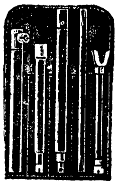


G-C Television Tools are the best quality tools you can buy. They are made specially for Television work and are all designed to give you long service. The steel tips are all extra thin and are of the best grade hardened steel that will give you service. Kit contains 16 essential Tools.

No. 8280 **List $12.90**
TV Kit in Leatherette Case

No. 8281 **List $12.90**
Kit supplied with Bench Stand

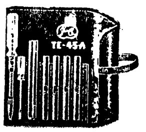
G-C NX ALIGNING KIT



Popular approved Army-Navy Kit for all sets. Fourteen tools. Contains Nos. 5004, 5011, 5017, 5015, 5016, and leatherette case.

No.		List
5020	Kit	$7.15

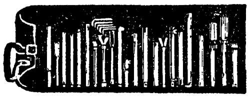
G-C TE-45A NEUTRALIZING KIT



Approved by U. S. Signal Corps. All popular balancing tools to make an all purpose kit. Contains two each Nos. 5051, 5052 and one each Nos. 5019, 5003, 5000 and 5" screwdriver in roll-type leatherette ease.

No.		List
5021	Kit	$7.45

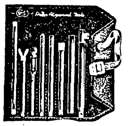
G-C PROFESSIONAL ALIGNMENT TOOL KITS



Complete kits. Be prepared to service every set with these DeLuxe Alignment Kits. In a handy roll-type leatherette case or a steel partitioned box. Kit contains 30 Tools.

No.		List
5024	Kit in Roll-Type Case	$21.95

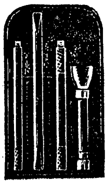
G-C ALL-PURPOSE ALIGNMENT TOOL KIT



Seventeen tools designed into nine basic tools some of which telescope into each other. Roll-type leatherette case. Includes Nos. 5001, 5003, 5004, 5011, 5016, 5017, 5053, 5056, 5057.

No.		List
5023	Kit	$6.90

G-C VEST POCKET ALIGNING KIT



Easy-to-carry all-purpose kit. Four tools with telescoping parts making them equivalent to six. Contains Nos. 5012, 5000, 5003, 5004 and leatherette case.

No.		List
5022	Kit	$3.30

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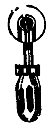
GENERAL CEMENT
RADIO•TV ALIGNMENT TOOLS

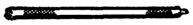
G-C "SHORTY" TV ALIGNMENT SCREWDRIVER



Only 2″ long, fits No. 4 and 6 studs. Unbreakable plastic, spring steel tips.

No.		List
8289	Tool	$0.70

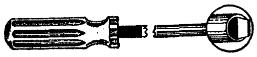
G-C TELEVISION 6" DUPLEX ALIGNER



All-purpose, for trimmers, I.F. transformers, coils, etc. Driver and recess tips.

No.		List
8276	Tool	$0.80

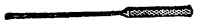
NEW G-C LONG ARM TV TOOL



Extra-long-reach for those hard-to-get-at places like Zenith sets and others. 18″ long.

No.		List
8821	Tool	$1.50

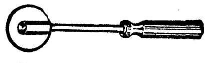
G-C TELEVISION CHANNEL TUNING TOOL



Designed for Television receivers, for making channel adjustments, etc. Completely insulated, non-metallic tool with long ⅛″ narrow blade. Overall length of tool approx. 7″. Made of bone fibre.

No.		List
8195	TV Tool	$0.90

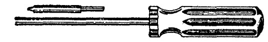
G-C TELEVISION ALL-PURPOSE ALIGNER



Specially made for TV I.F. adjustments, with a plastic handle and a hard fibre shaft. Very thin spring steel tip is recessed so the tool will guide itself over the screws.

No.		List
8273	TV Aligner	$1.10

G-C NYLON TELEVISION LONG REACH ALIGNER

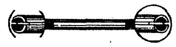


Handy new long reach TV aligner with insulated metal shaft and nylon tip that can be replaced. Very sturdy tool for TV work. 12″ long overall.

No.		List
8607	TV Tool	$1.80
8608-E		.30

Nylon Replacement Tip for 8607

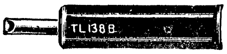
G-C TELEVISION 2-IN-1 9" LONG-REACH DUPLEX ALIGNER



For hard-to-get-at No. 4 and 6 studs. Spring steel recessed tips, color coded. Unbreakable.

No.	List
8721	$1.25

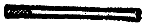
G-C TELEVISION ALIGNMENT TOOL



Special short sturdy tool with a fine metal screwdriver blade to adjust Television and FM sets while they are in the cabinet. Only 2⅝″ long overall.

No.		List
5066	TV Tool	$0.55

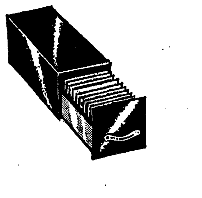
G-C TELEVISION AND FM TUNING TOOL



Special short tool with fine recessed screwdriver tip for Television and FM adjustments. Makes those difficult adjustments when set is installed in console. Only 2½″ long. Made of bone fibre.

No.		List
8196	TV Tool	$0.60

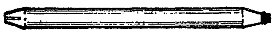
G-C PHONO DRIVE KIT



Kit of 50 assorted phono drives, saves you time and inconvenience. Drive assortment based on average popularity. Packed in envelopes for easy identification; ideal for the bench or on the job.

No.	List
8846	$13.50

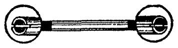
G-C GENERAL ELECTRIC ALIGNMENT TOOL



Handy alignment tool made of clear plastic. Has metal tip one end and a recessed tip on other end. Tool 6″ long, ⅜″ diameter. Tip ⅛″ wide.

No.		List
8609	Tool	$1.00

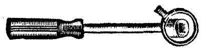
G-C TELEVISION 2-IN-1 7" DUPLEX ALIGNER



For No. 4 and 6 studs, color coded for easy identification. Spring steel recessed tips.

No.		List
8722	Tool	$1.05

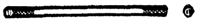
G-C TELEVISION ALIGNING WRENCH



New Television tool with ⅛″ square socket wrench, $\frac{3}{16}$″ shaft with insulated handle. Approximately 6″ long.

No.		List
5080	Television Wrench	$0.85

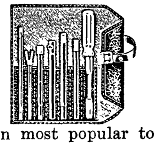
G-C TELEVISION CORE ALIGNER



For Motorola, Stewart-Warner, Belmont, etc., using Stackpole or other stud type cores that are not slotted. Made of hard fibre 6″ long with a milled steel insert on one end and a thin screwdriver blade on other end.

No.		List
8271	Core Aligner	$0.90

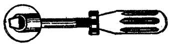
G-C DELUXE ALIGNMENT KIT



Fourteen most popular tools including Flexible Shaft Screwdriver and Tuning Wand, designed into seven basic tools. Contains Nos. 5002, 5004, 5011, 5014, 5016, 5017, 5019. In leatherette roll-type case.

No.		List
5026	Kit	$8.25

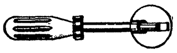
G-C UNIVERSAL SCREW DRIVER ALIGNER



Unbreakable flexible clear plastic shaft, amber plastic handle. 7″ long overall. Very handy and universal all-purpose alignment tool. Spring steel tips.

No.		List
8290	TV Tool	$1.00

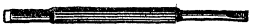
G-C K-TRAN TELEVISION ALIGNER



For K-Tran I.F. Transformer tuner slugs. Bone fibre with plastic handle. 6½″ long.

No.		List
8727	Tool	$0.85

G-C K-TRAN TOOL

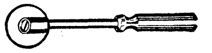


Ideal Television Tool

Specially designed for K-Tran and I.F. transformers. Made of bone fibre, screwdriver on both ends.

No.		List
5097	Tool	$0.85

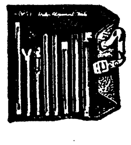
G-C TELEVISION I.F. OSCILLATOR ALIGNER



For I.F. and oscillator adjustments. Fits all makes of sets, RCA, G-E, Philco, Admiral, etc. Made of plastic handle and steel shaft. Blade is extra thin spring steel for long life.

No.		List
8272	TV Osc. Tool	$1.20

G-C STANDARD TELEVISION ALIGNMENT TOOL KIT



Here's a popular low-priced alignment kit that has the latest essential tools for Television Sets. Specially engineered for Television Sets. A real value in roll-type case.

No.		List
8455	TV Kit Complete	$7.65

GENERAL CEMENT
RADIO•TV ALIGNMENT TOOLS

G-C TELEVISION ZENITH UNIVERSAL ALIGNER

Designed for Zenith and other sets. Made of bone fibre and plastic handle. it has a thin fibre screwdriver on one end and a recessed extra thin spring steel tip on the other end.

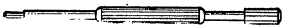
No.		List
8275	TV Universal Aligner	$0.80

G-C TELEVISION TUNING WAND

Made of extra thin flexible plastic material to fit small coil openings in TV sets. Brass insert on end reduces inductance and iron core on other end increases the inductance.

No.		List
8278	TV-Tuning Wand	$0.55

G-C NEW! TELEVISION 2-IN-1 ALIGNMENT TOOL



Made of molded nylon, has a hex wrench on each end. For Zenith, Admiral, Hoffman, G.E., RCA, and others using the hex type slug tuners.

No.		List
8606	Tool	$0.55

G-C "STRATO" TUNING WAND

Made of Genflex. Brass cylinder on one end, iron core on other end. Used for adjusting and checking coils. Inserting iron core end increases inductance; inserting brass end lowers inductance.

No.		List
5002	Tool	$1.10

G-C INSULATED HEX WRENCH AND DRIVER

Combination hex wrench and insulated screwdriver. The screwdriver may be extended from handle to provide extra long length. No metal parts. This is an all fibre tool.

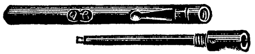
No.		List
5005	Extends from 7-13″	$0.85

G-C ALLIGATOR WRENCH AND SCREWDRIVER

For RCA, Philco and others. Made of 7/32″ bone fibre and strong metal wrench on one end and metal screwdriver tip on other end.

No.		List
5011	Tool	$0.55

G-C 4-IN-1 ALIGNMENT TOOL



This is the most popular alignment tool for most receivers. Made of bone fibre, combination tool. Consists of screwdriver with metal nib, ¼″ Hex Wrench slotted and 5/16″ Hex Wrench on other end.

No.		List
5014	Tool	$1.00

G-C DUPLEX INSULATED WRENCH ALIGNMENT TOOL

Made of bone fibre with ¼″ Hex Metal Wrench one end and 5/16″ Hex Metal Wrench on other end.

No.		List
5017	Tool	$1.40

BAKELITE NEUTRALIZING TOOL
U. S. Army TL-207

Genuine molded bakelite. Combination screwdriver and 5/16″ Hex Wrench. Approved by U. S. Army Signal Corps.

No.		List
5027	Tool	$2.85

G-C TELEVISION "SHORTY" DUPLEX ALIGNER

For trimmer and I.F. transformers where space is limited. Bone fibre with extra thin hardened spring steel tips. One end has a projected metal tip, the other end is recessed.

No.		List
8277	TV Shorty Aligner	$0.80

G-C ZENITH TV WRENCH AND ALIGNER

New plastic molded special tool made specially for Zenith TV sets. One end has a plastic hex wrench and the other end a small screwdriver tip.

No.		List
8282	Zenith TV Tool	$0.55

G-C DUPLEX ALIGNMENT SCREWDRIVER

Low-inductance Metal Tip on both ends made of Genflex material. One end is ¼″ and other end is 3/32″ for small holes. Strong, completely insulated.

No.		List
5001	Alignment Screwdriver	$0.85

G-C NO-METAL INSULATING ADJUSTMENT SCREWDRIVER

Made of black bone fibre. Indispensable for aligning all-wave sets. Will give long service. Ends can be re-ground.

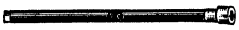
No.		List
5004	7″ Long	$0.45
	Low-Loss Polystyrene Type—Ideal for UHF Sets	
5008	7″ Long	.45

G-C DUPLEX NO-METAL ALIGNMENT SCREWDRIVER

Made of hard bone fibre or Polystyrene—¼″ blade on one end and ⅛″ blade on other. 6″ long. A dual purpose alignment screwdriver. Ends can be re-ground.

5009	Bone Fibre—6″	$0.45
5010	Polystyrene—6″	.45

G-C WRENCH AND SCREWDRIVER ALIGNING TOOL



Made of 7/32″ bone fibre with ¼″ Hex Wrench on one end and screwdriver with metal nib on other end. This is a very handy alignment tool and wrench.

No.		List
5013	Tool	$0.95

G-C 6-IN-1 ALIGNMENT TOOL

Bone fibre, combination tool. Consists of Screwdriver with metal nib, 5/16″ Hex Wrench, ¼″ Hex Side Wrench and ¼″ Hex End Wrench slotted.

No.		List
5016	Tool	$1.65

G-C FLEXI-DRIVER

"Around the Corner" screwdriver for radio work. Approved by U. S. Army and Navy.

No.		List
5019	Tool	$2.25

G-C SCREWDRIVERS

Insulated screwdrivers for radio work. No. 5056 for radio knobs. No. 5057 regular type for all-around radio use.

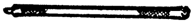
No.	Blade	List
5056	3″ x ⅛″ (Small)	$0.30
5057	3″ x 3/16″ (Large)	.80

G-C TELEVISION LONG REACH ALIGNER

Made for Admiral, Zenith, RCA, and other sets to adjust nested iron cores and make front end adjustments. The blades are extra thin, made of bone fibre and are extra long.

No.		List
8274	Long Reach Aligner	$1.20

G-C TELEVISION DUPLEX ALIGNER



All purpose TV aligner for trimmers and I.F. transformers. Made of bone fibre with extra thin spring steel tips. One end has a projected tip, the other end has a recessed tip.

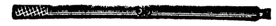
No.		List
8276	Duplex Aligner	$0.80

G-C TELEVISION CORE ALIGNER

For hard-to-reach places. Has a recessed steel milled slot to fit over Stackpole and other type stud cores not slotted. Steel insert pinned in a fibre shaft for extra strength.

No.		List
8279	TV Core Aligner	$1.10

G-C ALIGNMENT SCREWDRIVER



Low-inductance Metal Tip Screwdriver made of Genflex—strong, completely insulated. Very popular all-around alignment tool. Two sizes—¼″ and 3/32″ diameter.

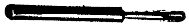
No.		List
5000	¼″ Diam. x 6″ Tool	$0.45
5088	3/32″ Diam. x 6″ Tool	.45

G-C RCA ALIGNING TOOL

Made of ¼″ bone fibre. Narrow screwdriver on one end and screw nib inserted on other end. Used on RCA sets and others for coil and push-button adjustments.

No.		List
5003	Tool	$0.85

G-C NON-EXTENSION TYPE WRENCH AND DRIVER



Same as No. 5005 except screwdriver is permanently attached in wrench. Length not adjustable. Overall length is 6″.

No.		List
5007	Tool	$0.45

G-C ALLIGATOR AND WRENCH ALIGNING TOOL

Made of 3/32″ bone fibre with alligator on one end and ¼″ metal Hex Wrench on other end. Very popular tool.

No.		List
5012	Tool	$0.55

G-C 5-IN-1 ALIGNMENT TOOL

Similar to our 5014 except supplied with heavy duty metal screwdriver.

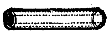
No.		List
5015	Tool	$1.65

G-C TELEVISION AND PUSH-BUTTON TOOL

Required to adjust Push-Button Tuners. Socket Screwdriver made of best steel.

No.		List
5018	Tool	$0.85

HEX INSULATED FIBRE ALIGNING WRENCHES



Hexed full length inside, so end can be cut off when worn.

No.	Length	Hex Size Across Flat	Diam.	List
5051	5″	5/16″	7/16″	$0.40
5052	5″	¼″	⅜″	.33
5053	6″	¼″	⅜″	.36
5054	8″	¼″	⅜″	.40
5055	12″	¼″	⅜″	.55

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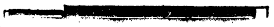
ALIGNMENT TOOLS • SERVICE AIDS

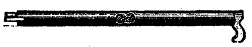
G-C TELEVISION AND TRIMMER TOOL



Handy tool to adjust smallest size trimmer condensers. Screwdriver is 7/32" diameter. Other end has a 5/16" hex nut wrench.

No.		List
5067	Trimmer 6" Long	$1.10

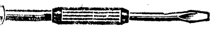
G-C ALIGNMENT TOOL FOR PHILCO, RCA, ETC.



For neutralizing air trimmer condensers on all sets. Made of 7/32" Fibre. Metal clip on end.

No.		List
5086	Tool	$0.65

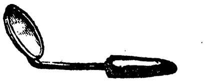
G-C TELEVISION AND TRIMMER TOOL



Specially made for adjusting neutralizing padding condensers and iron core tuners and coils.

No.		List
5091	Tool	$0.85

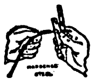
G-C INSPECTION MIRROR



Inspection Mirror for hard to see places.

No.	List
5090	$0.55

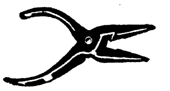
G-C WIRE STRIPPER



5-in-1 tool. Wire stripper, scraper, cutter, screwdriver, and wire winder all in one. Tempered steel.

No.	List
757	$0.45

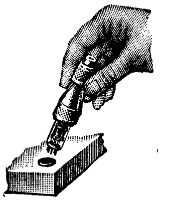
G-C TV PLASTIC PLIERS



Insulated long-nose pliers, shock-proof. High impact bakelite. Handy for picking up nuts and bolts when set is "hot."

No.	List
8387	$1.65

G-C AMO MINIATURE TUBE PULLER



(Pat. Pending)

Prevents burned fingers and broken tubes. Makes it easy to remove and install tubes such as 6AG5, 50B5, etc. Works on vacuum principle. Operates just by pressing on the tube. Releases tube by pressing button. Tube protected by rubber sleeve. Gets where your fingers can't reach. Sturdily constructed.

No.		List
5093	For 7-pin tubes	$1.80
8106	For 9-pin tubes	1.80

G-C TV "HIGH-VOLT" SAFETY PROBE AND TESTER

Check TV high voltage circuits quickly. Tester glows when okay. Handy for H.V. rectifier tubes, transmitters, output and Xmitter tubes.

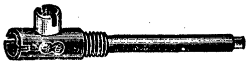
No.	List
8836	$2.75

G-C TEST MALLET, SCREWDRIVER AND TUBE TAPPER

Handy tool made with insulated screwdriver on one end and rubber mallet on other end. Very handy for tapping tubes to find shorted or intermittent tubes.

No.		List
5081	Tool	$0.70

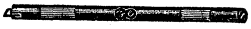
G-C BALANCING TOOL



A short neutralizing tool for work in close quarters. Sets can be adjusted without removing from cabinets. A very handy tool.

No.		List
5084	Tool	$0.65

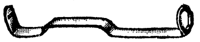
G-C TELEVISION AND PUSH-BUTTON TOOL



A specially-designed tool for adjusting iron core I.F. and R.F. transformers, coils, alignment condensers, and push-button tuners. Used on Bendix, RCA, and others. Metal tip on one end, other end recessed tip.

No.		List
5087	Tool	$0.85

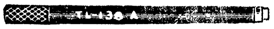
ZENITH PUSH-BUTTON WRENCH



Special wrench necessary to use in adjusting Zenith push-button radios.

No.		List
5094	Zenith Wrench	$0.20

G-C NEUTRALIZING AND ALIGNING TOOL

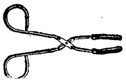


U. S. Army TL-138-A

Ideal for all-around tuning and aligning. 6" long.

No.		List
5098	Tool	$1.10

G-C TUBE AND PARTS EXTRACTOR

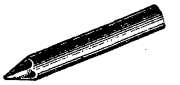


U. S. Signal Corps Part No. TL-201

Handy prong tool for extracting tubes and picking up parts. Rubber cushions on prongs.

No.		List
5092	Tube Extractor	$1.65

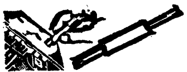
G-C SOLDERING IRON TIPS



Best grade hard-drawn copper, bright plated to resist corrosion. Heats fast and holds heat.

No.	Tip	List
724	1/4" x 3"	$0.50
725	5/16" x 4½"	.65
726	3/8" x 4½"	.70
727	7/16" x 4"	.85

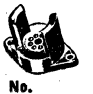
G-C AUTO RADIO TUNER



Ideal for adjusting auto radios and to turn controls when radio is removed from car and cables disconnected. Square tip and V-tip ends to fit various type shafts.

No.	List
8285	$0.45

G-C MINIATURE TUBE PIN STRAIGHTENER



Saves tubes! Straightens without damage the pins on miniature tubes such as 1S5, 6AK5, 9002, etc. Insert tube into precision base die and tube prongs are straightened and properly spaced. All metal.

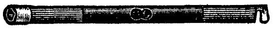
No.		List
5191	For 7-pin tubes	$1.25
8105	For 9-pin tubes	1.25

G-C TEST PROBE

Handy new test probe to "dig in" and find the trouble. Fibre point on one end. Metal hook on other end. Excellent for locating loose connections and shorted parts.

No.		List
5082	Tool	$0.65

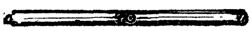
G-C ALIGNMENT WRENCH FOR PHILCO, RCA, ETC.



Excellent for neutralizing air trimmers on many models, RCA-Victor, Philco and others. Has 5/16" Hex Wrench on one end and metal hook on other end.

No.		List
5085	Tool	$1.65

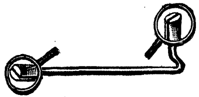
G-C ALIGNMENT SCREWDRIVER



Low inductance metal tip screwdriver made of Genflex—strong, durable, completely insulated. 7/32" diameter.

No.		List
5088	6" Tool	$0.45

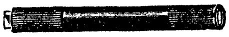
G-C CONTACT ADJUSTER



A handy tool to adjust contacts on switches, relays on pin ball machines and radio sets.

No.		List
5095	Contact Adjuster	$0.25

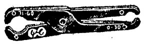
G-C NEUTRALIZING AND ALIGNING TOOL



Approved by U. S. Army and Navy
Made of fibre, 9/32" diameter by 6" long.

No.		List
5099	Tool	$1.40

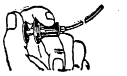
G-C FUSE PULLERS



For cartridge fuses. Heavy duty construction of high dielectric material.

No.		List
5525	Midget size, for fuses 1/4" by 1/2"	$0.65
5526	Large size, for fuses 1/2" by 1½"	1.35

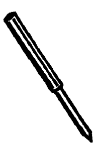
G-C LONG-REACH TV AND RADIO LUBRICATOR



For hard-to-reach radio and TV controls, bearings, phono motors, etc. Buy two—for both grease and light oil. Clear transparent plastic, long tube.

No.	List
8690	$0.80

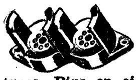
G-C SPEEDEX SLIM-TYPE SOLDER IRON TIPS



New high-heat turn-down tip made of one-piece copper. Fits 3/8" iron. Tip 4½" long.

No.	List
8741	$1.00

G-C DUPLEX TUBE PIN STRAIGHTENER



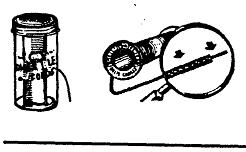
A tube pin straightener for both miniature and jumbo miniature tubes of the 7 and 9 pin types. Pins on either type can be straightened by inserting in receptacle. Precision constructed steel dies molded in colorful plastic.

No.		List
8655	Duplex Pin Straightener	$2.50

GENERAL CEMENT RADIO•TV DIAL CORDS, CABLES and BELTS

Insist on G-C for Every Radio-TV Service Aid!

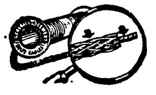
G-C No. 75 STANDARD THIN NYLON CORD



.028" diam. Most popular; used on 95% of sets. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
75-25	25 ft.	$1.40
75-50	50 ft.	2.65
75-100	100 ft.	4.95
75-11	Env.	.45

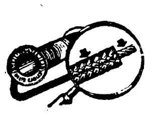
G-C No. 70 BRAIDED BRONZE CABLE



.040" diameter; used on radio dials, instruments and for aircraft reel-in antenna cable. Phosphor bronze braided over fibre glass core for strength. In plastic container.

No.	Spool	List
70-25	25 ft.	$1.30
70-50	50 ft.	2.65
70-100	100 ft.	3.80
70-11	Env.	.45

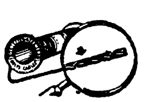
G-C No. 73 HEAVY NYLON CORD



.062" diameter; used on Philco, Majestic, Brunswick, etc. Very strong, chemically treated to prevent slipping. In plastic container.

No.	Spool	List
73-25	25 ft.	$1.90
73-50	50 ft.	3.25
73-100	100 ft.	5.50
73-11	Env.	.45

G-C No. 76 SPECIAL THIN BRONZE CABLE

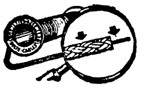


.025" diameter. Braided bronze as used on GE, RCA, and others. Also for flexible connections on speakers, cones, etc. In plastic container.

No.	Spool	List
76-25	25 ft.	$1.40
76-50	50 ft.	2.65
76-100	100 ft.	4.95
76-11	Env.	.45

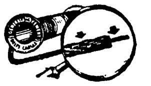
G-C No. 75-A EXTRA THIN NYLON CORD

.025" diam. Used on RCA, GE, Strom.-Carl., etc. Braided nylon over fibre glass core. In plastic container:



No.	Spool	List
75A-25	25 ft.	$1.40
75A-50	50 ft.	2.65
75A-100	100 ft.	4.95
75A-11	Env.	.45

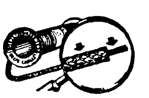
G-C No. 71 42-STRAND BRONZE CABLE



.040" diameter; 42 strands twisted phosphor bronze over fibre glass core. Radio dials, aircraft reel-in-antennas, etc. Durable and flexible. In plastic containers.

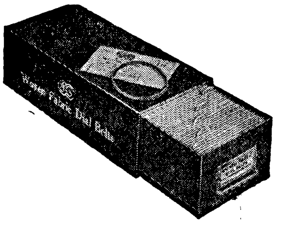
No.	Spool	List
71-25	25 ft.	$1.65
71-50	50 ft.	3.00
71-100	100 ft.	5.50
71-11	Env.	.45

G-C No. 74 MEDIUM NYLON CORD



.040" diameter. Very popular; used by RCA, Philco, GE, etc. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
74-25	25 ft.	$1.40
74-50	50 ft.	2.65
74-100	100 ft.	4.95
74-11	Env.	.45



G-C SERVICEMEN'S DIAL BELT KITS

General Cement Belts are approved replacements for all sets. They are made of best quality material and will not stretch. They are specially treated to prevent slipping. They are the best. Sizes available for all sets. **They are easy to install** as they are made to fit. No adjustments necessary.

BELTS — 50c List Each

Servicemen! Have an assortment of belts on hand for prompt replacement. Kits contain only the more popular belts used. KIT INCLUDES ATTRACTIVE STEEL BOX—BELT SCALE AND COMPLETE LISTING OF OVER 1100 MODELS.

G-C SERVICEMEN'S KITS

	List Price
No. G-25—Kit of 25 popular belts........	**$13.95**

INSTRUCTIONS — FOR MEASURING BELTS

To determine size of belt, if the old belt is available, cut the belt and measure for stretched out length. This will be "cut length" of belt.

If old belt is not available or is worn out so that it cannot be properly measured, stretch a thin thread around belt pulleys on set. (Be sure to use thin thread as a thick cord will give an inaccurate reading.) Measure the thread, it will be our "circumference around pulleys." In measuring belts always remember that the **circumference around pulleys** is not the same as **stretched out or cut length.** A belt when cut, develops approximately $\frac{3}{16}$" extra length when stretched out, depending on thickness of belt.

G-C RADIO BELT SPECIFICATIONS

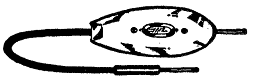
LISTED AS PER BELT SIZE

Circumference Around Pulleys	Cut Length	G-C Belt No.
5$\frac{7}{16}$"x¼"...	5⅝"x¼" ..	195
6-23/32"...	6-29/32" ...	101
6-55/64"...	7-3/64"	161
6-57/64"...	7-5/64"	102
6-15/16"...	7-1/8"	158
7-1/64"....	7-13/64" ...	157
7-1/4".....	7-7/16"	106
7-9/32"....	7-15/32" ...	156
7-13/32"...	7-19/32" ...	177
7-15/32"...	7-21/32" ...	103
7-1/2".....	7-11/16" ...	105
7-35/64"...	7-23/32" ...	155
7-11/16"...	7-7/8"	107
7-3/4".....	7-15/16" ...	174
7-15/16"...	8-1/8"	111
8-1/64"....	8-13/64" ...	104
8-1/32"....	8-7/32"	159
8-3/32"....	8-9/32"	113
8-3/16"....	8-3/8"	172
8-13/64"...	8-25/64" ...	162
8-15/64"...	8-27/64" ...	114
8-25/64"...	8-37/64" ...	110
8-1/2".....	8-11/16" ...	109
8-21/32"...	8-27/32" ...	108
8-39/64"...	8-51/64" ...	153
8-43/64"...	8-55/64" ...	112
8-11/16"...	8-7/8"	160
8-13/16"...	9"	167
9-1/16"....	9-1/4"	117
9-13/64"...	9-25/64" ...	115
9-19/64"...	9-31/64" ...	163
9-5/16"....	9-1/2"	116
9-17/32"...	9-23/32" ...	119
9-7/8".....	10-1/16"	123
9-59/64"...	10-7/64"	127
10-1/16"....	10-1/4"	126
10-1/4".....	10-7/16"	164
10-17/64"...	10-29/64" ...	124
10-19/64"...	10-31/64" ...	128
10-23/64"...	10-35/64" ...	118
10-3/8".....	10-9/16"	122
10-25/64"...	10-37/64" ...	125
10-1/2".....	10-11/16" ...	152
10-41/64"...	10-53/64" ...	129
10-11/16"...	10-7/8"	121
10-45/64"...	10-57/64" ...	120
10-27/32"...	11-1/32"	180
10-61/64"...	11-9/64"	133
10-31/32"...	11-5/32"	132
11".........	11-3/16"	135
11-5/64".....	11-17/64"	130
11-9/64".....	11-21/64"	131
11-5/32".....	11-15/32"	137
11-3/16".....	11-3/8"	171
11-9/32"x5/16"	11-15/32"x5/16"	131W
11-3/8"......	11-9/16"	134
11-25/64"....	11-37/64"	136
11-7/16".....	11-5/8"	173
11-21/32"....	11-27/32"	194
11-3/4"......	11-15/16"	141
11-13/16"....	12"	143
12".........	12-3/16"	138
12-1/32".....	12-7/32"	154
12-3/32".....	12-1/4"	142
12-7/32".....	12-13/32"	140
straight belt..	12-7/16"-str. belt	193
12-9/32".....	12-15/32"	139
12-15/32"....	12-21/32"	144
12-1/2"......	12-11/16"	178
12-39/64"....	12-51/64"	145
12-13/16"....	13"	168
13-3/16".....	13-3/8"	146
14-7/32".....	14-13/32"	186
14-27/64".....	14-39/64"	147
14-33/64".....	14-3/4"	148
14-57/64".....	15-5/64"	151
15-1/64"......	15-13/64"	149
15-17/64".....	15-29/64"	187
15-7/16"......	15-5/8"	183
15-13/16".....	16"	182
straight belt....	16" - str. Belt..	192
15-61/64".....	16-9/64"	150
16-19/64".....	16-31/64"	170
16-27/64".....	16-39/64"	184
16-15/16".....	17-1/8"	185
17-1/16"......	17-1/4"	165
17-13/32".....	17-19/32"	169
17-37/64".....	17-49/64"	179
17-5/8".......	17-13/16"	190
18-1/2".......	18-11/16"	189
18-9/16"......	18-3/4"	181
19-7/16"......	19-5/8"	166
19-47/64".....	19-59/64"	188
21-5/16"......	21-1/2"	175
22-35/64".....	22-47/64"	176
22-19/64".....	22-61/64"	191

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

G-C GENERAL CEMENT
WIRE STRIPPERS • TEST LEADS TEST LITES

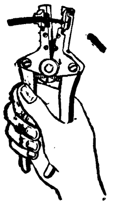
G-C DANDY TEST LITE



New neon test lite for checking radios, television sets, fuses, circuits, etc. Simple, safe and dependable for tracing all kinds of trouble. Use on voltages of 60 volts AC to 550 volts AC or DC.

No.		List
8585	Dandy Lite	$1.25

G-C STANDARD SPEEDEX WIRE STRIPPER

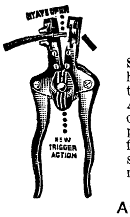


Fast operating precision made hand tool for stripping insulation from all types of wire. Very easy to operate. Strips 750 to 1000 wires per hour. Used by girls or men. All blades are interchangeable and easily replaced.

Standard Models

No.	Wire	List
733	12 to 20	$6.60
733-A	14 to 30	6.60
733-B	10 to 18	6.60
733-C	8 to 10	6.60
733-D	16, 18, 20, 22	6.60
733-E	14, 16, 18	6.60
733-F	10, 12, 14	6.60
733-G	For #18 P.O. S.J. or parallel wire	6.60
733-H	For the new 300-Ohm television and FM transmission line	6.60
733-I	For 10, 12, 14, 16, 18, 20 22 wire	6.60

G-C AUTOMATIC SPEEDEX WIRE STRIPPER

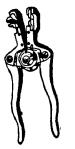


Similar to standard models except has the "stay open feature" with the new Speedex "Trig-O-Matic Action." Automatically holds jaws open until wire is removed, and prevents bending or crushing of fine wires. Has on-off mechanism so tool can be used as standard model if desired.

Automatic Models

No.	Wire	List
744	12 to 20	$8.25
744-A	14 to 30	8.25
744-B	10 to 18	8.25
744-C	8 to 10	8.25
744-D	16, 18, 20, 22	8.25
744-E	14, 16, 18	8.25
744-F	10, 12, 14	8.25
744-G	For #18 P.O.S.J. or parallel wire	8.25
744-H	For the new 300-Ohm television and FM transmission line	8.25
744-I	For 10, 12, 14, 16, 18, 20, 22 wire	8.25

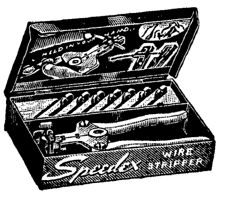
G-C HEAVY DUTY SPEED-O-MATIC WIRE STRIPPER



Improved version of the "744" series, ideal for production line. Delayed return action. Will not crush stranded wires. Sturdy, easy to use. Interchangeable blades.

No.	Wire	List
766	10 to 20	$8.25
766-A	14 to 30	8.25
766-B	10 to 18	8.25
766-C	8 to 10	8.25
766-D	16, 18, 20, 22	8.25
766-E	14, 16, 18	8.25
766-F	10, 12, 14	8.25
766-G	For #18 P.O.S.J. or parallel wire	8.25
766-H	For 300-Ohm TV & FM twin transmission line	8.25
766-I	For 10, 12, 14, 16, 18, 20, 22 wires	8.25
766-M	10 to 20	8.25
766-N	Straight cutter blades	8.25

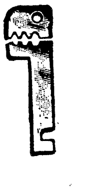
G-C SPEEDEX WIRE STRIPPER KIT



Wire stripper complete with seven different size blades put up in a specially designed permanent steel box. For wires No. 8 to No. 30.

No.		List
733-K	Standard Stripper Kit, with blades	$15.60
744-K	DeLuxe Automatic Stripper Kit, with blades	17.25
766-K	Speed-O-Matic Kit	17.25

G-C SPEEDEX REPLACEMENT BLADES

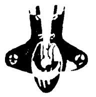


Fit standard and automatic models. Blades interchangeable.

No.		List
3W	12 to 20	$1.65
3W-A	14 to 30	1.65
3W-B	10 to 18	1.65
3W-C	8 to 10	1.65
3W-D	16, 18, 20, 22	1.65
3W-E	14, 16, 18	1.65
3W-F	10, 12, 14	1.65
3W-G	Blades for parallel #18 P.O.S.J. or similar	1.65
3W-H	Blades for the new 300-Ohm television and FM twin transmission line	1.65
3W-I	10, 12, 14, 16, 18, 20, 22 wire	1.65

When Blades for 766 Series Stripper are wanted — specify 2W — instead of 3W.

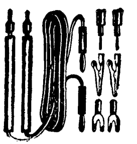
G-C SPEEDEX TRIG-O-MATIC PLATE



Converts any standard Speedex Stripper to an Automatic Model.

No.		List
756	Trig-O-Matic Plate, only	$2.20

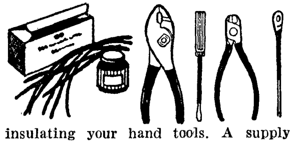
G-C UNIVERSAL TYPE TEST LEADS



Heavy duty 6000-volt leads 50" long, made with unbreakable plastic handles 6" long with solderless type tips. Other end comes with standard banana plugs, interchangeable for spade lugs, 'phone tips, and alligator clips. Supplied complete.

No.		List
No. 8463	Universal Test Leads	$3.00
No. 8464	Same, but supplied with needle point prods	3.00

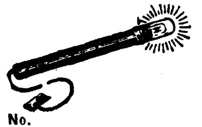
G-C TOOL HANDLE INSULATING TUBES



For insulating your hand tools. A supply of insulating tubing in assorted sizes to insulate all types of handles on pliers, cutters, screw driver blades, etc. Simply soak tubing for a few minutes in G-C Service Solvent. The tubing will swell. Slip it over the handles and allow to dry. It will shrink on drying. (G-C Service Solvent is not included in kit.)

No.		List
8118-E	Env. Asstd. Tubing	$0.45

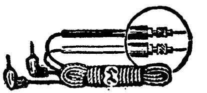
G-C INSPECTION LITE



Operates on 110-120 volts AC or DC. Cord approximately 6 feet long.

No.		List
705	Inspection Light	$2.25
704	Replacement Bulb for #705	.20
704-S	Clear Plastic Shield	.10

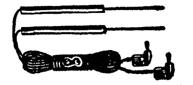
G-C MASTER TEST LEADS



The best test leads you can buy, 50" long, 6000-volt, heavy duty test prods, solderless type. Flexible leads run through handles and are fastened under the knurled collar on the tips. Available with either the attached angle tips or the straight solderless type tips.

No.		List
5050	With Solderless type Straight Tips	$1.85
8459	With Angle type Test Tips	2.10

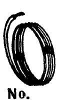
G-C THIN TYPE TEST LEADS



This is a handy pair of test leads for hard-to-reach places. Made with slim, plastic handles with long, slim insulated test rods attached. Made with 50" of 6000-volt test lead wire. Comes equipped with angle type phone tips.

No.		List
8465	Thin Type Test Leads	$2.10

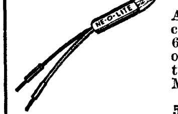
G-C NE-O-LITE WIRE



Wire same as used on Ne-O-Lite Testers, #18 stranded, rubber covered with a red or black braid, varnished. For ignition wiring, motor wiring, etc. Red or Black. Specify color.

No.		List
5113	100 ft.	$4.15

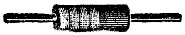
G-C NE-O-LITE



A simple, safe, electrical circuit tester for voltages from 60 volts AC to 550 volts AC or DC. Used for radio, electrical and automotive testing. Molded plastic.

No.		List
5100	Ne-O-Lite	$0.60

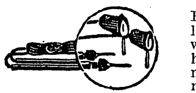
G-C RESISTOR FOR NEON LAMP



Required resistor when using No. 717 neon lamp on voltages of 60 to 550 volts AC or DC. Connect in series.

No.	List
718	$0.07

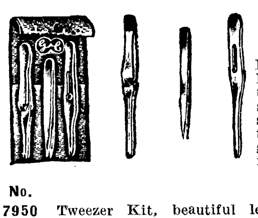
G-C NEEDLE POINT TEST LEADS



Heavy duty 6000-volt test leads, 50" long, made with unbreakable plastic handles 6" long with needle type chuck and needle to penetrate insulation. Available with either the attached angle tips or the straight solderless type tips.

No.		List
8461	With Solderless Straight Tips	$1.95
8462	With Angle type Test Tips	2.25

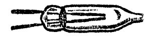
G-C TWEEZERS AND KIT



For the shop or laboratory to pick up and examine small parts, start screws and nuts, to get in hard-to-get spots, stringing dial cord, etc.

No.		List
7950	Tweezer Kit, beautiful leatherette case and one each tweezers described below.	$3.55
7946	6½" Self-closing tweezer. Opens when squeezed. Serrated, blunt points.	1.05
7947	6½" Heavy-duty type with slide lock feature. Holds wires or parts tight. Serrated, blunt points.	1.30
7948	4½" Precision Tweezer. Narrow pointed ends for delicate work.	0.60

G-C NEON GLOW LAMPS



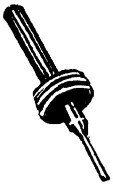
NE-T2 lamp as used in testers, appliances, as pilot light, etc.

No.	List
717	$0.25

GENERAL CEMENT

TEST PRODS • PLUGS • TIPS

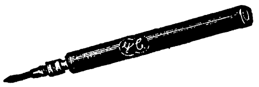
G-C TELEVISION HIGH-VOLT BAKELITE TEST PROD HANDLE



Heavy duty type test prod with finger ground ring to protect from the high voltage. Protects against the high voltage in a TV Set. Designed so that the minimum of metal is exposed. Made of black bakelite.

No. 8986 **List $1.50**
High-volt Test Prod Handle

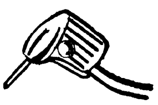
G-C LOW-LOSS DELUXE TEST PRODS



New polished low-loss material. Non-breakable. Moisture resistant. Withstands high voltages. Solderless type, brass nickel-plated.

No.		List
5045	Red	$0.50
5046	Black	.50

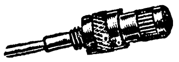
G-C TEST LEAD ANGLE TIP



New, attractive, fully insulated, molded plastic angle phone tip plugs. Will take wires up to .140 diameter.

No.		List
8149	Red, each	$0.45
8150	Black, each	.45

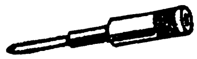
G-C TEST PROD TIPS



Solderless type, brass nickel-plated. Non-insulated. Wire fastens easily.

No.	List
5060	$0.20

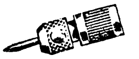
G-C HEAVY DUTY PHONE PLUG



Standard type as used on test prods, leads, etc. Fits snugly in ¼″ hole. Brass nickel-plated.

No.	List
7706	$0.15

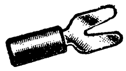
G-C PHONO NEEDLE POINT TEST PROD CHUCK



Push on type fits snugly in ¼″ hole. Brass nickel-plated.

No.	List
7703	$0.22

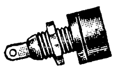
G-C INSULATED SPADE LUG



Tapered spade lug fits all screws or terminal strips up to No. 10. Insulated female end fits banana plugs.

No.		List
7712	Red	$0.18
7713	Black	.18

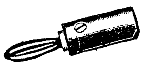
G-C INSULATED PHONE TIP JACKS



Standard insulated type phosphor bronze spring contacts. ⅜″ insulated head. Fits ¼″ hole and panels up to ¼″ thick. Brass parts nickel-plated.

No.		List
7715	Red	$0.25
7716	Black	.25

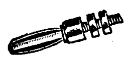
G-C SET SCREW TYPE BANANA PLUG



Insulated set screw type. Polished insulated plastic handles. Nickel-plated metal parts.

No.		List
7732	Red	$0.25
7733	Black	.25

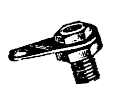
G-C SPLIT BANANA PLUG



Standard size with 6-32 threaded shank. Use on plug-in coils, terminal strips, etc. Complete with lug and nut. Brass nickel-plated.

No.	List
7736	$0.25

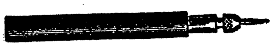
G-C BANANA JACK



Standard size banana pin jack. Fits ¼″ hole up to ⅜″ thick panel. Nut and lug supplied. Brass nickel-plated.

No.	List
7740	$0.17

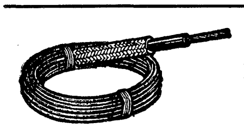
G-C NEEDLE POINT TEST PRODS



Adjustable chuck tip for needle. 6″ polished plastic handles in Red or Black. Brass Nickel-plated chuck removable. Includes needle. (Specify color.)

No.	List
7701	$0.50

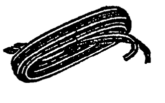
G-C SHIELDED PHONO PICK-UP WIRE



Handy package of single conductor shielded wire as used on phono pick-ups, etc. Enough wire for several jobs in package.

No.	List
1738-E	$0.45

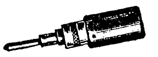
G-C TEST LEAD WIRE



Ideal long-life replacement wire, extra flexible, 6000-volt insulation. Red and Black. (Specify color.)

No.		List
5049	Env. 1 Red, 1 Black 50″ long	$0.80
5049-C	100 feet	8.25

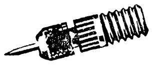
G-C INSULATED TEST PROD TIPS



Unbreakable polished plastic insulated handles. Solderless connectors, brass nickel-plated.

No.		List
5061	Red	$0.25
5061-E	Env. 2	.50
5062	Black	.25
5062-E	Env. 2	.50

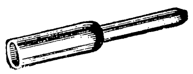
G-C PHONO NEEDLE POINT TEST PROD CHUCK



Threaded chuck fits ¼-20 threaded hole. Needle removable. Brass nickel-plated. Includes needle.

No.	List
7702	$0.30

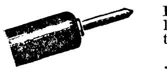
G-C SOLID STANDARD PHONE TIP



Solid brass type made to RMA specifications. Bright nickel-plated.

No.		List
6321-E	Env. 8	$0.45

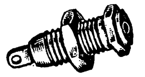
G-C INSULATED PHONE TIP PLUG



Fits standard phone tip jacks. Polished non-breakable low-loss plastic insulated handles. Brass, nickel-plated tip. Minimum contact exposure.

No.		List
7710	Red	$0.23
7711	Black	.23

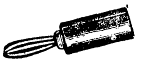
G-C PHONO TIP JACKS



Standard type with phosphor bronze spring contacts. Fits ¼″ hole and panels up to ⅜″ thick. Brass parts nickel-plated.

No.	List
7714	$0.17

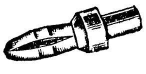
G-C SPLIT BANANA PLUG



Insulated solderless type with polished insulated handles. Metal parts nickel-plated.

No.		List
7730	Red	$0.35
7731	Black	.35

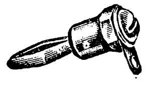
G-C SMALL BANANA PIN PLUGS



Approved silver-plated plugs with straight shank. Can be riveted or soldered. For wires, multiple plugs, etc.

No.		List
6400	Env. 10	$0.45

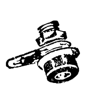
G-C SPLIT BANANA PLUG



Standard size with 6-32 female thread on end. Supplied with screw and solder lug. Brass nickel-plated.

No.	List
7737	$0.25

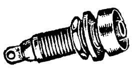
G-C INSULATED BANANA JACK



Standard size with polished plastic insulators. Fits ¼″ hole, up to ⅜″ thick panel. Nut, lug, and insulators supplied. Brass, nickel-plated.

No.		List
7741	Red	$0.22
7742	Black	.22

G-C INSULATED BANANA PLUG OR PHONE TIP JACK



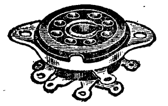
Standard size insulated combination jack. Brass nickel-plated with phosphor bronze spring contacts. Fits ¼″ hole, panels up to ⅝″ thick.

No.		List
7744	Red	$0.35
7745	Black	.35

ASK YOUR DISTRIBUTOR FOR YOUR G-C CATALOG . . . FREE! OR WRITE DIRECT.

GENERAL CEMENT

RADIO SOCKETS • PLUGS • CONNECTORS SHIMS



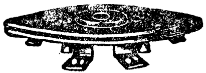
G-C STANDARD TUBE SOCKETS

BAKELITE SOCKETS

High quality molded bakelite sockets with plated bronze contacts. Three grounding lugs on base of each socket. 1½″ mounting centers.

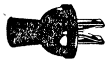
No.		List
1528	8-prong Octal	$0.22
1528-L	8-prong Loctal	.27

WAFER SOCKETS



No.	Mntg. Center	List
1534	4-prong 1½″	$0.15
1535	5-prong 1½″	.16
1536	6-prong 1½″	.16
1537	7-pr. Small 1½″	.17
1537-L	7-pr. Large 1½″	.18
1538	8-pr. Octal 1 5/16″	.16
1538-2	8-pr. Octal 1½″	.20
1538-L	8-pr. Loctal 1 5/16″	.16

G-C 861 CAP

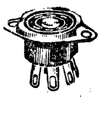


Spring action, finger grip rubber caps. Approved, screw terminal brass blade.

No.		List
861	Cap	$0.22

G-C MINIATURE TUBE SOCKETS

BAKELITE MINIATURE SOCKET

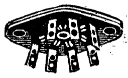


For Miniature Tubes

High quality molded bakelite socket with metal saddle mounting. Made with phosphor bronze plated contacts for 7-prong tubes. Standard ⅞″ mounting centers.

No.		List
1540	Bakelite Socket	$0.18

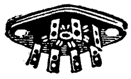
WAFER MINIATURE SOCKET



High grade laminated bakelite sockets for new miniature tubes. Phosphor bronze contacts, for 7-prong tubes. Standard ⅞″ mtg. centers.

No.		List
1541	Wafer Socket	$0.16
1542	Wafer Socket with grounding strap	.17

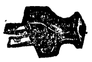
9-PIN MINIATURE WAFER SOCKET



Highest quality laminated bakelite wafer socket. Phosphor bronze contacts, for 9-pin tubes. Standard 1⅛″ mounting centers.

No.		List
1543	Wafer Socket	$0.16
1544	Wafer Socket with grounding strap	.18

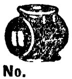
G-C 860 CAP



Spring action flat brown bakelite cap. Approved brass blades.

No.		List
860	Cap	$0.20

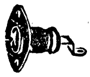
G-C CORD CONNECTOR



Brown bakelite with bronze contacts.

No.		List
863	Brown	$0.32

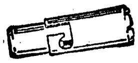
G-C ANTENNA CONNECTOR JACK



Shielded jack to fit the 1740 plug for auto antenna and phonograph connection.

No.	List
1741	$0.25

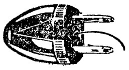
G-C ANTENNA CONNECTOR



Used for connections on auto antenna and ground lines.

No.	List
1747	$0.22

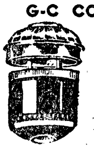
G-C 865 CAP



Modern flush type rubber cap. Easy to assemble. No exposed screws or wires.

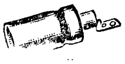
No.		List
865	Cap	$0.25

G-C CORD CONNECTOR



Handy cord connector to connect phono motors to radio sets, for appliances, vacuum cleaners, sewing machines, etc.

No.	List
868	$0.55

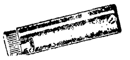


G-C EXTENSION JACK AND CONNECTOR

For extending radio ant. cables and phono attachments. Fits 1740 or 1742 plugs.

No.	List
1744	$0.16

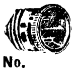
G-C JUMBO FUSE HOLDER



14 amp. fuse holder, 2¼″ long x ½″ diameter.

No.	List
1748	$0.26

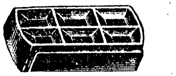
G-C 867 PLUG



Popular screw plug for standard sockets.

No.		List
867	Plug	$0.18

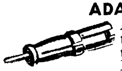
G-C SURFACE BLOCK



3-plug. Bakelite outlet for extension cords. Can fasten to wall or base.

No.		List
866	Brown	$0.50

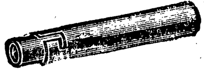
G-C MOTOROLA LEAD ADAPTER



Adapter plug used to adapt bayonet type connector to Motorola type.

No.	List
1745	$0.50

G-Ç FUSE CONNECTOR

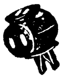


Regular Type

Used on auto radios and other equipment. Completely assembled.

No.	List
1749	$0.24

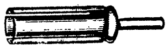
G-C CUBE TAP



New type spring action cube tap with 3 outlets always available.

No.		List
862	Brown	$0.32

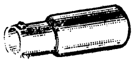
G-C AUTO ANTENNA PLUG



Shielded connector plug as used on Motorola and other auto radios.

No.	List
1740	$0.17

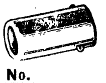
G-C ADAPTER SHELL



Used to change the Motorola fitting to bayonet type connector.

No.	List
1746	$0.12

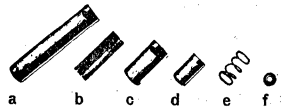
G-C ANTENNA CONNECTOR END



To be used with regular antenna connectors. With bushing.

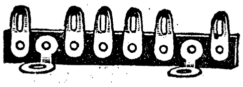
No.	List
1750	$0.10

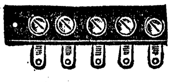
G-C REPLACEMENT PARTS FOR ANTENNA AND FUSE CONNECTORS



	No.		List
(a)	1791	Sleeve of Fuse Connector	$0.07
(b)	1792	Sleeve of Antenna Connector	.03
(c)	1793	End piece for Antenna and Fuse Connector	.05
(d)	6720	Auto Fuse Insulator Sleeve	.02
(e)	1796	Spring for Antenna and Fuse Connector	.02
(f)	1795	Bakelite Bushing	.04

G-C TERMINAL STRIPS





SCREW TYPE

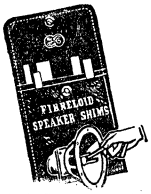
Laminated bakelite strips, rigidly constructed, terminals will not turn and short.

No.	Contacts	List
1772	2	$0.15
1773	3	.20
1774	4	.22
1775	5	.28
1776	6	.35
1777	7	.42
1778	8	.50
1779	9	.55
1780	10	.60

SOLDER TYPE

Mounted on laminated bakelite strips. Lugs securely fastened and will not turn.

No.	Contacts	List
1781	1	$0.05
1782	2	.06
1783	3	.07
1784	4	.09
1785	5	.12
1786	6	.13
1787	7	.20
1788	8	.22

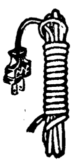


G-C FIBRELOID SPEAKER SHIMS

Shims made of tough and flexible fibreloid. Non-magnetic. 4 each of 5 sizes — twenty in all: Sizes, .005″, .0075″, .010″, .0125″, and .015″. Color coded. Supplied in gold lettered leatherette snap case with instructions.

No.		List
702	Kit	$0.65

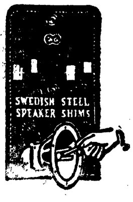
G-C RADIO CORD SETS



Handy replacement cord sets, ready to attach to radio sets and appliances. Approved Brown parallel wire with plugs attached.

No.		List
855	6 ft.	$0.65

G-C SWEDISH STEEL SPEAKER SHIMS

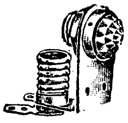


Makes it easier to center speaker voice coil. Permanent flexible Swedish steel. 4 shims each of 4 sizes coded for identification: .004″, .006″, .008″ and .010″ thick. Supplied in gold stamped leatherette partitioned snap case. Complete with instructions.

No.		List
701	Kit	$0.90

GENERAL CEMENT
SIGNAL LIGHTS • CONNECTOR • CLIPS

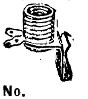
G-C ¾-INCH JEWEL SIGNAL LIGHT



Signal light with facet jewels in colors of Red, Green, Blue, Amber. $\frac{11}{16}$" mounting hole. Jewel removed from front. (Specify color.)

No.	Socket	List
7907	Min. Screw	$0.95
7908	Min. Bayonet	.95
7909	110-V. Candel.	.95

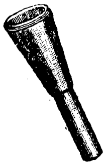
G-C CLIP-ON PILOT LIGHT SOCKETS



Clip up and clip down types for replacements. Cadmium-plated.

No.	Type	List
7920	Min. Screw Clip Up	$0.17
7921	Min. Screw Clip Down	.17
7922	Min. Bay. Clip Up	.20
7923	Min. Bay. Clip Down	.20
7924	110-V. Cand. Clip Up	.20
7925	110-V. Cand. Clip Down	.20

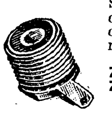
G-C PILOT LAMP INSTALLER



Makes it easy to install miniature dial bulbs, neon and candelabra lamps in hard-to-get-at places. All rubber.

No.		List
7935	Installer	$0.55

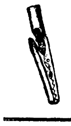
G-C MICROPHONE CHASSIS UNIT CONNECTOR



Single contact male connector for chassis. Used with Type 7942 female connector. Supplied complete. Brass nickel-plated.

No.		List
7941	Connector	$0.40
7943	Closed Circuit Type, prevents open circuit noises when mike is disconnected	$0.50

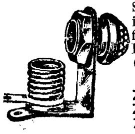
G-C ALLIGATOR CLIP



Solder type, non-insulated. Strong spring for positive contact. Nickel-plated.

No.		List
5063	Clip	$0.12
5063-E	Envelope of 3	.45

G-C ½-INCH JEWEL SIGNAL LIGHT

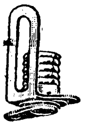


Signal light, requires $\frac{7}{16}$" mounting hole. Facet jewel removed from front. Colors: Red, Green, Blue. Amber. Opal, Clear. (Specify color.)

No.	Socket	List
7910	Min. Screw	$0.45
7911	Min. Bayonet	.45
7912	110-V. Candel.	.55

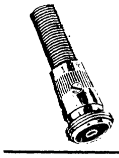
G-C BRACKET-TYPE PILOT LIGHT SOCKETS

Sturdy bracket-up or bracket-down type. Cadmium-plated.



No.		List
	Miniature Screw	
7926	Bracket Up	$0.17
7927	Bracket Down	.17
	Miniature Bayonet	
7928	Bracket Up	.19
7929	Bracket Down	.19
	110-V. Candelabra	
7930	Bracket Up	.20
7931	Bracket Down	.20

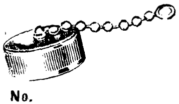
G-C MALE MICROPHONE CONNECTOR



Completely shielded, sturdy, single contact connector. Brass, bright chrome-plated. Steel spring cord protector.

No.		List
7940	Connector	$0.50

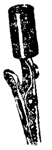
G-C MICROPHONE CONNECTOR CAP



Chrome-plated cap with anchor chain for all connectors. Seal against dirt and prevent thread damage.

No.		List
7944	Connector Cap	$0.60

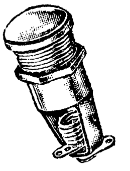
G-C SCREW TYPE INSULATED ALLIGATOR CLIP



Very popular. Bright polished handles. Set screw for wire.

No.		List
7750	Black Clip	$0.28
7751	Red Clip	.28

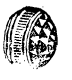
G-C ONE-INCH JEWEL SIGNAL LIGHT



For signal devices of all types. Bulbs change from the front; for socket bases as listed below. One inch mounting hole. Jewel colors: Red, Green, Amber, and Opal. (Specify Jewel Color.)

No.		List
7901	100-V Cand. Facet	$1.80
7902	110-V. Cand. Smooth	$1.65
7903	Min. Bayonet Facet	$1.65
7905	Min. Screw Facet	$1.55

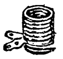
G-C PANEL JEWELS



Complete assemblies in 1", ¾", and ½" diameters. Fit panels up to ¼" thick. Brass nickel-plated. Colors: Red, Green, Blue, Amber, Opal, Clear. (Specify color.)

No.	Dia.	Jewel	Mtg. Hole	List
7913	½"	Facet	7/16"	$0.30
7914	½"	Smooth	7/16"	.30
7915	¾"	Facet	11/16"	.65
7916	1"	Facet	1"	1.40

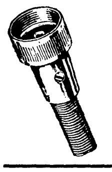
G-C UNMOUNTED PILOT LIGHT SOCKETS



Cadmium-plated. Ideal for replacements or special assemblies.

No.	Type	List
7932	Min. Screw Base	$0.15
7933	Min. Bayonet Base	.15
7934	110-V. Candelabra	.15

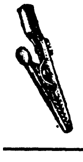
G-C FEMALE MICROPHONE CONNECTOR



Single contact female type used with No. 7940, 7941 and 7943 connectors. Complete, brass chrome-plated.

No.		List
7942	Connector	$0.60

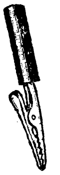
G-C INSULATED ALLIGATOR CLIP



Solder type with Red or Black insulated sleeve. Strong spring. Nickel-plated.

No.		List
5064	Red Clip	$0.22
5064-E	Envelope of 2	.45
5065	Black Clip	.22
-5065E	Envelope of 2	.45

G-C ALLIGATOR CLIP

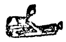


Wire fastens under set screw. Handy for all types of connectors. Cadmium-plated.

No.		List
7752	Clip	$0.20

G-C FAHNESTOCK CLIPS

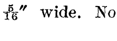
G-C SMALL CLIP



½" long by $\frac{7}{32}$" wide. Handles up to No. 16 wire. No. 4 Mtg. Hole.

No.		List
6301	Each	$0.04

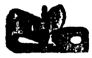
G-C DOUBLE CLIP



1½" long by $\frac{5}{16}$" wide. No. 6 Mtg. Hole.

No.		List
6304	Each	$0.15

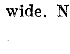
G-C MEDIUM CLIP



¾" long by $\frac{5}{16}$" wide. Handles up to No. 14 wire. No. 6 Mtg. Hole.

No.		List
6302	Each	$0.04

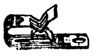
G-C MEDIUM SOLDER LUG CLIP



¾" long by $\frac{5}{16}$" wide. No. 6 Mtg. Hole.

No.		List
6306	Each	$0.07

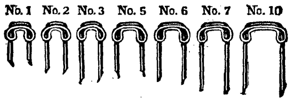
G-C LARGE CLIP



$1\frac{1}{16}$" long by ⅜" wide. No. 8 Mtg. Hole.

No.		List
6303	Each	$0.08

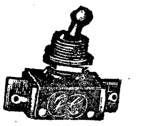
G-C INSULATED BELL STAPLES



No.		List
	Fig. 1, $\frac{3}{16}$" x ½"	
1751	Box 50, No. 1	$0.30
1752	Box 100, No. 1	.50
	Fig. 2, $\frac{3}{16}$" x ⅝"	
1753	Box 50, No. 2	.30
1754	Box 100, No. 2	.50
	Fig. 3, $\frac{3}{16}$" x ¾"	
1755	Box 50, No. 3	.30
1756	Box 100, No. 3	.50
	Fig. 5, ¼" x ⅝"	
1757	Box 50, No. 5	.30
1758	Box 100, No. 5	.50
	Fig. 6, ¼" x ¾"	
1759	Box 100, No. 6	.50
	Fig. 7, ¼" x ⅞"	
1760	Box 100, No. 7	.50
	Extra Large Cable Size Fig. 10, ⅜" x ¾"	
1761	Box 100, No. 10	.85

GENERAL CEMENT
SWITCHES • SPAGHETTI • TUBING

G-C TOGGLE SWITCHES

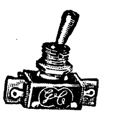


Ball handle general purpose switch. Made by H & H for G-C. 3 amps., 125 volts. Nickel Plated.

No. 1300 List $0.75
S.P.S.T.*
No. 1301 List $1.00
S.P.S.T.**
No. 1302 List $1.00
S.P.D.T.*
No. 1303 List $1.20
S.P.D.T.**
*½" Shank Length

No. 1304 List $1.40
D.P.S.T.*
No. 1305 List $1.60
D.P.S.T.**
No. 1306 List $1.60
D.P.D.T.*
No. 1307 List $1.85
D.P.D.T.**
**¾" Shank Length

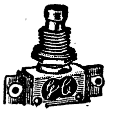
G-C BAT HANDLE TOGGLE SWITCH



Tear drop handle general purpose switch. Made by H & H for G-C. 3 amp., 125 volts. Nickel Plated.

No.		List
1330	S.P.S.T.	$0.75
1331	S.P.D.T.	1.00
1332	D.P.S.T.	1.40
1333	D.P.D.T.	1.60

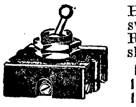
G-C PUSH-ON PUSH-OFF SWITCH



For vacuum cleaners, appliances, test equipment. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.		List
1338	S.P.S.T.	$1.85

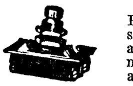
G-C NEUTRAL CENTER SWITCH



Handy radio, appliance and tester switch with 3 positions, on-off-on. Rated 15 amps., 110 volts; 15/32" shank. Nickel Plated.

No.		List
1308	S.P.D.T.	$1.65
1309	D.P.D.T.	$2.50

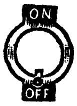
G-C HEAVY DUTY POWER SWITCH



Push button, D.P.S.T. safety switch for transmitters, refrigerators and high frequency work made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No.		List
1351	D.P.S.T.	$3.00

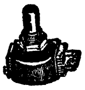
G-C ON-OFF PLATE



Will fit the G-C, H & H, Cutler-Hammer and other makes of standard switches.

No.		List
1329	On-Off Plate	$0.05

G-C ROTARY SWITCHES



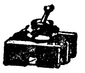
Best grade enclosed rotary switches. Made by H & H for G-C. 3 amps., 125 volts. Shafts 1½" long.

No.		List	No.		List
1320	S.P.S.T.*	$1.20	1324	D.P.S.T.**	$1.75
1321	S.P.S.T.**	1.25	1325	D.P.D.T.*	1.85
1322	S.P.D.T.*	1.35	1326	D.P.D.T.**	2.25
1323	S.P.D.T.**	1.35			

*⅜" Shank Length **1" Shank Length

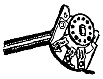
G-C EXTRA HEAVY DUTY POWER SWITCH

Three position for motors, projectors, transmitters, movie equipment, etc. Made by H & H for G-C. 10 amps., 125 volts. Neutral off in center. Size 2" x 1" x 1⅝", shank ¾" diameter.



No.		List
1352	D.P.D.T.	$ 6.25
1353	3-P.D.T.	9.50
1354	4-P.D.T.	12.50

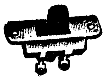
G-C REAR SPEAKER TONE SWITCH



Designed for rear seat auto radio speakers. Permits use of either speaker separately or together.

No.		List
8891	Switch	$0.95

G-C STACKPOLE SLIDE SWITCHES

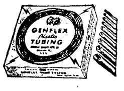


Made by Stackpole for G-C. Used on radios, phonographs, etc. UL approved at .5A-125V. and higher.

No.		List	No.		List
1367	S.P.S.T.*	$0.22	1369	D.P.S.T.**	$0.35
1368	S.P.D.T.*	.22	1370	D.P.D.T.**	.35

*17/32" w. x 1⅜" l. **15/32" w. x 1-57/64" l.

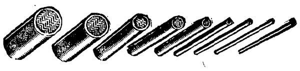
G-C GENFLEX PLASTIC TUBING



High grade extremely flexible plastic tubing for Radio and Electronic Insulation work. **Resistant** to cold or heat. High dielectric strength, average 8,000 volts. Colors: Black, Red, Green, Clear. (Specify.)

No.	Wire	Pkg.	List
603	18	20 ft.	$1.00
605	16	20 ft.	1.00
607	14	20 ft.	1.00
609	12	20 ft.	1.00
611	10	15 ft.	1.00
613	8	15 ft.	1.05
616	6	10 ft.	1.05
617	4	10 ft.	1.10
620	2	10 ft.	1.25
625	Fits over 300-ohm Twin Line 8 ft.		1.10

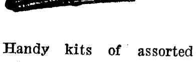
G-C RADIO SPAGHETTI



Best grade Radio and TV spaghetti. Smooth coated, best varnishes. Very flexible. 5000 volt dielectric. Approved by ASTM. Colors: Black, Red, Yellow, Green, Brown. Specify color. 30" lengths.

No.	Size	List
500	No. 20, fit 20 wire	$0.18
503	No. 17, fit 18 wire	.20
506	No. 14, fit 14 wire	.22
508	No. 12, fit 12 wire	.24
512	⅛" I.D.	.30
515	3/16" I.D.	.35
518	¼" I.D.	.50
521	⅜" I.D. (resist. size)	.90
522	7/16" I.D.	1.05
523	½" I.D.	1.20

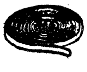
G-C PLASTIC TUBING KITS



Handy kits of assorted colors and sizes. Ideal for experimenters and servicemen.

No. 635 List $1.00
Kit of 25 ft. Asstd.

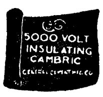
G-C RADIO FRICTION TAPE



This narrow ⅜" tape was particularly made for radio work. It eliminates waste and tearing of tape. It saves time and is handy to carry with you.

No.	Roll	List
870	65 ft. ⅜"	$0.65
871	65 ft. ¾"	1.25

G-C INSULATING CAMBRIC



10,000 Volts

Yellow varnished cambric. .010" thick.

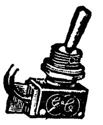
No. 549 List $0.85
Roll over 210 sq. in.
No. 548 List $3.65
36" x 36" yd.,
any length

G-C LAMINATED BAKELITE PANELS

1/16" thick. Black.

No. 590 List $0.70
6" x 6" x 1/16"
No. 591 List $1.35
6" x 12" x 1/16"
No. 592 List 2.65
12" x 12" x 1/16"

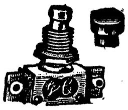
G-C BAT HANDLE SWITCH WITH WIRE LEADS



For vacuum cleaners, appliances, radio sets, etc. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.		List
1335	S.P.S.T.	$1.15

G-C PUSH BUTTON SWITCH



Two circuit, "slow make and quick break" momentary contact switch. One circuit normally on, other off; pushing button reverses circuits in use. Made by H & H for G-C. 3 amps., 125 volts. Shank ⅝" long.

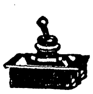
No.		List
1340	Switch	$1.40

PUSH BUTTON

For 1340 Switch. Red or Black (Specify).

No.		List
1343	Button	$0.35

G-C HEAVY DUTY POWER SWITCH

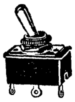


D.P.S.T. toggle power switch for motors, appliances, projectors, etc. Made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No.		List
1350	D.P.S.T.	$2.10

G-C MOLDED BAKELITE TOGGLE SWITCHES

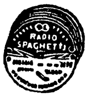
Bat handle style, silver plated contacts. Rated 3 amps. at 250 volts, 6 amps., 125 volts. 15/32" shaft. Nickel Plated.



No.		List
1361	S.P.S.T.	$1.10
1362	S.P.D.T.	1.25
1363	D.P.S.T.	1.70
1364	D.P.D.T.	2.00
	Momentary Switches (circuit normally "off")	
1365	S.P.S.T.	1.60
1366	D.P.D.T.	1.95

G-C SPAGHETTI ON SPOOLS

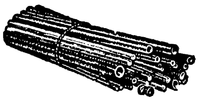
"Approved by ASTM"



5000-Volt Dielectric Strength. Best grade varnished tubing put on convenient 20-ft. spools. Will fit wire from No. 12 to No. 18. Colors: Black, Red, Yellow, Green, Blue. Specify color.

No.		List
499	Spool - 20-ft.	$1.85

G-C ASSORTED SPAGHETTI KIT

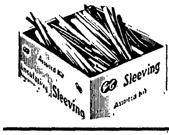


An assortment of 7½" lengths of spaghetti sleeving. 26 lengths to the kit. Sizes include from No. 17 wire to ⅜" I.D. A very handy bundle to have for repair jobs.

No.		List
550	Kit 26 Lengths	$0.49

G-C SPAGHETTI ASSORTMENT

"A Box Full of Spaghetti"



Here's a buy you can't beat on a spaghetti assortment. A variety of sizes and colors are included of high grade varnish tubing. Put up in attractive box.

No.	List
551	$1.40

G-C FYBEROID

"FISH PAPER"

Fish paper has many uses around the shop for repair jobs where electrical insulation is required. .010" — 240 sq. in. roll.

No.		List
560	Roll	$0.55

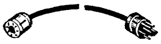
GENERAL CEMENT
TELEVISION SERVICE AIDS

G-C AC-DC INDOOR ANTENNA WIRE

Antenna lead wire for indoor type AC-DC sets. Flexible copper wire with brown plastic insulation.

No.		List
840	25-foot coil	$0.45

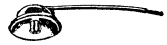
G-C YOKE COIL EXTENSION



Extends leads when removing chassis from cabinet, avoids removing yoke coil and CR tube. For RCA, Philco, etc. 48″ long.

No.	List
8847	$4.50

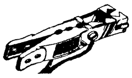
G-C ANGLE ANODE LEADS



Handy angle type with special "ozone proof" rubber cap that does not deteriorate or break up from high voltage. 18″ leads.

No.	List
8637	$1.00

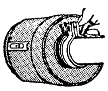
G-C TV 3-WAY ANTENNA LINE KLIPS



DeLuxe model — used three ways: Straight, side or RCA plug-in. No soldering, easy to attach. Belongs on every set.

No.	List
8744	$0.50

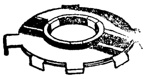
G-C KINE-CENTER



Centering device for electrostatic tubes. Easy to mount. Picture is centered by rotating two rings, stays centered with no focus distortion.

No.	List
8747	$1.75

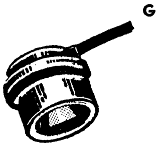
G-C 3-SECOND BEAM ADJUSTER



Fits all tubes, centers TV picture in 3 seconds (not 20-30 minutes). Eliminates fancy tilting controls. Easy to install; snap on yoke coil back; rotate for approx. centering; slide outer plate vertically or horizontally for vernier adjustment.

No.	List
8748	$1.75

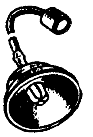
G-C TV INSULATED HIGH-VOLTAGE GRID CAPS



Heavy bakelite cap, wired with high voltage wires 10″ long. Two sizes available.

No.		List
8834	¼″ size Cap	$0.45
8835	⅜″ size Cap	.45

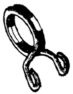
G-C TV ANODE EXTENSION



Extend high voltage TV anode leads. Pure gum "ozone proof" cap, high voltage plastic plug. 36″ long.

No.	List
8693	$1.50

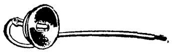
G-C TV SPRING-TYPE GRID CAPS



For high-voltage TV rectifier tubes. Constant contact and pressure due to unique construction; cannot slip off. For ¼″ and ⅜″ caps.

No.		List
8838	Envelope of 8	$0.45

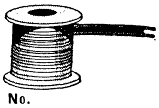
G-C STRAIGHT ANODE LEADS



Special "ozone proof" rubber cap does not deteriorate or break up from high voltage. 18″ leads.

No.	List
8636	$1.00

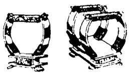
G-C 300-OHM TWIN LINE



High grade Polyethylene twin line. Heavy web assures satisfactory surface.

No.		List
8043	1000-ft. spools	(on request)

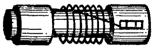
G-C ION TRAPS



Used by leading TV set manufacturers. Easy to install, assure brightest pictures. Traps stay put, don't wobble.

No.		List
8745	Single Ion Trap	$1.00
8746	Double Ion Trap	1.75

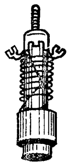
G-C FERRI-LOOPSTICK



Revolutionary indoor antenna that eliminates conventional bulky loop antennas. Peps up weak sets, greatly improves reception. Easy to install.

No.	List
8865	$0.75

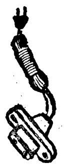
G-C VARI-LOOPSTICK



Similar to Ferri-Loopstick, but has set screw adjustment to adjust core for precision tuning. Easy to install. For new or old TV sets, gives stronger, clearer reception.

No.	List
8866	$1.00

G-C TV INTERLOCK SAFETY CORDS

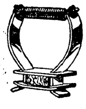


Replacement TV safety interlock or "cheater" cords. UL approved. Best grade wire, with attached molded plugs.

No.	Length	List
8200	6-ft. Reg. TV Cord	$0.75
8788	9-ft. Reg. TV Cord	1.10
8201	Special Zenith Cord	1.00
8634-E		.45

Receptable for Reg. TV Cord, 2 Per Env.

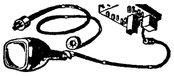
G-C BO ELIMINATOR



Barkhausen Oscillation — vertical black bars in TV picture — is caused by horizontal sweep output tube (25BQ6, 6BQ6, 6EU5, 25EU5, 6AU5, 25AU5, etc.). Easy to correct; slip BO Eliminator over tube, move up or down or turn until lines disappear.

No.	List
8749	$1.25

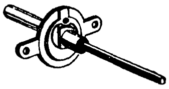
G-C TV TUBE EXTENSION



Handy CR tube extension for service work; ideal for new electrostatic tubes. Cord 48″ long, complete with plugs.

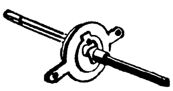
No.	List
8856	$2.50

G-C TV "SMOOTHER" TUNER DETENTS



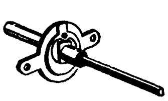
Popular short shafted detent. Replaces RCA part No. 71463 used on RCA, Admiral, Air King, Capehart, De-Wald, Garod, Fada, Emerson, Packard-Bell, etc.

No.	List
8600	$2.80



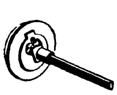
Long shaft detent. Replaces RCA Part No. 72743 used on RCA models 8TS30, 721TCS, 730TCS, 730TV2, etc.

No.	List
8601	$3.15



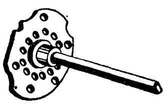
Extra long shaft detent for replacing Admiral Part No. 76B14. Used in Admiral Series No. 30-A and No. 8C, etc. Also on sets using RCA tuner type 201E1 — Part No. 71531.

No.	List
8602	$4.15



All phenolic shaft type detent used to replace RCA Part No. 73440. Used as a replacement on RCA tuners types 73435, 74571, and 74941. Used on RCA models in the 8T, 9T, 6TC, 8TR, 8TV, 9TC, 9TW series.

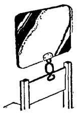
No.	List
8603	$4.75



Similar all phenolic shaft type detent to G-C No. 8603. Used to replace RCA Part No. 75162.

No.	List
8604	$4.00

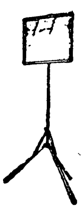
G-C TV PORTO MIRROR



Adjust rear controls and settings. Mirror has rubber lined spring clamp. Mirror made of heavy chrome plated metal to prevent distortion.

No.		List
8198	Tv Mirror, complete with clamp	$4.30
8199	Soft Cloth Carrying Bag	1.70

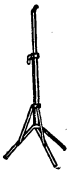
G-C THIRD-EYE TV MIRROR SET



DeLuxe mirror for TV servicing. Adjustable, telescoping stand with glass mirror; no distortion of TV picture. Mirror 12″ x 10″ in metal frame. Easy carrying.

No.		List
8390	Complete Mirror Set	$7.50
8199	Soft Cloth Carrying Bag	1.70

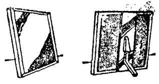
G-C TV MIRROR & EXTENSION LAMP STAND



Handy metal collapsible stand for No. 8391 mirror or extension lamp. Telescopes to small package.

No.	List
8392	$4.55

G-C THIRD-EYE GLASS MIRROR



Handy glass mirror in chrome frame, with metal plate and bench bracket. Use on bench or with No. 8392 stand.

No.		List
8391	12″ x 10″ Glass Mirror	$3.45
8199	Soft Cloth Carrying Bag	1.70

It's

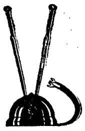
G-C

for All TV!

GENERAL CEMENT

RADIO•TV SERVICE AIDS

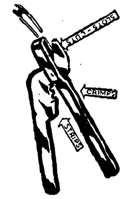
G-C INDOOR TV ANTENNA



Beautiful, high quality antenna. All-channel tuning; 3 section arms chrome plated on brass tubing. Walnut color plastic base. Arms closed 16", open 44"; opens horizontally from 36" to 92". Complete with 300-ohm twin line.

No.	List
8160	$6.65

G-C 300-OHM 4-IN-1 TOOL & KIT

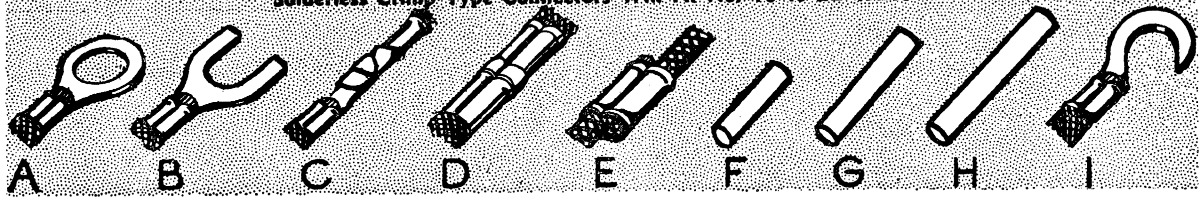


Handy tool is a stripper, cutter, slitter, crimper — all in one. Works well on all 300-ohm wire types. Saves time, does professional job. Supplied separately or with solderless terminal assortment.

No.		List
8385	4-in-1 Tool, only	$5.00
8386	Kit, Tool and Terminal Assortment	7.50

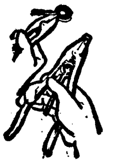
G-C SPEEDEX SOLDERLESS TERMINALS

Solderless Crimp Type Connectors Will Fit No. 16 to 22 Wires



STYLE NO. AND DESCRIPTION	STANDARD BOX List $1.85 No.	Quan.	BOX OF 144 Specify "G" After Part No. No.	List	BOXES OF 1,000 Specify "M" After Part No. No.	List
Assortment of 50 Terminals	8177	50				
"A" Small Ring Type No. 6 Screw	8178	50	8178-G	$4.05	8178-M	$24.55
"A" Large Ring Type No. 6 Screw	8179	50	8179-G	4.05	8179-M	24.55
"A" Large Ring Type No. 8 Screw	8180	50	8180-G	4.05	8180-M	24.55
"A" Large Ring Type No. 10 Screw	8181	50	8181-G	4.05	8181-M	24.55
"A" Large Ring Type for 16-14 Wire, No. 10 Screw	8188	50	8188-G	4.05	8188-M	24.55
"B" Slotted Tongue Type No. 6 Screw	8182	50	8182-G	4.05	8182-M	24.55
"B" Slotted Tongue Type No. 8 Screw	8294	50	8294-G	4.05	8294-M	24.55
"B" Slotted Tongue Type No. 10 Screw	8295	50	8295-G	4.05	8295-M	24.55
"C" Knife Disconnect	8185	36	8185-G	6.80	8185-M	40.70
"D" Butt Connector	8186	45	8186-G	5.70	8186-M	34.00
"E" Parallel Connector 22-16 Wire	8187	60	8187-G	3.95	8187-M	23.70
"E" Parallel Connector 16-14 Wire	8189	65	8189-G	3.95	8189-M	23.70
"F" Disconnect Plastic Tubing	8190	50	8190-G	1.40	8190-M	8.55
"G" Connector Plastic Tubing	8191	50	8191-G	1.40	8191-M	8.55
"H" Terminal Plastic Tubing	8192	50	8192-G	1.00	8192-M	6.15
"I" Hook Type Connector No. 6 Screw	8193	50	8193-G	4.05	8193-M	24.55

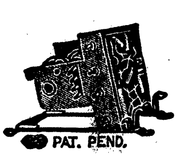
G-C TV STAND-OFF "EYE-OPENER" TOOL



Specially developed tool to open stand-off insulators for inserting lead-in and then closing them tight again. Fast. High grade steel.

No.	List
8450	$1.25

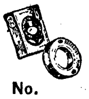
G-C CHASS-EZ



A tool to make the Serviceman's job easier. Chassis can be installed in "Chass-Ez" in five seconds. All one unit — no extra bolts or nuts to adjust. Heavy steel, riveted construction, heavily plated.

No.	List
5207	$4.00

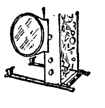
G-C MAGNETIC RECORDING WIRE



For all wire recorders. Includes plastic leads. Finest quality reproduction on stainless steel wire. Fits all standard recorders.

No.	Leaders with Spools	List
5171	1-hr. Spool	$5.00
5172	½-hr. Spool	3.00
5173	¼-hr. Spool	2.00
5174	Leaders only, for Armour type recorders, per pair	.22
5176	Empty Rewind Spool	.75
5175	Envelope Nylon Webster Cord	.45

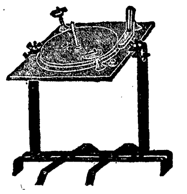
G-C TELEVISION SAF-T-RACK



A sturdy rack to use in repairing heavy television chassis. Set it on the rack and tilt it on side. Hooks hold the chassis on its side so you can work on it. Prevents tubes from being damaged.

No.		List
8045	Saf-T-Rack	$5.45

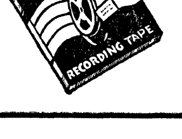
G-C PHONO TURNTABLE STAND



New improved model, adjustable to all turntables. Raises the turntable 15 inches above bench. Pivots on swivel joints for easy examination or repairs. Sturdy steel construction. Plated.

No.	List
5205	$8.25

G-C MASTER-TONE RECORDING TAPE



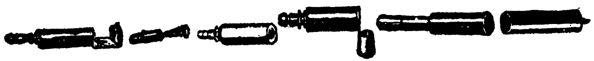
The new G-C plastic back master-tone recording tape available in two sizes, for commercial and home use. Comes in a plastic wheel which stops rapidly. Has low surface friction, high frequency response, and is uniform from reel to reel. No magnetic weak spots.

No.		List
5180	1270 foot reel	$5.50
5181	640 foot reel	3.50
5183	7" Empty reel	.75
5184	5" Empty reel	.65

GENERAL CEMENT KITS and BUSHINGS

It's G-C for All TV!

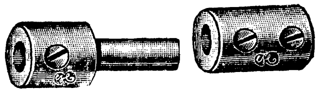
G-C IGNITION SUPPRESSORS



Rugged bakelite auto radio ignition suppressors. Resistance, 10,000 ohms (V-8 types, 50,000 ohms). Resistors are moisture-proof and impervious to heat, oil, and mild acids. All metal parts brass. Good for more than 50,000 miles.

	No.		List
(a)	1501	Bracket Type	$0.35
(b)	1502	Ford V8	.35
(c)	1503	Ford V8 Brush Type, 33, 34, 35 Cars	.35
(d)	1504	Ford V8 Brush Type, 36 to 40 Cars	.35
(e)	1505	Screw Type, Universal	.35
(f)	1506	Snap-On Type	.35
(g)	1507	Distributor Type	.35
(h)	1508	Cable type for Splicing Cables	.35

G-C SHAFT COUPLINGS, EXTENSIONS AND REDUCERS



No.	BRASS FITTINGS	List
6701	¼″ to ¼″ coupling	$0.20
6702	¼″ to ⅜″ coupling	.30
6703	¼″ to 3/16″ coupling	.30
6704	⅜″ to ⅜″ coupling	.30
6705	¼″ hole to ¼″ shaft extension	.30
6710	⅜″ hole to ¼″ shaft extension and reducer	.30
6712	¼″ x 6″ brass shaft	.25
6713	¼″ x 12″ brass shaft	.45
6716	¼″ hole x ¼″ round shaft x 4″ long	.35
	INSULATED FITTINGS	
6721	¼″ to ¼″ coupling	.25
6722	¼″ to ⅜″ coupling	.30
6725	¼″ hole to ¼″ shaft extension	.30
6734	¼″ x 6″ fibre shaft	.40
6735	¼″ x 12″ fibre shaft	.65

G-C REPLACEMENT AUTO AERIALS

FORD ROOF AER'AL

Ford-Mercury Part No. 51A-18813-A1

Replacement Aerial for all Ford and Mercury Roof Aerials of 1941-42-46-47-48 that operate from behind the dividing post of the windshield. Brass tubing, stainless steel extension rod, triple chrome plated. Free sliding with positive contacts insure noise-free reception. Easy to install, fits without changes, replaces original aerial. Complete with knob and set screw.

No. 7056	Ford-Mercury Roof Aerial	List $2.65

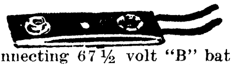
BUICK REPLACEMENT ANTENNA

Buick Part No. 980,688

Standard Buick Roof Aerial Mast. The replacement mast for Buick Roof Aerials on models 1940 through 1949. Easy to replace — merely tightens into position with a set screw. Admiralty brass tubes with a stainless steel top rod. Chrome-plated.

No. 7057	Buick Antenna Mast	List $3.00

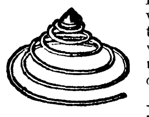
G-C MINI-MAX STRIP



Used for connecting 67½ volt "B" batteries, such as Eveready 455, 466; Burgess XX30, XX45.

No.	List
8115	$0.30

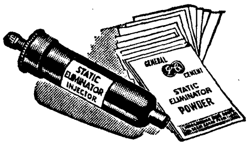
G-C HUB CAP STATIC SPRINGS



Eliminate wheel static noise developed by poor electrical contact between front axle and wheels. Springs have riveted metal points for firm, smooth contact. Plated.

No.		List
1058	Each	$0.15
1059	Box, 24 Springs	3.50

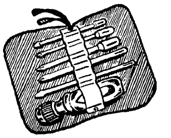
G-C STATIC POWDER & INJECTOR GUN



Inject powder in tubes, and eliminate wheel tire static. Easy to apply. Powder also cuts down tire trouble by eliminating those pin-point tube leaks caused by tire static discharge. Powder blown into tube with G-C Injector Gun.

No.		List
5604	Injector Gun, only	$1.80
5605	Packet Static Powder for 5 tires (1 car)	1.10
5606	Kit, one No. 5604 Injector, and one No. 5605 Powder	2.75

G-C SCREW DRIVER SET

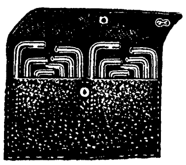


A handy screw driver set in a leatherette case with five interchangeable blades. Unbreakable handle with flanged aluminum screw chuck.

Blade Sizes

1 — cabinet	⅛ x 3¼
1 — cabinet	3/16 x 3¾
1 — mechanic	¼ x 5½
1 — recessed head No. 1	3/16 x 4¼
1 — recessed head No. 2	⅛ x 4¼
No. 8615	List $2.75

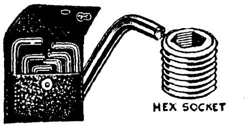
G-C ALLEN-BRISTO WRENCH KIT



Complete wrench kit for hex and spline type screws. Double snap button case of durable leatherette. Fit No. 2 to ⅜″ screws.

No.	List
5028	$1.80

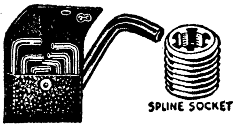
G-C ALLEN-HEX WRENCHES AND KITS



Made of alloy steel properly hardened. Used on knobs, dials, phono needles, motors, pulleys, etc.

No.		List
5029	Kit 6 Asstd. Wrenches in Leatherette Case	$0.85
5029-A	Env. 3 Hex Key Wrenches for No. ¼″ to ⅜″ Set Screws	.55
5031	No. 4	.15
5032	No. 5	.15
5033	No. 8	.15
5034	No. 10	.16
5035	¼″	.16
5036	5/16″	.25
5037	⅜″	.25

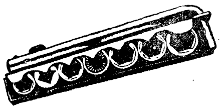
G-C BRISTO-SPLINE WRENCHES AND KITS



Very popular "Bristo" or "Spline" type wrenches as used on phono needles, motors, pulleys, knobs, etc. Made of alloy steel, properly hardened.

No.		List
5070	Kit 6 Asstd. Wrenches in Leatherette Case	$0.85
5071	No. 4	.14
5071-A	No. 5	.14
5072	No. 6	.14
5073	No. 8	.14
5074	No. 10	.15
5075	¼″	.15

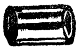
G-C 8-PIECE VEST POCKET SET



Handiest tool! Seven sockets, ¼", $\frac{5}{16}$", $\frac{11}{32}$", ⅜", $\frac{7}{16}$" hex; ⅜" round knurled, ¼" square, complete with 4" L handle.

No.	List
712	$1.75

G-C REDUCING BUSHINGS

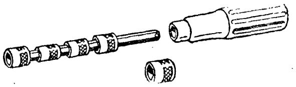


No.		List
6751-E	¼" to $\frac{3}{16}$" reduction, 8 in Env.	$0.45

G-C SHAFT EXTENSIONS

No.		List
6755	¼" x 4½" Long Flat Shaft Ext.	$0.55
6716	¼" x 4½" Long Round Shaft Ext.	.35

G-C 6-PIECE SLIP-ON WRENCH SET



Handle holds five sockets, sizes ¼", $\frac{5}{16}$", $\frac{11}{32}$", ⅜", and $\frac{7}{16}$". Easily assembled. Tempered steel, plated.

No.	List
715	$2.25

G-C PLASTIC HARDWARE ASSORTMENT

Approximately 1000 assorted screws, nuts, washers, springs, clamps, eyelets, grommets, terminals, etc. No cast-offs — only regular hardware. Plastic jar with screw cap.

No.		List
6064	1000 Asstd.	$1.80
6056-E	Env. 100 Asstd.	.45

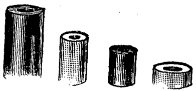
G-C HELL BOX

A grand assortment of useful hardware; screws, nuts, lugs, clips, washers, clamps, etc. Thousands of items needed every day. Metal hinged box.

No.	List
6500	$3.75

GENERAL CEMENT
SERVICE AIDS • RADIO KNOBS

G-C BRASS AND INSULATED SPACERS AND BUSHINGS



No.	Assortments	List
6617	Hardware Lab. Jar 12 Asstd. Spacers and Bushings	$0.85
6760-E	Env. 12 Asst. Ins. Spacers	.45
6762	15 Asst. Threaded Brass Bushings 6-32 thread, ¼" to ¾" long	1.45
6763	15 Asst. Threaded Brass Bushings 8-32 thread, ¼" to ¾" long	1.45
6775-E	Env. 12 ¼" x ¼" Ins. Spacers	.45
6761-E	Env. 12 Asst. Metal Spacers	.45

BRASS

No.	O.D.	Length	List
6765	¼"	¼"	$0.05
6767	¼"	½"	.06
6768	¼"	¾"	.07
6769	⅜"	¼"	.06
6770	⅜"	½"	.07
6771	⅜"	¾"	.08

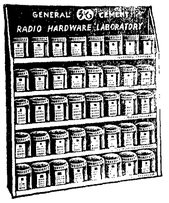
INSULATED

No.	O.D.	Length	List
6775	¼"	¼"	$0.04
6776	¼"	⅜"	.05
6777	¼"	½"	.05
6778	¼"	¾"	.08
6779	⅜"	¼"	.05
6780	⅜"	½"	.06
6781	⅜"	¾"	.07

THREADED BRASS BUSHINGS

No.	O.D.	Thread Size	Length	List
6785	¼"	6-32	¼"	$0.06
6786	¼"	6-32	⅜"	.08
6787	¼"	6-32	½"	.09
6789	¼"	6-32	¾"	.11
6790	¼"	8-32	¼"	.06
6791	¼"	8-32	⅜"	.08
6792	¼"	8-32	½"	.09
6793	¼"	8-32	¾"	.11

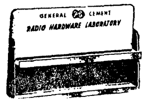
ELECTRONIC HARDWARE LABORATORIES



Complete assortment of hardware. Rack contains several thousand essential electronic hardware items. Packed in clear jars with screw caps. Assortments as below. Free Steel Rack!

No. 6601 **List $17.00**
20 jar assortment
No. 6604 **List $34.00**
DeLuxe Hardware Laboratory, 40 jars

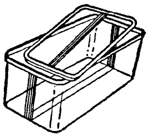
G-C STEEL HARDWARE RACK



Steel racks, hold No. 4002 2 oz. glass bottles or plastic jars. Attractively finished. Welded construction. Heavy steel. Two sizes.

No.	Size	List
4010	20 Jars	$2.75
4012	40 Jars	4.95

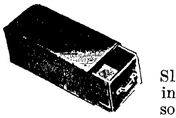
G-C PLASTIC STOCK BOXES AND TRAYS



Clear Polystyrene boxes for stocking small parts, screws, nuts, bolts, condensers, resistors, etc. Tight fitting covers.

No.		List
8022	4" x 4" x 2½" deep	$0.60
8023	4" x 8" x 2½" deep	1.20

G-C STEEL STOCK BOXES

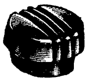


Slide-in drawer type cabinet box for parts. Made so can be stacked. Attractive finish, steel welded construction with handle. Size 13½" long, 6" wide, 4" high.

No.	List
4001	$3.55

GENERAL CEMENT RADIO KNOBS—KITS

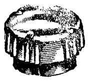
MAJESTIC BAKELITE KNOBS



Popular pattern. Set screw type. ⅞" dia., ¼" shaft.

No.		List
1100	Walnut	$0.24
1100-I	Ivory	.24

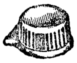
ROYAL BAKELITE KNOBS



Beautiful pattern. Set screw type. ⅞" dia., ¼" shaft.

No.		List
1105	Walnut	$0.24
1105-I	Ivory	.24

MIDGET BAKELITE KNOBS

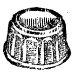


For small sets. $\frac{11}{16}$" dia., ¼" shaft.

Pointer Type

No.		List
1115	Walnut	$0.14
1116	Ivory	.17
1117	Red	.17
1118	Black	.14

MIDGET BAKELITE KNOBS
Set Screw Type

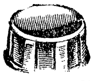


For small sets. $\frac{11}{16}$" dia., set screw ¼".

Non-Pointer Type

No.		List
1111	Walnut	$0.14
1112	Ivory	.17
1113	Red	.17
1114	Black	.14

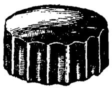
YANKEE BAKELITE KNOBS



Set screw type. ¾" and 1" dia., ¼" shaft.

No. 1109 **List $0.24**
¾" Walnut
No. 1110 **List $0.24**
1" Walnut
No. 1109-I **List $0.26**
¾" Ivory
No. 1110-I **List $0.26**
1" Ivory

MODERN LARGE KNOB



Knurl shaft or set screw types. 1⅛" diameter.

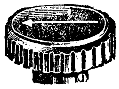
Knurl Shaft Type

No.		List
1176	Walnut	$0.17

Set Screw Type

No.		List
1177	Walnut	$0.19

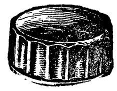
INSTRUMENT KNOB



Heavy duty knob for communication equipment, instruments. ¼" brass insert, set screw. 1¾" O.D. x ⅞".

No.		List
1175	Black	$0.55

POPULAR LARGE KNOB



Knurl shaft or set screw types. 1$\frac{3}{16}$" diameter.

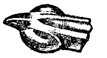
Knurl Shaft Type

No.		List
1180	Walnut	$0.17

Set Screw Type

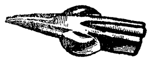
No.		List
1181	Walnut	$0.19

STREAMLINE POINTERS



The most popular pointer knob. ¼" shaft, set screw type 1¼" long.

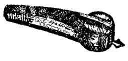
No.		List
1136	Black	$0.17
1136-W	Walnut	.18
1137	Red	.20
1137-I	Ivory	.22



A very popular pointer knob. ¼" shaft, set screw type, 2" long.

No.		List
1135	Black	$0.35
1135-W	Walnut	.35
1138	Red	.35
1138-I	Ivory	.35

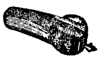
MODERN POINTER BAR KNOBS
BRASS BUSHING



For intercoms and instruments. Black. Set screw, ¼" shaft, 2¾" long.

No.		List
1130	Black	$0.47
1130-W	Walnut	.47

For intercoms and instruments. Black finish. Set screw, ¼" shaft, 1⅝" long.

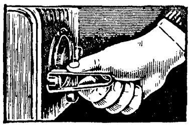


No.		List
1131	Black	$0.42
1131-W	Walnut	.42

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

GENERAL CEMENT
RADIO • TV KNOBS and KITS

G-C RADIO KNOB PULLER



Very handy in removing knobs. Simply slip behind knob and pull off. Saves cabinet and knobs.

No.	List
1063	$0.45

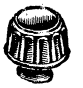
SPRING AND D-SHAFT KNOBS

Spring type. $\frac{15}{16}$″ dia. Fits ¼″ flat shafts.

No.		List
1151	Walnut	$0.16
1152	Ivory	.20

D — or flat shaft type. ⅝″ diameter.

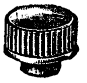
MIDGET TYPE PLASTIC KNOB



¾″ dia., ⅜″ shank for ¼″ knurled shafts.

No.		List
1157	Walnut	$0.14
1158	Ivory	.15

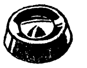
MIDGET TYPE PLASTIC KNOB



$\frac{23}{32}$″ diam., ½″ shank for ¼″ knurled shafts.

No.		List
1197	Walnut	$0.14
1198	Ivory	.15

G-C FRONT DUAL CONTROL KNOB



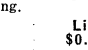
Plated gold finish inlay. 1$\frac{5}{16}$″ O.D. Used with rear knob No. 8533 and others.

No. 8530 **List $0.45**
Fits ¼″ Knurl Shaft

No. 8531 **List $0.50**
Fits ¼″ Flatted Shaft

No. 8532 **List $0.50**
Fits .202″
Flatted Shaft

G-C FRONT DUAL BAR CHANNEL KNOB



Push-on type for RCA sets and others. Fits standard ¼″ shaft flatted to .156″. Complete with spring.

No.	List
8861	$0.50

G-C FRONT KNOB

Push-on type for RCA sets and others; for off-on, volume, etc. Fits $\frac{3}{16}$″ shaft flat to .156″. Complete with spring.

No.	List
8863	$0.25

"Brass Bushing"

BRASS BUSHING

Brass insert. ¼″ shaft, set screw. 1¼″ long.

No.		List
1170	Black	$0.28
1170-W	Walnut	.28
1172	Red	.30
1172-1	Ivory	.30

MIDGET TYPE PLASTIC KNOB

¾″ dia. flush type for ¼″ knurled shafts.

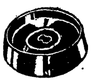
No.		List
1159	Walnut	$0.14
1160	Ivory	.15

MIDGET TYPE PLASTIC KNOB

$\frac{23}{32}$″ dia., flush shank for ¼″ knurled shafts.

No.		List
1193	Walnut	$0.14
1194	Ivory	.15

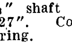
G-C REAR DUAL CONTROL KNOB



Rear mate to 8530 series knobs. 1⅝″ dia., for standard .265″ dia. rear keyway shaft.

No.	List
8533	$0.28

G-C REAR CHANNEL KNOB



Mate to No. 8861 knob. Fits ⅜″ shaft flatted to .327″. Complete with spring.

No.	List
8862	$0.45

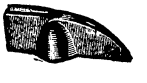
G-C REAR KNOB

Mate to No. 8863 knob. Fits 17/64″ shaft flat to .237″. Complete with spring.

No.	List
8864	$0.45

POINTERS

Brass insert. ¼″ shaft, set screw. 2″ long.



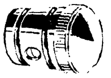
No.		List
1171	Black	$0.42
1171-W	Walnut	.42
1173	Red	.45
1173-1	Ivory	.45

ACORN PLASTIC KNOB

¾″ dia., ⅛″ shank for ¼″ knurled shafts.

No.		List
1182	Walnut	$0.13
1183	Ivory	.14

G-C AUTO RADIO KNOBS



Chrome plated. For ¼″ and $\frac{3}{16}$″ shafts. Set screw mounting.

No.		List
1169	¼″	$0.35
1174	$\frac{3}{16}$″	.35

G-C CHANNEL INDICATOR PLATE

For sets using Radio Condenser TV tuner, etc. Sparton, Farnsworth, Sonora, Meck. Walnut, gold letters. Matches 8530 series knobs. Fits ⅜″ dia. rear flat shaft.

No.	List
8537	0.75

G-C FRONT CHANNEL KNOB

Popular front knob used on channel tuners and controls for Motorola, Hallicrafter, Stromberg-Carlson, etc., also sets using Chicago Telephone tuner. $\frac{15}{16}$″ dia. Walnut. Fits .202″ dia. flat shaft.

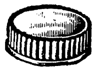
No.	List
8538	$0.22

POPULAR BAR KNOB

For intercoms, instruments, appliances. Bakelite with set screw. ¼″ hole, 1⅝″ long.

No.		List
1132	Walnut	$0.22

PUSH-ON KNURL KNOB



$\frac{15}{16}$″ dia. flush type for ¼″ knurled shafts.

No.		List
1184	Walnut	$0.17
1185	Ivory	.17

G-C KNOB SET SCREW ASST.

Handy set screw assortments for radio knobs, shafts, pulleys. 6-32, 8-32, and 10-32.

No.		List
1060	50 Asst.	$1.10
1061	100 Asst.	2.00
1062-E	15 Asst.	.45
6605	30 Asst.	.85

G-C COMBINATION DUAL KNOB

Front and rear dual dummy type control knob. 1⅜″ dia. Plated gold finish inlay. Fits ¼″ flat shaft.

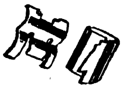
No.	List
8534	$0.75

G-C REAR CHANNEL KNOB

Mate to No. 8538 knob. For .265″ rear keyway shaft. 1¼″ dia.

No.	List
8539	$0.22

G-C TV KNOB SPRINGS



Standard and special replacements for TV-radio knobs.

Type A — Fits small .202″ dia. flat shaft

No.		List
8541-E	Env. 10	$0.45
8541-G	Gross	5.70

Type B — Fits ⅜″ dia. flat shaft

No.		List
8542-E	Env. 10	$0.45
8542-G	Gross	4.65

POPULAR PLASTIC KNOB

$\frac{15}{16}$″ diameter with ½″ shank extension for ¼″ knurled shaft.

No.		List
1153	Walnut	$0.14
1154	Ivory	.15

PUSH-ON KNURL KNOB

$\frac{15}{16}$″ dia., ½″ shank for ¼″ knurled shafts.

No.		List
1186	Walnut	$0.15
1187	Ivory	.15

G-C KNOB SPRING KITS

RADIO KNOB SPRINGS

No.	List
1049-E Env. 20 Asst.	$0.45
1050 Kit 35	$1.10
1051 Kit 100	$1.95
6619 Jar 35 Asst.	$0.85

G-C DUAL TUNER BAR KNOB

Front knob, 2″ long bar. Plated gold finish inlay. Used with No. 8536 knob and others. Fits ¼″ dia. flat shaft.

No.	List
8535	$0.95

G-C COMBINATION DUAL DUMMY KNOB

One-knob combination of No. 8538 and 8539 knobs. For matching cabinet design on single control. 1¼″ dia. at base. Fits ¼″ knurled shaft.

No.	List
8540	$0.45

ATTRACTIVE PLASTIC KNOB

$\frac{15}{16}$″ dia., flush type for ¼″ knurled shafts.

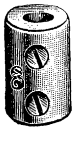
No.		List
1155	Walnut	$0.14
1156	Ivory	.15

POINTER TYPE PLASTIC KNOB

$\frac{15}{16}$″ dia., ½″ shank for ¼″ knurled shafts.

No.		List
1188	Walnut	$0.15
1189	Ivory	.15

G-C KNOB BUSHINGS



Reduce from ¼″ to $\frac{3}{16}$″. For auto radios.

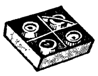
No.		List
6751	Env. of 8	$0.45

G-C REAR DUAL TUNER KNOB

Rear knob, used with No. 8535 and others. 1$\frac{5}{32}$″ dia. Fits standard ⅜″ dia. rear flat shaft.

No.	List
8536	$0.28

G-C TV KNOB SET

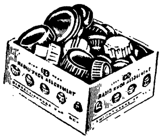


Set of above 4 TV knobs, boxed. Brown color.

No. 8860 **List $1.65**
Complete set

G-C RADIO KNOB KITS

Popular plastic knobs in assorted kits, all kinds.



No.	Quantity	List
1140	35 Asst. Push-on Buttons	$4.70
1141	28 Asst. Spring Knobs	4.70
1142	24 Asst. Set Screw Knobs	4.70
1143	30 Asst. All Type Knobs	4.70

G-C 50 LINE

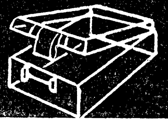
New, Compete Line of Packaged Hardware in Re-Usable Hinged Cover Plastic Boxes. List Price....$0.50 ea.

Many hardware items are also available to quantity users in Jars, Boxes of 144 (gross), and Boxes of 1000 at substantially lower prices shown below.

GENERAL CEMENT

RADIO • TELEVISION HARDWARE

THE HINGED COVER LINE



PHONO MOTOR DRIVES

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H014-F	Drive #14	4		—	—
H014-JF	Drive #14J	2		—	—
H016-F	Drive #16	2		—	—
H017-F	Drive #17	3		—	—
H018-F	Drive #18	4		—	—
H019-F	Drive #19	4		—	—
H020-F	Drive #20	1		—	—

RADIO DIAL DRIVES

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H026-F	Rubber, Asst. large	5		—	—
H027-F	Rubber, Asst. small	5		—	—

RUBBER GROMMETS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H025-F	Assorted	15	.85	—	—
H030-F	⅛" I.D. x ¼" Mtg. Hole	16		3.05	16.85
H032-F	⅛" I.D. x 5/16" Mtg. Hole	14		3.30	18.30
H034-F	¼" I.D. x ⅜" Mtg. Hole	12		3.40	18.60
H036-F	⅜" I.D. x ½" Mtg. Hole	10		3.90	21.75
H038-F	½" I.D. x ⅝" Mtg. Hole	8		6.85	38.30

PURE GUM RUBBER GROMMETS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H040-F	Assorted	12		—	—
H042-F	3/16" I.D. x 5/16" Mtg. Hole	12		3.75	20.90
H043-F	¼" I.D. x ⅜" Mtg. Hole	10		4.05	22.65

CORD STRAIN RELIEFS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H048-F	Reliefs	5		10.55	58.05

RUBBER FEET—SCREW TYPE (less screws)

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H050-F	Assorted	8		—	—
H052-F	⅜" O.D.	8		1.95	10.75
H054-F	½" O.D.	8		3.00	16.85
H056-F	⅝" O.D.	8		4.45	24.95
H058-F	½" O.D.	8		4.25	25.50

RUBBER TACK BUMPERS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H071-F	⅜" O.D.	10	.85	5.90	26.10

FELT CABINET PADS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H074-F	½" O.D. x ¼"	40	.85	1.05	5.80

CHASSIS MOUNTS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H075-F	Assorted	10		—	—
H076-F	¾" O.D. x ¾" h.	5		12.40	69.65

RUBBER WASHER & BUMPER ASSORTMENT

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H083-F	Assorted	12		—	—

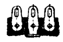
TRIMOUNTS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H370-F	Assorted	20	.85	—	—
H373-F	⅛" hole	25		2.40	13.40
H375-F	.136" hole	20		2.85	15.65
H378-F	5/32" hole x 25/32" h.	17		3.40	20.30
H379-F	5/32" hole x 21/32" h.	15		3.00	16.85

TERMINAL LUGS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H100-F	Assorted	30	.85		
H102-F	#10 Lugs, Style A	25		2.40	14.50
H104-F	#6 Lugs, Style B	25		1.95	11.50
H106-F	#8 Lugs, Style B	25		2.15	12.75
H108-F	#6 Lugs, Style C	30		1.65	9.75
H112-F	#6 Lugs, Style F	30		1.65	9.75
H113-F	#8 Lugs, Style F	30		1.80	10.25
H114-F	#6 Lugs, Style H	25		2.15	13.00
H117-F	#8 Lugs, Style H	25		2.25	13.50
H118-F	#10 Lugs, Style H	25		2.30	13.75
H122-F	#6 Lugs, Style L	20		2.60	15.50
H124-F	#6 Lugs, Style M	25		2.10	12.50
H134-F	#8 Lugs, Style M	25		2.15	12.75
H225-F	Solderless Lugs (TV Line)	10		5.25	32.80

TERMINAL STRIPS



CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H250-F	Assorted	4		—	—

SNAP BUTTON HOLE PLUGS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H300-F	Assorted	6		—	—
H306-F	¼" hole	8		6.20	34.85
H308-F	⅜" hole	8		7.35	40.65
H310-F	½" hole	6		8.30	46.45
H312-F	⅝" hole	6		9.30	52.25
H314-F	¾" hole	5		10.35	58.05
H316-F	1" hole	5		16.00	90.00

VENT PLUGS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H339-F	1" hole	4		19.70	110.30

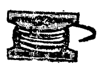
HAIR PIN COTTERS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H380-F	Assorted	50	.85	—	—

COTTER PINS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H388-F	Assorted	60	.85	—	—

DIAL CORD



CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H395-F	Cord, extra thin	10′		—	—
H396-F	Cord, standard thin	10′		—	—
H397-F	Cord, medium	10′		—	—

TENSION SPRINGS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H420-F	Assorted, small	10		—	—
H421-F	Assorted, large	10		—	—

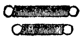
DIAL DRIVE SPRINGS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H400-F	Assorted, small	10		—	—
H401-F	Asst., large & small	8	.85	—	—
H403-F	T1, ½" x ⅛"	10		4.80	26.70
H406-F	T2, 1" x ⅛"	8		6.50	36.55
H408-F	T8, 1" x 3/16"	8		6.20	34.55
H410-F	T4, 1⅜" x 3/16"	8		8.00	44.70
H412-F	T5, 1½" x ¼"	6		9.25	51.65

COMPRESSION SPRINGS

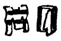
CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H440-F	Assorted, small	20	.85	—	—
H441-F	Assorted, large	15		—	—

PHONO SPRINGS



CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H450-F	Assorted, small	8		—	—
H452-F	Assorted, large	8		—	—

TV KNOB SPRINGS



CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H460-F	Assorted	12		—	—
H462-F	Springs, .202" shaft	10		5.70	31.95
H464-F	Springs, ⅜" flat shaft	10		4.65	26.10

RADIO KNOB SPRINGS

K1
K2
K3
K4
K5
K6
K6S
K7
K8
K9

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H480-F	Assorted	18	.85	—	—
H482-F	K1 Springs	20		2.60	14.20
H484-F	K2 Springs	20		3.05	17.10
H487-F	K3 Springs	20		2.80	15.65
H489-F	K4 Springs	10		4.40	24.65
H492-F	K6 Springs	8		5.45	30.75
H494-F	K8 Springs	10		6.90	38.50
H497-F	K10 Springs	10		2.80	16.65
H498-F	K11 Springs	10		4.60	25.55
H499-F	K12 Springs	10		4.60	25.55

CABLE CLAMPS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H500-F	Assorted	20	.85	—	—
H502-F	⅛" to 3/16" cable	25	.85	2.10	11.60
H503-F	3/16" to ¼" cable	20	.85	2.35	13.35
H506-F	5/16" to ½" cable	15		2.75	15.10

BASE BOARD WIRE CLIPS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H509-F	Set	20		2.35	13.95

EYELETS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H510-F	Assorted	50		—	—
H515	.123 Shank Dia.	50		.90	5.50

RIVETS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H525-F	Assorted	50		—	—

RIVETS & EYELETS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H526-F	Assorted	55	.85	—	—

TV CORD RIVETS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H527-F	Assorted				

ESCUTCHEON PINS

CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H560-F	Assorted	100		—	—

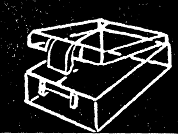
TWIN LEAD WIRING NAILS

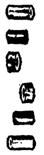
CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	JAR	QUANTITY LIST PRICE GR.	1,000
H565-F	Set	35		1.40	9.50

GENERAL CEMENT

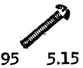
RADIO • TELEVISION HARDWARE

THE HINGED COVER LINE

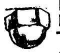




Cat. No.	Description	QUAN. (Hinged Box)	Jar	QUANTITY LIST PRICE Gross	1,000
ANGLE BRACKETS					
H570-F	Assorted	12			
FAHNESTOCK SPRING CLIPS					
H590-F	Assorted	12	.85		
H592-F	Clips, sm.	15		3.95	23.75
H594-F	Clips, m.	14		4.10	24.50
FUSE CLIPS					
H600-F	Assorted	12			
GRID CAPS					
H609-F	Assorted	8	.85		
H610-F	TV Spring Type	5			
H612-F	Insul. H. V., ¼" dia.	1			
H614-F	Insul. H. V., ⅜" dia.	1			
CORONA SHIELDS					
H619-F	Set	8			
METAL SPACERS					
H620-F	Assorted	12			
INSULATED SPACERS					
H630-F	Assorted	12			
FUSE INSULATORS					
H640-F	Set	16		1.80	
PHONE TIPS					
H645-F	Set	10		4.05	22.75
PHONO PLUGS					
H665-F	Set	4			40.50
PHONO JACKS					
H667-F	Set	3			125.00
SHIELDED PHONO PICK-UP WIRE					
H675-F	Sev. ft.				
RCA RECORD ADAPTERS					
H680-F	Plastic	5		9.30	55.75
SPEAKER DUST FELTS					
H740-F	Assorted	15	.85		
DIAL CORD CLIPS					
H744-F	Eyelets & Clamps, asst.	60			
H745-F	Clips, assorted	30	.85		
H746-F	Clips, for thin cable	40		1.55	8.70
SPRING WASHERS					
H750-F	Assorted	12			
KNOB FELT WASHERS					
H7560-F	Set	40	.85	.85	3.50
RETAINING RINGS AND "C" WASHERS					
H770-F	Assorted	25	.85		
H772-F	Washers for $\frac{3}{16}$" shaft	15	.85	1.80	10.20
H774-F	Washers for ¼" shaft	15	.85	1.95	11.05
H778-F	Rings for ¼" shaft	50		.85	4.45



CATALOG NO.	DESCRIPTION	QUANTITY (Hinged Box)	Jar	QUANTITY LIST PRICE Gross	1,000
CUP WASHERS					
H805-F	Assorted	40			
H806-F	Washers for #6 screw	45	.85	.85	4.35
H808-F	Washers for #8 screw	45	.85	.95	4.95
H810-F	Washers for #10 screw	35	.85	.95	5.50
INSULATING WASHERS, FLAT					
H820-F	Assorted	35			
H824-F	Washers for #6 hole	30	.85	.85	3.85
H825-F	Washers for #8 hole	30	.85	.95	4.10
H826-F	Washers for #10 hole	30	.85	.95	4.10
H827-F	Washers for ¼" hole	24	.85	.95	4.65
H828-F	Washers for ⅜" hole	20	.85	1.05	5.80
INSULATED WASHERS, EXTRUDED					
H854-F	Asst., plus flat	30			
H855-F	Assorted	30			
H864-F	Washers for ⅜" shaft	20	.85	2.05	11.60
METAL WASHERS					
H870-F	Assorted	80			
H874-F	Washers for #4 hole	80		1.45	8.15
H876-F	Washers for #6 hole	80	.85	.80	3.75
H878-F	Washers for #8 hole	80	.85	.85	4.05
H880-F	Washers for #10 hole	70		.85	4.05
H882-F	Washers for ¼" hole	50		.85	4.65
LOCK WASHERS, INTERNAL TEETH					
H920-F	Assorted	50			
H922-F	Washers for #2 hole	35		1.55	8.70
H924-F	Washers for #4 hole	50		1.45	8.15
H926-F	Washers for #6 hole	50		1.05	5.80
H928-F	Washers for #8 hole	50		1.05	5.80
H930-F	Washers for #10 hole	45		1.10	6.10
ASSORTED SCREWS AND NUTS					
H1000-F	Machine Screw Assortment	35			
H1002-F	Machine Screws & Nuts, small asst'd	35			
H1005-F	Rack Screws & Cup Washers, asst'd	15			
H1008-F	Hardware Assortment, approx.	100			
ROUND HEAD STEEL MACHINE SCREWS					
H1022-F	2-56 x ¼"	40		.95	5.15
H1024-F	2-56 x ½"	40		1.00	5.65
H1028-F	3-48 x ¾"	40		1.20	7.00
H1032-F	4-36 x ¼"	40	.85	1.00	5.80
H1034-F	4-36 x ½"	35	.85	1.10	6.20
H1036-F	4-36 x ¾"	35	.85	1.30	7.15
H1042-F	4-40 x ¼"	40	.75	1.00	5.80
H1044-F	4-40 x ½"	35	.85	1.10	6.20
H1062-F	6-32 x ¼"	40	.85	1.10	6.25
H1064-F	6-32 x ½"	30	.85	1.30	7.25
H1066-F	6-32 x ¾"	30	.85	1.50	8.40
H1068-F	6-32 x 1"	30	.85	1.75	9.50
H1082-F	8-32 x ¼"	30		1.45	8.00
H1083-F	8-32 x ⅜"	25	.85	1.55	8.65
H1084-F	8-32 x ½"	25	.85	1.60	9.30
H1086-F	8-32 x ¾"	20	.85	1.95	10.60
H1088-F	8-32 x 1"	20	.85	2.15	12.25
H1104-F	10-32 x ½"	20	.85	2.00	10.85
H1106-F	10-32 x ¾"	20	.85	2.30	12.85
H1108-F	10-32 x 1"	17	.85	2.60	14.50



Cat. No.	Description	QUAN. (Hinged Box)	Jar	QUANTITY LIST PRICE Gross	1,00
ROUND HEAD BRASS MACHINE SCREWS					
H1210-F	Assorted	30			
ORNAMENTAL HEAD SCREWS					
H1250-F	Assorted	20	.85		
H1252-F	6-32x¾"	25		1.60	9.00
H1253-F	6-32x1"	20		1.75	9.60
H1255-F	8-32x1¼"	12		2.05	11.30
OVAL HEAD RACK SCREWS					
H1266-F	6-32x¾"	30	.85	1.55	8.40
H1270-F	8-32x¾"	25	.85	1.70	9.45
H1273-F	10-32x¾"	20	.85	2.30	12.90
SHEET METAL SCREWS					
H1300-F	Assorted	25			
H1350-F	#4x½"	35	.85	1.75	9.70
H1362-F	#6x¼"	30	.85	1.60	9.15
H1363-F	#6x⅜"	25	.85	1.75	9.95
H1364-F	#6x½"	25	.85	1.85	10.45
H1366-F	#6x¾"	20	.85	2.05	11.55
H1382-F	#8x¼" (auto radio)	20		3.00	16.65
H1383-F	#8x⅜"	20	.85	2.05	11.55
H1384-F	#8x½"	20	.85	2.25	12.35
H1388-F	#8x1"	15	.85	2.90	16.25
H1403-F	#10x⅜"	15	.85	2.55	14.20
H1404-F	#10x½"	15	.85	2.65	15.00
H1406-F	#10x¾"	12	.85	3.00	16.85
ESCUTCHEON PLATE SCREWS					
H1500-F	Set, small	25	.85		
WOOD SCREWS					
H1502-F	Assorted	25	.85		
PHONO PICK-UP SCREWS					
H1550-F	Assorted	12			
H1551-F	2-56x$\frac{9}{16}$"	12		4.45	24.95
H1553-F	2-64x¾"	12		9.30	52.25
H1555-F	1-72x1"	5		4.65	26.10
PHONO PICK-UP CARTRIDGE MOUNTING SCREWS					
H1560-F	Assorted	60			
H1562-F	4-36x¼"	40	.85	1.00	5.80
H1564-F	4-40x¼"	40	.75	1.00	5.80
SPADE BOLTS					
H1570-F	Assorted	15			
WRENCH SETS					
H1600-F	Hex Wrench Set, Allen	4			
H1602-F	Spline Wrench Set, Bristol	4			
HEADLESS AND KNOB SET SCREWS					
H1605-F	Assorted	15	.85		
H1623-F	6-32x$\frac{3}{16}$"	15	.85	3.30	18.30
H1633-F	8-32x$\frac{3}{16}$"	15	.85	2.80	15.65
H1634-F	8-32x¼"	15	.85	2.85	15.95
H1644-F	10-32x¼"	15	.85	3.30	18.30
ALLEN HEX SET SCREWS					
H1674-F	4-36 Assorted	5			
H1676-F	6-32 Assorted	5			
H1678-F	8-32 Assorted	5			
STEEL HEX NUTS					
H1800-F	Assorted	30			
H1802-F	2-56	30		1.45	7.95
H1803-F	3-48	30		1.45	7.95
H1804-F	4-40	30	.85	1.35	7.55
H1805-F	4-36	30	.85	1.35	7.55
H1806-F	6-32	30	.85	1.25	7.55
H1808-F	8-32	30	.85	1.50	8.40
H1810-F	10-32	30	.85	1.70	9.30
BRASS HEX NUTS					
H1842-F	4-36	35		1.60	9.30
H1846-F	6-32	25		2.20	13.30
H1848-F	8-32	15		2.45	14.50
MOUNTING NUTS					
H1920-F	Assorted	12	.85		
H1923-F	Volume Control ⅜-32	15		3.95	22.05
H1924-F	Toggle Switch Hex $\frac{15}{32}$-32	10		6.65	37.45
H1926-F	Toggle Ring $\frac{15}{32}$-32	8		6.15	34.55
WING NUTS					
H1931-F	Assorted	10			
H1933-F	6-32	15		6.40	36.00
H1934-F	8-32	10		7.60	42.40
H1935-F	10-32	8		7.70	44.65
KNURLED THUMB NUTS					
H1941-F	Assorted	10			
H1943-F	6-32	8		3.35	19.80
H1944-F	8-32	8		2.40	13.95
H1945-F	10-32	5		7.70	44.65
ACORN NUTS					
H1950-F	Assorted	10	.85		
SPEED NUTS					
H1960-F	Assorted	30	.85		
DIAL PULLEYS					
H1966-F	Assorted	6	.85		
PLASTIC ANCHOR					
H1968-F	Set	8			

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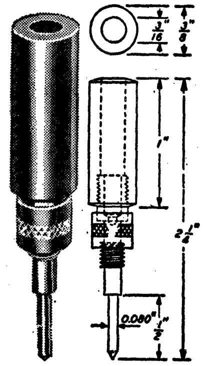
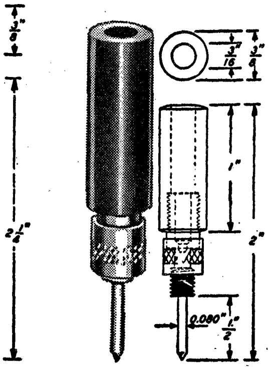
"It's Sound Planning to Specify SMITH!"



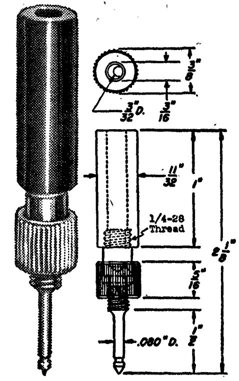


200 201

INSULATED SOLDERLESS TIP PLUGS

Plug portion brass, nickel plated. Fits all standard phone tip jacks. Wire is wrapped around screw portion and tightened with knurled nut. Molded plastic handle available in Red, Black, Yellow or Green. Specify color.

No. 200	Senior Type	$23.00 Per C
No. 201	Junior Type	$23.00 Per C

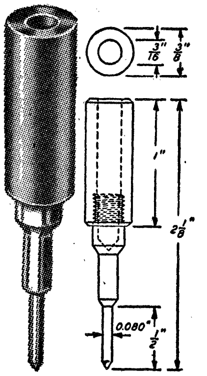


250

SOLDERLESS PHONE TIP PLUG

Signal Corps Approved. Steel, Case hardened phone tip made to Signal Corps drawing and specs. Supplied with Rigid Thermoplastic handle to JAN specs. Available in Red or Black. Specify color.

No. 250 $65.00 Per C

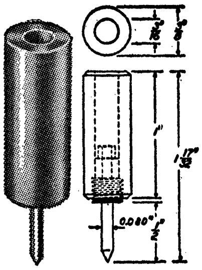


229

HEAVY DUTY INSULATED PHONE TIP PLUG

Plug portion brass, nickel plated. Fits all standard phone tip jacks. Molded plastic handle available in Red, Black, Yellow or Green. Specify color.

No. 229 $28.00 Per C

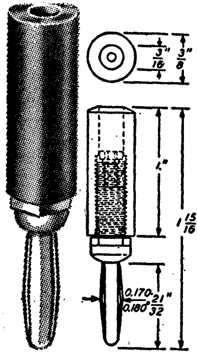


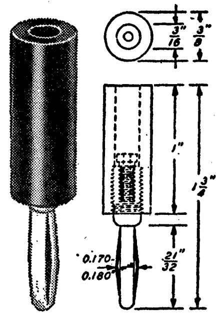
203

INSULATED SHORT PHONE TIP PLUG

Plug portion brass, nickel plated. Fits all standard phone tip jacks. Tip inserts right up to handle. Molded plastic handle available in Red, Black, Yellow or Green. Specify color.

No. 203 $20.00 Per C





212 242 211

INSULATED BANANA PLUGS

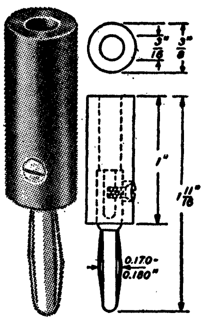
Plug portion hexed brass, nickel plated. Fits all standard banana jacks. Beryllium spring retains resiliency after thousands of insertions. Wire can be soldered to brass stud or plug. Molded plastic handle available in Red, Black, Yellow or Green. Specify color.

No. 212	Phosphor Bronze Spring	$30.00 Per C
No. 242	Beryllium Copper Spring	$50.00 Per C

INSULATED BANANA PLUG

Spring Type. Plug portion brass, nickel plated. Fits all standard banana jacks. Four leaved phosphor bronze spring. Wire can be soldered to stud or plug. Molded plastic handle available in Red, Black, Yellow or Green. Specify color.

No. 211 $25.00 Per C

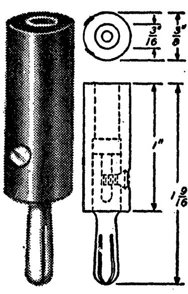


204

INSULATED BANANA PLUG

Spring Type. Plug portion brass, nickel plated. Fits all standard banana jacks. Four leaved phosphor bronze spring. Set screw provided for solderless connection. Molded plastic handle available in Red, Black, Yellow or Green. Specify color.

No. 204 $25.00 Per C

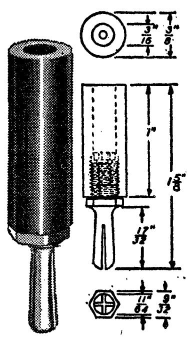


213

INSULATED BANANA PLUG

Split Type. Plug portion brass, nickel plated; cross slotted. Set screw for solderless connection. Molded plastic handle available in Red, Black, Yellow or Green. Specify color.

No. 213 $20.00 Per C

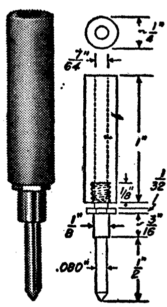


253

INSULATED BANANA PLUG

Plug portion brass, nickel plated. Wire can be soldered to stud or plug. Molded plastic handle. Red, Black, Yellow or Green. Specify color.

No. 253 $25.00 Per C

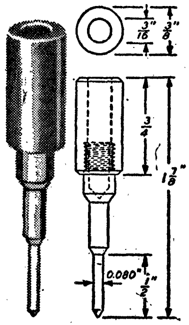


270

SUB-MINIATURE PHONE TIP

Fits standard tip jacks. For checking all types of subminiature equipment. Brass, nickel plated tip. Handle Red or Black bone fibre. Specify color.

No. 270 $20.00 Per C

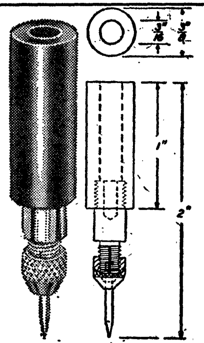


215

HEAVY DUTY INSULATED PHONE TIP PLUG

Banana plug inserts in rear to adapt to phone tip plug. Plug portion brass, nickel plated. Fits all standard phone tip jacks. Molded plastic handle in Red, Black, Yellow or Green. Specify color.

No. 215 $25.00 Per C

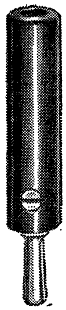


216

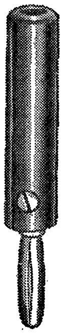
INSULATED PHONO NEEDLE TIP PLUG

Brass, nickel plated. Removable chuck. Molded handle, Red, Black, Yellow or Green. Specify color.

No. 216 $25.00 Per C



243

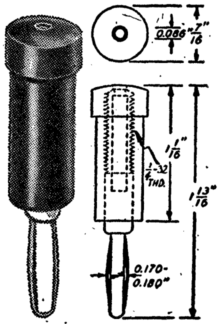


244

INSULATED BANANA PLUGS

Embody our No. 213 Split and 204 Spring Type plugs, except handles are 1½" long. Set screw for solderless connection. Machined plastic handle in Red, Black, Yellow or Green. Specify color.

No. 243	Split Type	$40.00 Per C
No. 244	Spring Type	$40.00 Per C



214

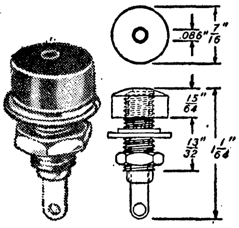
TIP PLUG TO BANANA PLUG ADAPTER

Fits all standard banana jacks. Adapts phone tip plug to banana plug. Insulated handle. Red, Black, Yellow or Green. Specify color.

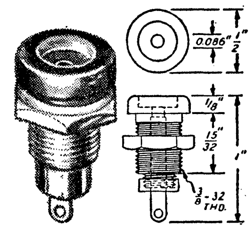
No. 214 $45.00 Per C

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY


.086"
$\frac{7}{16}$"
$\frac{15}{64}$"
$\frac{13}{32}$"
$1\frac{1}{64}$"

202 – 223


0.086"
$\frac{1}{2}$"
$\frac{1}{8}$"
$\frac{15}{32}$"
1"
$\frac{3}{8}$-32 THD.

240

INSULATED PHONE TIP JACKS

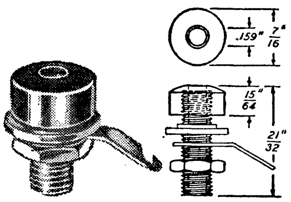
Accommodates all standard phone tip plugs. Body is brass, nickel plated. Sturdy phosphor bronze spring. Mounts in $\frac{5}{16}$" hole in panels up to $\frac{3}{8}$" thick. Molded plastic head available in Red, Black, Yellow or Green. No. 202 available in Blue also. Specify color.

No. 202	$\frac{7}{16}$" Head Diameter	**$20.00 Per C**
No. 223	$\frac{1}{2}$" Head Diameter	**$35.00 Per C**

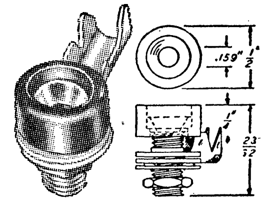
ALL INSULATED TIP JACK

Accommodates all standard phone tips. Sturdy phosphor bronze contact. Mounts in $\frac{3}{8}$" hole in panels up to $\frac{5}{16}$" thick. Red, Black, Yellow, Green or Blue. Specify color.

No. 240 **$50.00 Per C**


.159"
$\frac{7}{16}$"
$\frac{15}{64}$"
$\frac{21}{32}$"

205


.159"
$\frac{1}{2}$"
$\frac{1}{4}$"
$\frac{23}{32}$"

219

INSULATED BANANA JACK

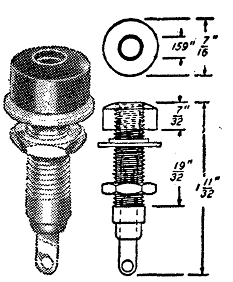
Accommodates all standard banana plugs. Body is brass, nickel plated. Mounts in $\frac{5}{16}$" hole in panels up to $\frac{3}{8}$" thick. Molded plastic head, Red, Black, Yellow, Green or Blue. Specify color.

No. 205 **$20.00 Per C**

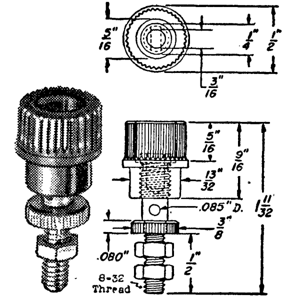
INSULATED BANANA JACK

Accommodates all standard banana plugs. Body is brass, nickel plated. Mounts in $\frac{5}{16}$" hole in panels up to $\frac{3}{8}$" thick. Plastic head. Red, Black, Yellow or Green. Specify color.

No. 219 **$22.00 Per C**


.159"
$\frac{7}{16}$"
$\frac{7}{32}$"
$\frac{19}{32}$"
$1\frac{11}{32}$"

206


$\frac{5}{16}$"
$\frac{1}{4}$"
$\frac{1}{2}$"
$\frac{3}{16}$"
$\frac{5}{16}$"
$\frac{9}{16}$"
$\frac{13}{32}$"
.085" D.
$1\frac{11}{32}$
$\frac{3}{8}$"
.080"
$\frac{1}{2}$"
8-32 Thread

220

INSULATED COMBINATION JACK

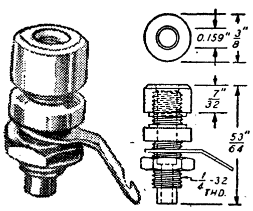
Accommodates all standard phone tip or banana plugs. Body is brass, nickel plated; contact is a sturdy phosphor bronze spring. Molded plastic head. Red, Black, Yellow, Green or Blue. Specify color.

No. 206 **$25.00 Per C**

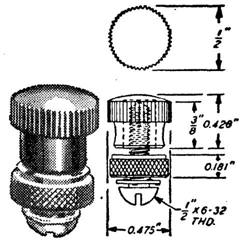
COMBINATION BINDING POST

Molded plastic free turning non-removable head. Accepts a phone tip plug, a spade lug, or a banana plug. Normally grounded; can be insulated by use of No. 2155 shoulder and 2163 flat fibre washers. Red or Black. Specify color.

No. 220 **$40.00 Per C**


0.159"
$\frac{3}{8}$"
$\frac{7}{32}$"
$\frac{53}{64}$"
$\frac{1}{4}$-32 THD.

221


$\frac{1}{2}$"
$\frac{3}{8}$" 0.426"
0.181"
$\frac{1}{2}$" x 6-32 THD.
0.475"

265

INSULATED MIDGET BANANA JACK

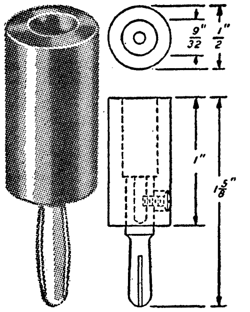
Accommodates all standard banana plugs. Brass, nickel plated body. Insulating groove of head mounts in $\frac{5}{16}$" hole in panels up to $\frac{1}{4}$" thick. Red, Black, Yellow or Green. Specify color.

No. 221 **$30.00 Per C**

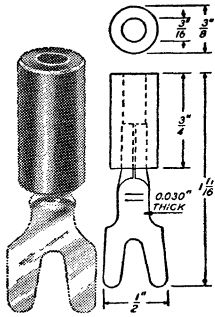
BINDING POST

Molded-in brass insert in molded bakelite head supplied only in black. Brass, nickel plated retaining washer. Supplied complete with 8/32" x $\frac{1}{2}$" screw and lockwasher.

No. 265 **$25.00 Per C**


$\frac{9}{32}$"
$\frac{1}{2}$"
1"
$1\frac{5}{8}$"

233 – 234


$\frac{3}{16}$"
$\frac{3}{8}$"
$\frac{3}{4}$"
0.030" THICK
$1\frac{1}{16}$"
$\frac{1}{2}$"

218

HEAVY DUTY INSULATED BANANA PLUG

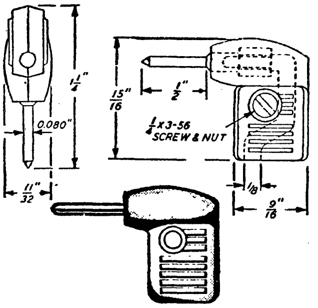
Embody No. 213 Split Type and No. 204 Spring Type banana plug bodies. Larger plastic handle accommodates heavier wire. Set screw for solderless connection. Red or Black. Specify color.

No. 233	Split Type Plug	**$75.00 Per C**
No. 234	Spring Type Plug	**$75.00 Per C**

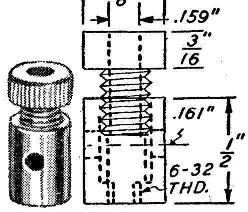
INSULATED SPADE LUG

Adapts banana plug to a spade lug. Steel hot tinned lug .030" thick for extra durability. Molded plastic handle in Red or Black. Specify color.

No. 218 Complete **$18.00 Per C** **No. 129** Lug Only **$20.00 Per M**


$\frac{1}{4}$"
$\frac{15}{16}$"
$\frac{1}{2}$"
0.080"
$\frac{1}{4}$ x 3-56 SCREW & NUT
$\frac{1}{8}$
$\frac{9}{16}$"
$\frac{11}{32}$"

235


$\frac{3}{8}$"
.159"
$\frac{3}{16}$"
.161"
$\frac{1}{2}$"
6-32 THD.

136

MOLDED METER TIP PLUG

Molded in two halves for easy assembling. Brass nickel plated tip fits standard tip jacks. Available in Red and Black. Specify color.

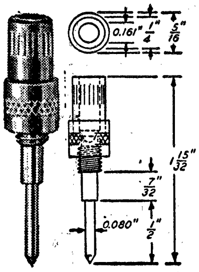
No. 235	Tip Plug	**$0.45 Each**
No. 235-D	Display of 24 Pairs	**$21.60 Each**

METAL COMBINATION BINDING POST

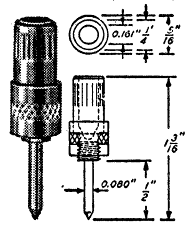
Two-piece brass nickel plated. Accepts all standard phone tip or banana plugs. Mounts to chassis by use of 6-32 screw.

No. 136 **$25.00 Per C**

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53


0.161"
1/4"
5/16"
15/32"
7/32"
0.080"
1/2"

105

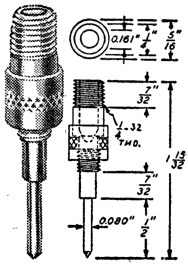

0.161"
1/4"
5/16"
13/16"
7/32"
0.080"
1/2"

106

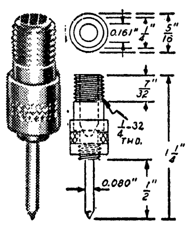
SOLDERLESS PHONE TIP PLUGS

Brass, nickel plated. Wire is wrapped around screw portion, and tightened with knurled nut. Fits standard phone tip jacks.

No. 105	Senior Type	$16.00 Per C
No. 106	Junior Type	$16.00 Per C


0.161"
1/4"
5/16"
7/32"
1/4-32 THD.
13/32"
7/32"
0.080"
1/2"

124

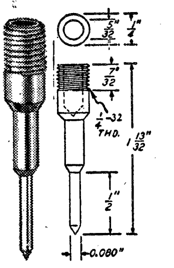

0.161"
1/4"
5/16"
7/32"
1/4-32 THD.
1 1/4"
0.080"
1/2"

127

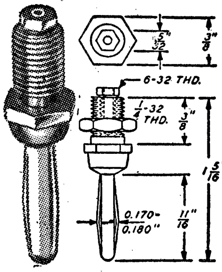
THREADED SOLDERLESS PHONE TIPS

Brass, nickel plated. Wire is wrapped around screw portion and tightened with knurled nut. Threaded for easy insertion in plastic handles. Fits standard phone tip jacks.

No. 124	Senior Type	$18.00 Per C
No. 127	Junior Type	$18.00 Per C


5/32"
1/4"
7/32"
1/4-32 THD.
1 13/32"
1/2"
0.080"

125


5/32"
3/8"
6-32 THD.
1/4-32 THD.
3/8"
1 5/16"
0.170-0.180"
11/16"

135–145

HEAVY DUTY PHONE TIP PLUG

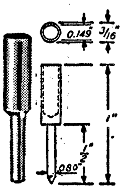
This brass nickel plated phone tip is of extra sturdy construction, and fits all standard phone tip jacks.

No. 125	$16.00 Per C

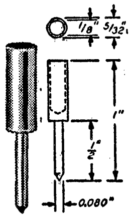
BANANA PLUGS — Spring Type

Hexed brass, nickel plated. Beryllium spring retains resiliency after thousands of insertions. Wire can be soldered to stud or plug. Supplied with hex nut.

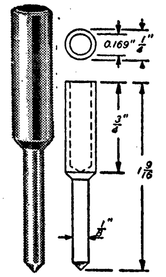
No. 135	Beryllium Copper Spring	$45.00 Per C
No. 145	Phosphor Bronze Spring	$25.00 Per C


0.149
3/16"
1"
1/2"
.080"

108


1/8"
5/32
1"
1/2"
0.080"

123

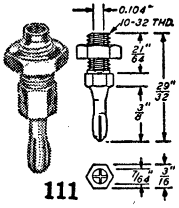

0.169"
1/4"
3/4"
1 9/16"
1/4"

155

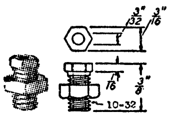
SOLDER TYPE PHONE TIPS

Brass nickel plated.

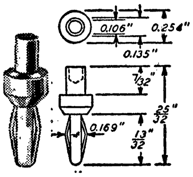
No. 108	Standard Type	$ 30.00 Per M
No. 123	Large I.D. Type	$ 40.00 Per M
No. 155	Heavy Duty Type	$100.00 Per M


0.104"
10-32 THD.
21/64"
29/32"
3/8"
7/64
3/16

111


3/32"
3/16"
1/16
3/8"
10-32

112


0.106"
0.254"
0.135"
7/32"
25/32"
0.169"
13/32"

121

MIDGET BANANA PLUG AND JACK

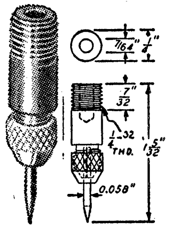
For use in minimum of space. The plug is cross slotted. Plug and jack are brass, nickel plated.

No. 111	Plug	$15.00 Per C
No. 112	Jack	$12.00 Per C

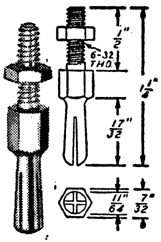
MIDGET BANANA PLUG
Rivet Type

Brass, silver plated. Four leaved phosphor bronze spring. Fits all standard banana jacks. Also made to rigid JAN specs.

No. 121	$20.00 Per C


7/64"
1/4"
7/32"
1/4-32 THD.
1 5/32"
0.058"

128


1/2"
6-32 THD.
1 1/4"
17/32"
11/64
7/32

104

NEEDLE TIP AND CHUCK

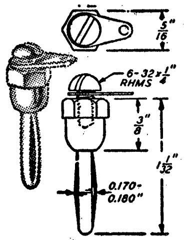
Brass nickel plated body, with steel nickel plated needle. Removable chuck. Threaded for easy insertion in plastic handles.

No. 128	$20.00 Per C

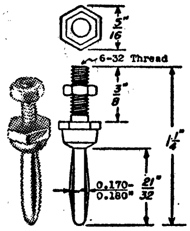
BANANA PLUG — Split Type

Hexed brass, nickel plated. Cross slotted for positive and lasting contact. Fits all standard banana jacks. One-piece construction. 6-32 hex nut.

No. 104	$20.00 Per C


5/16"
6-32 x 1/4" RHMS
3/8"
1 1/32"
0.170-0.180"

100


5/16"
6-32 Thread
3/8"
1 1/4"
0.170-0.180"
21/32"

102

BANANA PLUG

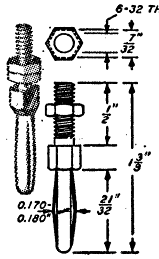
Hexed brass, nickel plated. Spring is four-leave phosphor bronze, nickel plated. Plug supplied with screw and phosphor bronze tinned lug. Internal female permits use of this plug on all size panels.

No. 100	$20.00 Per C

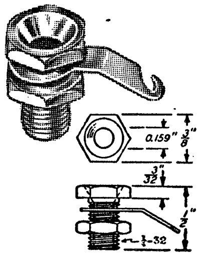
BANANA PLUG

Hexed brass, nickel plated. Four-leaved phosphor bronze spring, nickel plated. 6-32 hex nut.

No. 102	$20.00 Per C


6-32 THD.
7/32"
1/2"
1 3/8"
0.170-0.180"
21/32"

103


0.159"
3/8"
3/32
1/2"
1/4-32

101

BANANA PLUG

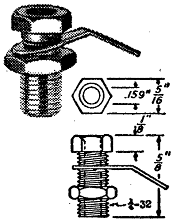
Hexed brass, nickel plated. Four-leaved phosphor bronze spring, nickel plated. 6-32 hex nut.

No. 103	$20.00 Per C

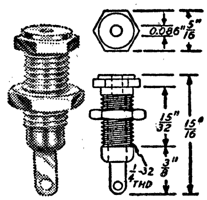
BANANA JACK

Hexed brass, nickel plated jack with recessed head. Recommended for use with No. 100 banana plug but accommodates all standard banana plugs.

No. 101	$15.00 Per C


.159"
5/16
1/8
5/8
1/4-32

109


0.086"
5/16
15/32
15/16
1/4-32 THD
3/8"

107

BANANA JACK

Hexed brass, nickel plated. Mounts in ¼" hole and fits panels up to ⅜" thick. Accommodates all standard banana plugs.

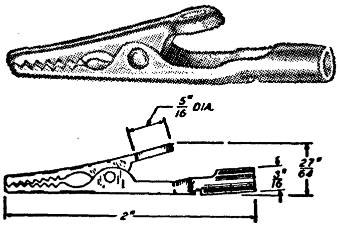
No. 109	$15.00 Per C

PHONE TIP JACK

Body is brass, nickel plated, with internal phosphor bronze spring for positive contact. Mounts in ¼" hole in panels up to ⅜" thick. ¼-32 hex nut.

No. 107	$15.00 Per C

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

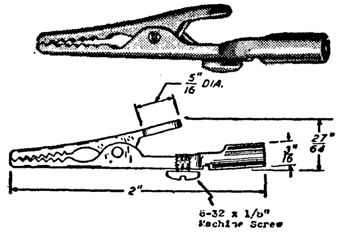


300

ALLIGATOR CLIP

Steel, cadmium plated. Jaws match accurately for firm grip. Banana plug fits in rear of alligator clip.

No. 300	$10.00 Per C

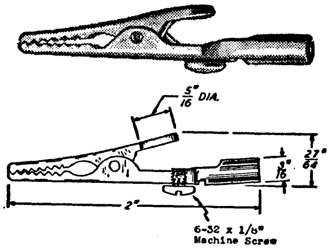


350

STEEL ALLIGATOR CLIP
Screw Type

Steel, cadmium plated. Jaws match accurately for firm grip. Supplied with screw for solderless connection.

No. 350	$11.00 Per C

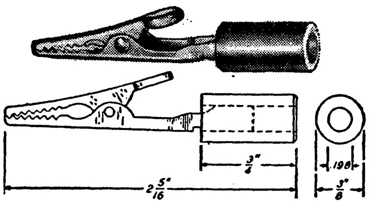


360

COPPER ALLIGATOR CLIP
Screw Type

Solid copper. Jaws match accurately for firm grip. Supplied with brass screw for solderless connection.

No. 360	$15.00 Per C

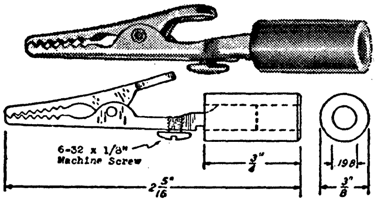


301 306

INSULATED ALLIGATOR CLIP

Embodies our No. 300 steel cadmium plated alligator clip with molded plastic Red or Black handle. Specify color.

No. 301	¾" Handle	$18.00 Per C
No. 306	1½" Handle	$35.00 Per C

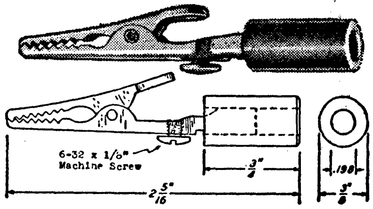


351

INSULATED STEEL ALLIGATOR CLIP

Screw type. Embodies our No. 350 steel, cadmium plated screw type alligator clip with molded plastic Red or Black handle. Specify color.

No. 351	$19.00 Per C

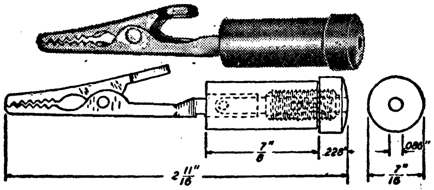


361

INSULATED COPPER ALLIGATOR CLIP

Screw type. Embodies our No. 360 copper screw type alligator clip with molded plastic Red or Black handle. Specify color.

No. 361	$23.00 Per C



304 334

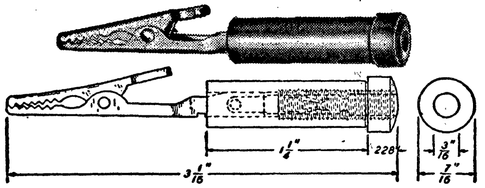
PHONE TIP TO ALLIGATOR CLIP ADAPTER

No. 300 Alligator clip with No. 202 tip jack in rear of handle, adapts phone tip plugs to alligator clips. Red or Black. Specify color.

No. 304	$50.00 Per C

Same, except with No. 360 screw type copper alligator Clip.

No. 334	$55.00 Per C



305 335

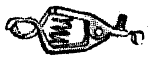
PHONE TIP OR BANANA PLUG TO ALLIGATOR CLIP ADAPTER

No. 300 alligator clip with No. 206 comb. phone tip and banana plug jack in rear of handle. Adapts phone tips and banana plugs to alligator clips. Red or Black. Specify color.

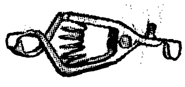
No. 305	$60.00 Per C

Same, except with No. 360 screw type copper alligator clip.

No. 335	$65.00 Per C



365



366

BATTERY TEST CLIP — Midget Size

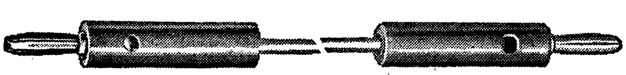
Steel, cadmium plated, for radio and ignition work, etc. Jaws have meshing teeth. Jaw spread ½", 7 lb. spring, 1½" long, 5 amp. capacity.

No. 365	$9.50 Per C

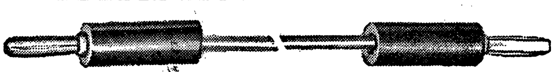
BATTERY TEST CLIP — Small Size

For general testing and radio use. Steel, Electroplated. Jaws have meshing teeth. Jaw spread $\frac{9}{16}$", 10 lb. spring, 2" long, 10 amp. capacity.

No. 366	$10.00 Per C



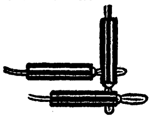
680



690

"CROSS-PATCH" PATCH CORD

Provides a never-ending banana plug receptacle to interconnect an unlimited amount of multiple circuits. The cross hole is designed for positive contact of all standard banana plugs. Fits all standard banana jacks. Four-leaved phosphor bronze nickel plated spring. Red or Black assemblies. Specify color.



No. 680	8" Wire Length	$1.45 Each
No. 681	12" Wire Length	$1.55 Each
No. 682	24" Wire Length	$1.65 Each
No. 683	36" Wire Length	$1.75 Each

PATCH CORD

Embodies No. 211 banana plug and is used to interconnect circuits. Molded plastic handle. Plug portion brass, nickel plated. Fits all standard banana jacks. Four-leaved phosphor bronze nickel plated spring. Red or Black assemblies. Specify color.

No. 690	8" Wire Length	$ .80 Each
No. 691	12" Wire Length	$ .90 Each
No. 692	24" Wire Length	$1.00 Each
No. 693	36" Wire Length	$1.10 Each

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

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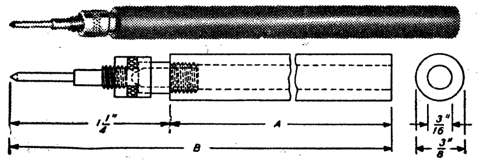
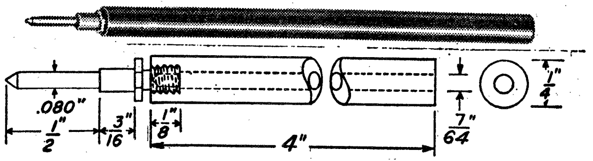


SOLDERLESS TEST PRODS

Wire fits thru handle, and is wrapped around the screw portion and tightened with the knurled nut. Brass nickel plated tip with Red or Black plastic handle. Specify color.

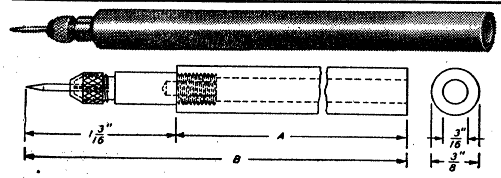
No. 302	4" Handle (A)	5¼" Overall (B)	$0.45 Each
No. 303	5½" Handle (A)	6¾" Overall (B)	$0.50 Each



SUBMINIATURE TEST PROD

Brass, nickel plated phone tip. Small ¼" O.D. handle. Ideally suited for checking sub-miniature equipment. Red or Black bone fibre. Specify color.

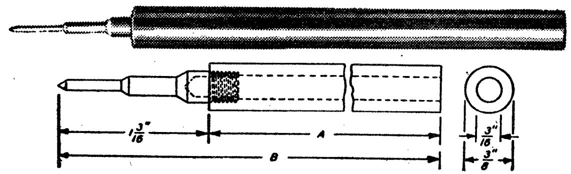
No. 322	$0.30 Each



PHONO NEEDLE TEST PRODS

Brass, nickel plated body, with steel nickel plated needle. Removable chuck for replacing needles. Red or Black plastic handle. Specify color.

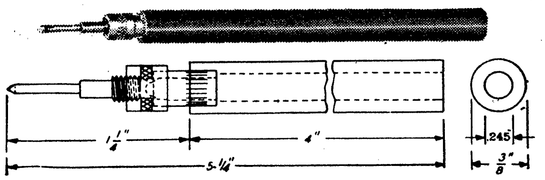
No. 317	4" Handle (A)	5 3/16" Overall (B)	$0.45 Each
No. 318	5½" Handle (A)	6 11/16" Overall (B)	$0.50 Each



HEAVY DUTY TEST PROD

Extra sturdy brass, nickel plated tip with Red or Black plastic handle. Specify color.

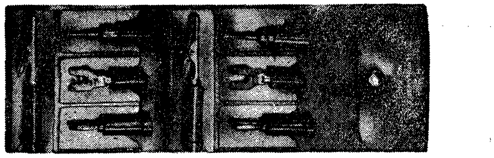
No. 319	4" Handle (A)	5 3/16" Overall (B)	$0.50 Each
No. 329	5½" Handle (A)	6 11/16" Overall (B)	$0.55 Each



FIBRE TEST PROD

Wire fits through handle and is wrapped around screw portion and tightened with the knurled nut. (Large I.D. of prod permits use of heavy duty wire.) Brass nickel plated tip with Red or Black handle. Specify color.

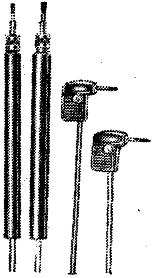
No. 323	$0.35 Each



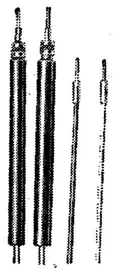
LABORATORY INTERCHANGE KIT

Permits use of Alligator Clips, Banana Plugs, Spade Lugs or Phone Tips interchangeably. One each red and black solderless phone tips with banana jack rear, spade lugs with banana jack rear, combination alligator clip jack, and banana plugs with phone tip jack rear. Durable vinyl kit.

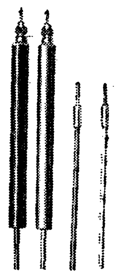
No. 640	$3.25 Each



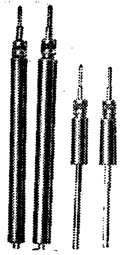
625 – 626



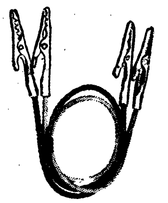
600 – 601 – 602



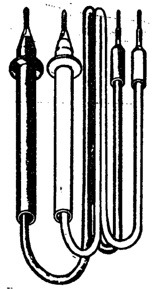
613 – 614 – 615



603



604 – 607



620 – 621 – 622

METER TIP TEST LEAD

50" rubber covered kinkless wire. Molded plastic **fingergrip tips** and 4" plastic test prod handles.

No. 625	Solderless prods	$2.00 Per Pr.
No. 626	Needle Tip Prods	$2.00 Per Pr.

SOLDERLESS TIP TEST LEADS

Fibre handles 4" long x ⅜" diameter. Flexible kinkless rubber covered wire, 50" long.

No. 600	Phone Tips	$1.30 Per Pr.
No. 601	Spade Lugs	$1.30 Per Pr.
No. 602	Alligator Clips	$1.40 Per Pr.

PHONO NEEDLE TEST LEADS

Fibre handles 4" long x ⅜" diameter. Tips are very sharp phonograph needles. Flexible kinkless rubber covered wires 50".

No. 613	Phone Tips	$1.30 Per Pr.
No. 614	Spade Lugs	$1.30 Per Pr.
No. 615	Alligator Clips	$1.40 Per Pr.

ALL SOLDERLESS TEST LEADS

No. 302 handles and No. 200 plugs. Flexible kinkless rubber covered leads 50" long.

No. 603	$1.90 Per Pr

ALLIGATOR CLIP TEST LEADS

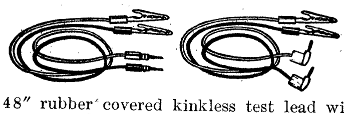
Very flexible kinkless Red and Black wire with alligator clips at each end.

No. 604	12"	Wire Length	$0.85 Per Pr.
No. 605	24"	Wire Length	$0.95 Per Pr.
No. 606	36"	Wire Length	$1.10 Per Pr.
No. 607	48"	Wire Length	$1.20 Per Pr.

HIGH TENSION TEST LEADS

Heavy duty probes, 48" high tension kinkless rubber covered wire .248" O.D. 22,000 volt breakdown (60 cycles).

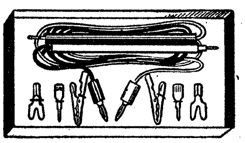
No. 620	Phone Tips	$3.00 Per Pr.
No. 621	Spade Lugs	$3.00 Per Pr.
No. 622	Alligator Clips	$3.60 Per Pr.



ALLIGATOR CLIP TEST LEADS

48" rubber covered kinkless test lead wire. Insulated alligator clips on one end and meter type or solderless phone tips on other end.

No.		Each
627	Solderless Tips	$1.30
628	Meter Tips	$1.35



ALL PURPOSE TEST LEAD KIT

48" rubber covered kinkless test lead wire. Plastic handles with solderless or needle tips. Other end supplied with standard #204 banana plugs, which are interchangeable with the phone tips, alligator clips, or spade lugs included.

No. 609		$2.00 Ea.
	Banana Plug Lead Only	
No. 610	Solderless Prods	$2.75 Ea.
No. 611	Needle Tip Prods	$2.75 Ea.

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

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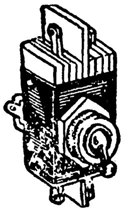
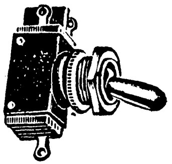


BALL HANDLE TOGGLE SWITCHES

Laminated type. Made by H. & H. Switches nickel plated; supplied with ring nut and mounting nut.

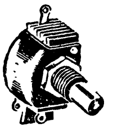
No.	Type	Current Rating 125 V.	Current Rating 250 V.	Shaft	Ea.
500	SPST		3 Amps	$\frac{15}{32}$″	$0.75
501	SPST		3 Amps	1″	1.00
502	SPDT	3 Amps	1 Amp	$\frac{15}{32}$″	1.00
503	SPDT	3 Amps	1 Amp	1″	1.20
504	DPST	3 Amps	1 Amp	$\frac{15}{32}$″	1.40
505	DPST	3 Amps	1 Amp	1″	1.60
506	DPDT	3 Amps	1 Amp	$\frac{15}{32}$″	1.60
507	DPDT	3 Amps	1 Amp	1″	1.85



BAT HANDLE TOGGLE SWITCHES

Laminated type. Made by H. & H. Switches nickel plated; supplied with ring nut and mounting nut.

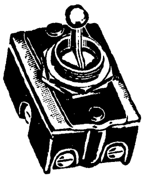
No.	Type	Current Rating 125 V.	Current Rating 250 V.	Shaft	Ea.
510	SPST		3 Amps	$\frac{15}{32}$″	$0.75
511	SPDT	3 Amps	1 Amp	$\frac{15}{32}$″	1.00
512	DPST	3 Amps	1 Amp	$\frac{15}{32}$″	1.40
513	DPDT	3 Amps	1 Amp	$\frac{15}{32}$″	1.60



ROTARY SWITCHES

Made by H. & H. Switches nickel plated; supplied with mounting nut. Threaded shank $\frac{11}{32}$″ O.D. x ⅜″ long. Overall length of shaft 1½″.

No.	Type	Current Rating 125 V.	Current Rating 250 V.	Ea.
570	SPST		3 Amps	$1.00
571	SPDT	3 Amps	1 Amp	1.20
572	DPST	3 Amps	1 Amp	1.50
573	DPDT	3 Amps	1 Amp	1.85

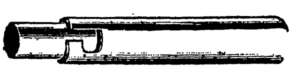


HEAVY DUTY POWER SWITCHES

Made by H. & H., and specially recommended for use in amplifiers, transmitters, motors and all heavy current circuits. Neutral off in center position. Rated at 10 amps, 125 volts; 5 amps, 250 volts. Mounting sleeve diameter ¾″ x ⅜″ long.

No.	Type	Power Rating	Ea.
574	DPDT 2″x1¼″x⅞″	¾ H.P. 250 Volts	$ 6.25
575	TPDT 2″x2¼″x1″	½ H.P. 115-230 V.A.C. 3-ph.	9.50
576	4PDT 2″x2¼″x1″	½ H.P. 115-230 V.A.C. 2-ph.	12.50

FUSE RETAINER

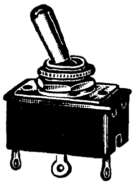


Recommended for use in auto radio power supply cables.

No. 1301 ....$20.00 Per C

PARTS FOR CONNECTOR AND RETAINER

No.	Type	Per C
1305	Male Cap for #1300 & #1301	$3.00
1306	Female Shell for #1300	3.50
1307	Contact for #1300 & #1301	5.00
1308	Spring for #1300 & #1301	1.00
1309	Washer for #1300 & #1301	.50
1310	Insulating Tube for #1301	.90
1311	Female Shell for #1301	5.00



MOLDED BAKELITE SWITCHES

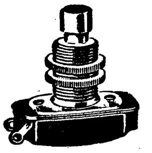
Made by H. & H. Bat handle. Back connected silver plated contacts, slotted sleeve.

No.	Type	Current Rating 125 V.	Current Rating 250 V.	Shaft	Ea.
520	SPST	6 Amps	3 Amps	$\frac{15}{32}$″	$1.10
521	SPDT	6 Amps	1 Amp	$\frac{15}{32}$″	1.25
522	DPST	6 Amps	3 Amps	$\frac{15}{32}$″	1.70
523	DPDT	6 Amps	3 Amps	$\frac{15}{32}$″	2.00

MOLDED BAKELITE MOMENTARY SWITCHES

Same as above except switches are momentary type. SPST normally "OFF."

No.	Type	Current Rating 125 V.	Current Rating 250 V.	Shaft	Ea.
524	SPST	6 Amps	3 Amps	$\frac{15}{32}$″	$1.60
525	DPDT	6 Amps	3 Amps	$\frac{15}{32}$″	2.50

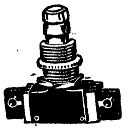


MOMENTARY PUSH BUTTON SWITCH

Momentary contact A.C. Push Button Switches. Molded type with soldering lug. Rated at 1 amp. 125 volts. Normally "OFF," push to make, release to break. $\frac{15}{32}$″ shank.

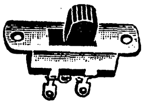
No.	Type	Each
540	SPST	$0.80
541	SPDT	.85
542	DPST	.90
543	DPDT	1.30

PUSH BUTTON MOMENTARY SWITCH



Slow make and break switch made by H. & H. Laminated type, solder lug. Circuit normally "OFF," push to make, $\frac{9}{16}$″ slotted sleeve, rated at 1 amp, 125 volts. The two circuit switch has one circuit normally on, one circuit normally off.

No.	Type	Each
579	SPST less button	$0.90
580	Two Circuit less button	1.40
581	Red or Black button	.35

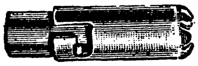


SLIDE LEVER SWITCHES

Rated 1½ amps. 110 volts. Size 1⅜″ x ½″. Mounting centers 1⅛″.

No.	Type	Each
515	SPST	$0.35
516	SPDT	.40
517	DPST	.50
518	DPDT	.55

ANTENNA CONNECTOR



For use as connection of auto radio antenna lead-in to auto radio receiver.

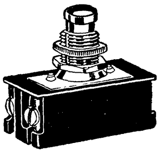
No. 1300.......................... $12.00 Per C

JUMBO FUSE HOLDERS

These jumbo fuse holders are for use with various types of auto receivers. All parts comprising bushings, springs, contacts, etc., are furnished unassembled, packed in individual envelopes.

No.	Size	Fuse Size	Each
1302	½″ x 2⅛″	9 amp.	$0.32
1303	½″ x 2⅝″	14 amp.	.32
1313	½″ x 2⅝″	30 amp.	.32

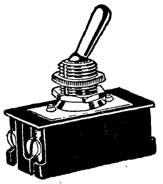
HEAVY DUTY MOMENTARY SWITCH



Made by H. & H. DPST Momentary contact push button switch, normally off, screw terminal, bakelite case, $\frac{7}{16}$″ slotted sleeve. Rated at 6 amps, 250 volts—12 amps, 125 volts—1 HP at 250 volts.

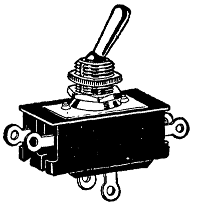
No. 595..$3.00 each

HEAVY DUTY SWITCH



Made by H. & H. DPST Switch Maintained contact bat handle bakelite case, $\frac{5}{16}$″ slotted sleeve, screw terminals. Rated at 6 amps, 250 volts — 12 amps, 125 volts — 1 HP at 250 volts.

No. 596......$2.10 each

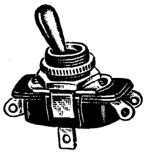


CENTER OFF SWITCHES

Made by H. & H. Three Position bat handle switch. "Center Off." Bakelite case, rated at 3 amps, 250 volts — 6 amps, 125 volts — solder terminals.

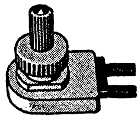
No.	Type	Each
566	SPDT	$1.90
567	DPDT	2.35

DPDT CENTER OFF SWITCH



Bat handle toggle switch rated at 1 amp. — 125 volts with center "OFF" position. Lug terminals, $\frac{15}{32}$″ brass nickel plated shaft. Can be used for switching to either high or low frequency antenna on TV receivers.

No. 565 $1.45 each



ROTARY TYPE CANOPY SWITCH

Rated at 3 amps. 125 volts, 1 amp. 250 volts. Supplied with 6″ leads. C.S.A. approved.

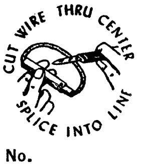
No. 585 $0.45 each

NAME PLATES

Brass nickel plated name plates to fit all standard $\frac{15}{32}$″ sleeves.

No.	Type	Per C
508	ON-OFF	$5.50
509	HI-LOW	5.50

WIRED FUSE RETAINER

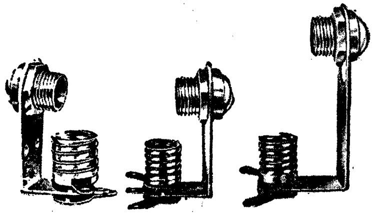


Wired fuse retainer saves the soldering operation necessary when replacing retainer. Simply cut wire, strip and put in line. Will accommodate either 3 A.G. 20 amp. or SFE 14 amp. fuse.

No.		Each
1304		$ 0.45
1304-D	Display of 24	10.80

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

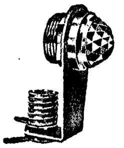
PANEL INDICATOR ½ INCH JEWEL



Jewel holder made of brass, nickel plated. Jewel mounts in a single 7/16" dia. hole. Also available with universal adjustable bracket for use where more accurate focus of the jewel to lamp filament is required. Facetted jewel available in Red, Green, Amber, Blue, Opal and Clear colors. Please specify.

No.	Type	Each
1900	Miniature Screw Base	$0.45
1901	Candelabra Base	.55
1902	Candelabra Base with Univ. Bracket	.58
1903	Bayonet Base	.45
1904	Bayonet Base with Univ. Bracket	.50

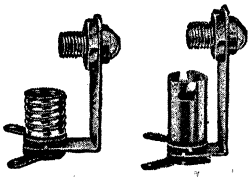
PANEL INDICATOR ¾ INCH JEWEL



Jewel holder is made of brass, nickel plated. Jewel mounts in a single 11/16" dia. hole. Available with facetted jewels in Red, Green, Amber, Blue, Opal and Clear colors. Please specify.

No.	Type	Each
1905	Miniature Screw Base	$0.95
1906	Miniature Bayonet Base	1.00
1907	Candelabra Base	1.00

PANEL INDICATOR ⅜ INCH JEWEL

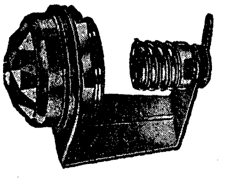


Jewel holder made of brass, nickel plated. Jewel mounts in a single 5/16" dia. hole. Available with facetted jewels in Red, Green, Amber, Blue Opal & Clear colors. Please specify.

No.	Type	Each
1908	Miniature Screw Base	$0.50
1909	Miniature Bayonet Base	.50

PANEL INDICATOR 1 INCH OPEN TYPE

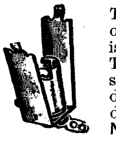
Jewel Removable from Front Panel



Jewel holder made of brass, chromium plated finish. Jewel mounts in single 1" dia. hole. The embossed rib in center of bracket supplies additional strength, assuring perfect alignment. Available with facetted jewels in the following colors: Red, Green, Amber, Blue, Opal, and Clear colors. Please specify.

No.	Type	Each
1917	Miniature Screw Base	$1.60
1918	Miniature Bayonet Base	1.60
1919	Candelabra Base	1.70

CLIP-IN SOCKET

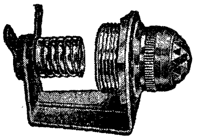


This clip-in socket is of the bayonet base type construction, and is assembled with two solder lugs. The special clip-in bracket is steel, cadmium plated, and is designed to clip into the dial directly.

No. 1938..............$15.50 per C

PANEL INDICATOR ½ INCH OPEN TYPE

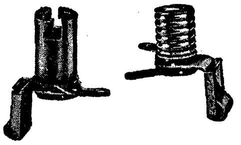
Jewel Removable from Front of Panel



Jewel holder made of brass, nickel plated. Mounts in a single 11/16" dia. hole. The embossed rib in center of bracket gives additional strength and assures perfect alignment. Available with facetted jewels in Red, Green, Amber, Blue, Opal and Clear colors.

No.	Type	Each
1920	Miniature Screw Base	$0.70
1921	Miniature Bayonet Base	.70

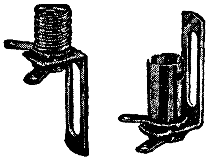
CLIP-ON TYPE PILOT LIGHT SOCKETS



Can be used by clipping on to variable condenser or chassis. All brackets are cadmium plated.

No.	Type	Per C
1922	Min. Screw Up Clip	$14.50
1923	Min. Screw Down Clip	14.50
1924	Min. Bayonet Up Clip	16.50
1925	Min. Bayonet Down Clip	16.50
1926	Candelabra Up Clip	18.75
1927	Candelabra Down Clip	18.75

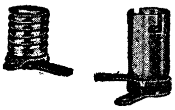
BRACKET TYPE PILOT LIGHT SOCKETS



Brackets are steel, cadmium plated.

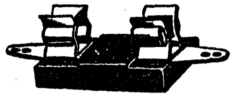
No.	Type	Per C
1928	Min. Screw Up Bracket	$14.50
1929	Min. Screw Down Bracket	14.50
1930	Min. Bayonet Up Bracket	16.50
1931	Min. Bayonet Down Bracket	16.50
1932	Candelabra Up Bracket	18.75
1933	Candelabra Down Bracket	18.75

UNMOUNTED TYPE SOCKETS



No.	Type	Per C
1934	Miniature Screw Base	$14.50
1935	Miniature Bayonet Base	13.50
1936	Candelabra Base	15.50

FUSE MOUNTING BASES



Black bakelite, panel mount type. Accommodates 3 A G Auto type cartridge fuse.

No.	Type	Per C
530	Single	$25.00
531	Double	40.00
532	Clip Only	2.50

GLASS JEWELS

Jewels are available in Red, Green, Amber, Blue, Opal and Clear colors in smooth or facetted types. Jewel holders are brass, nickel plated, and are supplied with mounting nut.

⅜ Inch Jewel

MOUNTS IN 5/16" HOLE

No.	Type	Each
1940	Smooth	$0.25
1941	Facetted	0.25

½ Inch Jewel

MOUNTS IN 7/16" HOLE

No.	Type	Each
1911	Smooth	$0.30
1912	Facetted	0.30

¾ Inch Jewel

MOUNTS IN 11/16" HOLE

No.	Type	Each
1913	Smooth	$0.70
1914	Facetted	0.70

1 Inch Jewel

MOUNTS IN 1" HOLE

No.	Type	Each
1915	Smooth	$1.25
1916	Facetted	1.25

MICROPHONE CONNECTOR

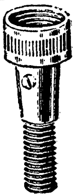
Single Contact Male

A completely shielded single contact connector. Made of brass and heavily chrome plated. Mate for No. 116 female connector.

No. 115 ....$0.55 each

MICROPHONE CONNECTOR

Single Contact Female

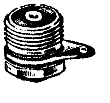


Used extensively for making connections from microphone to amplifier. Equipped with coupling ring. Brass, heavily chrome plated.

No. 116 ....$0.58 each

CHASSIS CONNECTOR

Single Contact Male



Brass, heavily nickel plated. Threaded ⅜"-27, and mounts in a ⅜" hole. Supplied complete with washers, soldering lug and nut.

No. 117 ....$0.38 each

CAP AND CHAIN

Made of brass, heavily nickel plated. The cap seals open end units against dust.

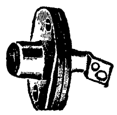
No. 118 ....$0.60 each

PHONO ADAPTER ATTACHMENT PLUG

R.C.A. type phono plug. For use with record players, recording and reproducing equipment, etc. Extra long pin for new type jacks and large hole in cap for coaxial cable.

No. 1201 ....$8.00 per C

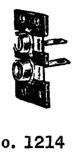
PHONO JACK



Female for No. 1201 plug. Single prong positive grip jack mounted on 1/16" bakelite with 11/16" mounting centers.

No. 1203 ....$11.00 per C

DUAL PHONO JACK



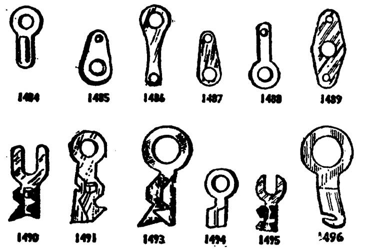
Two positive grip jacks mounted on 1/16" bakelite. Double mounting holes spaced ½" x 1 3/16". Jacks are 9/16" center to center. Used on recording units and phono players, etc., where dual application is necesssary.

No. 1214 ....$20.00 per C

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

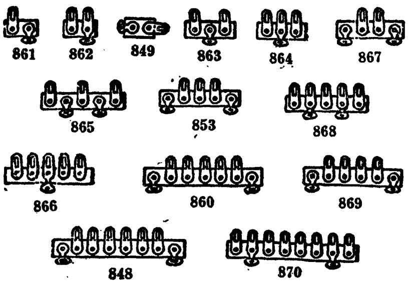
SOLDER TYPE LUGS
Hot Tinned



No.	Material	L.	Thickness	Hole	Per M
1484	Brass	5/8"	.020"	No. 6	$7.70
1485-6	Ph. Br.	5/8"	.012"	No. 6	8.00
1485-8	Ph. Br.	5/8"	.012"	No. 8	8.00
1486-6	Ph. Br.	7/8"	.012"	No. 6	8.00
1486-8	Ph. Br.	7/8"	0.12"	No. 8	8.00
1487-6	Ph. Br.	5/8"	0.12"	No. 6	8.00
1487-8	Ph. Br.	5/8"	0.12"	No. 8	8.00
1488	Brass	3/4"	.016"	No. 6	6.60
1489	Brass	7/8"	.015"	No. 8	9.00
1490	Brass	3/4"	.020"	No. 10	10.00
1491	Copper	15/16"	.020"	No. 10	11.00
1493	Brass	1 1/8"	.027"	1/4"	20.00
1494-6	Brass	5/8"	.020"	No. 6	8.30
1494-8	Brass	5/8"	.020"	No. 8	8.30
1495	Brass	5/8"	.020"	No. 8	7.70
1496	Brass	3/4"	.020"	1/4"	10.00

An attractive display card of each lug containing 24 45c list envelopes, can be obtained by specifying the letter "D" after the above catalog numbers.

TIE DOWN TERMINAL STRIPS



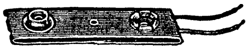
No.	Per C	No.	Per C
848	$9.75	864	$3.75
849	2.75	865	6.10
853	5.75	866	5.95
860	8.25	867	5.00
861	2.75	868	6.50
862	2.90	869	7.50
863	3.50	870	9.20

TERMINAL BOARDS
Screw Type

Brass hot tinned lugs mounted on 1/16" bakelite. Lugs are spaced 7/16" center to center.

No.	Terminals	Mounting Center	Per C
872	2	1 11/16"	$12.00
873	3	1 3/4"	18.00
874	4	2 3/16"	22.00
875	5	2 5/8"	28.00
876	6	3 1/16"	33.00
877	7	3 1/2"	40.00

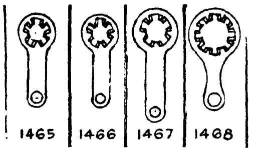
MINI-MAX CONNECTING STRIP



This fastening connecting strip is spaced so that it will snap onto terminal connections of portable batteries.

No.	Type	Per C
1205	67 1/2 Volt	$30.00
1206	90 Volt	40.00

LOCKING TYPE TERMINAL LUGS



BRASS ELECTRO PLATED

No.	Hole Size	Thick	Per M
1465	No. 4	.020	$14.00
1466	No. 6	.020	14.00
1467	No. 8	.020	14.00
1468	1/4"	020	14.00

FIBRE ALIGNMENT SCREW DRIVERS

Made of bone hard fibre 7/32" O.D. x 7" long.

No. 307 .... $0.45 each
No. 307-D—Display of 24............$10.80 each

"VERI-THIN" ALIGNING SCREW DRIVER

Fibre aligning tool 7" long x 1/8" O.D. with screw driver on each end.

No. 328 .... $0.40 each
No. 328-D—Display of 50............$20.00 each

"LONG REACH" ALIGNING SCREW DRIVER

Aligning tool 9" long x .165 O.D. with screw driver on each end. Material of treated clear lucite.

No. 330 .... $0.60 each
No. 330-D—Display of 36............$21.60 each

"EXTRA LONG REACH" ALIGNING SCREW DRIVER

Hard Bone Fibre screw driver 12 inches long by 1/8 inches dia. Extra strong and durable.

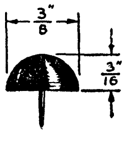
No.	Each
333	$ 0.70
333-D—Display of 50 tools	35.00

TEST PROD
"MAKE YOUR OWN R. F. PROBE"

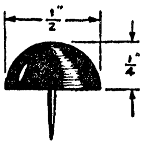
An exceptionally sturdy fibre prod with rear of prod designed to accommodate IN-34 crystal and condensers, necessary for use as an R.F. Probe. Heavy duty removable screw type tip for easy soldering.

No. 630 .... $1.20 each
No. 630-D—Display of 12............$14.40 each

RUBBER TACK BUMPERS

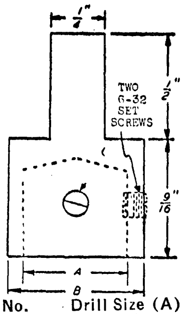


No. 2190
$2.40 C



No. 2191
$2.65 C

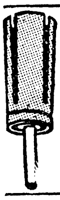
DRILL ADAPTER



Convert your 1/4" drill chuck to drill holes up to 1/2". Steel drill adapter enables the use of drills from 5/16" to 1/2" in portable electric drill with a 1/4" chuck. Drills can be quickly inserted and tightened with two set screws located at 90° angle for firm hold.

No.	Drill Size (A)	O.D. (B)	Each
1 5	5/16"	7/16"	$0.75
176	3/8"	1/2"	.80
177	7/16"	9/16"	.85
178	1/2"	5/8"	.90
179	Kit of 1 each		3.30

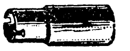
MOTOROLA TYPE PLUG



Attachment plug for all Motorola auto radio receivers and many other types of auto radios.

No. 1200 ....$14.00 per C

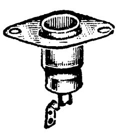
LEAD-IN ADAPTER



Lead-in adapter converts Motorola pin plug to Delco type plug.

No. 1204 ....$11.00 per C

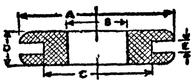
ANTENNA CONNECTOR
Flange Type



Female connector for No. 1200 Motorola type Plug. Sturdy steel flange, 15/16" mounting centers. Solder coated shell, flange, and contact. Used extensively on auto radios.

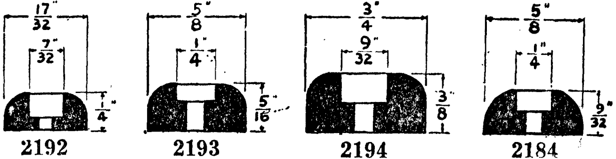
No. 1207 ......$20.00 Per C

RUBBER GROMMETS



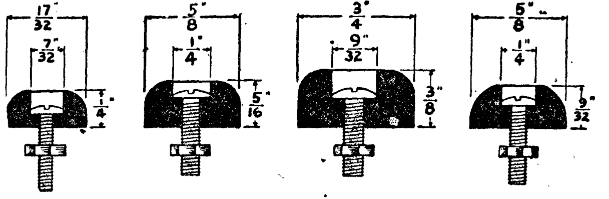
A: O.D.
B: I.D.
C: PANEL
D: THICK
E: P. THICK

No.	A	B	C	D	E	Per C
2185	5/16"	1/8"	3/16"	3/16"	1/16"	$2.20
2172	7/16"	3/16"	5/16"	3/16"	1/16"	3.30
2170	5/8"	1/4"	3/8"	3/8"	1/16"	3.85
2174	5/8"	5/16"	7/16"	1/4"	1/16"	3.60
2175	11/16"	3/8"	1/2"	1/4"	1/16"	3.85
2177	3/4"	7/16"	9/16"	1/4"	1/16"	3.60
2186	1 1/16"	1/2"	3/4"	5/16"	1/16"	4.95
2187	1 1/8"	5/8"	7/8"	5/16"	1/16"	5.20
2188	1 1/16"	9/16"	13/16"	5/16"	1/16"	5.50
2189	1"	3/4"	7/8"	5/32"	1/32"	8.00



RECESS RUBBER BUMPERS

No.	Per C
2192	$2.20
2193	2.75
2194	4.40
2184	4.50



RUBBER BUMPERS WITH SCREW

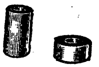
Supplied complete with 1/2" screw and hex nut. For panels up to 3/16" thick. Specify larger screw for larger panels.

No.	Per C
2196	$3.90
2197	4.25
2198	5.25
2199	5.50

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

HERMAN H. SMITH, INC. • ELECTRONIC COMPONENTS

"It's Sound Planning to Specify SMITH!"



BRASS SPACERS CADMIUM PLATED

Ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a No. 6 or No. 8 screw.

For No. 6 Screw No.	Per C	¼″ O.D. Length	For No. 8 Screw No.	Per C
2100	$5.00	¼″	2105	$5.00
2101	6.50	⅜″	2106	6.50
2102	8.00	½″	2107	8.00
2103	9.50	¾″	2108	9.50
2104	11.00	1″	2109	11.00
		⅜″ O.D.		
2110	$8.00	¼″	2115	$8.00
2111	9.50	⅜″	2116	9.50
2112	11.00	½″	2117	11.00
2113	12.50	¾″	2118	12.50
2114	14.00	1″	2119	14.00

THREADED BRASS SPACERS CADMIUM PLATED

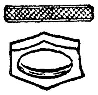
Brass bushings ¼″ O.D. Threaded 6-32 and 8-32.

Threaded 6-32 No.	Per C	Length	Threaded 8-32 No.	Per C
2120	$6.00	¼″	2125	$6.00
2121	7.50	⅜″	2126	7.50
2122	9.00	½″	2127	9.00
2123	11.00	¾″	2128	11.00
2124	12.50	1″	2129	12.50

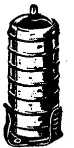
INSULATED SPACERS

For No. 6 Screw No.	Per C	¼″ O.D. Length	For No. 8 Screw No.	Per C
2130	$6.00	¼″	2140	$6.00
2131	6.75	⅜″	2141	6.75
2132	7.00	½″	2142	7.00
2133	9.00	¾″	2143	9.00
2134	10.75	1″	2144	10.75

Volume Control and Toggle Switch Nuts
Brass Nickel Plated



No.	Type	Dimensions	Per M
1195	Volume Control	⅜-32 x ½ x 3/32	$21.00
1196	Toggle Switch	15-32 x 9/16 x 5/64	30.00
1197	Toggle Ring Nut	15-32 x ⅝ x 1/16	30.00

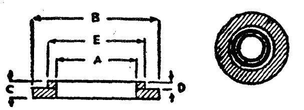


MINI-SHIELDS FOR MINI-TUBES

These Mini-Shields fit snugly on all Mini-Tubes. Serrations in base clip prevent shielded tube from joggling or working loose. Available in two sizes for 1½″ and 2″ long tubes.

No.	Type	Over-all Length	Per C
550	For 2″ Tube	1¾″	$13.00
551	For 1½″ Tube	1¼″	11.00
553	3-Prong Base Clip		5.50
554	Single Clips		3.30

FIBRE SHOULDER WASHERS



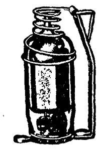
A. Inside Diameter
B. Outside Diameter
C. Thickness Over-all
D. Height of Shoulder
E. Diameter of Shoulder

No.	A	B	C	D	E	Per M
2150	#6-.140	.375	.098	.031	.237	$11.50
2151	#4-.110	.250	.062	.031	.187	9.50
2152	#6-.136	.250	.093	.031	.187	10.00
2153	#6-.136	.312	.093	.031	.187	11.00
2154	¼″-.250	.500	.068	.028	.312	12.00
2155	#8-.172	.375	.093	.031	.246	11.00
2156	#10-.196	.375	.093	.031	.308	11.00
2157	⅜″-.375	.750	.093	.031	.500	14.50
2158	⅜″-.385	.625	.093	.031	.500	14.00

FLAT FIBRE WASHERS

No.	For Screw-(I.D.)	O.D.	Thickness	Per M
2160	#6-.136	.250	1/16	$9.50
2161	#4-.110	.250	1/16	9.50
2162	#6-.140	.375	1/16	8.50
2163	#8-.172	.375	1/16	8.50
2164	#10-.196	.375	1/16	8.50
2165	¼″-.250	.500	1/16	9.00
2166	¼″-.250	.500	3/32	9.50
2167	5/16″-.312	.500	1/16	9.00
2168	⅜″-.385	.625	1/16	11.00
2169	⅜″-.375	.750	1/16	14.00

MINI-SPRING FOR MINI-TUBES



For Table Radios • Electronic Equipment Radio Receivers

The Mini-Tube guard gives support to the Mini-Tube in two ways. It maintains a direct axial pressure downward plus a sideways support that keeps the tube upright and perpendicular to the chassis. The spring action is constant and resilient permanently.

No.	Type	Per C
560	Short	$13.50
561	Medium	13.50
562	Long	13.50
563	9-Prong	13.50

BRASS AND INSULATED COUPLINGS

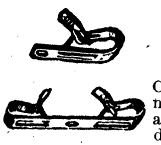
Available in both brass and insulated material. Overall length ¾″. Set screws are provided in coupling for tightening to shaft.

No.	Type	O.D.	Material	Each
120	¼″-¼″	7/16″	Brass	$0.25
140	¼″-¼″	7/16″	Fibre	0.25
131	⅜″-¼″	½″	Brass	0.25
141	⅜″-¼″	½″	Fibre	0.25
133	⅜″-⅜″	½″	Brass	0.25
142	⅜″-⅜″	½″	Fibre	0.25

STEEL SPADE BOLTS

Steel, cadmium plated finish, threaded 6-32, thread length 5/16″, length over-all ¾″.

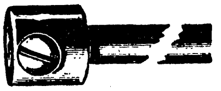
No. 1500 $11.00 per M



FAHNESTOCK SPRING BATTERY CLIPS

Clips are made of brass, nickel plated and are available in the single and double clip types.

No.	Type	Length	Per C
533	Single	¾″	$1.80
534	Single	1″	2.20
535	Double	1½″	10.00
536	Double	2 1/16″	11.00



BRASS AND INSULATED EXTENDERS

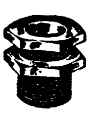
Extra long extenders in either brass or insulated material. Suitable for use on amplifiers, television receivers, radio receivers or wherever a ¼″ or ⅜″ shaft extender is required.

No.	Type	Material	Shaft Length	Overall Length	Each
150	¼″-¼″	Brass	1⅜″	1¾″	$0.30
130	¼″-¼″	Fibre	1⅜″	1¾″	0.30
132	⅜″-¼″	Brass	1⅜″	1¾″	0.30
134	⅜″-¼″	Fibre	1⅜″	1¾″	0.30

THREADED BRASS RODS

Rods ordinarily supplied in one foot lengths; if two foot length is required, please specify.

No.	Size	Per Foot
1400	6-32	$0.35
1401	8-32	.35
1402	10-32	.45
1403	¼″-20	.50



BEARING FOR PANEL ASSEMBLY

Made of brass, and fits in ⅜″ diameter hole in panels up to 5/16″ thick. Bearing is made to accommodate ¼″ shafts. Overall length ½″.

No. 119 .... $0.25 each

FAHNESTOCK CLIP

A speedy and positive contact spring clip. Especially useful for clipping to ammeter screws on auto radios. Supplied in phosphor bronze.

No. 538 $11.00 per C

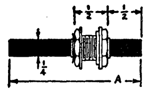
PANEL BEARING ASSEMBLY

This panel bearing is accurately machined and is specially recommended for use as dial drives, or for mounting volume controls, switches, etc. Over-all length 1⅞″. Supplied with nut. Drive shaft ¼″ O.D.

No. 126 $30.00 per C

BRASS AND INSULATED RODS

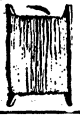
No.	Type	Length	Dia.	Each
1404	Brass	6″	¼″	$0.30
1405	Brass	12″	¼″	.60
1406	Insulated	6″	¼″	.25
1407	Insulated	12″	¼″	.50



PANEL BEARING ASSEMBLY

This assembly combines either 3″ or 6″ brass rod, ¼″ O.D. with our standard No. 119 Panel Bearing. Completely assembled so that panel bearing is held rigidly in place. Will fit on panels up to 5/16″ thick and can be used with either rigid or flexible couplings.

No.	A	Each
148	3″	$0.50
149	6″	.60



ANTENNA HANK

Cotton covered copper antenna hank.

No. 1222 $35.00 per C

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

HERMAN H SMITH, INC. • ELECTRONIC COMPONENTS

"It's Sound Planning to Specify SMITH!"

STEEL MACHINE SCREWS

Round Head Cadmium Plated

No.	Per M	Size	No.	Gross
1000M	$5.90	6-32 x ¼"	1000G	$1.00
1001M	6.30	6-32 x ⅜"	1001G	1.10
1002M	6.80	6-32 x ½"	1002G	1.15
1006M	7.60	8-32 x ¼"	1006G	1.25
1007M	8.30	8-32 x ⅜"	1007G	1.35
1008M	8.80	8-32 x ½"	1008G	1.40

BRASS MACHINE SCREWS

Round Head Nickel Plated

No.	Per M	Size	No.	Gross
1044M	$6.50	4-36 x ¼"	1044G	$1.00
1045M	8.10	4-36 x ⅜"	1045G	1.05
1046M	10.00	4-36 x ½"	1046G	1.10
1047M	6.50	4-40 x ¼"	1047G	1.00
1048M	8.10	4-40 x ⅜"	1048G	1.05
1049M	10.00	4-40 x ½"	1049G	1.10
1050M	9.30	6-32 x ¼"	1050G	1.55
1051M	10.90	6-32 x ⅜"	1051G	1.80
1052M	12.50	6-32 x ½"	1052G	2.10
1056M	13.70	8-32 x ¼"	1056G	2.30
1057M	15.60	8-32 x ⅜"	1057G	2.65
1058M	17.60	8-32 x ½"	1058G	2.95

HEXAGON NUTS

Brass Nickel Plated

No.	Per M	Size	No.	Gross
1188M	$9.00	4-36 x ¼"	1188G	$1.45
1168M	9.00	4-40 x ¼"	1168G	1.45
1189M	12.90	6-32 x ¼"	1189G	2.10
1190M	12.90	6-32 x 5/16"	1190G	2.10
1191M	14.10	8-32 x ¼"	1191G	2.30
1192M	14.10	8-32 x 5/16"	1192G	2.30
1193M	15.90	10-32 x 5/16"	1193G	2.65

Steel, Cadmium Plated

No.	Per M	Size	No.	Gross
1179M	$7.10	6-32 x ¼"	1179G	$1.10
1180M	7.90	6-32 x 5/16"	1180G	1.30
1181M	7.90	8-32 x 5/16"	1181G	1.30

PARKER KALON SELF TAPPING SCREWS

Round Head — Cadmium Plated

TYPE A Sharp Point No.	Gross	Size	TYPE Z Blunt Point No.	Gross
1801	$1.45	4 x ½	1807	$1.45
1802	1.35	6 x ¼	1808	1.35
1803	1.40	6 x ⅜	1809	1.40
1804	1.45	6 x ½	1810	1.45
1805	1.55	8 x ⅜	1811	1.55
1806	1.65	8 x ½	1812	1.65

SLOTTED HEX HEAD — CADMIUM PLATED

Type Z — Blunt Point

No.	Size	Gross
1830	6 x ¼	$1.35
1831	6 x ⅜	1.40
1832	6 x ½	1.45
1833	8 x ⅜	1.55
1834	8 x ½	1.65

FLAT WASHERS

Brass Nickel Plated

No.	Per M	Size	Material	No.	Gross
1149M	$4.80	No. 4x⅜"x.037"	Brass	1149G	$0.70
1150M	4.80	No. 6x⅜"x.012"	Ph. Br.	1150G	0.70
1151M	4.80	No. 8x⅜"x.012"	Ph. Br.	1151G	0.70
1152M	4.80	No. 10x⅜"x.037"	Brass	1152G	0.70

SHAKEPROOF WASHERS

Steel, Cadmium Plated Internal Teeth

No.	Per M	Type	No.	Gross
1127M	$4.50	No. 4	1127G	$0.65
1128M	4.80	No. 6	1128G	0.75
1129M	4.80	No. 8	1129G	0.75
1130M	5.40	No. 10	1130G	0.80
1132M	7.20	¼"	1132G	1.10
1131M	9.00	⅜"	1131G	1.45

Narrow Rim Control Shaft Lockwasher — Internal Teeth

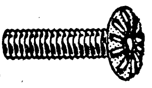
No.	Per M	Type	No.	Gross
1145M	$9.00	⅜"	1145G	$1.45

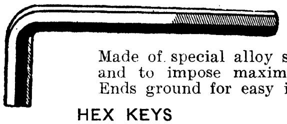
External Teeth

No.	Per M	Type	No.	Gross
1139M	$4.50	No. 4	1139G	$0.65
1140M	4.80	No. 6	1140G	0.75
1141M	4.80	No. 8	1141G	0.75
1142M	5.40	No. 10	1142G	0.80
1144M	7.20	¼"	1144G	1.10
1143M	9.00	⅜"	1143G	1.45

FANCY HEAD BRONZE FINISH SCREWS

No.	Size	Per M
1160	6-32 x ¾"	$10.70
1161	6-32 x 1"	11.40
1162	6-32 x 1¼"	12.50

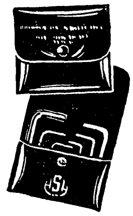




HEX AND SPLINE KEYS

Made of special alloy steel, tempered to avoid brittleness and to impose maximum resistance to torsional strain. Ends ground for easy insertion.

HEX KEYS No.	Screw Size	Per C	SPLINE KEYS No.	Screw Size	Per C
340	No. 2	$11.00	370	No. 4	$11.00
341	No. 3, 4	11.00	371	No. 5	11.00
342	No. 5, 6	11.00	372	No. 6	11.00
343	No. 8	11.00	373	No. 8	11.00
344	No. 10	13.20	374	No. 10	13.20
345	¼"	13.20	375	¼"	13.20
346	5/16"	13.20	376	5/16"	13.20



HEX AND SPLINE KEY KITS

Attractive tearproof vinyl plastic kit with individual pockets for each of six keys in kit.

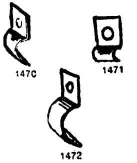
Kit of 6 hex keys for screws from No. 3 to 5/16".
No. 355 $85.00 per C

Kit of 6 spline keys for screws from No. 5 to 5/16".
No. 385 $85.00 per C

Combination Kit of 3 hex and 3 spline keys for No. 6-8-10 screws.
No. 390 $85.00 per C

Combination Kit of 7 hex keys for screws from No. 3 to 5/16" and 4 spline keys from No. 4 to No. 10.
No. 395 $180.00 per C

No.	DISPLAY CARDS	Each
355D	Display of 24 Hex Kits No. 355	$20.40
385D	Display of 24 Spline Kits No. 385	20.40
390D	Display of 24 Combination Kits No. 390	20.40
395D	Display of 24 Combination Kits No. 395	36.00

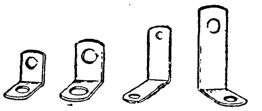


CABLE CLAMPS

Steel Cadmium Plated with No. 8 open Hole.

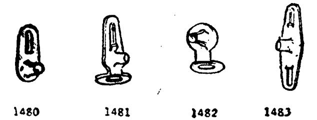
No.	Length	Width	Cable	Per C
1471	⅝"	⅜"	⅛" to ¼"	$2.00
1470	¾"	⅜"	¼"	2.00
1472	1"	⅜"	½"	2.50

BRASS AND STEEL ANGLES



No.	Material	Size	Per C
1474	Brass N.P.	½"x½"	$2.80
1475	Brass N.P.	⅝"x⅝"	5.50
1476	Steel H.T.	¾"x¾"	2.20
1477	Steel H.T.	⅝"x1⅛"	2.20

EYELET TYPE SOLDER LUGS



Made of brass. Nos. 1480, 1481 and 1482 are hot tinned and No. 1483 cadmium plated. Specially recommended for mounting on terminal strips.

No.	Length	Hole	Per M
1480	⅝"	5/64 slot	$ 5.00
1481	⅝"	No. 8	11.00
1482	¼"	No. 8	8.30
1483	15/16"		8.30

BINDING HEAD SCREWS

Steel Nickel Plated

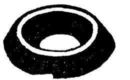
No.	Per M	Size	No.	Gross
1425M	$5.90	6-32 x ¼"	1425G	$1.00
1426M	6.30	6-32 x ⅜"	1426G	1.10
1427M	6.80	6-32 x ½"	1427G	1.15
1428M	7.60	8-32 x ¼"	1428G	1.25
1429M	8.30	8-32 x ⅜"	1429G	1.35
1430M	8.80	8-32 x ½"	1430G	1.40

RACK SCREWS

Oval Head, Steel, Nickel Plated

Specially recommended for mounting panels in racks and cabinets. Available in gross packages or packed 1000 to the box.

No.	Per M	Size	No.	Gross
1111M	$9.20	10-32 x ½"	1111G	$1.55
1112M	10.40	10-32 x ¾"	1112G	1.60



COUNTERSUNK WASHERS

Brass, Nickel Plated

Recommended for use with Rack Screws designated above.

No.	Per M	Size	No.	Gross
No.	Per M	Size	No.	Gross
1115M	$6.80	6	1115G	$1.05
1116M	7.20	8	1116G	1.10
1117M	7.20	10	1117G	1.10

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

HERMAN H. SMITH, INC. • ELECTRONIC COMPONENTS

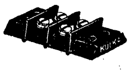
"It's Sound Planning to Specify SMITH!"

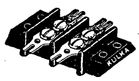
HEAVY DUTY BAKELITE BARRIER TERMINAL STRIPS

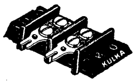
Shown below are our popular screw type terminal blocks. Made of molded thermosetting plastics — in high tensile strength bakelite for general commercial use. CFG, MFE, CMG, MME, AND MDG blocks made in strict compliance with latest military specifications MIL-P-14C. Prices available on request. Special flag, spade, hole type lugs, and steel straddle plates available. Manufactured by the KULKA ELECTRIC MANUFACTURING COMPANY, INC. and exclusively distributed by us to the Radio Parts Distributors

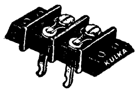
600 Series

Height 11/32″, Width ⅞″, Thickness ¼″, Terminals ⅜″ Centers, 5/16″ Mtg., 5-40x¼″ Screws.


600-2


600-2-ST


600-2-¾ST


600-2-Y

No.	Each	No.	Each	No.	Each	No.	Each
600-1	$0.15	600-ST-1	$0.19	600¾ST-1	$0.19	600-Y-1	$0.19
600-2	0.25	600-ST-2	0.32	600¾ST-2	0.32	600-Y-2	0.32
600-3	0.33	600-ST-3	0.44	600¾ST-3	0.44	600-Y-3	0.44
600-4	0.42	600-ST-4	0.57	600¾ST-4	0.57	600-Y-4	0.57
600-5	0.51	600-ST-5	0.69	600¾ST-5	0.69	600-Y-5	0.69
600-6	0.59	600-ST-6	0.83	600¾ST-6	0.83	600-Y-6	0.83
600-7	0.68	600-ST-7	0.95	600¾ST-7	0.95	600-Y-7	0.95
600-8	0.77	600-ST-8	1.08	600¾ST-8	1.08	600-Y-8	1.08
600-9	0.86	600-ST-9	1.21	600¾ST-9	1.21	600-Y-9	1.21
600-10	0.95	600-ST-10	1.33	600¾ST-10	1.33	600-Y-10	1.33
600-11	1.03	600-ST-11	1.45	600¾ST-11	1.45	600-Y-11	1.45
600-12	1.12	600-ST-12	1.58	600¾ST-12	1.58	600-Y-12	1.58
600-13	1.21	600-ST-13	1.71	600¾ST-13	1.71	600-Y-13	1.71
600-14	1.31	600-ST-14	1.84	600¾ST-14	1.84	600-Y-14	1.84
600-15	1.40	600-ST-15	1.96	600¾ST-15	1.96	600-Y-15	1.96
600-16	1.49	600-ST-16	2.09	600¾ST-16	2.09	600-Y-16	2.09
600-17	1.57	600-ST-17	2.21	600¾ST-17	2.21	600-Y-17	2.21
600-18	1.66	600-ST-18	2.34	600¾ST-18	2.34	600-Y-18	2.34
600-19	1.75	600-ST-19	2.46	600¾ST-19	2.46	600-Y-19	2.46
600-20	1.84	600-ST-20	2.60	600¾ST-20	2.60	600-Y-20	2.60
600-21	1.93	600-ST-21	2.72	600¾ST-21	2.72	600-Y-21	2.72
600-22	2.02	600-ST-22	2.86	600¾ST-22	2.86	600-Y-22	2.86

601 Series

Height ⅜″, Width 1⅛″, Thickness 5/16″, Terminals 7/16″ Centers, 27/64″ Mtg., 6-32x¼″ Screws.

No.	Each	No.	Each	No.	Each	No.	Each
601-1	$0.20	601-ST-1	$0.24	601¾ST-1	$0.24	601-Y-1	$0.24
601-2	0.31	601-ST-2	0.41	601¾ST-2	0.41	601-Y-2	0.41
601-3	0.42	601-ST-3	0.57	601¾ST-3	0.57	601-Y-3	0.57
601-4	0.54	601-ST-4	0.74	601¾ST-4	0.74	601-Y-4	0.74
601-5	0.64	601-ST-5	0.90	601¾ST-5	0.90	601-Y-5	0.90
601-6	0.75	601-ST-6	1.07	601¾ST-6	1.07	601-Y-6	1.07
601-7	0.88	601-ST-7	1.23	601¾ST-7	1.23	601-Y-7	1.23
601-8	0.99	601-ST-8	1.40	601¾ST-8	1.40	601-Y-8	1.40
601-9	1.10	601-ST-9	1.56	601¾ST-9	1.56	601-Y-9	1.56
601-10	1.22	601-ST-10	1.73	601¾ST-10	1.73	601-Y-10	1.73
601-11	1.33	601-ST-11	1.89	601¾ST-11	1.89	601-Y-11	1.89
601-12	1.44	601-ST-12	2.06	601¾ST-12	2.06	601-Y-12	2.06
601-13	1.56	601-ST-13	2.22	601¾ST-13	2.22	601-Y-13	2.22
601-14	1.67	601-ST-14	2.39	601¾ST-14	2.39	601-Y-14	2.39
601-15	1.78	601-ST-15	2.55	601¾ST-15	2.55	601-Y-15	2.55
601-16	1.90	601-ST-16	2.72	601¾ST-16	2.72	601-Y-16	2.72
601-17	2.01	601-ST-17	2.88	601¾ST-17	2.88	601-Y-17	2.88
601-18	2.12	601-ST-18	3.05	601¾ST-18	3.05	601-Y-18	3.05
601-19	2.24	601-ST-19	3.21	601¾ST-19	3.21	601-Y-19	3.21
601-20	2.35	601-ST-20	3.38	601¾ST-20	3.38	601-Y-20	3.38
601-21	2.47	601-ST-21	3.55	601¾ST-21	3.55	601-Y-21	3.55
601-22	2.59	601-ST-22	3.72	601¾ST-22	3.72	601-Y-22	3.72
601-23	2.71	601-ST-23	3.89	601¾ST-23	3.89	601-Y-23	3.89

602 Series

Height ⅝″, Width 1 5/16″, Thickness ⅜″, Terminals 9/16″ Centers, ½″ Mtg., 8-32x5/16″ Screws.

No.	Each	No.	Each	No.	Each	No.	Each
602-1	$0.23	602-ST-1	$0.30	602¾ST-1	$0.30	602-Y-1	$0.30
602-2	0.36	602-ST-2	0.50	602¾ST-2	0.50	602-Y-2	0.50
602-3	0.51	602-ST-3	0.70	602¾ST-3	0.70	602-Y-3	0.70
602-4	0.65	602-ST-4	0.90	602¾ST-4	0.90	602-Y-4	0.90
602-5	0.78	602-ST-5	1.11	602¾ST-5	1.11	602-Y-5	1.11
602-6	0.92	602-ST-6	1.31	602¾ST-6	1.31	602-Y-6	1.31
602-7	1.07	602-ST-7	1.52	602¾ST-7	1.52	602-Y-7	1.52
602-8	1.20	602-ST-8	1.72	602¾ST-8	1.72	602-Y-8	1.72
602-9	1.34	602-ST-9	1.93	602¾ST-9	1.93	602-Y-9	1.93
602-10	1.49	602-ST-10	2.12	602¾ST-10	2.12	602-Y-10	2.12
602-11	1.62	602-ST-11	2.33	602¾ST-11	2.33	602-Y-11	2.33
602-12	1.76	602-ST-12	2.53	602¾ST-12	2.53	602-Y-12	2.53
602-13	1.90	602-ST-13	2.74	602¾ST-13	2.74	602-Y-13	2.74
602-14	2.04	602-ST-14	2.94	602¾ST-14	2.94	602-Y-14	2.94
602-15	2.18	602-ST-15	3.15	602¾ST-15	3.15	602-Y-15	3.15
602-16	2.32	602-ST-16	3.34	602¾ST-16	3.34	602-Y-16	3.34
602-17	2.45	602-ST-17	3.54	602¾ST-17	3.54	602-Y-17	3.54
602-18	2.58	602-ST-18	3.74	602¾ST-18	3.74	602-Y-18	3.74
602-19	2.76	602-ST-19	3.99	602¾ST-19	3.99	602-Y-19	3.99
602-10	2.90	602-ST-20	4.20	602¾ST-20	4.20	602-Y-20	4.20
602-21	3.04	602-ST-21	4.41	602¾ST-21	4.41	602-Y-21	4.41
602-22	3.19	602-ST-22	4.62	602¾ST-22	4.62	602-Y-22	4.62
602-23	3.33	602-ST-23	4.83	602¾ST-23	4.83	602-Y-23	4.83
602-24	3.48	602-ST-24	5.04	602¾ST-24	5.04	602-Y-24	5.04
602-25	3.62	602-ST-25	5.25	602¾ST-25	5.25	602-Y-25	5.25
602-26	3.76	602-ST-26	5.46	602¾ST-26	5.46	602-Y-26	5.46

MARKER STRIPS
for 600, 600-ST and 600-¾ST

Black fiber marker strips 1/32″ thick imprinted to specs. Bakelite marker strips are available. Specify XP. Prices on request.

No.	Per C
MS600-1	$2.20
MS600-2	3.30
MS600-3	3.30
MS600-4	4.40
MS600-5	5.50
MS600-6	6.60
MS600-7	6.60
MS600-8	7.70
MS600-9	8.80
MS600-10	9.90
MS600-11	11.00
MS600-12	11.00
MS600-13	12.10
MS600-14	13.20
MS600-15	13.20
MS600-16	14.30
MS600-17	15.40
MS600-18	16.50
MS600-19	16.50
MS600-20	17.60
MS600-21	18.70
MS600-22	19.80

MARKER STRIPS
for 601, 601-ST and 601-¾ST

No.	Per C
MS601-1	$2.75
MS601-2	3.85
MS601-3	4.95
MS601-4	6.05
MS601-5	7.15
MS601-6	8.25
MS601-7	9.35
MS601-8	10.45
MS601-9	11.55
MS601-10	12.65
MS601-11	13.75
MS601-12	14.85
MS601-13	15.95
MS601-14	17.05
MS601-15	18.15
MS601-16	19.25
MS601-17	20.35
MS601-18	21.45
MS601-19	22.25
MS601-20	23.65
MS601-21	24.75
MS601-22	25.85
MS601-23	26.95

MARKER STRIPS
for 602, 602-ST and 602-¾ST

No.	Per C
MS602-1	$3.00
MS602-2	4.40
MS602-3	5.50
MS602-4	7.00
MS602-5	8.50
MS602-6	9.90
MS602-7	12.25
MS602-8	12.65
MS602-9	14.00
MS602-10	15.40
MS602-11	16.75
MS602-12	18.15
MS602-13	19.25
MS602-14	20.75
MS602-15	22.25
MS602-16	23.50
MS602-17	25.00
MS602-18	26.50
MS602-19	28.00
MS602-20	29.50
MS602-21	31.00
MS602-22	32.50
MS602-23	34.00
MS602-24	35.50
MS602-25	37.00
MS602-26	38.50

MARKER STRIPS
for 600-Y Series

Black fiber marker strips 1/32″ thick imprinted to specs. Bakelite marker strips are available. Specify XP. Prices on request.

No.	Per C
MS600-Y-1	$5.50
MS600-Y-2	6.60
MS600-Y-3	7.40
MS600-Y-4	8.25
MS600-Y-5	9.08
MS600-Y-6	9.90
MS600-Y-7	10.73
MS600-Y-8	11.55
MS600-Y-9	12.38
MS600-Y-10	13.20
MS600-Y-11	14.03
MS600-Y-12	14.85
MS600-Y-13	15.68
MS600-Y-14	16.50
MS600-Y-15	17.33
MS600-Y-16	18.15
MS600-Y-17	18.98
MS600-Y-18	19.80
MS600-Y-19	20.63
MS600-Y-20	21.45
MS600-Y-21	22.28
MS600-Y-22	23.50

MARKER STRIPS
for 601-Y Series

No.	Per C
MS601-Y-1	$6.00
MS601-Y-2	7.10
MS601-Y-3	8.25
MS601-Y-4	9.25
MS601-Y-5	10.40
MS601-Y-6	11.50
MS601-Y-7	12.60
MS601-Y-8	13.75
MS601-Y-9	14.85
MS601-Y-10	15.95
MS601-Y-11	17.00
MS601-Y-12	18.15
MS601-Y-13	19.25
MS601-Y-14	20.35
MS601-Y-15	21.45
MS601-Y-16	22.55
MS601-Y-17	23.65
MS601-Y-18	24.75
MS601-Y-19	25.85
MS601-Y-20	26.95
MS601-Y-21	28.05
MS601-Y-22	29.15
MS601-Y-23	30.25

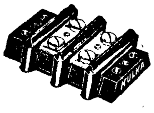
MARKER STRIPS
for 60-Y Series

No.	Per C
MS602-Y-1	$6.25
MS602-Y-2	7.70
MS602-Y-3	9.00
MS602-Y-4	10.40
MS602-Y-5	11.75
MS602-Y-6	13.20
MS602-Y-7	14.50
MS602-Y-8	15.75
MS602-Y-9	17.25
MS602-Y-10	18.75
MS602-Y-11	20.00
MS602-Y-12	21.25
MS602-Y-13	22.50
MS602-Y-14	24.00
MS602-Y-15	25.50
MS602-Y-16	27.00
MS602-Y-17	28.25
MS602-Y-18	29.75
MS602-Y-19	31.25
MS602-Y-20	32.75
MS602-Y-21	34.25
MS602-Y-22	35.75
MS602-Y-23	37.25
MS602-Y-24	38.75
MS602-Y-25	40.25
MS602-Y-26	41.75

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

603 SERIES

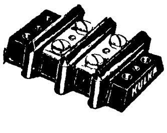
Height ¾", Width 1$\frac{13}{16}$", Thickness $\frac{7}{16}$", Terminals $\frac{11}{16}$" Centers, ⅝" Mtg., 10-32 x ⅜" Screws.



603		603 - ST		603 - ¾ ST		603 Marker Strips	
No.	Each	No.	Each	No.	Each	No.	Per C
603-1	$0.55	603-ST-1	$0.66	603¾ST-1	$0.66	MS603-1	$6.60
603-2	0.94	603-ST-2	1.13	603¾ST-2	1.13	MS603-2	7.70
603-3	1.32	603-ST-3	1.60	603¾ST-3	1.60	MS603-3	9.60
603-4	1.71	603-ST-4	2.07	603¾ST-4	2.07	MS603-4	11.00
603-5	2.09	603-ST-5	2.53	603¾ST-5	2.53	MS605-5	13.20
603-6	2.48	603-ST-6	3.00	603¾ST-6	3.00	MS603-6	14.30
603-7	2.86	603-ST-7	3.46	603¾ST-7	3.46	MS603-7	15.80
603-8	3.25	603-ST-8	3.92	603¾ST-8	3.92	MS603-8	17.30
603-9	3.63	603-ST-9	4.40	603¾ST-9	4.40	MS603-9	18.70
603-10	4.02	603-ST-10	4.80	603¾ST-10	4.80	MS603-10	20.40

604 SERIES

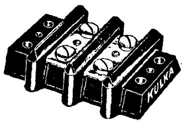
Height $\frac{15}{16}$", Width 2", Thickness ½", Terminals ⅞" Centers, ¾" Mtg., 12-32 x ⅜" Screws.



604		604 - ST		604 - ¾ ST		604 Marker Strips	
No.	Each	No.	Each	No.	Each	No.	Per C
604-1	$0.90	604-ST-1	$1.10	604¾ST-1	$1.10	MS604-1	$6.60
604-2	1.65	604-ST-2	2.00	604¾ST-2	2.00	MS604-2	10.10
604-3	2.40	604-ST-3	2.90	604¾ST-3	2.90	MS604-3	13.40
604-4	3.15	604-ST-4	3.80	604¾ST-4	3.80	MS604-4	16.75
604-5	3.90	604-ST-5	4.70	604¾ST-5	4.70	MS604-5	20.00
604-6	4.65	604-ST-6	5.60	604¾ST-6	5.60	MS604-6	23.00
604-7	5.40	604-ST-7	6.50	604¾ST-7	6.50	MS604-7	26.00
604-8	6.15	604-ST-8	7.40	604¾ST-8	7.40	MS604-8	29.00

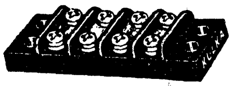
605 SERIES

Height 1⅛", Width 2½" Thickness ⅝", Terminals 1⅛" Centers, ⅞" Mtg., ¼-28 x ½" Screws.



605		605 - ST		605 - ¾ ST		605 Marker Strips	
No.	Each	No.	Each	No.	Each	No.	Per C
605-1	$1.25	605-ST-1	$1.45	605¾ST-1	$1.45	MS605-1	$7.15
605-2	2.40	605-ST-2	2.80	605¾ST-2	2.80	MS605-2	12.65
605-3	3.50	605-ST-3	4.20	605¾ST-3	4.20	MS605-3	18.15
605-4	4.70	605-ST-4	5.60	605¾ST-4	5.60	MS605-4	23.50
605-5	5.80	605-ST-5	7.00	605¾ST-5	7.00	MS605-5	29.00
605-6	7.00	605-ST-6	8.30	605½ST-6	8.30	MS605-6	34.00

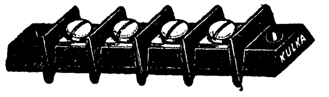
410 SERIES
MINIATURE TERMINAL BLOCK
With Double Screw Terminals



Designed especially to meet the increasing need for very small but highly efficient terminal blocks required today. Available in bakelite MME (Melmac 592), Acme Blue, and Resinox 11315. Slotted binder head or Phillips screws, 2-56 x $\frac{3}{16}$". Width ⅝", Height $\frac{5}{16}$".

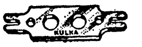
GENERAL PURPOSE AND CFG MATERIAL				MFE, MME, CMG, MDG MATERIAL			
No.	Each	No.	Each	No.	Each	No.	Each
410-1	$0.40	410-12	2.16	410-1	$0.80	410-12	3.68
410-2	0.56	410-13	2.32	410-2	1.08	410-13	3.94
410-3	0.72	410-14	2.48	410-3	1.34	410-14	4.20
410-4	0.88	410-15	2.64	410-4	1.60	410-15	4.46
410-5	1.04	410-16	2.80	410-5	1.86	410-16	4.72
410-6	1.20	410-17	2.96	410-6	2.12	410-17	4.98
410-7	1.36	410-18	3.12	410-7	2.38	410-18	5.24
410-8	1.52	410-19	3.28	410-8	2.64	410-19	5.50
410-9	1.68	410-20	3.44	410-9	2.90	410-20	5.76
410-10	1.84	410-21	3.60	410-10	3.16	410-21	6.02
410-11	2.00	410-22	3.76	410-11	3.42	410-22	6.28

599 SERIES
SPECIAL NARROW WIDTH BLOCK
With Single Screw Terminal



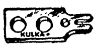
This is another small but strong molded thermosetting plastic terminal block molded of commercial black bakelite same as used on our 600 series. Single wire connection with single mounting hole. Width $\frac{9}{16}$", Height $\frac{13}{32}$", Terminals ⅜" Centers.

No.	Each	No.	Each
599-1	$0.20	599-12	1.44
599-2	0.31	599-13	1.56
599-3	0.42	599-14	1.67
599-4	0.54	599-15	1.78
599-5	0.64	599-16	1.90
599-6	0.75	599-17	2.01
599-7	0.88	599-18	2.12
599-8	0.99	599-19	2.24
599-9	1.10	599-20	2.35
599-10	1.22	599-21	2.47
599-11	1.33	599-22	2.59



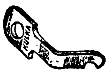
TWO-SIDED LUG

No.	Per C
600-STL	$3.50
601-STL	5.00
602-STL	6.00
603-STL	8.00
604-STL	15.00
605-STL	20.00



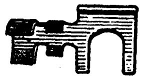
ONE-SIDED LUG

No.	Per C
600-3/4STL	$3.50
601-3/4STL	5.00
602-3/4STL	6.00
603-3/4STL	8.00
604-3/4STL	15.00
605-3/4STL	20.00



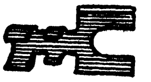
BENT LUG

No.	Per C
600-YL	$3.00
601-YL	5.00
602-YL	6.00



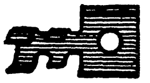
FLAG LUG

No.	Per M
600-SLF	$20.00
601-SLF	21.00
602-SLF	23.00
603-SLF	45.00



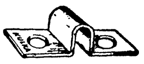
SPADE LUG

No.	Per M
600-SLS	$20.00
601-SLS	21.00
602-SLS	23.00
603-SLS	45.00



HOLE LUG

No.	Per M
600-SLH	$20.00
601-SLH	21.00
602-SLH	23.00
603-SLH	45.00



JUMPER

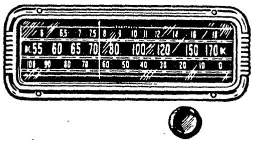
No.	Per M
600-J	$35.00
601-J	40.00
602-J	45.00
603-J	55.00
604-J	65.00
605-J	75.00

For Other Components, Send for Complete HERMAN H. SMITH INC. Catalog No. 53

WALDOM ELECTRONICS, Inc.
CRONAME PRODUCTS

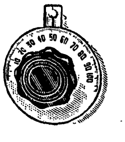
CRONAME CROFLEX TUNERS

Available in five sizes these dials fit any normal chassis. Locate tuning knobs at either end or along lower edge of dial. Place variable condenser at almost any point behind the dial. Hub with adapter fits either ⅜″ or ¼″ shaft. Pilot socket supplied. Bronze escutcheon and edgelit glass scale, calibrated 55 to 170 AM and 6 to 18 MC.



Cat. No.	Ratio	Pointer Travel	Escutcheon Outside	Escutcheon Inside	List Each
231	13 to 1	4″	2¼″ x 4¾″	1¾″ x 4¼″	$ 9.45
232	16 to 1	4 11/16″	2 9/16″ x 6 1/16″	1 9/16″ x 5⅛″	9.95
233	18 to 1	5½″	3 5/32″ x 6⅝″	2″ x 5¾″	10.70
234	23 to 1	6¾″	3 1/16″ x 8 7/16″	1⅞″ x 7¼″	10.90
236	31 to 1	9″	4″ x 11 1/16″	2⅞″ x 9⅜″	16.95

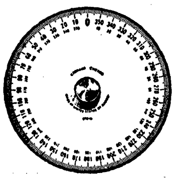
DIRECT DRIVE DIALS



Standard type, deluxe direct drive dials. Knobs are black bakelite with brass inserts. Dial plates are heavy brass, with chromium finish. Indicators for accurate reading. All dials fit ¼″ diameter instrument shafts.

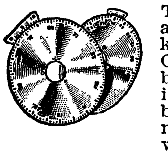
Cat. No.	Calibration	Dial Diam.	List Price
292	0-100 in 180°	4″	$ 4.85
293	0-100 in 270°	4″	4.85
294	0-100 in 180°	2¾″	3.75
295	0-100 in 270°	2¾″	3.75
302	0-100 in 360°	4″	4.85
303	0-100 in 360°	2¾″	3.75
27068	0-100 in 180°	1¾″	1.90
27069	0-100 in 270°	1¾″	1.90

AZIMUTH DIAL
Precision Test Dial



No. 27010. Calibrated in degrees through full 360°. Outer numerals read 0 to 360 in clockwise direction; inner numerals 0 to 360 in counter-clockwise direction. Etched on heavy brass with black graduations and figures on hand-spun chromium background. Hub has two set screws and fits ⅜″ shaft. Diameter of dial is 6″; diameter of indicator is ½″.
List Price $9.95

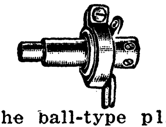
ACCESSORY DIALS



These dials are for attachment to the knobs illustrated. Of heavy etched brass with chromium finish. Calibration lines and numerals are filled with black enamel. are furnished with KD-1 and KD-2 single-line indicators; all the others have spring-mounted vernier indicators. Packed in individual envelope complete with indicator and all necessary screws for attaching dial to knob and indicator to panel.

Cat. No.	Cal.	Dia.	Use Knob	List Price
KD-1	180°	1¾″	6537	$ 1.65
KD-2	270°	1¾″	6537	1.65
KD-3	180°	2¾″	6549	3.00
KD-4	270°	2¾″	6549	3.00
KD-5	360°	2¾″	6549	3.00
KD-6	180°	4″	6550	3.85
KD-7	270°	4″	6550	3.85
KD-8	360°	4″	6550	3.85

PLANETARY DRIVES



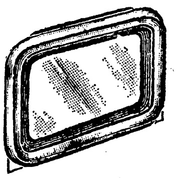
The ball-type planetary drive units on this page are useful whenever a compact device is needed for reduced-speed operation. Ratio approximately 5 to 1. May be used as auxiliaries or incorporated in new construction. All units have hubs to fit ¼″ instrument shafts.

No. 599 is a precision device used for both military and civilian production. Can be used as a single-speed drive by omitting knob on the high-speed sleeve.
List Price $9.00

No. 27067 same as No. 599 described above except for threaded sleeve.
List Price ....$ 9.00

No. 6665 Knob fits either of the units above. Larger knob is anodized aluminum. Smaller knob is black butyrate with brass insert.
List Price $1.25

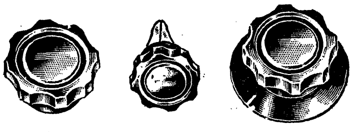
TV MASK ASSEMBLIES



Commercial television mask and escutcheon assemblies for the most popular sized TV tubes. Each complete kit consists of a mask, tempered glass and decorative escutcheon. Suitable for use in either conversion work or custom-built installations. Mask is heavy gauge aluminum, green-sprayed finish. Front glass is ¼″ thick, specially tempered. All escutcheons are of durable construction finished in attractive gold finish. For rectangular tubes only.

Cat. No.	Description	List Price
CK-14	14″ Kit	$13.50
CK-16	16″ Kit	16.50
CK-17	17″ Kit	16.50
CK-20	20″ Kit	24.85
CK-21	21″ Kit	29.50

FLUTED KNOBS



Black full-fluted knobs of compression-molded Bakelite. With ¼″ brass inserts and slotted head set screws.

PLAIN KNOBS

Cat. No.	Dia.	List Price
6537	1⅛″	$ .44
6538	1⅜″	.47
6539	1⅝″	.57
6540	2⅜″	.82

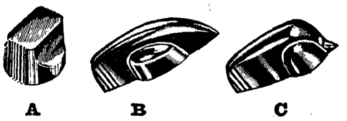
KNOB AND POINTER

Cat. No.	Knob Dia.	Ptr. Length	List Price
6566P	1-1/8″	25/32″	$ .70
6571P	1-3/8″	1-1/32″	.90
6570P	1-5/8″	1-5/16″	.85
6559P	2-3/8″	1-11/16″	1.20

KNOB AND SKIRT

Cat. No.	Knob Dia.	Skt. Dia.	List Price
6545S	1⅛″	1½″	$ .70
6548S	1⅜″	1¾″	.70
6549S	1⅝″	2 1/16″	.90
6550S	2⅜″	3″	1.10

BAR AND LEVER KNOBS



Made of Butyrate with brass insert and slotted head set screws.

Cat. No.	Color	Length	Fig.	List Ea.
BK-1B	Black	11/16″	A	$ .60
BK-1W	Walnut	11/16″	A	.60
BK-2B	Black	1-1/4″	B	.35
BK-2W	Walnut	1-1/4″	B	.35
BK-3B	Black	2-1/4″	B	.45
BK-3W	Walnut	2-1/4″	B	.45
BK-4B	Black	1-31/32″	C	.40
BK-4W	Walnut	1-31/32″	C	.40

List prices shown are subject to usual trade discounts, and are subject to change without notice. For detailed and complete information see our general catalog.

WALDOM ELECTRONICS, INC.

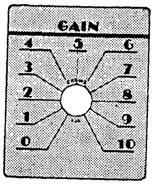
Chicago 10, Illinois

Manufacturers of Field Coils and Replacement Cones

WALDOM ELECTRONICS Inc.

CRONAME PRODUCTS

ETCHED—ANODIZED DIAL AND TITLE PLATES



Quality anodized aluminum plates designed for amplifier and public address equipment. Black figures are deeply dyed into the aluminum surface to assure long-lasting service.

VERTICAL STYLE

2⅝" High x 2-3/16" Wide

No.	Description
436	Gain 0-10
437	Gain 5-0-5
438	Switch 1-2-3
439	Tone 0-10
442	Bass 0-10
443	Treble 0-10
444	Phono 0-10
445	Attenuator

List Price Ea. .... .50

HORIZONTAL STYLE

2-3/16" High x 2⅝" Wide

Cat. No.	Title and Calibration
410	Without Title 0-10
411	Tone 0-10
412	Gain 0-10
413	Master Gain 0-10
414	Record 0-10
415	Microphone 0-10
416	Microphone 1, 0-10
417	Microphone 2, 0-10
422	Gain 5-0-5
423	Increase with Arrow
424	Radio-Microphone 5-0-5
425	Record-Microphone 5-0-5
426	Volume 0-10
427	Fader 5-0-5
428	Bass 5-0-5
429	Treble 5-0-5
430	Expansion 0-10
446	Phono 0-10
447	Bass 0-10
448	Treble 0-10

List Price Ea. .... .50

DOUBLE HORIZONTAL

2-3/16" High x 5" Wide

No.	Description
418	Tone 0-10 and Gain 0-10
419	Record 0-10 and Microphone 0-10
420	Microphone 1, 0-10 and Microphone 2, 0-10

List Price Ea. 1.05

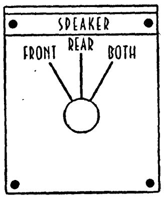
QUADRUPLE HORIZONTAL

2-3/16" High x 9½" Wide

No.	Description
421	Microphone 0-10—Record 0-10 Master Gain 0-10—Tone 0-10

List Price Ea. 1.55

SPEAKER SWITCH PLATE

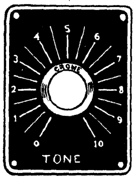


This attractive anodized aluminum plate is suitable for use on "rear - seat" automotive speaker installations, or wherever an indicator plate of this description is required. Silvery-white background with black letters indicating "Rear", "Front", "Both". With four mounting holes. Overall size 2⅛" high x 1¾" wide.

No.	Description
441	Speaker Plate

List Price Ea. .... .40

ETCHED DIAL PLATES



Plates in this group are calibrated 0-10 in 300° and titled as listed below. All are etched aluminum with polished figures and border and black background. Size 2¼" x 1-11/16"; 13/32" diameter center hole.

No.	Title	No.	Title
276	Gain	578	Microphone 2
277	Tone	579	Exciter
565	Record	580	Monitor
566	Microphone	585	Bass
570	Master Gain	586	Treble
571	No Title	587	Phono
577	Microphone 1	588	Volume

List Price Ea. .... .32

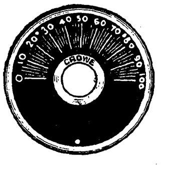
ROUND CONTROL PLATES

Control plates at right are 1¾" diameter, etched and finished to match those above. Center hole is 13/32" diameter.

No.	Title
25	Volume
26	Off-Tone Control
569	Calibrated 0-100 in 180°, No Title
905	Calibrated 0-100 in 270°, No Title

List Price Ea. .... .30

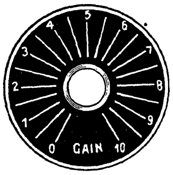
ANODIZED DIAL PLATES



These four round dials are made of anodized aluminum and have embossed beaded edges for greater stiffness and better appearance. Highly polished black backgrounds and silvery-white figures and borders. Diameter of center hole is 13/32".

No.	Description	List Ea.
550	1⅞" dia. 0-100 in 180°	.37
551	1⅞" dia. 0-100 in 270°	.37
552	2⅞" dia. 0-100 in 180°	.67
553	2⅞" dia. 0-100 in 270°	.67

CHROME AND BLACK PLATES



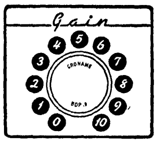
The chrome and black dials listed below and illustrated at the right are made of heavy brass with satin chromium figures, graduations and borders. The backgrounds are dull black.

No.	Description	List Ea.
260	3" dia. — 0-100 in 180°	1.10
261	3" dia. — 0-100 in 270°	1.10

No.	Description	List Ea.
262	1⅞" dia. — 0-100 in 180°	.55
263	1⅞" dia. — 0-100 in 270°	.55

No.	Description	List Ea.
264	2¼" dia. — 0-10 in 300° and titled "Gain"	.75

BRONZE DIAL PLATES

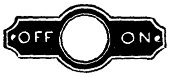


These unusual plates are particularly attractive against wood-color backgrounds in either dark or blonde tones. Good, too, on brown lacquer or wrinkle finishes. Harmonize nicely with traditional as well as modern cabinet designs. Wording is deeply etched into the solid bronze metal then filled with maroon enamel. All plates are 2¼" wide x 2" high. The center hole is 13/32" dia. to clear standard control and switch sleeves.

No.	Title
BDP-1	Gain 0-10
BDP-2	Master Gain 0-10
BDP-3	Volume 0-10
BDP-4	Selector 0-100 (180°)
BDP-5	Selector 100-0 (180°)
BDP-6	Tone 0-10
BDP-7	Bass 0-10
BDP-8	Treble 0-10
BDP-9	Bass-Treble 5-0-5
BDP-10	Mixer 5-0-5
BDP-11	Power-Tone off-on treble-bass
BDP-12	Power Switch off-on
BDP-13	Expansion 0-10
BDP-14	Microphone 0-10
BDP-15	Mic. 1 0-10
BDP-16	Mic. 2 0-10
BDP-17	Phono 0-10
BDP-18	Phono 1 0-10
BDP-19	Phono 2 0-10
BDP-20	Phono 1-Phono 2 5-0-5
BDP-21	Mic-Phono 5-0-5
BDP-22	Radio-Mic 5-0-5
BDP-23	Fader 5-0-5
BDP-24	Fader 0-10
BDP-25	No Title 0-10
BDP-26	No Title 5-0-5
BDP-27	Brightness
BDP-28	Contrast
BDP-29	Vertical Hold
BDP-30	Fine Tuning
BDP-31	Channel Selector 1-13

List Price Ea. .... .50

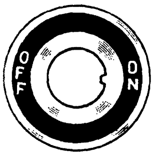
SWITCH PLATES



"Off - On" Switch Plate. Etched aluminum with black background and polished aluminum letters and border. Size is 11/16" x 11/16".

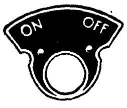
No.	Title	List Price
278	"Off-On"	.20

CIRCULAR PLATES



These plates are 1⅞" in diameter with 15/32" hole. Polished aluminum with black background. Locking lug fits groove in switch.

No.	Description	List Ea.
272	Off-On	.38
589	Off-On (Vertical)	.38
573	Micro-Phono	.38
581	Lo-Hi	.38
582	Monitor	.38



Polished aluminum with black background. All are 1" x 1¼".

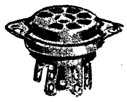
279	"Broadcast-Shortwave"
584	"Off-On"
274	"1-2"
564	"1-2-3"

List Each .... .25

The dial and title plates listed on this page are representative of the various type we carry. For complete and detailed information write for our general Catalog No. 503.

WALDOM ELECTRONICS Inc.

TUBES SOCKETS—CABINETS
TV ACCESSORIES



MINIATURE SOCKETS

7 PIN TYPE

Standard 7 pin sockets for either bottom or top mounting depending on application. Steel saddle cadmium plated. Contacts are brass cadmium plated. With center shield and ground lugs. Mounting centers are ⅞". Chassis mounting hole required ⅝".

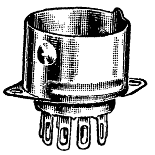
No.	Description	List Ea.
VTS-69	Blk. Bakelite Bottom Mtg.	.18
VTS-70	Mica-filled Bottom Mtg.	.20
VTS-71	Blk. Bakelite Top Mtg.	.18
VTS-72	Mica-filled Top Mtg.	.20

9 PIN TYPE

Same general construction as 7 pin sockets illustrated above, except mounting centers are 1⅛" and mounting hole required is ¾".

No.	Description	List Ea.
VTS-73	Blk. Bakelite Bottom Mtg.	.22
VTS-74	Mica-filled Bottom Mtg.	.25
VTS-75	Blk. Bakelite Top Mtg.	.20
VTS-76	Mica-filled Top Mtg.	.33

SHIELD BASE TYPES



Molded from low loss mica-filled or ceramic material. Saddles brass, nickel plated. Contacts silver tinned, phosphor bronze or beryllium copper. Center shields on all units. 7 pin types mount through top of chassis, requiring ⅝" mounting hole with ⅞" mounting centers. 9 pin types require ¾" mounting hole with 1⅛" mounting centers.

No.	Description	List Ea.
VTS-129	7 Pin Mica Phos. Bronze	.65
VTS-130	7 Pin Mica Ber. Copper	.70
VTS-131	7 Pin Ceramic Phos. Bronze	.80
VTS-132	7 Pin Mica Ber. Copper	.85
VTS-133	9 Pin Mica Phos. Bronze	.65
VTS-134	9 Pin Mica Ber. Copper	.75
VTS-135	9 Pin Ceramic Phos. Bronze	.85
VTS-136	9 Pin Ceramic Ber. Copper	.95

TUBE SHIELDS

Matching tube shields for shield-base sockets listed above. Slight downward pressure and twist from top of shield locks shield to socket base firmly and securely. Fabricated from brass with nickel plated finish, complete with plated retainer springs. Available in three sizes for each type.

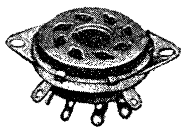
FOR SEVEN PIN TYPES

No.	Height	List Ea.
TST-93	1⅜"	.26
TST-94	1¾"	.31
TST-95	2¼"	.35

FOR NINE PIN TYPES

No.	Height	List Ea.
TST-96	1½"	.37
TST-97	1 15/16"	.35
TST-98	2⅜"	.40

SADDLE MOUNT OCTALS



Popular Bakelite saddle mount octals. Tinned steel saddle with ground lugs. Contacts are brass, cadmium plated. Available with either 1-5/16" or 1½" mounting centers. Require socket holes as indicated.

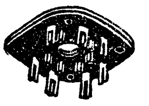
1-5/16" Mounting Centers

No.	Description	Mtg. Hole	List Ea.
VTS-65	Blk. Bakelite	15/16"	.15
VTS-66	Mica-filled	15/16"	.20

1½" Mounting Centers

No.	Description	Mtg. Hole	List Ea.
VTS-67	Blk. Bakelite	1-1/16"	.16
VTS-68	Mica-filled	1-1/16"	.22

LAMINATED SOCKETS

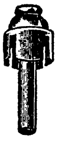


General purpose laminated bakelite sockets. Rugged riveted construction. Contacts are brass, cadmium plated. 7 and 9 pin miniature types are supplied with center shields and grounds straps as indicated.

No.	Type	Mtg. Ctrs.	List Ea.
VTS-52	4 prong	1½"	.15
VTS-53	5 prong	1½"	.16
VTS-54	6 prong	1½"	.18
VTS-55	7 prong	1½"	.19
VTS-56	Octal	1½"	.14
VTS-42	7 pin	⅞"*	.13
VTS-43	7 pin	⅞"**	.15
VTS-44	7 pin	1" *	.13
VTS-45	7 pin	1" **	.14
VTS-46	7 pin	1-5/16"*	.15
VTS-47	7 pin	1-5/16"**	.15
VTS-48	9 pin	1⅛"*	.17
VTS-49	9 pin	1⅛"**	.18
VTS-50	9 pin	1-5/16"*	.17
VTS-51	9 pin	1-5/16"**	.18

*With center shield.
**With ctr. shield and gnd. strap.

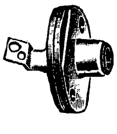
PHONO PLUG



Conventional RCA type phono plug. For use on record players, radio, etc. or wherever emergency connections of an experimental nature are required. Pin is 11/16" long, ⅛" in diameter. For use with PS-106 listed below.

No.	List Ea.
PP-105	.09

PHONO SOCKET



Female socket. Companion unit for PP-105 listed above, or for any plug with ⅛" diameter pin. Ceramic insert mounted on 1/16" bakelite disc, with 11/16" mounting centers. Metal parts cadmium plated.

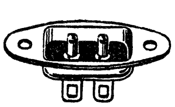
No.	List Ea.
PS-106	.09

BAKELITE METER CASES

Sturdy heavy molded plastic meter cases, with highly polished finish. Will withstand rugged usage, thus providing safety to inner components and meter. BC-140 has outer dimensions of 5-9/32" wide by 6-51/64" high. Inner dimensions are 4-31/32" wide by 6½" high. Designed to accommodate meters with flange sizes up to 4⅝" by 4-3/16". Complete with four mounting bosses, drilled for 6/32" self-tapping screws. Bosses are recessed ⅛" for flush panel mounting. BC-138 is 3¾" wide by 6¼" high and 2" deep. Inside dimensions are 3½" wide by 6" high. Matching panels listed at right.

No.		List Ea.
BC-138	3¾" x 6¼"	1.35
BC-140	5-9/32" x 6-51/64"	2.10

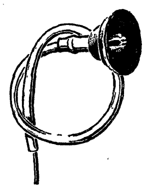
TV INTERLOCK PLUG



Conventional male interlock TV socket. Standard type used on all television receivers. Heavily plated contact pins. Mounting centers 1¼".

VTS-61		.15

TV ANODE CONNECTORS



Presented in the listing below are a series of anode connectors which will handle the majority of replacement needs for this item. Heavy duty molded rubber cap 1½" in diameter. Contact is one-formed piece with silver plated finish, postive grip. All supplied with heavily insulated leads and choice of cap styles as indicated.

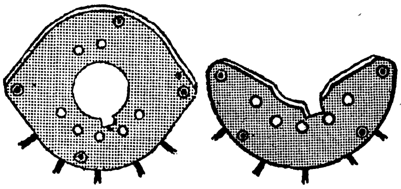
No.	Description	List Ea.
AC-99	18" Lead straight cap	.50
AC-100	18" Lead right angle cap	.50
AC-101	24" Lead straight cap	.55
AC-102	24" Lead right angle cap	.55

SNAP-ON ANODE CONNECTOR

Similar in construction to above units except with button contact for latest type metal-shell picture tubes.

No.	Description	List Ea.
AC-109	24" Lead right angle cap	.55

LAMINATED TV SOCKETS



Laminated duo-decal TV sockets with plastic protective backshells. Ideal for replacement use or new installation utilizing picture tubes ranging in size from 7" to 20". Furnished compete with color coded leads for rapid installation. Fig. A is 10 contact wired with 5 leads. Fig. B is popular crescent shaped duo-decal also with 5 leads. All with 20" leads.

No.	Description	List Ea.
VTS-58	Standard (A)	.81
VTS-59	Half-moon (B)	.80
VTS-60	Electrostatic (A)	.90

MOLDED PANELS

Matching molded black phenolic panels ⅛" thick for meter cases listed at left. Both types are precision cut for accurate fit with highly polished finish. No. BP-137 is 3½" x 6" for BC-138. BP-139 is 4 15/16" x 6-15/32" to fit BC-140.

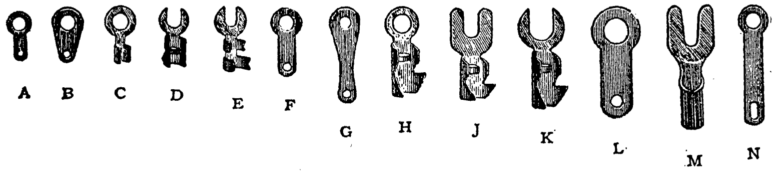
No.	List Ea.
BP-137	.70
BP-139	1.00

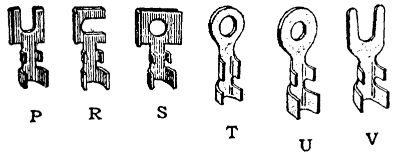
The above items are a representative listing of the many items contained in our general catalog. For complete and detailed information, write for our general catalog No. 5C3.

WALDOM ELECTRONICS Inc.

TERMINAL LUGS — STRIPS AND BOARDS

PLATED AND TINNED SOLDER LUGS



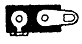


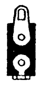
A series of terminal lugs for all applications. Available in brass, copper or steel with hot-tin dipping as outlined in "Material" column. Standard package quantities are 100 (C) and 1000 (M). Please specify C or M after catalog number for quantity desired when ordering.

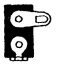
Cat. No.	Fig.	Mtl.	Hole Size	Length	List Per "C"	List Per "M"
T-151	A	.020B	#6	½"	.27	6.75
T-152	A	.020B	#8	13/16"	.25	6.30
T-153	A	.020B	#10	13/16"	.25	6.30
T-154	B	.020B	#6	9/16"	.31	7.65
T-155	C	.032C	3/16"	19/32"	1.25	11.25
T-156	C	.032C	#6	19/32"	.80	7.20
T-157	D	.020B	#8	41/64"	.70	6.30
T-158	E	.020B	#6	21/32"	.75	6.75
T-159	E	.020B	#8	21/32"	.75	6.75
T-160	E	.020B	#8	13/16"	.85	7.65
T-161	E	.020B	#8	¾"	.80	7.20
T-162	F	.015B	#8	47/64"	.80	7.20
T-163	G	.025B	#6	1"	.85	7.65
T-164	G	.025B	#8	1"	.85	7.65
T-165	H	.020C	#4	15/16"	1.25	11.25
T-166	H	.020C	#6	15/16"	1.25	11.25
T-167	H	.020C	#8	15/16"	1.25	11.25
T-168	H	.020C	#10	15/16"	1.25	11.25
T-169	H	.020B	13/32"	1-9/32"	2.15	19.35
T-170	J	.020B	3/16"	25/32"	.80	7.20
T-171	J	.025B	3/16"	31/32"	1.25	11.25
T-172	K	.025C	9/32"	1-1/16"	1.70	15.30
T-173	L	.020B	#10	1-5/32"	1.35	12.15
T-174	M	.020S	7/32"	1-5/16"	1.30	11.70
T-175	N	.025S	#8	1¼"	.65	5.85
T-176	P	.032B	⅛"	21/32"	1.80	16.20
T-177	P	.032B	#6	23/32"	2.00	18.00
T-178	P	.032B	#8	23/32"	2.05	18.45
T-179	P	.040B	#10	1-1/64"	3.55	31.95
T-180	R	.032B	.128	21/32"	1.75	15.75
T-181	R	.032B	#6	23/32"	1.90	17.10
T-182	R	.032B	#8	23/32"	1.95	17.55
T-183	R	.040B	#10	1-1/64"	3.45	31.05
T-184	S	.032B	#6	23/32"	1.90	17.10
T-185	S	.032B	#8	23/32"	1.95	17.55
T-186	S	.040B	#10	1-1/64"	3.50	31.50
T-187	T	.032B	#8	15/16"	3.15	28.35
T-188	T	.032B	#10	15/16"	3.15	28.35
T-189	U	.032B	#6	1-3/32"	4.50	40.50
T-190	U	.032B	#8	1-3/32"	4.50	40.50
T-191	U	.032B	#10	1-3/32"	4.50	40.50
T-192	U	.032B	¼"	1-3/32"	4.50	40.50
T-193	V	.032B	#8	1"	4.30	38.70

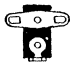
WALDOM TERMINAL STRIPS

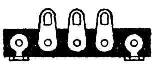
Standard type lug mounting terminal strips. Fabricated from X Grade bakelite 1/16" thick ⅜" wide. Square barrelled construction of lugs prevents twisting and slippage. End terminals are spaced 3/16" from end of strip. All strips are furnished with lug holes spaced ⅜" center to center. Type "A" with insulated mounting lugs. Type "B" combined mounting and ground lug.

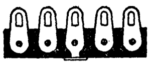

TS-113


TS-114


TS-115


TS-116


A

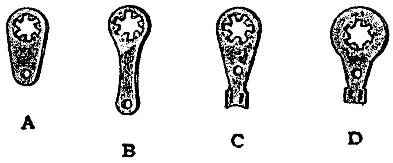

B

Cat. No.	Mtg. Type	No. of Term.	List Each	Cat. No.	Mtg. Type	No. of Term.	List Each
TS-1	A	1	.03	TS-17	A	8	.13
TS-2	B	1	.03	TS-113	Illus.	1	.03
TS-3	A	2	.04	TS-114	Illus.	1	.03
TS-4	B	2	.05	TS-115	Illus.	1	.03
TS-5	A	3*	.055	TS-116	Illus.	1	.03
TS-6	B	3*	.06	TS-117	A	2**	.06
TS-7	B	3**	.07	TS-118	B	2**	.07
TS-8	A	4*	.06	TS-119	A	2*	.04
TS-9	B	4*	.06	TS-120	B	2*	.05
TS-10	A	4**	.08	TS-121	A	3**	.065
TS-11	B	4**	.08	TS-122	B	3*	.06
TS-12	A	5**	.09	TS-123	A	4*	.06
TS-13	B	5**	.095	TS-125	B	6**	.11
TS-14	A	6**	.10	TS-126	A	6*	.08
TS-15	B	6*	.08	TS-127	A	7**	.10
TS-16	B	6**	.11	TS-128	A	8**	.11

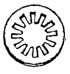
*With 1 mtg. lug

**With 2 mtg. lugs

LOCKING-TYPE LUGS

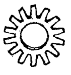


Cat. No.	Fig.	Screw Size	List Per "C"
T-194	A	#6	1.35
T-195	A	#8	1.35
T-196	B	#4	1.35
T-197	B	#6	1.35
T-198	B	#8	1.35
T-199	C	#4	1.50
T-200	C	#6	1.50
T-201	C	#8	1.50
T-202	D	#10	3.50
T-203	D	¼"	3.50



INTERNAL WASHERS PLATED STEEL

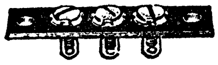
Cat. No.	Screw Size	List Per "C"
T-204	#4	.50
T-205	#6	.50
T-206	#8	.55
T-207	#10	.55
T-208	¼"	.70
T-209	⅜"	1.25



EXTERNAL WASHERS PLATED STEEL

Cat. No.	Screw Size	List Per "C"
T-210	#4	.50
T-211	#6	.50
T-212	#8	.55
T-213	#10	.55
T-214	¼"	.70
T-215	⅜"	1.25

TERMINAL BOARDS SCREW-TYPE



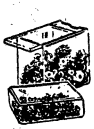
Listed below are both standard and heavy duty, bakelite screw type terminal strips. Terminals are hot-tin dipped for easy soldering. All are ⅝" wide, with .136 dia. mounting holes. Standard duty are 1/16" thick, heavy duty 3/32" thick.

Cat. No.	No. of Term	Mtg. Ctrs.	List Each
BTS-18	1	⅞"	.05
BTS-19	2	1-5/16"	.09
BTS-20	3	1¾"	.11
BTS-21	4	2-3/16"	.18
BTS-22	5	2⅝"	.21
BTS-23	6	3-1/16"	.24
BTS-24	7	3½"	.29
BTS-25	8	3-15/16"	.32
BTS-26	9	4⅜"	.37
BTS-27	10	4-13/16"	.41
BTS-28	11	5¼"	.45

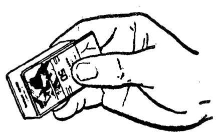
HEAVY-DUTY TYPE

Cat. No.	No. of Term	Mtg. Ctrs.	List Each
BTS-30	1	⅞"	.06
BTS-31	2	1-5/16"	.11
BTS-32	3	1¾"	.10
BTS-33	4	2-3/16"	.20
BTS-34	5	2⅝"	.23
BTS-35	6	3-1/16"	.28
BTS-36	7	3½"	.32
BTS-37	8	3-15/16"	.36
BTS-38	9	4⅜"	.40
BTS-39	10	4-13/16"	.45
BTS-40	11	5¼"	.50

WALSCO ELECTRONIC HARDWARE



Now! Both the 50 and the 99 Line are packaged in transparent, re-usable PLASTIC STORAGE BOXES with sliding tops that can be opened with one hand.



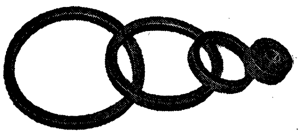
PHONO HARDWARE AND RUBBER ITEMS

50 line List Price 50c each		99 line List Price $1.80 each	
Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity

NOT CARRIED IN 99 LINE

WALSCO PHONO-MOTOR DRIVES

Precision-made, Resilient, Synthetic Rubber

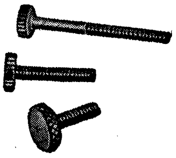


Replacement Selector. Lay old motor drive on this chart to quickly find part needed.

Used on Most 2 & 3 Speed Record Changers	DIMENSIONS I.D.	O.D.	Thick	Catalog No.	Approx. Quantity
Gen. Indst. Mod. LX & RX	2	2-3/8	5/32	7014-F	4
Alliance, Seeburg, G.E., V.M. 400	1-1/2	1-3/4	3/16	7016-F	2
Seeburg, RCA, G.E.	7/8	1-1/8	3/16	7017-F	3
Philco, RCA, etc.	1/8	3/8	1/4	7018-F	4
Detrola	5-3/4	6	3/16	7019-F	4
G.I. Recorder/Changer	1-7/32	1-15/32	3/16	7020-F	1
Gen. Indust. Mod. LX & RX	2	2-3/8	5/32	7022-F	3

Precision-made, resilient, synthetic rubber. Form a non-positive, non-slipping contact with turntable. Ground precisely concentric they obviate wow or turntable rumble caused by irregular drive wheel. Highly abrasion and oil-resistant they are good for many years of trouble-free service.

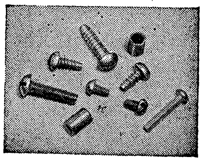
WALSCO PHONOGRAPH PICKUP SET SCREWS



Knurled head, steel screws, antique bronze finish. For replacement on pickup and recording heads. Fits all types.

Used on	Size	Catalog No.	Approx. Quantity
Various Models	Assorted	8550-F	12
Shure and others	2-56 x ⅝″	8552-F	12
Most Astatic & Webster	2-64 x ¾″	8553-F	12
Most RCA, etc.	1-72 x 1″	8555-F	5

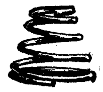
WALSCO PICKUP CARTRIDGE MOUNTING SCREWS



Machine and self-tapping screws of various lengths. Whatever your problem, the solution can be found in this assortment of small machine and self-tapping screws of various sizes. Spacers are also included.

	Catalog No.	Approx. Quantity
Assorted Screws and Spacers	8560-F	30

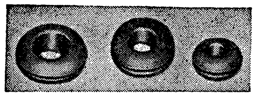
WALSCO PHONO PANEL MOUNTING SPRINGS



Very resilient, very strong, precision-formed. This is an assortment of conical springs for shock-resistant mounting of record changer units, etc.

	Catalog No.	Approx. Quantity
Assorted	7450-F	8

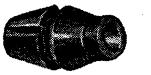
WALSCO RUBBER GROMMETS



Protect insulation from raw edges of holes in metal chassis. Easily squeezed into place; give a neat, practical finish. Extremely useful for damping vibration when mounting certain parts.

DIMENSIONS A	B	C	D	E	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
11/32	1/8	3/16	1/16	1/4	7030-F	16	7030-N	85
7/16	3/16	7/32	1/16	5/16	7032-F	14	7032-N	85
9/16	1/4	1/4	1/16	3/8	7034-F	12	7034-N	65
5/8	3/8	1/4	1/16	1/2	7036-F	10	7036-N	55
13/16	1/2	9/32	1/16	5/8	7038-F	8	*7038-N	35
				Assorted	7025-F	15		

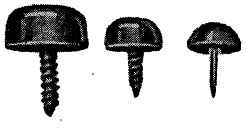
WALSCO CORD STRAINRELIEFS



For POSJ or POT (plastic) cord. Prevents chafing of ac power cord where it enters chassis. Takes strain off terminals. Protects against breakage of conductors due to sharp kinking over metal edge.
ATTACH TO CORD WITH WALSCO RUBBER CEMENT.

Catalog No.	Approx. Quantity
7048-F	5

WALSCO CABINET FEET



Supplied in two types—with tacks or screws—WALSCO Cabinet Feet are made of synthetic rubber. Wood screws are supplied with screw type feet. However, machine or sheet metal screws will fit.

	Dia.	Height	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
SCREW-ON RUBBER FEET	3/8	7/32	7052-F	8	7052-N	55
	1/2	9/32	7054-F	8	7054-N	50
	5/8	5/16	7056-F	8	7056-N	30
			7050-F	8		
TACK-ON RUBBER FEET	3/8				7071-N	55
	1/2				7072-N	50
		Assorted	7070-F	10		

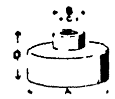
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

WALSCO ELECTRONIC HARDWARE

50 line List Price 50c each — **99 line** List Price $1.80 each

RUBBER ITEMS *(Cont.)* & WASHERS & INSULATORS

WALSCO CHASSIS MOUNTS



These resilient, synthetic rubber mounts are a must wherever vibration may affect performance.

A	B	C	D	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
3/4	1/2	1/4	3/8	7077-F	6		
1	1/2	1/4	17/32	7079-F	4		
				7075-F	10		

WALSCO RUBBER WASHER & BUMPER ASSORTMENT

Eliminate rattles and microphonics with WALSCO Rubber Washers and Bumpers. The assortment consists of round and square pieces of soft rubber.

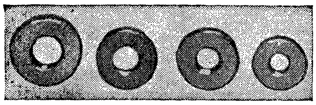
50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
7083-F	12		

WALSCO DIAL CORD IN SMALL PACKAGES

WALSCO cords meet the rigid standards set by the Government, Electronic Industries, and Engineering Laboratories. Made with high-abrasion-resistant Nylon over fiberglas core.

Size	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Special Thin	7395-F	10		
Standard Thin	7396-F	10		
Medium	7397-F	10		

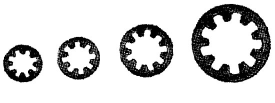
WALSCO METAL WASHERS



Precision-cut steel washer, cadmium-plated, with concentric center hole. Here are listed the small sizes most frequently used in electronic assemblies.

Screw Size	I.D.	O.D.	Thick	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
#4	.125″	5/16″	1/32″	7874-F	80		
#6	.149″	3/8″	1/32″	7876-F	80	7876-N	500
#8	.175″	3/8″	1/32″	7878-F	80	7878-N	500
#10	.203″	7/16″	1/32″	7880-F	70	7880-N	300
1/4″	.265″	1/2″	1/32″	7882-F	50	7882-N	300
			Assorted	7870-F	80		

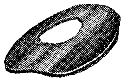
WALSCO LOCK WASHERS



Made of special steel selected for its elasticity and hardness. WALSCO offers these indispensable washers in the individual sizes most frequently needed in both electronic and electrical appliances, or in a handy assortment that belongs in all labs and shops.

For Screw Size	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
#2	7922-F	35		
#4	7924-F	50		
#6	7926-F	50	7926-N	300
#8	7928-F	50	7928-N	275
#10	7930-F	45	7930-N	275
1/4″			7932-N	200
3/8″			7935-N	125
Assorted	7920-F	50		

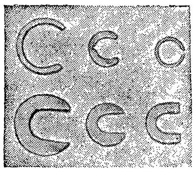
WALSCO SPRING FRICTION WASHERS



To secure a light drag to a rotating shaft. The WALSCO assortment contains popular sizes of phosphor bronze and spring steel washers.

Size	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	7750-F	12		

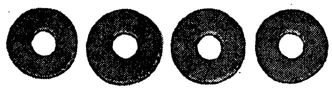
WALSCO RETAINING RINGS AND "C" WASHERS



When servicing rotational components such as volume controls or record changers, it is frequently necessary to replace worn or lost retaining rings and "C" washers. Rings are made of tempered spring steel. Washers are annealed steel, cadmium plated.

Item	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
"C" Washers for 3/16″ shaft	7772-F	15		
"C" Washers for 1/4″ shaft	7774-F	15		
Assorted Rings and Washers	7770-F	25		

WALSCO KNOB FELT WASHERS



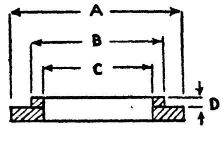
Space knobs from panel face with these WALSCO Felt washers and get smooth, quiet operation. Made of tough brown felt, they have a ¼″ hole to fit standard control and condenser shafts. O.D. is ¾″, thickness 1/32″.

50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
7760-F	40		

WALSCO INSULATING WASHERS

Insulation of components and controls from chassis or from each other can usually be most easily accomplished with WALSCO Insulating Washers. Precision made from vulcanized phenolic fiber.

Available FLAT or EXTRUDED



Overall thickness of extruded washers is approximately 3/32″ and of the flat washers 1/32″.

Fits Screw Size	A	B	C	D	Type	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
#6	5/16	3/16	.136	1/32	Extruded			7856-N	125
	5/16	....	.136	....	Flat			7836-N	250
					Fl. & Ex.	7824-F	30		
#8	3/8	1/4	.165	1/32	Extruded			7858-N	125
	3/8	....	.165	....	Flat			7838-N	250
					Fl. & Ex.	7825-F	30		
#10	3/8	.308	.195	1/32	Extruded			7860-N	100
	3/8	....	.195	....	Flat			7840-N	250
					Fl. & Ex.	7826-F	30		
1/4″	1/2	11/32	.255	1/32	Extruded			7862-N	100
	1/2	....	.255	....	Flat			7842-N	225
					Fl. & Ex.	7827-F	24		
3/8″	5/8	1/2	.380	1/32	Extruded			7864-N	85
	5/8	....	.380	....	Flat			7844-N	175
					Fl. & Ex.	7828-F	20		
					Assortment	7820-F	35		

WALSCO ELECTRONIC HARDWARE

INSULATING SPACERS, FUSE CLIPS AND MISCELLANEOUS THREADED FASTENERS

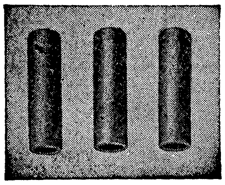
	50 line List Price 50c each		99 line List Price $1.80 each	
	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity

WALSCO METAL AND INSULATING SPACERS

Solve electrical and mechanical spacing and mounting problems when building or remodeling electronic equipment. Very handy for mounting sockets, switches, raising panels, chassis, and condensers. Assortment of various lengths and hole sizes.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted Metal Spacers	7620-F	12		
Assorted Insulating Spacers	7630-F	12		

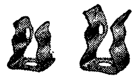
WALSCO FUSE INSULATORS



Standard fiber insulators used on automobile radio installations. Two lengths included in the assortment fit all standard ¼″ diameter fuses.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	7640-F	20		

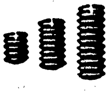
WALSCO FUSE CLIPS



Made of spring brass, nickel plated to defy corrosion and guarantee perfect contact. Designed for single hole mounting.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	7600-F	12		

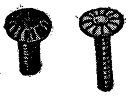
WALSCO STEEL SET SCREWS



WALSCO furnishes precision, hardened, headless, slotted steel set screws in sizes most frequently used in dial knobs, record changers, home and auto radios, etc.

Size	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
#6-32 x 3/16″	8623-F	15		
#8-32 x 3/16″	8633-F	15		
#8-32 x 1/4″	8634-F	15		
#10-32 x 1/4″	8644-F	15		
Assorted	8605-F	15	8605-N	55

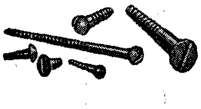
WALSCO ORNAMENTAL HEAD SCREWS



When you mount a speaker or other component to a wood panel, fasten it with WALSCO Ornamental Screws. Finished in bronze, stamped with rosette design.

Size	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
#6-32 x 3/4″	8252-F	25	8252-N	125
#6-32 x 1″	8253-F	25	8253-N	125
#8-32 x 1-1/4″	8255-F	15	*8255-N	80
Assorted	8250-F	20		

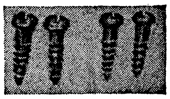
WALSCO STANDARD WOOD SCREW ASSORTMENT



This is the assortment every technician, lab, shop, and handyman should have on hand. Brass and steel round and flathead screws of popular sizes are included.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	8502-F	25		

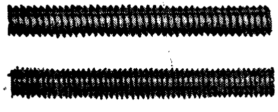
WALSCO SMALL ESCUTCHEON & WOOD SCREW ASSORTMENT



Extra small wood screws designed primarily for fastening name plates, escutcheons, trimmings, data plates, etc., to wood or plastic.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	8500-F	25		

WALSCO THREADED STEEL RODS



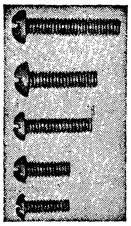
Make screw fasteners as long as you need them. Handy for mounting, suspending, or spacing components. Several components may be spaced, adjusted, and locked on same rod. Finest cold-rolled steel for maximum strength. Each package contains one 6-32 and one 8-32 threaded rod, each 8″ long.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
	8580-F	2		

WALSCO ELECTRONIC HARDWARE

MACHINE SELF-TAPPING, RACK SCREWS

WALSCO STEEL MACHINE SCREWS



Selected to suit the electronic technician's need for screw fasteners, WALSCO Steel Machine Screws are top-quality round head, cadmium plated. They are packaged in convenient assortments or by individual sizes. Handy, inexpensive assortment for the laboratory or repair shop contains Nos. 6, 8, and 10 plated steel machine screws of various lengths.

packaged in individual sizes Size	50 line List Price 50c each Catalog No.	50 line Approx. Quantity	99 line List Price $1.80 each Catalog No.	99 line Approx. Quantity
#2-56 x 3/16"			8021-N	225
#2-56 x ⅜"	8023-F	40	8023-N	200
#2-56 x ½"	8024-F	40	8024-N	200
#4-40 x ¼"	8042-F	40	8042-N	225
#4-40 x ⅜"			8043-N	200
#4-40 x ½"	8044-F	35	8044-N	200
#6-32 x ¼"	8062-F	40	8062-N	225
#6-32 x ⅜"	8063-F	40	8063-N	225
#6-32 x ½"	8064-F	35	8064-N	200
#6-32 x ¾"	8066-F	30	8066-N	175
#6-32 x 1"			8068-N	150
†#6-32 x 2"	8078-F	15		
#8-32 x ¼"	8082-F	30	8082-N	200
#8-32 x ⅜"	8083-F	30	8083-N	175
#8-32 x ½"	8084-F	25	8084-N	160
#8-32 x ¾"	8086-F	25	8086-N	140
#8-32 x 1"			*8088-N	125
#10-32 x ½"	8104-F	25	8104-N	140
#10-32 x ¾"	8106-F	20	*8106-N	115
#10-32 x 1"	8108-F	17	*8108-N	100

†This size required to fasten selenium rectifiers.

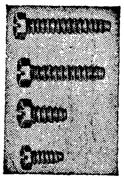
ASSORTED STANDARD MACHINE SCREWS Various Sizes, Lengths, and Styles.	Size	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
	Assorted	8000-F	35	8000-N	200

WALSCO SMALL MACHINE SCREW AND NUT ASSORTMENT

Extra small screws needed in experimental and repair work for fastening small parts, replacing rivets, etc. Special assortment of Nos. 2 and 4 screws with nuts to fit.

Size	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Assorted	8002-F	40		

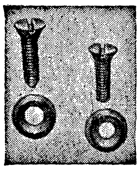
WALSCO SHEET METAL AND SELF-TAPPING SCREWS



Easier than riveting, faster than machine screws—WALSCO Self-tapping Screws cut their own threads in either metal or plastic. Just drill a hole and drive the screw—no nut or tapping necessary. Just the thing for mounting parts to chassis, replacing rivets, eyelets, etc. Listed here are all the popular sizes used by major manufacturers.

Size	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
#6 x ¼"	8362-F	30	8362-N	150
#6 x ⅜"	8363-F	25	8363-N	150
#6 x ½"	8364-F	25	8364-N	150
#6 x ¾"	8366-F	20	8366-N	125
#6 x 1"	8368-F	20	8368-N	125
#8 x ¼"	8382-F	20	8382-N	125
#8 x ⅜"	8383-F	20	8383-N	125
#8 x ½"	8384-F	20	8384-N	125
#8 x ¾"	8386-F	15	8386-N	80
#8 x 1"	8388-F	15	8388-N	80
#10 x ⅜"	8403-F	15	8403-N	80
#10 x ½"	8404-F	15	8404-N	80
#10 x ¾"	8406-F	12	8406-N	80
Assorted	8300-F	25	8300-N	125

WALSCO RACK SCREWS AND CUP WASHERS



Nickel-plated WALSCO oval-head screws and cup washers give a workmanlike finish to panels mounted on racks or in cabinets. Recommended for studio and laboratory installations.

	Size	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Screws	#6-32 x ⅝"	8265-F	30	8265-N	175
	#8-32 x ⅝"	8269-F	25	8269-N	150
	#10-32 x ¾"	8273-F	20	8273-N	100
Washers	#6 (7/16" O.D.)	7806-F	45	7806-N	275
	#8 (1/2" O.D.)	7808-F	45	7808-N	250
	#10 (9/16" O.D.)	7810-F	35	7810-N	200
Assorted Screws and Washers		8005-F	15		

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

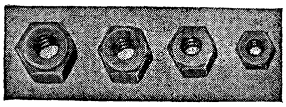
WALSCO

ELECTRONIC HARDWARE

HEX, LOCK, SPECIAL AND SPEED NUTS AND MISCELLANEOUS FASTENERS

50 line List Price 50c each — **99 line** List Price $1.80 each

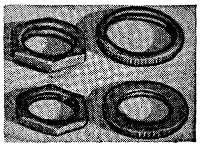
WALSCO HEX NUTS



Precision tapped for effortless assembly, cadmium plated for corrosion resistance and neat appearance; WALSCO nuts are "Small Pattern" as preferred in the electronics industry.

	Size	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Steel, Cadmium Plated	#2-56	8802-F	30	8802-N	175
	#4-40	8804-F	30	8804-N	175
	#6-32	8806-F	35	8806-N	200
	#8-32	8808-F	30	8808-N	200
	#10-32	8810-F	30	8810-N	175
	Assorted	8800-F	30	8800-N	175
Brass	#6-32	8846-F	25	8846-N	150
	#8-32	8848-F	15	8848-N	100
	#10-32			8850-N	80

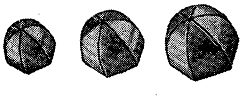
WALSCO SPECIAL MOUNTING NUTS



For panel mounting components with threaded bushings such as potentiometers, volume controls, jacks, toggle switches, etc.

Description	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
3/8″ x 32 Vol. Control Hex Nut	8923-F	18	8923-N	85
15/32″ x 32 Toggle Switch Hex Nut	8924-F	10	8924-N	50
15/32″ x 32 Toggle Switch Ring Nut	8926-F	10	8926-N	50
Assorted	8920-F	15		

WALSCO ACORN NUTS



Give a well-finished look to panel assemblies, test instruments, cabinets, etc., with these cadmium plated, double self-locking WALSCO Acorn Nuts. Assortment contains sizes 6-32, 8-32, and 10-32 nuts.

	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Assorted	8950-F	10		

WALSCO KNURLED THUMB NUTS

Precision-made, brass knurled thumb nuts preferred for securing conductors to binding posts, batteries, etc.

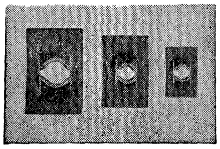
Size	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
#6-32	8943-F	8		
#8-32	8944-F	8		
#10-32	8945-F	5		

WALSCO WING NUTS

Designed for easy-on, easy-off installation without tools. Frequently used for bolting chassis to supports in wood cabinets, fastening lids to car radios, etc.

Size	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
#6-32	8933-F	15		
#8-32	8934-F	10		
#10-32	8935-F	8		

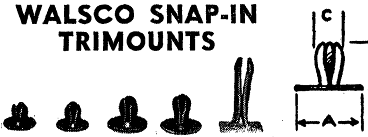
WALSCO SPEED NUTS



Used in record changer assemblies, tuning units, etc. Replacements will frequently be needed by the busy serviceman and shop.

	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Assorted	8960-F	30		

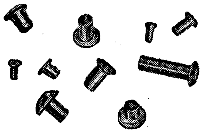
WALSCO SNAP-IN TRIMOUNTS



For Hole	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
1/8″	9/32″	13/64″	1/64″	7373-F	25	7373-N	125
5/32″	23/64″	9/32″	3/16″	7375-F	20	7375-N	100
5/32″	3/8″	5/8″	5/32″	7377-F	15	7377-N	85
			Assorted	7370-F	20		

For light duty assembly, WALSCO Snap-in Trimounts provide a neat, handsome fastening. Use on back covers, dial scales, chassis, built-in antennas, etc.

WALSCO RIVET ASSORTMENT



Contains dozens of rivets—hollow, solid, split—and metals—brass, copper, aluminum. From 1/16″ to 3/16″ diameter and up to ¾″ length.

	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Assorted	7525-F	50		

WALSCO TV INTERLOCK CORD RIVET ASSORTMENT

Assortment of rivets and washers needed to fasten interlock cords to back of TV set. Contains sizes for fastening interlock receptacles to chassis.

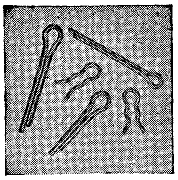
	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Assorted Rivets and Washers	7527-F			

WALSCO EYELET ASSORTMENT

Brass eyelets of various diameters and lengths.

	50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
Assorted	7510-F	50		

WALSCO SMALL COTTER AND HAIR PINS



Assortment of most popular sizes of cotter and hair pins. Valuable aid in repair of radios and phonograph mechanisms.

50 line Catalog No.	50 line Approx. Quantity	99 line Catalog No.	99 line Approx. Quantity
7380-F	50		

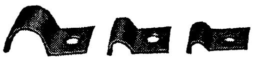
TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

WALSCO

ELECTRONIC HARDWARE

50 line List Price 50c each — **99 line** List Price $1.80 each

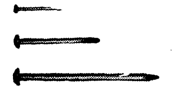
MISC. FASTENERS, BRACKETS, PLUGS, PHONE TIPS



WALSCO CABLE CLAMPS

Made of heavy gauge steel cadmium plated, perfectly punched and stamped. Holes accommodate No. 6 and No. 8 screws. ⅜" wide. Available in three sizes for cables from ⅛" to $\frac{5}{16}$" diameter.

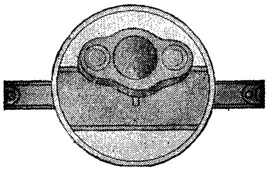
For Cable Diameter	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
1/8" to 3/16"	7502-F	25	7502-N	125
3/16" to 1/4"	7503-F	20	7503-N	100
1/4" to 5/16"	7505-F	16	7505-N	75
Assorted	7500-F	20		



WALSCO ESCUTCHEON PIN ASSORTMENT

The quick, neat way to fasten name plates and markers to wood, wals, or plywood. WALSCO Escutcheon Pins are brass finished, packaged in various sizes and lengths from ¼" to ⅝".

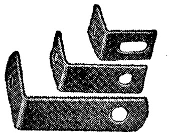
	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	7560-F	100		



WALSCO TWIN-LEAD WIRING NAILS

Improve the appearance of TV installations by fastening 300-ohm twin-lead to walls and mouldings. Line impedance not affected because ornamental head consists almost entirely of insulating material.

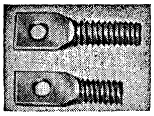
	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
	7565-F	35	7565-N	200



WALSCO ANGLE BRACKET ASSORTMENT

Instantly solve problems of mounting components at right angles to panel or chassis with the proper WALSCO Angle Bracket. Assortment of plated steel or brass brackets to fill every need of the experimenter, technician, or "ham."

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	7570-F	15		

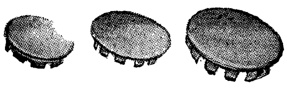


WALSCO SPADE BOLTS

For dozens of jobs no other type fastener can perform quite as well. Indispensable for attaching condensers, coils, cans, and many other items. Stud size 6-32; hole for No. 6 screw or ⅛" rivet.

Length	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
5/8"			8571-N	100
3/4"			8572-N	100
Assorted	8570-F	15		

WALSCO SNAP-HOLE PLUGS



The quickest, simplest way ever devised to cover a hole in chassis or panel. Spring flanges hold polished nickel-plated flat-head button firmly in place. Use WALSCO Snap-hole Plugs to seal adjustments, cover unused holes, etc.

Fits Hole Diameter	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
1/4"	7306-F	8	7306-N	50
3/8"	7308-F	8	7308-N	50
1/2"	7310-F	6	7310-N	40
5/8"	7312-F	6	7312-N	30
3/4"	7314-F	5	7314-N	25
1"	7316-F	5	*7316-N	20
Assorted	7300-F	8		

WALSCO VENTILATING HOLE PLUGS

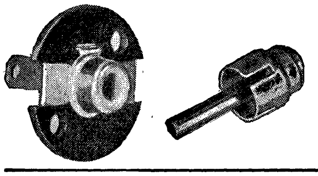
Snap these protective screen coverings into ventilating holes on chassis, portable equipment cases, amplifiers, amateur rigs, etc. Spring flange holds plug in place.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Assorted	7330-F	3		

WALSCO PHONE TIPS

Audio and test circuits, designed to fit all standard tip jacks. Made of brass, easy to solder, nickel-plated for long wear and good contact.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
	7645-F	10	7645-N	60



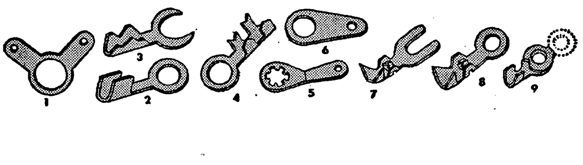
WALSCO PHONO PLUGS AND JACKS

Standard, nickel-plated plugs and jacks for connecting record players, pick-ups, auto radio antennas, etc. Recommended for all single conductor, shielded cable connections.

	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
Plugs	7665-F	4		
Jacks	7667-F	2		

WALSCO TERMINAL LUGS

Ready-tinned WALSCO Terminal Lugs are designed to simplify your assembly problems. The types and sizes listed here contain lugs you will need for assembly, experimentation and repair.



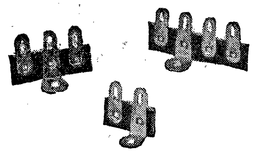
	For Screw Size	50 line Catalog No.	Approx. Quantity	99 line Catalog No.	Approx. Quantity
1	Asstd. #6 & #8	7110-F	20		
	#6			7116-N	125
	#8			7118-N	125
2	Asstd. #6 & #8	7120-F	25		
	#6			7126-N	140
	#8			7128-N	140
3	Asstd. #6 & #8	7130-F	25		
	#6			7136-N	115
	#8			7138-N	115
4	Asstd. #6 & #8	7140-F	20		
	#6			7146-N	100
	#8			7148-N	100
5	Asstd. #6 & #8	7150-F	15		
	#6			7156-N	100
	#8			7158-N	100
6	Asstd. #6 & #8	7160-F	35		
	#6			7166-N	250
	#8			7168-N	250
7	#10	7170-F	25	7179-N	140
8	#10	7180-F	20	7189-N	100
		7190-F	8	7199-N	35
9	Assorted Types	7100-F	30		

WALSCO **ELECTRONIC HARDWARE**

STRIPS, CAPS, CLIPS, SPRINGS, SOCKET WRENCHES

	50 line List Price 50c each		99 line List Price $1.80 each	
	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity

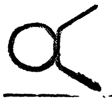
WALSCO TERMINAL STRIPS



To organize wire distribution or to mount small parts that must be insulated from chassis. Solder-coated terminals are riveted to high-grade phenolic base. Assortment contains several popular types.

	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
Assortment of Various Size Strips	7250-F			

WALSCO GRID CAP ASSORTMENT



Assortment contains ¼″ and ⅜″ spring clips for TV high voltage tubes.

	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
Assorted	7609-F	10		

WALSCO TV GRID CLIP ASSORTMENT

Precision stamped to fit securely all standard metal and glass tubes. Assortment includes clip for high-voltage TV rectifier tubes.

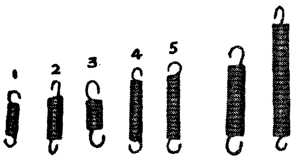
	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
Assorted	7610-F	8		

WALSCO SPRING CONNECTOR CLIPS

Make fast connection with excellent electrical contact. No tools required for connecting or disconnecting. Recommended for "breadboard" work. Made of spring brass or phosphor bronze.

	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
For Wires #16 gauge and smaller	7592-F	18		
#12 to #18 gauge	7594-F	14		
Assorted	7590-F	15		

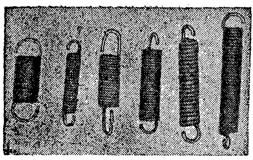
WALSCO DIAL DRIVE SPRINGS



Carefully-looped ends greatly simplify installation. Eliminate fumbling. Rust-proof cadmium plated. Available in all standard sizes. Springs are shown actual size.

Overall Length	Diam.	Wire Thickness	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
1/2″	1/8″	.016″	7404-F	10		
5/8″	5/32″	.018″	7405-F	10		
9/16″	3/16″	.020″	7407-F	10		
3/4″	1/8″	.016″	7409-F	8		
3/4″	5/32″	.020″	7411-F	8		
Assorted Small Springs			7400-F	10		
Assorted (Large and Small)			7401-F	8	7401-N	50

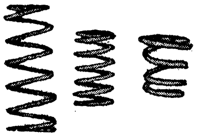
WALSCO EXPANSION SPRINGS



Holds parts or controls under tension. Will fill need of serviceman or technician. Contains many different sizes.

	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
Assorted Small Springs	7420-F	10		
Assorted Large Springs	7421-F	10		

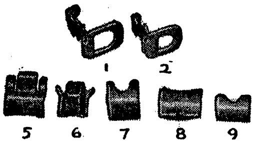
WALSCO COMPRESSION SPRINGS



These ordinary hard-to-get compression springs are offered in two wide assortments by WALSCO to solve radio and electronic equipment, motors, appliance problems, etc.

	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
Assorted Small Springs	7440-F	20		
Assorted Large Springs	7441-F	15		

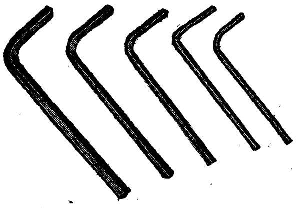
WALSCO RADIO KNOB SPRINGS



Made of finest grade tempered spring steel; available in all standard sizes and shapes.

	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
1	7485-F	8		
2	7486-F	10		
TV 3	7488-F	12		
4	7490-F	12		
5	7491-F	20		
6	7493-F	24		
7	7495-F	15		
8	7496-F	25		
9	7497-F	10		
Assorted	7498-F	10		
TV Knob Spring	7480-F	18		
Assortment	7481-F	10		

WALSCO KEY WRENCHES



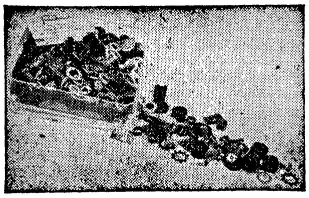
Offered in assortments of sizes to fit practically all standard socket screws used in electronic equipment. In the Hex Assortment are wrenches to fit set screws No. 4 to No. 10 and cap screws No. 2 to No. 6. In the Spline Assortment are wrenches to fit all set screws up to ¼″ and cap screws up to No. 8.

	Catalog No.	Approx. Quantity	Catalog No.	Approx. Quantity
Hex (Allen) Wrench Assortment	8600-F	4		
Spline (Bristol) Wrench Assortment	8602-F	4		

HARDWARE ASSORTMENT
MISCELLANEOUS ITEMS
SPECIAL TOOLS AND WIRE STRIPPERS

WALSCO

walsco quality earned its reputation

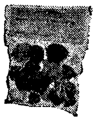


WALSCO HARDWARE ASSORTMENT

Here are parts to fill the occasional need — the nut, washer, grommet, spring, clamp, eyelet, or terminal of the size and type you don't ordinarily stock. Contains about 600 to 1000 pieces.

		List Price	Dealer's Net
K3003	Hardware Assortment	$1.80	$1.08

WALSCO KNOB ASSORTMENT



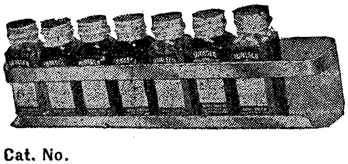
A real bargain in every way, it contains knobs in different colors — brown, ivory, some red, some clear . . . knobs of many sizes, and various shapes.

Cat. No.		Dealer's Net
K-100	Approx. 25 assorted knobs	$0.95

WALSCO STROBOSCOPE DISC

The best way to check and adjust turntable speed. At correct speeds lines on the disc remain stationary when viewed under 60 cycle AC light. Three sets of lines for checking 78, 45, and 33⅓ rpm speeds.

Cat. No.		List Price
949	Stroboscope Disc Standard Packing: 25	$0.17



WALSCO WALL RACKS

Keep small hardware and chemical containers in place, within easy reach. And your workbench clear. Made of satin-finish aluminum with polished edges.

Cat. No.		List Price
995	Wall Racks for eight 2-oz. bottles	$1.40
996	Wall Racks holding 7 Walsco 99 Line hardware, Walsco dial cord, or Cat. No. 998 plastic storage boxes	1.40

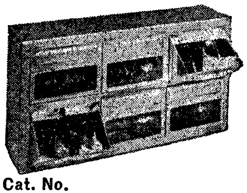
WALSCO GLASS JARS AND PLASTIC BOXES

These see-through containers provide the most efficient method yet devised for "filing" small hardware items. Keep small parts clean, rust-free, ready-to-use, easy-to-find.

Cat. No.		List Price
997	Plastic Box with 4 compartments and telescoping lid. 4½" square, 1⅜" high. (Standard pack: 24)	$0.70
998	Plastic Box with Sliding Lid (99 Line size)	.28
988A	Plastic Box with Sliding Lid (50 Line size)	.10
999	Glass Jar, 2 oz. size. (Standard pack: 36)	.13

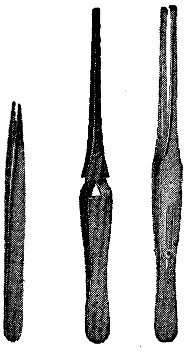
WALSCO VIEW BINS

Keep small parts sorted, visible, dust-free with WALSCO View-Bins. Most practical method ever devised for storing plugs, knobs, switches, connectors, condensers, resistors, coils, etc. Each bin can be divided into two compartments with readily insertable metal divider furnished for each. Bins can be removed with one hand, but cannot be pulled out accidentally. Open bin does not block view or access to bin below. Windows made of clear, high-strength glass. Silver-gray hammertone finish. Welded steel construction.



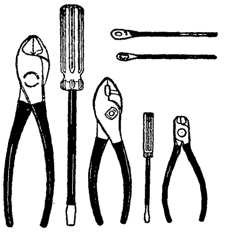
Cat. No.		List Price
1010-6	6 compartments	$ 4.95
1010-12	12 compartments	9.50
1010-24	24 compartments	16.95

WALSCO SERVICE TWEEZERS



Cat. No.		List Price
570	Self-Closing Tweezer with cross-over action, 6½" long, serrated, blunt points (Standard Package: Display card with 10 tweezers. Cat. No. 570D)	$1.05
571	Heavy-Duty Tweezer with slide-lock feature. Length 6½", serrated, blunt points (Standard Package: Display card with 10 tweezers. Cat. No. 571D)	1.30
572	Precision Tweezer with narrow, pointed ends especially suitable for delicate work. Over-all length 4½" (Standard Package: Display card with 20 tweezers. Cat. No. 572-D)	.60
575	Tweezer Kit, made of durable leatherette, containing one each of the above listed tweezers. Provides servicemen with necessary tweezers for every need. Neat, compact, handy (Standard Package: Display of 12 Kits Cat. No. 575-D)	3.55

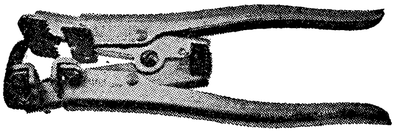
WALSCO PROTECTO TUBE



Insulate your own favorite tools: Insulate handles of pliers, wire cutters, screwdriver shanks neatly and effectively. WALSCO Protecto Tube is easy to apply. Soak tubing in "Expanding Solution," then slip over part to be insulated. It dries and shrinks skin tight. Will not crack or shatter even under extremes of temperature. Supplied in variety of colors to aid in identifying tools.

Cat. No. K-18 .... **List Price $1.80**

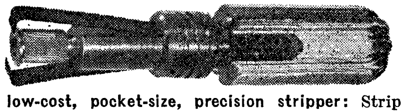
WALSCO ALL-PURPOSE WIRE STRIPPERS



Strip from 700 to 1,000 wires an hour! Cut through insulation without nicking conductor. Built-in locking device prevents crushing of stranded wire. Strips all wires from 16 to 22 gauge. Strips 300-ohm twin lead. Wire cutter is part of the same tool. Made of steel, lasts a lifetime. Blades are precision ground. Equally effective for use with electrical, automotive, aviation, telephone wires, etc.

Cat. No.	Description	List Price	Dealer's Net
590	WALSCO All-Purpose Wire Stripper	$8.25	$4.95
590-1	Replacement Blade Set for No. 590	2.00	1.20
591	WALSCO "Wide-Range" Model for Electrical Trade. Strips all wire gauges from No. 10 to No. 22. Similar construction to No. 590 but does not include cutter. Will not strip 300 ohm twin-lead	8.25	4.95
591-1	Replacement Blade Set for No. 591	2.00	1.20

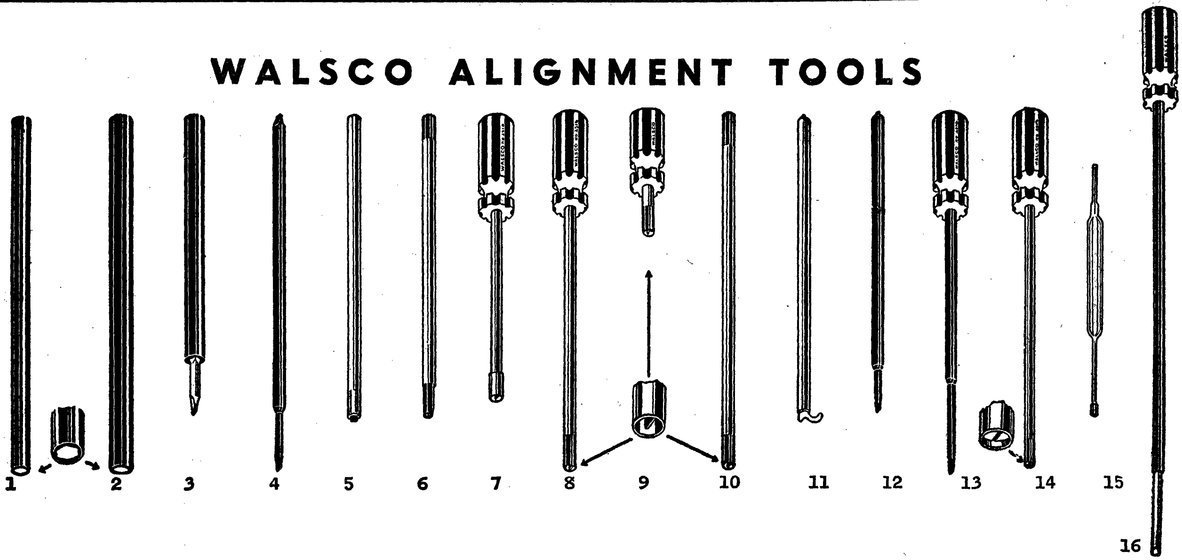
WALSCO TWISTO WIRE STRIPPER



Patented low-cost, pocket-size, precision stripper: Strip insulation right up next to a soldered connection, plug, or socket. Can be inserted into chassis and assemblies to strip wires without removing them. Quick micrometertype adjustment is set instantaneously for a.w.g. wire sizes 12 to 22. Features a built-in stop for accurately-uniform, repetitive production stripping. To operate, you merely dial wire size, insert wire in hollow end, set sliding collar with thumb, twist and pull. The most compact precision wire stripper on the market!

Cat. No.		List Price
592	WALSCO Twisto Stripper (Standard Pack: 6)	$4.50
592-3P	Replacement blades, per set (Standard Pack: 6 sets)	.75

WALSCO ALIGNMENT TOOLS



WALSCO ¼" HEX I. D. NEUTRALIZING WRENCH.

Very durable. Can be cut if corners become rounded from wear. Over-all length—7½″, O.D.—⅜″ round.

Cat. No.	Picture No.	List Price
§2503—Lo-loss Plastic Wrench	1	$0.45

WALSCO 5/16" HEX. I. D. NEUTRALIZING WRENCH.

Same construction as ¼″ wrench listed above. Over-all length—7½″. O.D.—7/16″.

Cat. No.	Picture No.	List Price
§2508—Lo-loss Plastic Wrench	2	$0.45

WALSCO FIBRE HEX-WRENCH-AND-SCREW-DRIVER.

Standard ¼″ hex wrench combined with a tough nylon screwdriver tip.

Cat. No.	Picture No.	List Price
°2510—Combination Tool	3	$0.65

WALSCO DUPLEX ALIGNMENT SCREWDRIVER.

Precision made. Ground or molded to fit large or small screws. Width of blade on large end—7/32″; on small end—5/32″. Thickness to conform to standard slot dimensions. Over-all length—7″.

Cat. No.	Picture No.	List Price
°2520—Fibre Screwdriver	4	$0.55

WALSCO METAL TIP ALIGNMENT SCREWDRIVER.

Butyrate handle. This tool combines the low capacity effect of an alignment tool with the mechanical strength of a metal screwdriver. Diameter—7/32″; over-all length—6″.

Cat. No.	Picture No.	List Price
°2525—Alignment Screwdriver	5	$0.50

WALSCO TUNING WAND.

Made from Butyrate rod with inductance-increasing powdered iron core on one end and inductance-reducing brass piece on opposite end. Over-all length—6″.

Cat. No.	Picture No.	List Price
°2540—Tuning Wand	6	$0.55

WALSCO TV OSCILLATOR ALIGNMENT TOOLS.

Cat. No.	Picture No.	List Price
°2518—For Philco Receivers	7	$1.75
°2522—For Receivers with "Standard Coil" Front Ends	13	1.10
§2523—Extra long (12″); with replaceable super-tough molded nylon tip, for general front-end alignment without removing from cabinet	16	1.80
°2523-1—Replacement Tip for tool No. 2523 (Standard Pack: 20 Tips)		0.30

WALSCO TV I.F. ALIGNMENT SCREWDRIVERS.

Standard Tools for all TV and FM sets. Made of new flexible low-loss plastic with thin precision screwdriver tips.

Cat. No.	Picture No.	List Price
°2516—8½″ long, for No. 6 Studs	8	$1.10
°2517—2″ long, for No. 6 Studs	9	0.70
°2519—7″ long—1 end for No. 6 Studs; other end for No. 4 Studs	10	1.05
°2524—8½″ long, Slotted Type, for No. 6 Studs	14	1.10
°2526—5″ long, Molded-Nylon Tool, hex stud one end, very small screwdriver other end. For Zenith, Hoffman, Raytheon, and other sets	15	0.55

WALSCO WIRE DRESSING AND ALIGNMENT TOOL.

Made with thin (7/32″) Butyrate handle, 7″ long. Special tool on one end for dressing wires and finding loose connections or shorts. Other end has low capacity metal screwdriver tip.

Cat. No.	Picture No.	List Price
°2512—Wire Dressing and Alignment Tool	11	$0.60

WALSCO "K-TRAN" ALIGNMENT TOOL.

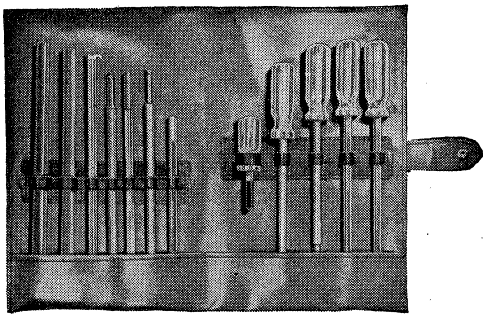
For adjustment of all miniature (K-Tran) I.F. transformers. Made of tough bone fibre. One end is machined to fit "K-tran" slots; other end is equipped with low-capacity metal screwdriver tip.

Cat. No.	Picture No.	List Price
°2515—"K-Tran" Alignment Tool	12	$0.80

WALSCO TV-FM ALIGNMENT TOOL KITS

Handy TV-FM alignment tool kit or wall rack. Durable leatherette kit gives servicemen every tool necessary to align TV and FM sets. Handy wall rack for use above bench in shop. Provides proper place for each tool, and always handy.

Cat. No.	List Price
580—12 Tools in leatherette case	$12.65
581—12 Tools on wall rack	12.65



§Standard Package: Display Card of 12 Tools.
°Standard Package: Display Card of 20 Tools.

SPECIAL TOOLS
DIAL CORDS
UNIBELT

WALSCO

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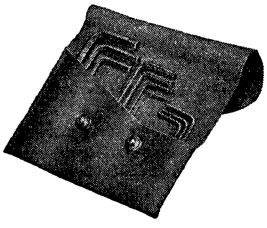
WALSCO HEX AND SPLINE WRENCH KIT

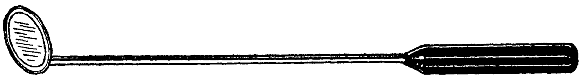


All of the wrenches listed above are included in this kit. Arranged by size in a durable leatherette case with double snaps, the right wrench is easy to find, the complete set is easy to carry.

Cat. No.		List Price	Dlrs. Net
560	Wrench Kit	$1.80	$1.08

Standard Package — 25

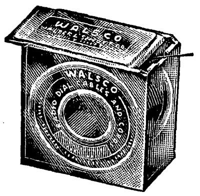
WALSCO INSPECTION MIRROR



High-visibility polished glass reflection mirror protected against breakage by a heavy gauge plated metal backing. Has red plastic, insulated grip.

Cat. No.		List Price
554		$0.55
554D	Display Card of 12 No. 554	6.60

WALSCO NYLON DIAL CORD



Made of genuine Nylon braided over a fiberglas core. Stays taut in service. Is chemically treated to increase grip; will not slip. 25 and 100 foot spools packaged in clear plastic, re-usable storage boxes with sliding lids. Proper size for practically any set manufactured since 1934.

Cat. No.	Diam.	Breaking Strength	LIST PRICES Feet Per Spool 25	100	500
		"SPECIAL THIN"			
35	.025″	15 lbs.	$1.40		
35-1C	.025″	15 lbs.		$4.95	
35-5C	.025″	15 lbs.			$14.30
		STANDARD			
39	.032″	20 lbs.	$1.40		
39-1C	.032″	20 lbs.		$4.95	
39-5C	.032″	20 lbs.			$14.30
		MEDIUM			
34	.040″	35 lbs.	$1.40		
34-1C	.040″	35 lbs.		$4.95	
34-5C	.040″	35 lbs.			$17.60

Also available in 50 Line packages. See page 4.

HEAVY
(used on many Philco and Majestic sets)

Cat. No.	Diam.	25	100
33	.062″	$1.90	
33-1C	.062″		$5.05

Standard Package: 12

WALSCO BRONZE DIAL CABLES

strong, flexible, uniform size and quality

When a control-dial linkage requires the strength that only metal can give, WALSCO Bronze Dial Cable is the material to use.

CADMIUM BRONZE CABLE—16-strand, .039″ o.d., 50 lb. breaking strength. Good flexibility, excellent abrasion resistance. Specially braided so it will not unravel. Fiberglas core adds to flexibility.

No. 31	25 ft.	List Price	$ 1.30
No. 31-1C	100 ft.	List Price	3.80
No. 31-5C	500 ft.	List Price	15.40

PHOSPHOR BRONZE CABLE—42-strand, .032″ diam., 40 lb. breaking strength. Numerous strands give cable extraordinary flexibility. Use wherever strong, flexible cable is required.

No. 30	25 ft.	List Price	$ 1.65
No. 30-1C	100 ft.	List Price	5.50
No. 30-5C	500 ft.	List Price	22.00

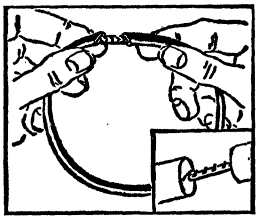
SPECIAL THIN BRONZE CABLE—An extra-thin cable with diameter of only .022″. Surprisingly strong and flexible. Non-ravelling.

No. 32	25 ft.	List Price	$ 1.40
No. 32-1C	100 ft.	List Price	4.95
No. 32-5C	500 ft.	List Price	14.30

Standard Package: 12

WALSCO UNIBELT

a universal, fit-it-yourself, adjustable dial-drive belt



WALSCO
UNIBELT

U. S. Patent No. 2,300,706

Now, with a single spool of WALSCO Unibelt you can fit a dial-drive belt to the exact dimension needed — faster than you could pick the proper size ordinary belt from your storage shelf. On one spool you have the right belt size for every make and model set. All you do is cut the length you need and "zip" the ends together. No cement, no special tools needed. Save hours of hunting. You will always have the right size belt in stock without investing in a large inventory. Furthermore, you don't have to take the dial mechanism apart to install Unibelt, because the ends can be joined in the set. Made with a stainless steel core and covered with pure latex, Unibelt cannot stretch. When properly assembled, it will not slip, fray, or break. WALSCO Unibelt is unconditionally guaranteed. Breaking strength — over 60 pounds. One spool makes five average-length belts.

Cat. No.		List Price
303	5 foot spool with 10 connectors and instructions	$3.00

WALSCO DIAL DRIVE BELTS

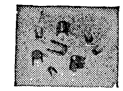
precision-made, no stretch, no slip, very strong

Specially treated to maintain maximum friction through years of trouble-free use, WALSCO Dial Drive Belts have earned a reputation for dependability. Best quality materials assure enduring strength. WALSCO guarantees these belts to fit perfectly, 95 different sizes for any set manufactured since 1930.

Cat. No.	Description	List Price
1101-1195	(Complete reference chart free upon request)	$ 0.30
1195	for RCA TV Tuner	.30
K-250	KIT of 25 most popular belts	7.50
K-260	KIT of 50 most popular belts	15.00
K-270	KIT of 100 belts—all sizes	30.00

WALSCO DIAL CORD CLIPS

easy to use, fit all standard cords



Make an easy task of a fussy chore. With the right clip in the right place at the right time, you can save many precious minutes of fumbling with cord ends. This assortment of WALSCO Dial Cord Clips contains the proper sizes for all standard thicknesses of cords.

Cat. No.		List Price per pkg.
7745-F	Approximately 35 Clips	$0.50

For bulk quantity prices on these items, see WALSCO Industrial and Bulk Price List, available upon request.

WALSCO

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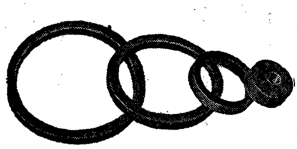
WALSCO PHONO-MOTOR DRIVES



Cut and ground with precision to assure constant, uniform speed, WALSCO Phono-motor Drives are made of abrasion-resistant synthetic rubber for long wear.

Cat. No.	I.D.	O.D.	Thick	No. of Drives per pkg.	Used on	List Price per pkg.
7014-F	⅝″	11/16″	¼″		Most 2 & 3 speed record Changers (VM, GI, etc.)	$0.50
7016-F	2″	2⅜″	5/32″	2	Gen. Indust. Mod. LX & RX	.50
7017-F	1½″	1¾″	3/16″	2	Alliance, Seeburg, G.E. V. M. 400	.50
7018-F	⅞″	1⅛″	3/16″	3	Seeburg, R.C.A., G.E.	.50
7019-F	⅛″	⅜″	¼″	4	Philco, R.C.A., etc.	.50
7020-F	5¾″	6″	3/16″	1	Detrola	.50
7022-F	1 7/32″	1 15/32″	3/16″	3	G.I. Recorder/ Changer	.50
760-23	11/16″	1⅛″	¼″	2	R.C.A., RP-176, 177 and most pre-war R.C.A. Changers. Also on G.E. 809-J, etc.	.45
761-23	4½″	5½″	⅝″	1	Same as #760-23	1.10
760-24	2⅞″	3⅜″	¼″	1	R.C.A. 960015, 960260, 960276. Also most Admiral and Crescent post-war changers	.55
†760-25	Spring Drive			1	Detrola-Utah	.55

This is a COMPLETE Phono Drive list and partially duplicates drives shown on Page 3.

WALSCO PHONO TURNTABLE FELTS

brown felt, accurately die-cut

On every overhaul job recommend a new turntable felt to prevent slippage of recordings, and to protect the record. Concentricity is assured because both the center hole and outer circle are cut by the same die.

USE WALSCO FABRIC CEMENT FOR ATTACHING

Cat. No.	List Price
350-8 — 7⅞″ diameter	$0.50
350-9 — 8⅞″ diameter	.50
350-10— 9⅞″ diameter	.70
350-12—11⅞″ diameter	.85

WALSCO SPEAKER DUST FELTS

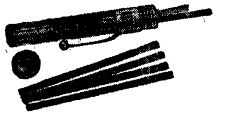
Keep metal particles and dust out of voice coils with these specially-designed thin felt disks.

Cat. No.	List Price
7740-F—Approx. 15 Assorted Sizes	$0.50

Attach to Cone with WALSCO Radio Cement

WALSCO SPEAKER ADJUSTMENT SHIMS

non-magnetic, corrosion-resistant, tempered metal

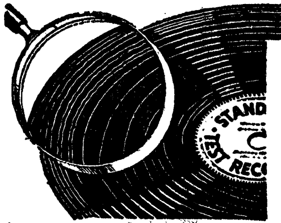


Here is an assortment of plainly marked, easy to carry speaker adjustment shims — indispensable to the serviceman when adjusting voice coils. You get 16 shims in four sizes— .004″, .006″, .008″ and .010′. They are made of spring-tempered, corrosion-resistant, non-magnetic metal. Each is clearly marked for immediate identification.

Cat. No.	List Price
2550—16 Assorted Shims—4 of each size	$0.75

For bulk quantity prices on these items, see WALSCO Industrial and Bulk Price List, available upon request.

WALSCO STANDARD TEST RECORDS



use to test and adjust sound reproduction systems

A set of these WALSCO Test Records quickly furnishes the electronic engineer or technician with complete data for detecting and remedying defects in pickups, amplifiers, speakers, record changers, and turntables. Recordings are made of long-wearing plastic selected for its low surface noise. They are unbreakable in normal use, and one set will last for years.

Cat. No. 720-6—Set of six 10″ records consisting of one each of the following: Record No. 720, 721, 725, 726, 727, 728.
With this set a complete mechanical and audio check can be run on a phono system quickly and accurately. Needed by every laboratory and service shop.......... **List Price $10.90**

Cat. No. 720—10″ record with accelerated pitch. Playing time approximately 45 sec. Lead-in grooves modulated with 3 tones to indicate set-down position of pick-up. Proper tripping action indicated by tone signals at end of record. Both sides of record identical. **List Price $1.80**

Cat. No. 721—10″ record. One side with accelerated pitch and without starting spiral for checking "feed-in" or pick-up. Other side same as No. 720.......... **List Price $1.80**

Cat. No. 725—10″ record. One side: Sweep Frequency Record at N.A.B. standard level. Range 10,000 to 50 c.p.s. Cross-over to constant amplitude at 500 c.p.s. Other side same as No. 720. **List Price $2.10**

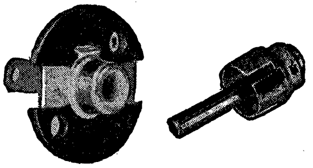
Cat. No. 726—10″ record. One side: Test Frequency Record at N.A.B. standard level. Range 10,000 to 50 c.p.s. in 16 steps. Other side same as No. 720.......... **List Price $2.10**

Cat. No. 727—10″ record. One side contains 1000 and 400-cycle tone for 1 min. each. Especially designed for testing irregular turntable speed ("WOW"). Other side same as No. 720.......... **List Price $2.10**

Cat. No. 728—10″ record. One side contains silent (unmodulated) groove for checking turntable rumble. Other side same ts No. 720. **List Price $1.80**

groove for checking turntable rumble. Other side same as No. 720. Designed for use in connection with set No. 720-6 in checking performance of intermix changers.......... **List Price $10.90**

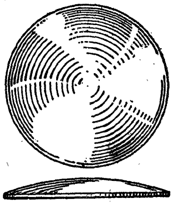
WALSCO PHONO PLUG AND JACK



This WALSCO plug and jack provide a highly efficient means of joining single conductor shielded leads. Widely used in making record player, pick-up, or auto antenna connections. Made of brass, nickel plated to assure corrosion-free contact surface.

Cat. No.	List Price per Pkg.
7665-F—Package of 4 Plugs	$0.50
7667-F—Package of 3 Jacks	.50

WALSCO PLASTIC DIAL CRYSTALS



The excellent optical qualities of WALSCO Plastic Convex Dial Crystal make it the preferred dial window for custom construction or replacement. Unbreakable, shatterproof, it will not fog with age. You can easily use scissors or knife to cut plastic to correct size. Press or cement in place.

Cat. No.	Size	List Price
990—6″	Maximum Diameter	$1.20
992—9″	Maximum Diameter	2.00
994—8″	x 10″ Flat Sheet	1.80

Use WALSCO Plastic Cement for Installing

TRADE DISCOUNT APPLIES TO LIST PRICES ONLY

PLASTIC CEMENTS
SOLVENTS
CLEANING & LUBRICATING COMPOUNDS

WALSCO

walsco quality earned its reputation

1. WALSCO TUNERCLEAN

The royal purple u.h.f. contact cleaner. Thoroughly cleans corrosion and dirt from v.h.f. and u.h.f. switch contacts in TV tuners, etc.; lubricates contact surfaces to give smoother operation, longer life, leaves a corrosion-inhibiting, protective film on contact surfaces after solvents evaporate.

Cat. No.	List Price
105—1 oz. bottle	$0.85
106—2 oz. bottle	1.60
108—1 pint	12.50

2. WALSCO VINYLITE CEMENT

For porous materials such as paper, leather, cloth and plastics and non-porous materials. Air dries; has amazing thermo-setting properties. As it cools, the cement sets into a tough, flexible, waterproof bond.

Cat. No.	List Price
25—2 oz. bottle	$0.75

3. WALSCO PLASTIC CEMENT

Cements plastics, metal, wood, glass, and many other materials with a water-proof, heat-resisting, remarkably strong bond. Makes an excellent general household cement, model airplane cement, etc.

Cat. No.	List Price	Cat. No.	List Price
41—1¾ oz. tube	$0.60	44—4 oz. bottle	$1.20
42—2 oz. bottle	.65	48—8 oz. bottle	1.90

4. WALSCO LUCITE CEMENT

Crystal clear, fast-drying acrylic cement dries fast, forms a bond as strong as the original material, makes an almost invisible joint. Recommended for building components, models, boxes, and cabinets of lucite.

Cat. No.	List Price
165—2 oz. bottle	$0.65

5. WALSCO RADIO CEMENT

A clear, general-purpose, super-strength adhesive. Fast drying, elastic adhesive, won't become brittle with age. Especially for speaker manufacture and repair; not affected by vibration, high temperature, moisture, or oil. Available in a range of sizes to suit every user.

Cat. No.	List Price	Cat. No.	List Price
51—1¾ oz. tube	$0.60	58—8 oz. bottle	$1.90
52—2 oz. bottle	.65	59—1 pt. can	3.65
54—4 oz. bottle	1.10	50-GL—1 gal. can	11.35

6. WALSCO WOOD GLUE

Now repair cabinets, affix labels and join wood parts neatly and easily—stronger than ever before. Composition gasket prevents bottle top from sticking, keeps contents fresh.

Cat. No.	List Price	Cat. No.	List Price
222—2 oz. bottle	$0.65	224—4 oz. bottle	$1.10

7. WALSCO FABRIC CEMENT

Will not penetrate or shrink fabric. This fast-drying, moisture-proof adhesive will cement cloth to grilles, felt to turntables, fabric to portable radio and equipment cases without the slightest danger of disfiguring the material. Sunlight and high temperature do not affect it; will not become brittle with age.

Cat. No.	List Price
21-A—2 oz. bottle	$0.65

8. WALSCO RUBBER CEMENT

There is nothing better for cementing rubber mounts to chassis, rubber cushions to lids, rubber gaskets to metal, phono rim drives to drive wheel. Forms a water-tight, air-tight, resilient bond.

Cat. No.	List Price	Cat. No.	List Price
112—2 oz. bottle	$0.65	114—4 oz. bottle	$1.20

9. WALSCO "NO-OX"*

Keep volume controls, contacts, and "mixers" absolutely clean and quiet. A liquid, non-gumming chemical that dissolves corrosion with amazing speed. Protects slide wires long after application.

Cat. No.	List Price
101—1 oz. bottle	$ 0.85
102—2 oz. bottle	1.60
100-16—1 pt. bottle	12.50

*Mfd. under exclusive licensing agreement with NO-OX Laboratories. Trade Mark registered.

WALSCO CONTACTENE

Lubricates as it cleans, fast acting, quick drying. Eliminates volume control noise. Powerful solvents remove coatings of oxide, grease, dirt, and corrosion without harm to either metal or insulation. Applicator brush fastened inside bottle cap.

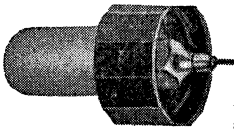
Cat. No.	List Price	Cat. No.	List Price
82—2 oz. bottle	$0.55	88—8 oz. bottle	$1.25
84—4 oz. bottle	.95	89—1 pt. can	2.00

POLYSTYRENE CEMENT AND COIL DOPE

"Welds" polystyrene—ideal u.h.f. coil coating. Makes coils and other parts moisture-proof with just one coating, shrinks on drying to hold windings firmly in place.

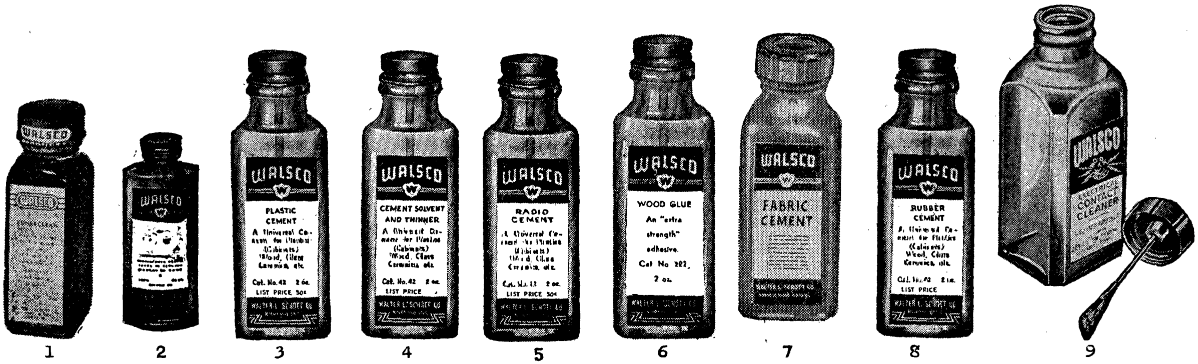
Cat. No.	List Price	Cat. No.	List Price
152—2 oz. bottle	$0.65	154—4 oz. bottle	$1.10

WALSCO CONTACTENE INJECTOR



Cat. No.	List Price
989—Contactene Injector	$0.75
989-D—Display of 12 No. 989	9.00

Put that drop where you want it. Fine surgical-grade steel needle injector can be inserted into places ordinary applicators cannot reach.



WALSCO SOLVENTS AND THINNERS

Solvent	Use With	Cat. No.	Quan.	List Price	Bulk No.
Cement* Solvent	Plastic Cement	62	2 oz.	$0.55	R-60
	Radio Cement	64	4 oz.	.95	
		68	8 oz.	1.25	
		69	1 pt.	1.80	
Polystyrene Solvent	Polystyrene Cement	162	2 oz.	.55	R-160
		164	4 oz.	.95	
Lacquer Thinner	Vinylite Cement	138-2	2 oz.	.55	R-1
	Plastic Cement*	138-8	8 oz.	1.25	
	Radio Cement*	138-GL	1 gal.	7.50	
	Crystalizing Lacquer				
	Fungus Lacquer				
	Telephone Black & Gray				
	Light Bulb Coloring				
	Anti-Corona Lacquer				
	CR-Tubecoat				
No. 7 Thinner	Fabric Cement	468	½ pt.	.60	R-7
	Rubber Cement				
	Wrinkle Varnish				
	Insulating Varnish				
	Flock Undercoat				
Water	Wood Glue				

LUBRICATING, CLEANING COMPOUNDS SPECIAL CHEMICALS AND FINISHES CABINET POLISHES

WALSCO

walsco quality earned its reputation

1. WALSCO "LUBRIPLATE"

Grease-type, protective, super-lubricant. Increases mechanical efficiency by reducing friction loss. Increases service life by reducing wear and preventing rust and corrosion. Spreads itself over entire bearing surface to form a coherent film that stays put. Has just the right weight and viscosity for electronic work. Comes in large tube with handy applicator tip.

Cat. No. 23-A—2 oz. tube..**List Price $0.65**

2. WALSCOLUB-B

Electrically neutral lubricant that prevents corrosion. Walscolub-B clings to metal surfaces and effectively seals them against oxidation and corrosion. Packaged in generous size, easy-to-use applicator tube.

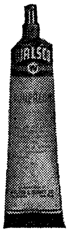
Cat. No. 22—1¾ oz. tube..**List Price $0.65**

Available also in 1 lb., 5 lb. and 25 lb. containers for industrial users. Prices on request.

3. WALSCO "TUNERLUB"

Assures quiet operation of television tuners. Purity—freedom from zinc and other harmful metal oxides—is the secret of the outstanding performance of Walsco "Tunerlub." Forms a strong film to give lasting protection to high-frequency switch contacts.

Cat. No. 26—1⅞ oz. tube..**List Price $0.75**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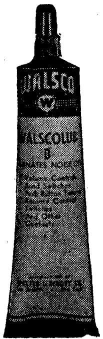
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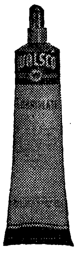
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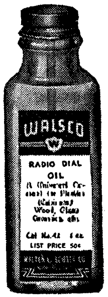
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7. WALSCO "NO-SLIP"

Increase friction of pulley belts and cords with WALSCO "No-Slip." A fast-drying liquid, you merely brush it on to stop slipping. Shrinks fibers. Makes cords and belts last longer.

Cat. No.	List Price
401—½ oz. bottle	$0.50
402— 2 oz. bottle	.80
401-D—Display of 12 #401	6.00

8. WALSCO STRIPVAR

Instantly softens Formvar, Formex, and similar insulation on magnet wires. Dip wire in Stripvar and wipe off—that's all. You're ready to solder.

Cat. No.	List Price
130—2 oz. bottle	$ 0.75
131—1 pt. can	4.50
130-GL—1 gal. can	25.00

9. WALSCOFLUX

A non-corrosive, instant-acting soldering flux. Solder flows easily and smoothly with liquid WALSCOFLUX. For all electronic soldering. Won't corrode metal. Made of pure rosin.

Cat. No. 220—2 oz. bottle with applicator..............**List Price $0.65**

WALSCO RH CLEANER

For quick cleaning of tape or wire recording heads. Dissolves scum, loosens lint and dirt. A protective anti-corrosion film remains. Guaranteed not to harm nor adversely affect the performance of wire, tape, or head.

Cat. No. 93—1 oz. bottle..**List Price $0.93**

Standard Package: 12

4. WALSCOCLEAR (Formula 91)

Neutralizes static electricity in plastics. Wipe plastic lenses crystal clear, free from lint and dust. Counteracts the electrostatic charge caused by the presence of high voltage. Will not fog or dull plastic.

Standard Package: 12

Cat. No. 91—4 oz. bottle..**List Price $0.55**

5. WALSCO DIAL OIL

A light-bodied jewelers-quality lubricating oil. For quiet, free-running dial mechanisms a drop of Walsco Dial Oil is essential. Every set that is serviced—whether new or old—needs this light-bodied lubricant at several points.

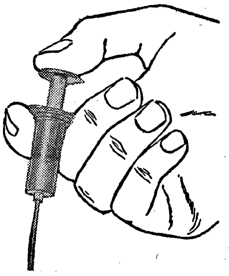
Cat. No. 72—2 oz. bottle..**List Price $0.50**

6. WALSCO CARBON TETRACHLORIDE

Top-quality all-purpose cleaning fluid. WALSCO Carbon Tetrachloride is 100% chemically pure; can be used safely to clean grease and dirt from the most delicate instruments. Non-explosive, non-inflammable.

Cat. No.	List Price
214— 4 oz. bottle	$0.80
219—16 oz. can	1.90
214-GL—1 gal. can	7.60

WALSCO LUBRICATOR



Greatly simplify lubrication problems with this ingenius plastic syringe. It is designed for applying light greases and oils such as Walscolub-B, Lubriplate, Tunerlub, etc., to cramped and otherwise inaccessible points in electronic and mechanical equipment. To use, you simply remove plunger, fill chamber with lubricant, replace plunger, and extrude desired amount of grease with pinpoint accuracy.

Cat. No.	List Price
998—Lubricator	$0.80
998D—Display of 12 No. 998	9.60

11

12

10. WALSCO SUPER POLISH

Give a "brand new" appearance and a lasting protective finish to fine cabinets.

Cat. No.	List Price
412—4 oz. bottle	$0.55
418—8 oz. bottle	.80

11. WALSCO SCRATCH-REMOVING POLISH

Scratches disappear while you polish! Will not change shade of finish. Use "Dark" for walnut, mahogany, etc., "Light" for maple, bleached oak, pine, etc.

Cat. No. Dark	Light	List Price
414	434—4 oz. bottle	$0.55
416	438—8 oz. bottle	.80

12. WALSCO FLOCK FINISH SPRAY KIT

Now YOU can apply a flock finish that cannot be distinguished from factory work. Kit contains everything needed to obtain a colorful, velvet-like, protective flock finish.

Cat. No. K-50—Complete Flocking Kit....................**List Price $13.10**

WALSCO CARBONEX

This is a brush-applied liquid that forms a conductive coating for patching noisy and worn carbon controls.

Cat. No. 96—1 oz. bottle..**List Price $0.80**

Standard Package: 12

PAINTS, LACQUERS CABINET REFINISHING AND REPAINT KITS

WALSCO

walsco quality earned its reputation

WALSCO
Air-Dry
Wrinkle
Varnish

1

2

WALSCO
CRYSTALLIZING
LACQUER

3

4

WALSCO
TELEPHONE BLACK

5

1. WALSCO AIR-DRY WRINKLE VARNISH

Just one coat gives a coating that is hard, tough, extremely durable. Can be used on either wood or metal. Will air-dry at room temperature. Can also be baked.

Cat. No.			List Price
145—Gray	2 oz. jar		$0.65
145—Black	2 oz. jar		.65
147—Gray	16 oz. jar		3.30
147—Black	16 oz. jar		3.30

2. WALSCO ANTI-CORONA LACQUER

Prevents corona discharge and arcing in such applications as the high-voltage supply of TV sets. Apply it to wiring, solder lugs, sharp corners, inside high-voltage cages, points on chassis, etc.

Cat. No.	List Price
195—2 oz. bottle	$1.20
196—1 pt. can	7.50

WALSCO LIGHT BULB COLORING

Color your own bulbs this simple, inexpensive way. WALSCO Light Bulb Coloring is a transparent, heat- and moisture-resisting, fast-drying lacquer.

Cat. No.		List Price
116—Red	2 oz. jar	$0.65
117—Blue	2 oz. jar	.65
118—Green	2 oz. jar	.65
119—Assorted	Kit of 3	1.75

WALSCO INSULATING VARNISH

This one insulating varnish will take care of 90% of your surface-sealing problems. Because it is highly-resistant to heat, acid, oil and grease, WALSCO Insulating Varnish is recommended for radio coils, transformers, solenoids, motors, and all electrical appliances.

Cat. No.	List Price
192—2 oz. bottle	$ 0.65
193—1 pt. can	2.75
194—1 gal. can	15.00

WALSCO CABINET PATCHING OUTFIT

Do expert touch-up without previous experience. Contains a wide assortment of needed materials. Included are: two shades of walnut spirit stain, dark brown lacquer, Plastic Wood, two shades of ivory spirit enamel, patching lacquer, WALSCO Super Polish, alcohol, 3 brushes of various sizes, garnet finishing paper, French polishing pad, and steel wool, together with Complete Instruction Booklet.

Cat. No.	List	Dealer's Net
K-10—In sturdy box with hinged lid	$7.15	$4.29
K-10-W—In California redwood case	8.25	4.95

WALSCO CABINET REPAIR KIT

For occasional limited finish restoration. For the shop or store that is only seldom called on to patch the finish of a cabinet. The kit is very compact, inexpensive and yet contains everything necessary for craftsmanlike work. Included are: ivory spirit enamel, light and dark; dark brown enamel-finish lacquer; spirit stain; WALSCO Super Polish; French varnish; finishing paper; steel wool; polishing cloth; instruction booklet.

Cat. No.	List	Dealer's Net
K-9	$3.30	$1.98

WALSCO *Super-Chief* REFINISHING KIT

The most complete kit of its kind on the market. Contains the basic materials needed to establish a cabinet repair and refinishing department. The WALSCO Super-Chief Kit will pay for itself on your first major renovation job. Packed in California redwood portable case.

Cat. No.	List	Dealer's Net
K-26	$20.35	$12.21

3. WALSCO CRYSTALLIZING LACQUER

Simply brush it on—it's dry in thirty minutes. Suitable for wood, metal, cardboard, plastic, masonite. To render clear glass translucent, use clear Crystallizing Lacquer. Available colors: Black, Gray, Green, Brown, Clear. Specify color when ordering.

Cat. No.	List Price
122—2 oz. jar	$0.65
129—16 oz. can	4.10
142—Sealer, 2 oz. jar	.55

4. WALSCO ANTI-FUNGUS LACQUER

Electronic equipment intended for use in hot and humid climates must be protected from attack by fungi. This WALSCO lacquer meets U. S. government specifications JAN-C-173 for anti-fungus and moisture-repellent treatment. Brush, dip, or spray. Air-dries quickly.

Cat. No.	List Price
135—2 oz. bottle	$ 0.65
136—1 pt. can	2.75
137—1 gal. can	16.50

5. WALSCO SATIN FINISH LACQUER

Give your panels, racks, meters and cabinets the same finish found on standard telephone and communications equipment. May be brushed, dipped, or sprayed. Air-dries quickly. For both commercial and amateur use.

Cat. No. Black	Gray		List Price
172	182	2 oz. jar	$0.65
179	189	1 pt. can	3.30

WALSCO LACQUER THINNER

Use this thinner with WALSCO Light Bulb Coloring, Fungus Lacquer, Anti-Corona Lacquer, Crystallizing Lacquer, Satin Finish Telephone Lacquer.

Cat. No.	List Price
138-2—2 oz. bottle	$0.55
138-8—8 oz. can	1.25
138GL—1 gal. can	7.50

WALSCO FURNITURE REFINISHING KIT

For all-around touchup and overhaul of wood finishes. Contains materials for filling nicks and dents; for patching scratches, discolored and scuffed varnish; rebuilding broken edges, etc. Complete Instruction Book. Kit furnished in California Redwood case with hinged lid.

Cat. No.	List	Dealer's Net
K-15	$8.80	$5.28

WALSCO STICK SHELLAC KT

The simple method of filling nicks and deep scratches. There is a color to match practically any radio or TV cabinet in this assortment of shellac sticks. Easy to use! Included in the WALSCO Stick Shellac Kit are the following: six colors of stick shellac, alcohol lamp, burn-in spatula, bottle of shellac rubbing fluid, felt, steel wool, alcohol, and complete instructions.

Cat. No.	List	Dealer's Net
K-9	$3.30	$1.98

REFILLS OF REFINISHING MATERIALS

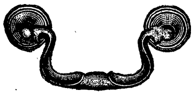
Cat. No.	Stains	List Price
287—Spirit Stain, 1 oz. (Walnut, Mahogany, Maple, Black)		$0.33
288—Spirit Stain, 8 oz.		1.55
289—Blending Stain (Lt. Brown, Med. Brown)		.80
	PATCHING LACQUER (Improved French Varnishing Materials)	
290—4 oz. bottle		1.30
291—16 oz. bottle		3.85
	STICK SHELLAC RUBBING FLUID	
295—4 oz. bottle		.80
296—16 oz. bottle		1.90
	STICK SHELLAC	
299—Set of 8 assorted colors		1.95

CABINET HARDWARE
SPEAKER ACCESSORIES
SPAGHETTI, INSULATING ITEMS
SPECIALTIES

WALSCO

walsco quality earned its reputation

WALSCO KNOBS AND DRAWER PULLS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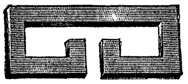
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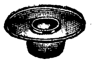
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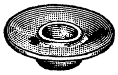
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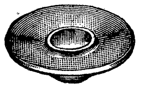
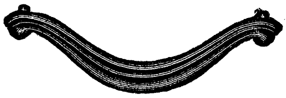
Cat. No. 330-5


Cat. No. 330-3


Cat. No. 330-6

Distinctive, well-made cabinet hardware. Available in styles to harmonize with period or modern design. Ideal for custom cabinets; the finishing touch to a complete rejuvenation; excellent replacement for bent or broken handles. Specially constructed to avoid rattles. Mounting screws included.

Cat. No.	Size	Finish	List Price Each	Cat. No.	Size	Finish	List Price Each
330-1	1 ⅞″ dia.	Brass	$0.45	330-5	4 ¼″ long	Bronze	$1.00
330-2	2 ⅝″ dia.	Brass	.75	330-6	6 ⅛″ long	Bronze	1.45
330-3	3″ dia.	Brass	.90	330-7	4″ long	Bronze	1.05
330-4	3 ¾″ long	Brass	1.90				

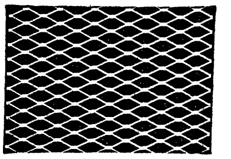
WALSCO DRAWER SLIDES

The most efficient way to suspend drawer-type construction. Made of durable, heavy-gauge, cold-rolled steel with a corrosion-resistant finish. Drawers will slide smoothly and easily without sticking, and with just the right amount of drag. Mounting screws furnished.

Cat. No.	Size	Per Pair
331-1	14″ long	$2.75

(Standard Pack: 6 pairs)

WALSCO ORNAMENTAL METAL GRILLE



Heavy metal, richly plated in "brushed brass," and lacquered for enduring rich gold effect. Widely used in custom-built radios, high-quality P.A. speakers, in juke boxes, etc.

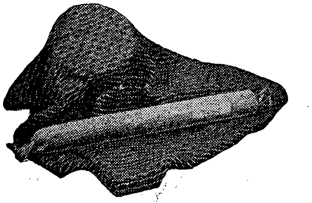
Cat. No.	Size	List Price
382	12″ x 18″	$ 3.00
384	18″ x 24″	5.50
386	24″ x 36″	10.45
387	24″ x 48″	13.75
388	36″ x 48″	19.50

WALSCO CABINET DOOR HINGES

Swing-back hinges for radio, TV, phono cabinets. Allow doors to swing all the way back against the sides of the cabinet. Built-in stop prevents door knob or handle from denting side of cabinet. Antique bronze finish, countersunk screw holes; screws furnished. A pair of hinges is required for each door.

Cat. No.	List Price
332-1—Pair of 1 upper, 1 lower hinges	$0.90

WALSCO GRILLE CLOTH

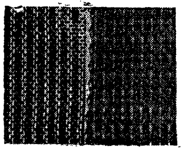


Combines perfect acoustical qualities with top quality appearance. Available in shades to match walnut, light, or mahogany cabinet finishes. Use WALSCO Fabric Cement to attach. Specify color-match when ordering.

Cat. No.	Size	List Price
360	12″ x 12″	$0.70
361	18″ x 24″	1.80
362	1 yd. x 50″ (pkg.)	6.90

WALSCO "LUMITE" GRILLE CLOTH

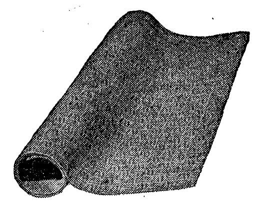
Made of genuine Saran plastic fibers, WALSCO Plastic Grille Cloth will not discolor, rot, stain, or mildew; can be whisked clean with damp rag, brush, or vacuum cleaner.



Cat. No.	Size	List Price
366	12″ x 18″	$1.65
367	36″ x 36″	9.25

	Pattern	Color
Specify color pattern when ordering	A	Maroon
	B	Bronze and Gold
	C	Ecru (Blond)

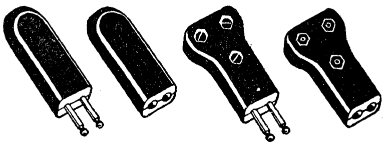
WALSCO INSULATING CAMBRIC



This insulating material is put up especially for experimental and repair work. Used in re-building transformers, field coils, solenoids, relays, etc. Yellow color; very flexible and durable.

Cat. No.	List Price
645—Roll of approx. 210 sq. in.	$0.85
645-D—Display of 10 No. 645 rolls	8.50

WALSCO MINIATURE PLUG AND JACK



Fill a long-felt need for compact two-conductor connectors. Excellent for use with lapel microphones, speaker extensions, hearing aids, dictaphones, etc.

Cat. No.	Type	List Price	Cat. No.	Type	List Price
790—Plug	(PJ291)	$0.60	792—Plug	(PJ292)	$0.80
791—Jack	(JJ048)	.80	793—Jack	(JJ055)	1.20

(Standard Pack: Display Cards of 20)

WALSCO SPAGHETTI BARGAIN ASSORTMENT

Each bundle contains twenty-four 8-inch lengths of durable varnished tubing of assorted sizes and in a variety of bright colors.

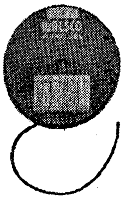
Cat. No.	List Price
644	$ 0.49
644D—Display of 25 #644	12.25

WALSCO FLEXITUBE

High-grade extruded vinyl plastic tubing, recommended for most electronic and electrical applications. Is impervious to water, oil, alcohol, most acids and alkalies. Packed on handy spools.

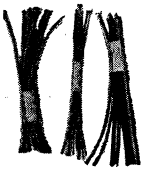
List Price, per pkg. $1.00

Cat. No.	Size B & S Gauge No.	Approx. I.D. Inch	Approx. I.D. mm	Quantity per pkg.*
600	18	.042″	1	20 ft.
601	16	.053″	1.4	20 ft.
602	14	.066″	1.6	18 ft.
603	12	.085″	2	16 ft.
604	10	.106″	2.7	14 ft.
605	8	.133″	3.5	12 ft.
606	6	.166″	4	10 ft.
607	4	.208″	5	6 ft.
608	2	.263″	6.5	6 ft.



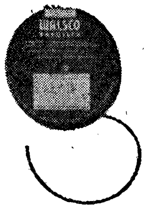
Color: Clear will be supplied unless order specifies color. Black, Green or Red available subject to stock on hand.

HANDY ASSORTMENTS OF FLEXITUBE



Cat. No.		List Price
620	20 ft. of Assorted sizes and colors, from size 18 to 10	$ 1.00
620-D	36 Assortments of No. 620 in one Display Box	36.00
621	12 ft. of Assorted sizes and colors, from size 10 to 2	1.00
621-D	24 Assortments of No. 621 in one Display Box	24.00

WALSCO RAYOFLEX



Cat. No.	Size B & S Gauge No.	Approx. I.D.	Quantity per pkg.	Price per pkg.
630	18	.042″	10 ft.	$1.05
631	15	.059″	10 ft.	1.05
632	12	.085″	8 ft.	1.05
633	9	.118″	5 ft.	1.05
634	6	.166″	5 ft.	1.05
635	2	¼″	30 in.	.60
636	0	5/16″	30 in.	.70
637	00	⅜″	30 in.	.75
638	0000	½″	30 in.	1.25

Available in: Black, Blue, Red, Yellow.
Please specify color when ordering.

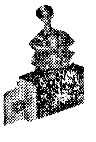
PANEL SWITCHES
TELEVISION ANTENNAS

WALSCO

walsco quality earned its reputation

WALSCO BALL HANDLE TOGGLE SWITCHES

These top-quality WALSCO switches have silver-plated contacts, terminals plated for easy soldering, nickel-plated handles. Durable laminated construction. Rated at 3 amps at 125 volts, or 1 amp at 250 volts. They bear inspection-and-approval stamp of Underwriters' Laboratories, Inc. Made by H & H for WALSCO.



Cat. No.	Description	Shank Length	List Price
1300	S.P.S.T.	½″	$0.75
1301	S.P.S.T.	1″	1.00
1302	S.P.D.T.	½″	1.00
1303	S.P.D.T.	1″	1.55
1304	D.P.S.T.	½″	1.40
1305	D.P.S.T.	1″	2.30
1306	D.P.D.T.	½″	1.60
1307	D.P.D.T.	1″	1.85

WALSCO BAT HANDLE TOGGLE SWITCHES

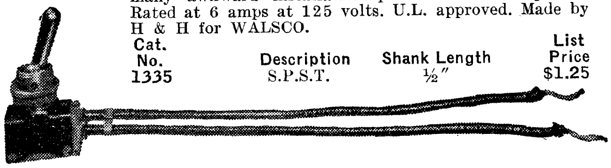
Feature easier action with 50% longer bat handle. Electrical and construction characteristics are identical with ball handle switches. Rated at 3 amps at 125 volts. U.L. approved. Made by H & H for WALSCO.

Cat. No.	Description	Shank Length	List Price
1330	S.P.S.T.	½″	$0.75
1331	S.P.D.T.	½″	1.00
1332	D.P.S.T.	½″	1.40
1333	D.P.D.T.	½″	1.75

BAT HANDLE TOGGLE SWITCH WITH WIRE LEADS

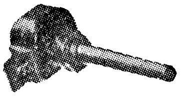
Has two built-in 6″ insulated wire leads which solve many awkward installation problems. Nickel plated. Rated at 6 amps at 125 volts. U.L. approved. Made by H & H for WALSCO.

Cat. No.	Description	Shank Length	List Price
1335	S.P.S.T.	½″	$1.25



WALSCO ROTARY SWITCHES

Laminated construction. Housing made of stamped steel, plated. Precision-turned shaft with forward edge chamfered makes for easy insertion into knob. Silver-plated contacts. Rated at 3 amps at 125 volts. U.L. inspected and approved. Made by H & H for WALSCO.



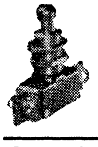
Cat. No.	Description	Shank Length	List Price
1320	S.P.S.T.	⅜″	$1.10
1322	S.P.D.T.	⅜″	1.20
1325	D.P.D.T.	⅜″	2.40

WALSCO PUSH-ON, PUSH-OFF BUTTON SWITCH

Neat appearance and fast action make this switch popular for a great variety of uses. Push to close circuit; push again to break. Nickel plated push button. Rated at 6 amps at 125 volts. Will operate satisfactorily for many thousands of cycles. Inspected and approved by Underwriters' Laboratories. Made by H & H for WALSCO.

Cat. No.	Description	List Price
1338	S.P.S.T.	$1.95

WALSCO 2-CIRCUIT MOMENTARY CONTACT SWITCH

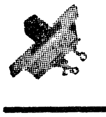


In this 2-circuit push button switch, one circuit is normally on, the other normally off. When you push and hold button, you cut out one circuit, cut in another. Laminated construction. Shank is ⅝″ long. Rated at 1 amp at 125 volts. U.L. approved. Made by H & H for WALSCO.

Cat. No. 1340 .... List Price $1.95

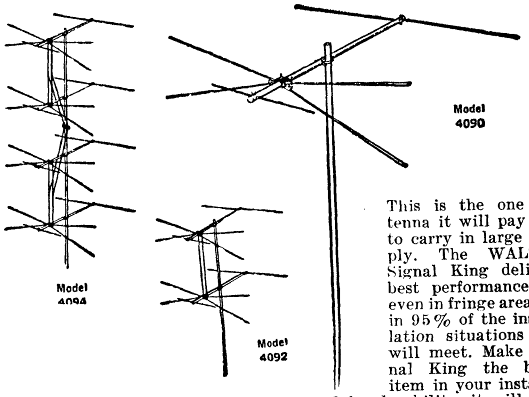
WALSCO SLIDE SWITCHES (STACKPOLE)

Neat, handy, easy to install. Mounting hole drilled for No. 6 screw. Rated at .5 amp at 125 volts. U.L. approved.



Cat. No.	Type	Mt. Hole Spacing	Width	Length	List Price
1367	S.P.S.T.	1⅛″	17/32″	1⅜″	$0.25
1368	S.P.D.T.	1⅛″	17/32″	1⅜″	.25
1369	D.P.S.T.	1⅝″	15/32″	1 57/64″	.45
1370	D.P.D.T.	1⅝″	15/32″	1 57/64″	.45

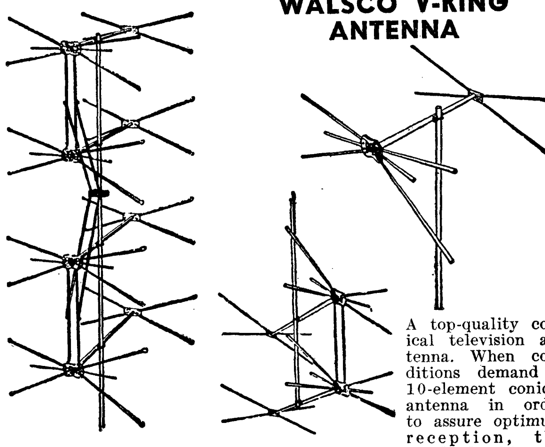
WALSCO SIGNAL KING ANTENNA



This is the one antenna it will pay you to carry in large supply. The WALSCO Signal King delivers best performance — even in fringe areas— in 95% of the installation situations you will meet. Make Signal King the basic item in your installation department. Ruggedly built, designed for durability, it will continue to deliver top performance under the most adverse weather conditions. Remarkable new patented design.

Cat. No.		List Price
4090	Single Bay, no mast	$ 9.25
4092	Dual Stack, no mast	19.85
4094	4-Bay Stack, no mast	44.50
	STACKING KITS	
4005-7	To convert 2 single bays to one dual stack	1.50
4005-8	To convert 2 dual stacks to one 4-bay stack	5.60

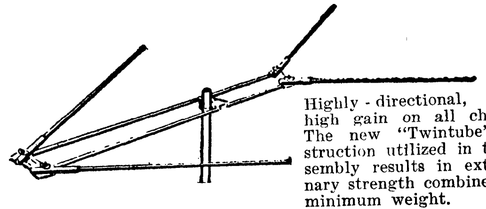
WALSCO V-KING ANTENNA



A top-quality conical television antenna. When conditions demand a 10-element conical antenna in order to assure optimum reception, the WALSCO V-King is first choice. Combines improved, durable mechanical design with excellent gain characteristics over entire TV spectrum. Broad directional pattern coupled with good selectivity.

Cat. No.		List Price
4060	Single Bay, no mast	$ 9.25
4062	Dual Stack, no mast	19.85
4064	4-Bay Stack, no mast	44.50
	STACKING KITS	
4005-6	To convert 2 Single Bays to one Dual Stack	1.50
4005-5	To convert 2 Dual Stacks to one 4-Bay Stack	5.60

WALSCO DOUBLE-VEE ANTENNA*

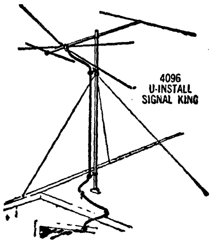


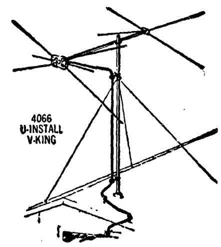
Highly - directional, extra-high gain on all channels. The new "Twintube" construction utilized in this assembly results in extraordinary strength combined with minimum weight.

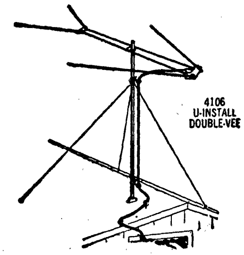
*Licensed under patents of the Workshop Associates, Inc.

Cat. No.		List Price
4100	Single Bay, no mast	$ 7.50
4102	Dual Stack, no mast	17.75
	STACKING KITS	
4005-9	To convert 2 Single Bays to one Dual Stack	2.90

WALSCO U-INSTALL ANTENNA KITS







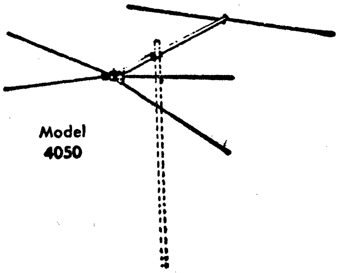
More and more customers are going to want to install their own television antennas. Three outstanding, service-proved WALSCO quality antennas — the Signal King, V-King, and Double-Vee — are put up in kits that contain everything needed for most home installations. Each easy to install kit contains the following:

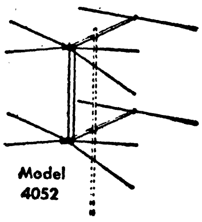
- 1 Complete Antenna
- 1 Mast
- Mast Base
- 1 Guy Wire Ring
- 40 ft. of Guy Wire
- 50 ft. of 300 ohm Twin-Lead
- 3 Screw Eyes
- 2 Mast Stand-off Insulators
- 3 Wood Screw Stand-off Insulators

Cat. No.		List Price
4096	Signal King U-Install	$14.25
4066	V-King U-Install	14.25
4106	Double-Vee U-Install	12.50

These kits are also available with Chimney Mount (instead of Base, Guy Wire, and Rings). Add $1.40 to List Price and "CM" to Catalog Number.

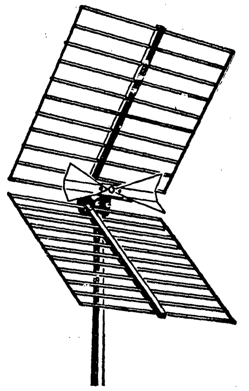
WALSCO E-CON ANTENNA


Model 4050


Model 4052

- High Gain Conical Array
- Ready stacking for Fringe Area Reception
- All-Aluminum Elements — One End Reinforced — Other End Sealed
- Sturdy "Galvaneal" Crossarm with a full 1" o.d.
- Speedy Assembly — No Loose Hardware

Cat. No.		List Price
4050	Single Bay E-Con	$ 5.95
4052	Dual Stack E-Con	13.10



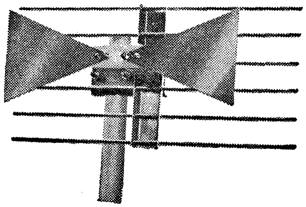
WALSCO CORNER-REFLECTOR ANTENNA

- Frequency Range — 450 to 900 MC.
- Gain 10 to 14 db.
- Front to back ratio — **outstanding!** 15 to 1
- Ideal where ghosts and reflections are especially troublesome
- Uni-directional on all UHF channels
- Highly directive in both horizontal and vertical planes
- All parts pre-assembled — takes only 5 minutes to set up

The ultimate design for high gain, fringe area reception. Ideal for use in difficult locations, especially where ghosts and reflections are encountered. It is uni-directional on all UHF channels; shows exceptional directivity in both horizontal and vertical planes.

Cat. No.		List Price
4450	(without mast)	$14.50

WALSCO REFLECTO-FAN ANTENNA

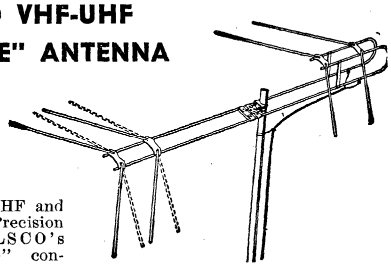


Best-value, broad-band UHF TV antenna reception. For excellent reception on all UHF channels — 14 to 83. Backed by an unconditional one full year guarantee. Offers low wind resistance, provides good directivity in both horizontal and vertical planes. Reflections, ghosts, and noise are eliminated in most locations.

- High gain on all channels. No weak spots. Readily stacked for fringe area reception.
- Easy to assemble. Takes but a few minutes.
- Outstanding mechanical design — highest grade insulation and aluminum alloys used throughout.
- Highly directive, eliminates ghosts as well as noise.
- Unconditionally guaranteed for one full year.

Cat. No.		List Price
4400	Single Bay (less mast)	$ 6.75
4402	Dual Stack (less mast)	14.25
4404	4-Bay Stack (less mast)	
4405-1	Stacking Kit to convert two model 4400 to one model 4402	.80
4405-2	Stacking Kit to convert two model 4400 to one model 4402	.80

WALSCO VHF-UHF "TROMBONE" ANTENNA



The first practical fringe area antenna for high gain reception on all present and future VHF and UHF channels. Precision made with WALSCO's famous "twin tube" construction, the elements remain in perfect alignment for lasting high gain performance. Will give satisfactory results on VHF at distances up to 60 miles and up to 45 miles on UHF, depending on terrain, power of transmitter, etc. For greater distances or difficult locations, the dual or triple stacks are recommended.

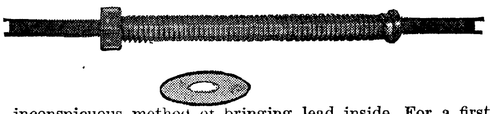
Cat. No.		List Price
4150	Single Bay (less mast)	$18.50
4152	Dual Bay (less mast)	39.95
4153	Triple bay (less mast)	54.95
4150-2	Stacking Kit to convert two model 4150 to one model 4152	2.95
4150-3	Stacking Kit to convert three model 4150 to one model 4153	7.50

TV ACCESSORIES
TV CONNECTORS
GRID CAPS

WALSCO

walsco quality earned its reputation

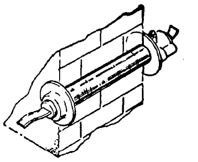
WALSCO TWIN-LEAD FEED-THRU BUSHING



Neat, inconspicuous method of bringing lead inside. For a first-class permanent and professional installation bring 300-ohm Twin-lead right through wall or window frame. Made of Lo-loss polystyrene. Designed to hold line firmly in place with weather tight seal. Does not affect line impedance. Supplied in 8⅝″ length to fit most walls; easily cut off for thinner walls.

Cat. No.		List Price
1550	Feed-through Bushing	$ 1.10
1550-D	Display of 12 Bushings	13.20

WALSCO UNIVERSAL FEED-THRU BUSHING



Accommodates all popular standard TV lead wires. Fits all standard types of coaxial or twin-lead wires including shielded and tubular twin leads as well as rotator control cable. Has provision for terminating to open line, enabling you to bring 300-ohm twin lead through wall and into room. The bushing is 15″ over all, fits walls up to 14″ thick. Can be easily cut down to fit with knife or saw. Requires ¾″ hole.

Cat. No.	List Price
1551	$1.95

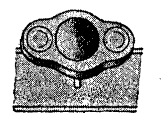
(Standard Pack: 12)

WALSCO TWIN-LEAD FLEXITUBE

For protecting 300-ohm twin-lead. Guard twin-lead against chafing. Made of clear, flexible vinyl plastic, WALSCO Twin-lead Flexitube is remarkably weather-resistant — maintains flexibility and toughness under the most adverse climatic conditions. Protect all Twin-lead with this size WALSCO Flexitube.

Cat. No.		List Price
609-75	75 ft. Hank	$6.50/hank

WALSCO TWIN-LEAD WIRING NAILS



Fasten twin-lead without affecting impedance. Fasten twin-lead securely to walls, molding . . . wherever a nail can be driven; yet, have no appreciable effect on line impedance because the nail heads consist almost entirely of insulating material.

(Standard Pack: 12 hanks)

Cat. No.	Approx. Quant. Per Pkg.	List Price
7565-F	35 (Standard Pack: 20 Pkgs.)	$0.50
7565-N	200 (Standard Pack: 6 Pkgs.)	1.80
7565	Bulk (Min. Quant.: 1000)	7.70 per M

WALSCO 4-BAY TERMINAL BLOCK ASSEMBLY

This insulator assembly simplifies stacking conical antennas such as the WALSCO V-King and WALSCO Signal King. Positively prevents shorting of elements to mast.

Cat. No.	List Price
4005-5B	$2.00

(Standard Pack: 25)

ANTENNA INSULATOR ASSEMBLY

Complete replacement insulator with holding straps, clamps, screws, nuts and lugs for WALSCO V-King Antennas.

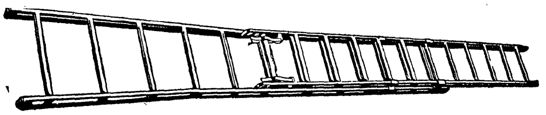
Cat. No.	List Price
4005-11A	$1.75

REPLACEMENT ELEMENTS FOR CONICAL ANTENNAS

Diameter elements made of butt-seamed high-strength chromium-aluminum alloy. One end reinforced, other end crimped on 44″, 48″, and 50″ lengths.

Cat. No.		List Price
4004-20	20″ long, each	$0.22
4004-26	26″ long, each	.30
4004-44A	44″ long, each	.60
4004-48A	48″ long, each	.65
4004-50A	50″ long, each	.70

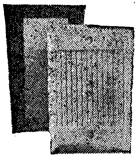
WALSCO MAGNESIUM LADDER



Save energy, install antennas safely. A 20-footer — the lightest ladder made — weighs but 23 pounds. Safer, will not splinter or crack — will outlast wooden ladders three to one.

Cat. No.		List Price
1600	20 ft. Magnesium extension ladder	$ 53.40
1602	28 ft. Magnesium extension ladder	75.90
1603	40 ft. Magnesium extension ladder	125.70
1605	Pivoted Safety Shoes for above ladder. Specify "small" for 1600 and 1602 — "large" for 1603. Per pair	4.68

WALSCO TV ANTENNA WALL PLATE

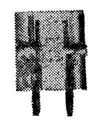


Offered in choice of brown or ivory plastic, the WALSCO Wall Plate matches the latest, most modern style plastic electric wall plates. Fits standard junction boxes; may be mounted close to wall or base board.

Cat. No.		List Price
1588	Brown	$1.50
1589	Ivory	1.50

(Standard Pack: 12)

WALSCO TWIN-LEAD CONNECTOR PLUG

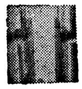


Can be used for attaching lead from set to either wall plate or jack. Has excellent electrical characteristics, is made of tough, transparent lo-loss plastic. Plated prongs. Wires are easily secured to plug with set screws.

Cat. No.	List Price
1582	$0.45

(Standard Pack: 25)

WALSCO TWIN-LEAD CONNECTOR JACK



Lo-loss plastic jack for 300-ohm twin lead. This jack mates with plug No. 1582. Makes a quick, neat assembly by merely stripping twin-lead, inserting wires, tightening set screws. High impact resistance, excellent electrical properties, does not affect line impedance.

Cat. No.	List Price
1583	$0.45

(Standard Pack: 25)

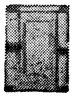
WALSCO POLARIZED TWIN-LEAD CONNECTORS

Molded of transparent lo-loss plastic with one male prong and one receptacle on each plug. 300-ohm Twin lead is quickly attached to plug by means of set screws. Matches line impedance.

Cat. No.	List Price
1584	each $0.45

(Standard Pack: 25)

WALSCO TWIN-LEAD JOINER

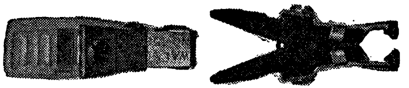


Transparent plastic splicer for 30-ohm twin lead. Easy to use, makes a secure connection without affecting line impedance. To splice flat Twin Lead, to strip ends, insert wires into either side of joiner, and secure with set screws. Permanent, neat, inexpensive.

Cat. No.	List Price
1585	$0.30

(Standard Pack: 25)

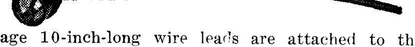
WALSCO QUIK-KLIP



Quickest way to attach lead-in wires to TV set. Provides a simple, speedy method of attaching antenna lead-in wires to TV sets. Ruggedly made of high impact polystyrene. Jaws are heavy steel, brass plates. Two sets of teeth — on end for general use, on side for use in limited space. Can't short out. Works in any position.

Cat. No.		List Price
1525	Quik-Klip, each	$ 0.50
1525-D	Display of 50 units	25.00

WALSCO INSULATED GRID CAPS WITH LEADS



High-voltage 10-inch-long wire leads are attached to these heavy bakelite high-voltage grid caps. Offered in two sizes — ¼″ and ⅜″.

Cat. No.		List Price
1630	¼″ size	$0.45
1631	⅜″ size	.45

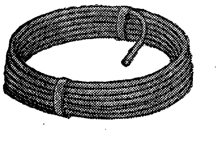
(Standard Pack: 25)

TV ANTENNA HARDWARE
"CHEATER" CORDS
ANODE LEADS

WALSCO

walsco quality earned its reputation

WALSCO GUY WIRE

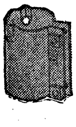


Made of high-grade steel, stranded for flexibility, heavily galvanized for full rust resistance. Put up in 200-foot continuous lengths, tied off into four 50-foot coils.

Cat. No.		List Price
1510	4 Strand No. 20; 3/32″ diam.	$1.45 per C ft.
1512	6 Strand No. 20; ⅛″ diam.	1.90 per C ft.

(Standard Pack: 1200 ft.)

WALSCO GUY-WIRE RING

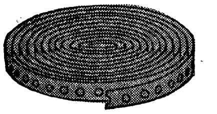


Grips mast firmly without crushing tubing. Generous length gives large friction-contact area; two clamping screws assure maximum purchase. Each clamp accommodates three guy wires. Made of very strong, highly corrosion resistant aluminum alloy.

Cat. No.		List Price
4005-1	For 1″ Diam. Masts	$0.45
4005-26	For 1¼″ Diam. Masts	.50

(Standard Pack: 25)

WALSCO PERFORATED STEEL STRAP

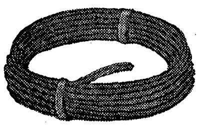


Made of thin steel, galvanized to prevent rust, it is flexible and strong, ¼″ holes are punched ¾″ apart.

Cat. No.		List Price
1518	10 ft. coil	$0.70

(Standard Pack: 25 rolls)

WALSCO ALUMINUM GROUND WIRE



Soft and easy to bend to follow house profile. Will not rust, stain walls and window frames, ⅛″ diameter (No. 8 B & W Gauge), solid, annealed, pure, high-conductive aluminum.

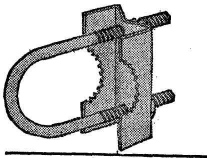
Cat. No.		List Price
1500	100 ft. coil	$ 2.75
1505	500 ft. coil	12.80

WALSCO GROUND CLAMP

Assures a solid, dependable contact even on corroded rods and pipes. Adjusts to fit grounding connections from ⅜″ to 1¼″ in diameter.

Cat. No. 4005-10 .... List Price $0.20
(Standard Pack: 25 units)

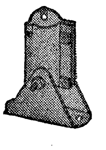
WALSCO U-BOLT BRACKET ASSEMBLY



The WALSCO U-bolt Bracket is designed for permanency. Made of weather-resistant, cadmium-plated steel. Sharp teeth on jaws grip mast like pipe vise. Fits mast up to 1½″.

Cat. No. 4005-20 .... List Price $0.60
(Standard Pack: 25)

WALSCO MAST SWIVEL BASE



Permits mounting mast at any angle on any pitch roof. Mast can be oriented to signal pattern after it has been installed. Built of aluminum and heavy cadmium-plated steel for endurance.

Cat. No.		List Price
4005-2	For 1″ Diam. Masts	$0.85
4005-27	For 1¼″ Diam. Masts	0.95

(Standard Pack: 25)

WALSCO TURNBUCKLES

Made of steel with rustproof galvanized finish. A necessity with high mast and tower antenna installations.

Cat. No.	Length Open	Length Closed	List Price
1533	4¼″	3″	$0.30
1535	7½″	5½″	.40
1537	10½″	7½″	.95

(Standard Pack: 1 Dozen)

WALSCO SCREW EYES

Made of heavy steel, cadmium-plated for weather resistance. Just the right weight for securing guy wires to roof structures.

Cat. No.		Each	List Price Per Gross
1540	Over-all length 2″	$0.05	$5.40
1542	Over-all length 3″	.08	8.25
1544	Over-all length 5⅛″	.15	15.00

(Standard Pack: 144)

WALSCO ROOF PATCHING COMPOUND

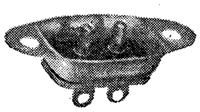
WALSCO
W
ROOF PATCHING
COMPOUND
WALTER L. SCHOTT CO.

Wherever a screw must be driven to install an antenna, apply this waterproofing compound generously. Compounded of the very best quality asphalt and fibred asbestos, this material is easily and neatly applied with disposable applicators furnished with each can.

Cat. No.		List Price
1548	16 oz. can	$1.00

(Standard Pack: 24)

WALSCO TV INTERLOCK RECEPTACLE



Interchangeable with receptacles found in RCA, Philco, GE, Admiral and other TV sets. Use to replace broken or damaged receptacles, or in custom cabinets. Sturdily made, stamped steel shell, rugged pins, U.L. approved.

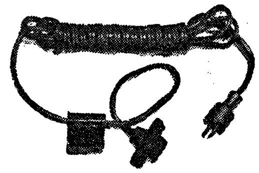
Cat. No. 1650 .... List Price $0.25
(Standard Pack: 25)

WALSCO TV INTERLOCK OR "CHEATER" CORD

Molded bakelite plug attached to fit standard electric outlets. Special molded rubber plug fits standard TV Interlock Receptacles. May be used either as a replacement cord, or as a "cheater" cord when servicing.

Cat. No. 1620 .... List Price $0.75
(Standard Pack: 12)

WALSCO SERVICEMAN'S "CHEATER" CORD

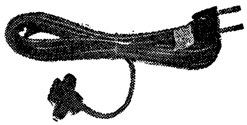


Equipped with a special male plug (instead of appliance plug) that mates with interlock plug found on TV set back panel. Unnecessary to disconnect TV set from regular wall outlet. Has a special built-in receptacle which taps the line for trouble light, tester, or soldering iron. U.L. approved.

Cat. No.	List Price
1621	$1.30

(Standard Pack: 12)

WALSCO DELUXE INTERLOCK "CHEATER" CORD



Contains a built-in duplex outlet for testers, soldering irons, trouble lights. All connections necessary for TV servicing.

Cat. No.	List Price
1622	$2.50

(Standard Pack: 12)

WALSCO TV TUBE ANODE LEAD

STRAIGHT TYPE

WALSCO top-quality materials and construction distinguish this straight-type anode lead. A tinned stranded copper conductor is covered with thick plastic insulation especially developed high-voltage work up to 20 kilovolts. Terminal end has been dipped in solder for quick connection. Lead is 18″ long. Tube connection is snap-button type insulated with a special ozone-resistant rubber that will not deteriorate or break down when exposed to high voltage.

Cat. No. 1628 .... List Price $1.00
(Standard Pack: 12)

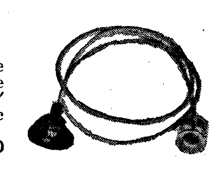
WALSCO TV TUBE ANODE LEAD

OFFSET TYPE

Materials used in this lead are identical with those in 1628 above. However, the lead enters the tube connection plug at right angles. Excellent for making conversion from small to large screen. Lead is 18″ long. For use up to 20 kilivolts.

Cat. No. 1629 .... List Price $1.00
(Standard Pack: 12)

WALSCO TV TUBE ANODE LEAD EXTENSION CORD



With regular anode plug and a high voltage plastic receptacle that mates with the anode plug in most TV sets. Extension cord is 36″ long, flexible, with high-dielectric plastic insulation.

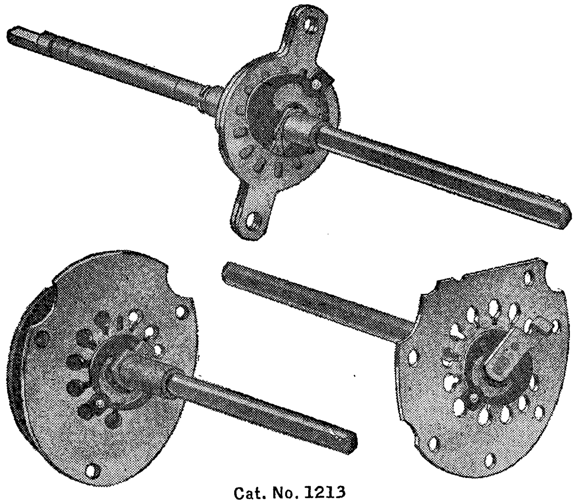
Cat. No. 1625 .... List Price $1.50
(Standard Pack: 12)

DETENTS • TV CHEMICALS
DECALS • TV CASTERS

WALSCO

walsco quality earned its reputation

WALSCO TV TUNER DETENTS



Cat. No. 1213

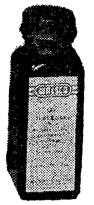
High-precision top-quality replacements. Three point ball bearing suspension gives smooth, low-torque tuning. Detent spring is made of phosphor bronze for enduring, dependable service. Shafts are made of linen base molded and machines phenolic. They are rigid, precise, non-warping.

	SHAFT LENGTH*	
Cat. No.	**Brass**	**Phenolic**
1210	$2\frac{13}{16}$"	3¾"
1211	$3\frac{9}{16}$"	3¾"
1212	4½"	3¾"

*Measured from "C" Washer

Cat. No.		**List Price**
1210	Replaces RCA part 71463	$2.80
1211	Replaces RCA part 72743	3.15
1212	Replaces RCA part 201E1 for use with Tuner No. 71531	4.15
1213	Replaces RCA part 73440	4.75
1214	Replaces RCA part 75162	4.00

WALSCO C-R TUBECOAT



Quick-drying coating for TV picture tubes. Patch scratches and peeled-off areas of TV picture tubes with fast-drying WALSCO C-R Tubecoat. With brush attached to bottle cap you can make good-as-new repairs without removing tube from cabinet. No muss, no fuss.

Cat. No.		**List Price**
199	2 oz. bottle with brush	$1.20

WALSCO TUNERCLEAN

For cleaning and protecting switch contacts. Thoroughly cleans corrosion and dirt from switch contacts in TV tuners. Lubricates contacts and leaves an anti-corrosion protecting film as solvents evaporate. Quiet, like-new operation is prolonged.

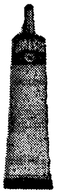
Cat. No.		**List Price**
105	1 oz. bottles	$ 0.85
108	1 pint	12.50

WALSCO SILVER CONTACT CLEANING CLOTH

Specially-woven fabric, designed to clean and remove the tarnish from turret tuner contact points and springs. Has a microscopic polishing agent; yet, leaves no undesirable chemical deposit. Safe to use on the most delicate equipment.

Cat. No.		**List Price**
280		$ 0.50
280-D	Display of 20 No. 280	10.00

WALSCO SILICONE COMPOUND

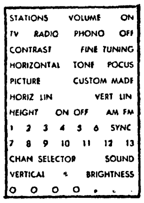


Forms a moisture-repellent seal of high dielectric strength. Recommended for treating TV and amateur transmitter antenna lead wires, insulators, and terminals. Prevents high voltage arcing and breakdown under humid conditions.

Cat. No.		**List Price**
24	1 oz. tube	$ 2.00
24-D	Display of 12 1 oz. tubes	24.00

WALSCO TV RECEIVER DECALS

complete marking set for television controls



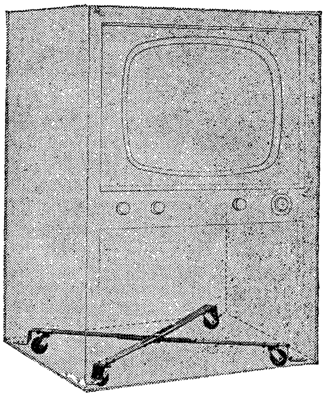
Now you can achieve a most professional-finished appearance on custom TV sets or refinished cabinets with easy-to-apply WALSCO decals. Cut out label you need, dip it in water, slide marking off paper backing and onto panel. Cements itself to surface as it dries. Very legible type; letters are gold. Every designation you will ever need — over forty markings on each sheet, 2 complete sheets per set.

Cat. No.		**List Price per pkg.**
2551	2 complete sets of Decals	$0.45
2551-D	Display of 20 No. 2551	9.00

WALSCO ROLABOUT TV CASTERS

put wheels under any TV set; easy to install can be installed in the home

Give mobility to any TV set this easy way — with WALSCO ball bearing Rolabout TV Casters. Every homemaker has wished for an easy way to move the TV set — in order to get behind it to clean, to move it from room to room, to turn it to face company who have come to watch a favorite program. . . . Further, it simplifies servicing. The WALSCO Rolabout assembly is easily and quickly installed on almost every TV console. Lifetime construction. It consists of a steel, criss-cross, universally adjustable frame; ball bearing casters with good sized wheels for easy moving, wheels that are wide enough to prevent marring floor; and a center wing nut to lock frame members together.



Tips of the frame support of the cabinet at all four corners. Frame is so designed that sides of cabinet hang down to mask caster wheels. To install, you merely adjust frame to fit, drive wood screws at each corner, and lock wing nut in center. Add dollars to your every service call. Every set owner is a ready customer.

Cat. No. 333 .... **List Price $7.95**

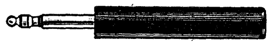
(Standard Pack: 12)

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

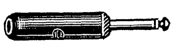
U. S. ARMY-NAVY SPECIFICATION PLUGS



DESIGNED TO MEET THE LATEST JAN SPECIFICATION P-642. High compression-molded insulation for high di-electric and tensile strengths Features durability with low moisture absorption characteristics.

No. PJ-055B	Dealer Cost $ .90
No. PJ-054	Dealer Cost .90
No. PJ-068—3 Conductor Microphone Plug	Dealer Cost $2.36

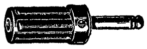
ICA 2 — CONDUCTOR PHONE PLUGS



Features smaller barrel for panel mounting space economy. Has 2 screw type terminals. Tenite handles. Measures 1⅝″ L. x ½″ Dia. Fits standard jacks.

No. 7577—Black	Dlr. Cost $0.42
No. 7579—Red	Dlr. Cost .42

ICA BAKELITE DOUBLE PHONE PLUG



Molded bakelite ribbed barrel. Takes 2 cord tips. Fits all jacks.

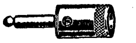
	Dealer Cost
No. 24B—Black	$ .34
Display Card of 24 above	
D-70024B	8.16
24R—Red	.34
Display Card of 24 above	
D-70024R	8.16
34B—Black barrel only	13.36C
34R—Red barrel only	13.36C
34P—Plug only	.27

ICA MIDGET PHONE PLUG

Overall length—2¼″.
Diameter of ribbed barrel $\frac{9}{16}$″.

No.	Dealer Cost
29B—Black	$ .34
Display Card of 24 above	
D-70029B	8.16
29R—Red	.34
Display Card of 24 above	
D-70029R	8.16

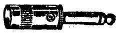
ICA STUBBY SHIELDED PHONE PLUG



Barrel measures $\frac{11}{16}$″ diameter x 1″ long.

No. 27	Dlr. Cost $ .49
No. 37—Barrel only	Dlr. Cost .32

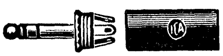
ICA MIDGET SHIELDED PHONE PLUG



Diameter of Barrel $\frac{9}{16}$″.
Overall size of Plug 2¼″.

No. 30 Dealer Cost $ .48

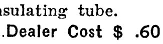
ICA 3-WIRE MICROPHONE PLUG



Has solder connections for cable or microphone use. Ribbed barrel molded of bakelite; brass parts, nickel plated.

No. 1901 Dealer Cost $ .83

ICA SHIELDED DOUBLE PHONE PLUG

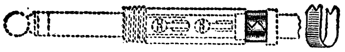


Nickel Barrel—Brass Shell
Nickel Plated

Supplied with fibre insulating tube.

No. 25 Dealer Cost $ .60

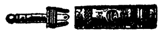
STRAIN RELIEF CLAMP



For firm attachment of cables to PJ0 and PL type plugs. Approved by government services.

No. 5695 Dealer Cost $2.00C

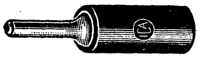
ICA SHIELDED 3-WIRE MICROPHONE PLUG



Shielded Nickel Barrel

No. 1900 Dealer Cost $1.10

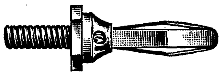
PHONE TIP WITH INSULATING JACKET



Nickel Plated brass with small O.D. insulating sleeve.

No. 341B—Black	Dealer Cost $10.00C
No. 341R—Red	Dealer Cost 10.00C

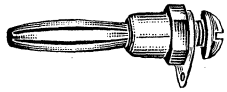
SPRING TYPE BANANA PLUG



Has nickel-plated brass body with phosphor bronze spring contacts. Extra sturdy. Overall size 1$\frac{3}{16}$″ long. Threaded shank length $\frac{13}{32}$″ long; for 6-32 nuts.

No. 7573 Dlr. Cost $9.00 C

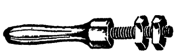
ICA BANANA PLUG



Nickel-plated brass with snug-fitting one-piece phosphor bronze spring. Includes 6-32 screw and soldering lug; has 6-32 female threaded receptacle. Hex center permits firm tightening. Center shaft extends full length of plug.

No. 7584 Dlr. Cost $9.00 C

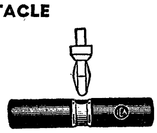
ICA SPLIT BANANA PLUGS



For positive and durable spring action. Allows spring to fit into jack, cannot bend out of shape — Complete with two nuts.

No. 403 Dealer Cost $11.66C

WIRE CONNECTOR WITH BANANA PLUG RECEPTACLE

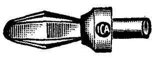


Ideal for quick splicing for testing point.

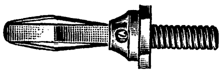
No. 1933 Dlr Cost $ .25

BERYLLIUM BANANA PLUGS

Approved by the Signal Corps and other government agencies. These plugs are used in all government equipment. Made of nickel-plated Beryllium copper and guaranteed for its spring and durability.



No. 419 — Overall size $\frac{13}{16}$″ long. Shank length ¼″ long. Shank diam. ⅛″. Dealer Cost $13.35C



No. 421 — Overall size 1$\frac{3}{16}$″ long. Threaded shank length $\frac{13}{32}$″ long threaded for 6/32 nuts.

Dealer Cost $21.00C

SILVER-PLATED BANANA PLUGS

No. 424—SILVER-PLATED Beryllium Copper Banana Plug. Overall length 1½″. Shank length ¾″, threaded for 8/32 nuts.

Dealer Cost $20.00C

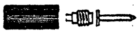
No. 429—Same as No. 424 above with knurled collar for snug panel fit.

Dealer Cost $20.00C

No. 428—Overall length: 1⅞″; shank 1⅛″; thread: 8-32.

Dealer Cost $20.00C

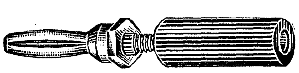
INSULATED MIDGET PHONE TIP PLUG



Fits all standard jacks. Tip is threaded. Overall length 1¼″. Ribbed barrel.

No.	Dealer Cost
876R—Red	$12.00C
876B—Black	12.00C

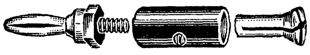
INSULATED SILVER-PLATED BERYLLIUM COPPER BANANA PLUG



Features a ribbed insulating 1″ L. x ⅜″ dia. tenite handle . . . beryllium copper springs. Silver-plated for permanent electrical contact. Fits standard type banana jacks. Cross-drilled holes in plug end for solder connection. Overall length: 1¾″.

No. 413R—Red	Dlr. Cost $0.30
No. 413B—Black	Dlr. Cost .30

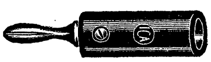
ICA INSULATED SOLDERLESS BANANA PLUG



Revolutionary new solderless silver plated beryllium copper spring banana plug with insulating ribbed tenite sleeve. Measures ⅜″ in dia.; 1″ long. Features a novel miniature spring collet which serves as receptacle for phone tip or test lead wire ranging from 14 to 20 gauge.

No. 433B—Black	Dlr. Cost $0.36
No. 433R—Red	Dlr. Cost .36

ICA INSULATED SOLDERLESS SPLIT BANANA PLUGS



Set screw provided at side of ribbed barrel to fasten screw without soldering.

1½″ Long

No. 883B—Black	Dlr. Cost $15.00C
No. 883R—Red	Dlr. Cost 15.00C
No. 7565—Yellow	Dlr. Cost 15.00C
No. 7566—Green	Dlr. Cost 15.00C
No. 7567—Blue	Dlr. Cost 15.00C

2½″ Long
With sleeve covering set screws.

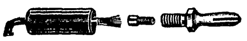
No. 882B—Black	Dlr. Cost $0.27
No. 882R—Red	Dlr. Cost .27

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

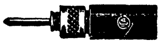
ICA INSULATED SOLDERLESS SPLIT BANANA PLUGS

With Solderless Wire Nut



No. 434B—Black	Dlr. Cost $18.00C
No. 434R—Red	Dlr. Cost 18.00C

ICA INSULATED SOLDERLESS PLUG



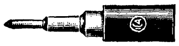
2″ long — fits all standard phone tip jacks. Ribbed barrel.

No. 885B—Black	Dealer Cost $13.80C
No. 885R—Red	Dealer Cost 13.80C
No. 7555—Yellow	Dealer Cost 13.80C
No. 7556—Green	Dealer Cost 13.80C
No. 7557—Blue	Dealer Cost 13.80C

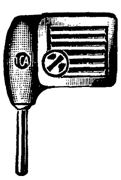
ICA INSULATED NEEDLE POINT TIP PLUG

Ribbed barrel.

No. 886B—Black	Dlr. Cost $14.16C
No. 886R—Red	Dlr. Cost $14.16C



ICA GRIP-RITE MOLDED PHONE TIP PLUG



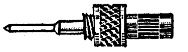
Replacement for ICA and Weston — as well as other make Test Leads.

No.	Dlr. Cost
868—Red	$ .30
869—Black	.30

Display Card of 12 each above

No. 70868-9 Dealer Cost $7.20

ICA SR. SOLDERLESS PLUGS

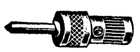


1½″ over-all length.

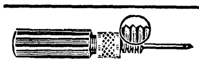
No. 358 Dealer Cost $9.58C

ICA JR. SOLDERLESS PLUGS—No. 359

1½″ over-all length. Tip ½″.



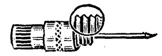
Dealer Cost $9.58C



LOCKING TYPE SOLDERLESS PHONE TIP

Companion piece to ICA No. 432 locking type tip jack. (May also be used with non-locking type jack). Insulated barrel. Overall length: 1⅞″; tip ⅜″.

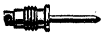
No. 7530-B—Black	Dlr. Cost $18.00 C
No. 7530-R—Red	Dlr. Cost 18.00 C



No. 7526—Same as above without insulating barrel. Overall length: 1⅜″; tip: ⅜″.

Dealer Cost $14.00 C

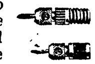
MIDGET SHARP POINT PHONE TIP THREADED—NOT INSULATED



Threaded to fit all test prods.

No. 365 Dlr. Cost $10.00C

ICA PHONO NEEDLE CHUCKS

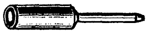


Push on type can be forced into handles — Threaded type can be screwed into handles. Machined of brass, nickel plated with needle point.

No.	Dlr. Cost
508—Push-on Type, Overall size 1″	$12.00C
509—Threaded Type, Overall size 1″	15.00C

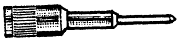
STANDARD PHONE TIPS

Overall Length 1″



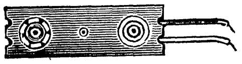
No. 360 Dealer Cost $16.67M

HEAVY DUTY PHONE TIPS



Overall Length 1$\frac{11}{32}$″.

No. 361 Dlr. Cost $7.80C



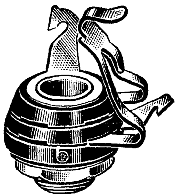
BATTERY CONNECTOR STRIP

Fitted with easy snap-on clips for the following popular type batteries: Burgess XX30; XX45. Eveready 455; 467. RCA VS016; VS056; Ray-O-Vac P4367.

No. 3397 Dlr. Cost $10.00 C

ICA DELUXE PHONE JACKS

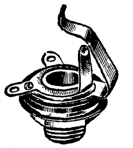
Greater Efficiency



New design. Tension fatigue minimized. Spring members made of phosphor bronze. Hooked type soldering lugs — Cannot turn or short. For standard ¼″ plug.

No.	Dealer Cost
1920—Single Open Circuit	$ .50
1921—Single Closed Circuit	.58
1922—Three-Way Microphone Jack	.75

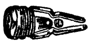
ICA PHONE JACKS



Smaller type precision made jacks for limited space. Complete with nut and metal washer.

No.	Dealer Cost
1870—Single Open Circuit	$ .30
1871—Single Closed Circuit	.34
1872—3-Way Microphone Jack	.38

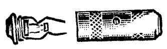
ICA PANEL MOUNTING JACKS



Small and compact. Insulated shoulder washers. Phosphor-bronze, nickel-plated springs.

No.	Dealer Cost
325—Single Open Circuit	$ .34
1905—3-Way Microphone Jack	.75

ICA SHIELDED 3-WAY PORTABLE MICROPHONE JACK

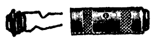


For all types of microphones. Sturdily constructed of brass parts with phosphor bronze springs. Nickel plated and thoroughly insulated.

No. 1904 Dealer Cost $1.00

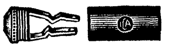
ICA SHIELDED PORTABLE JACK

Single Open Circuit



	Dealer Cost
No. 1913—2⅛″ Long, $\frac{11}{16}$″ Diameter	$ .84

ICA BAKELITE PORTABLE JACKS



Single Open Circuit
Ribbed barrel

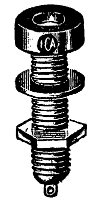
No.	Dealer Cost
1911—Overall Size 1⅝″; Diam. ¾″	$ .50

Display Card of 16 above

No. D-71911 Dealer Cost $8.00

No. 1903—Portable Jack, black Bakelite barrel Dealer Cost $ .75

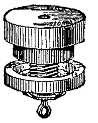
ICA COMBINATION BANANA PLUG OR PHONE TIP JACK



Made to take banana plug or standard phone tips interchangeably. Insulated cap in black and red — With washers and nuts.

No.	Dealer Cost
528R—Red	$15.00C
528B—Black	$15.00C

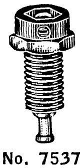
HIGH VOLTAGE NYLON TIP JACK



Nylon insulation can withstand 10,000 v. breakdown. Low leakage resistance; very low moisture absorption. One piece spring contact loop of phosphor bronze. Offers stability in sensitive test equipment. Takes all standard phone tips and test prods. Molded washer affords added protection against "shorts."

No.	Dlr. Cost
1899-N—Natural Finish	$0.45
1899-B—Black	.45
1899-R—Red	.45

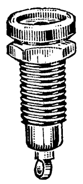
MINIATURE NYLON TIP JACKS



Molded from low-loss nylon, resulting in an all-insulated jack. Beryllium copper silver plated contact. Recessed contact for shorting safety; high voltage breakdown. ¼-32 thread with nut. Overall dimensions: ⅜″ dia. x ⅞″ L.

No. 7537—White	Dlr. Cost $30.00 C
No. 7538—Red	Dlr. Cost 30.00 C
No. 7539—Black	Dlr. Cost 30.00 C
No. 7540—Green	Dlr. Cost 30.00 C
No. 7541—Orange	Dlr. Cost 30.00 C
No. 7542—Yellow	Dlr. Cost 30.00 C
No. 7543—Brown	Dlr. Cost 30.00 C
No. 7544—Blue	Dlr. Cost 30.00 C
No. 7545—Ivory	Dlr. Cost 30.00 C

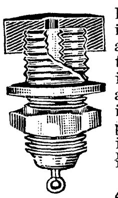
MOLDED TIP JACK



All-molded tip jack with phosphor bronze spring contact includes brass nut for mounting directly on panels up to ⅜″ thick. Mounting hole: ⅜″. Overall dimensions: 1″ L. x ½″ Dia.

No.	Dealer Cost
7521—Black	$21.00 C
7522—Red	21.00 C
7523—Green	21.00 C
7524—Yellow	21.00 C
7525—Blue	21.00 C

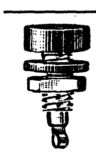
LOCKING TYPE TIP JACKS



Bakelite insulated tip jack with internal thread in metal body to accommodate solderless phone tip. Twist of phone tip locks it in place. May be used with standard phone tips as well as locking type. Phosphor bronze one-piece spring contact loop. Mounting hole: $\frac{5}{16}$″. Overall length: $\frac{15}{16}$″. Dia. ½″.

No.	Dealer Cost
432-R—Red	$19.00 C
432-B—Black	19.00 C

BERYLLIUM COPPER INSULATED TIP JACKS

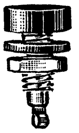


Bakelite. Spring contact of heat treated beryllium copper.

No.	Dealer Cost
1897—Black	$ .36
1898—Red	.36

ICA BAKELITE INSULATED TIP JACKS

Molded Bakelite Head



No.	Dealer Cost
1889—Black	$15.00C

Display Card of 40 above

D-71889	$6.00
1890—Red	$15.00C

Display Card of 40 above

D-71890	$6.00

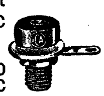
Net

SINCE 1921

insuline *Corporation of America*

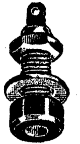
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

BAKELITE BANANA TYPE JACKS



No.	Dealer Cost
1891—Black	$15.00C
Display Card of 40 above	
D-71891	$6.00
1892—Red	$15.00C
Display Card of 40 above	
D-71892	$6.00

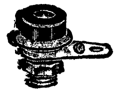
ICA INSULATED TIP JACKS



With receptacle for standard phone tips.

No.	Dealer Cost
889B—Black	$12.00C
889R—Red	12.00C
No. 7560—Yellow	Dlr. Cost $12.00 C
No. 7561—Green	Dlr. Cost 12.00 C
No. 7562—Blue	Dlr. Cost 12.00 C

INSULATED BANANA JACKS



With receptacle for banana plugs.

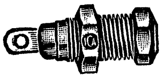
No.	Dealer Cost
888B—Black	$12.00C
888R—Red	12.00C
No. 7570—Yellow	Dlr. Cost $12.00 C
No. 7571—Green	Dlr. Cost 12.00 C
No. 7572—Blue	Dlr. Cost 12.00 C

ICA BRASS TIP JACKS

Nickel Plated

No. 357

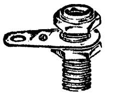
Dealer Cost..........$9.00C



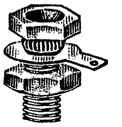
ICA TRANSMITTING BANANA JACKS

Nickel Plated Brass

No. 402....Dealer Cost $9.00C



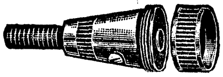
SILVER PLATED BRASS BANANA JACK



Has knurled shoulder for firm panel fit. Extended shank suitable for heavy panels. Minimum panel thickness: $\frac{3}{16}$″; maximum: ⅝″. Overall length: ⅞″, shank length: $\frac{13}{16}$″, hex head dia.: $\frac{7}{16}$″. Takes Insuline banana plugs No. 410, 421, 424, 428, and 429, 7573 and 7584.

No. 431A ....Dealer Cost $12.00 C

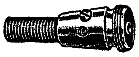
MICROPHONE CONNECTORS



NEW Universal shielded cable single contact microphone connector. Newly designed non-fixed coupling ring permits easy cable connection. Male-female connector in one. Eliminates necessity for mating connectors.

No. 1931............................Dealer Cost $ .30

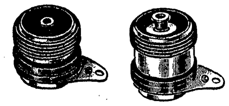
MICROPHONE CONNECTORS



Shielded cable type. Single contact male microphone connector. Chrome-plated brass.

No. 1932..........................Dealer Cost $24.00C

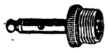
MICROPHONE CONNECTORS



No. 1929—For use on chassis unit or in microphone. Single Contact. Dealer Cost $18.00C

No. 1930—Closed circuit connector. With spring actuated contact. Dealer Cost .27

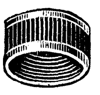
PHONE PLUG ADAPTER



Soldering or wiring not necessary.

No. 33................................Dealer Cost $ .30

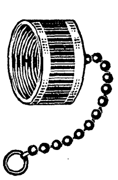
CONNECTOR COUPLING RING



Microphone connector coupling ring converts male to female. Offers male-female connector in one unit.

No. 1925........Dlr. Cost $8.00 C

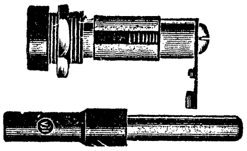
ICA CAP AND CHAIN



Provides effective protection to unused male microphone connectors against grit and dirt. Affixed chain prevents loss when making connection. For use with ICA 1929 and No. 1930 or similar connectors.

No. 1918 ....Dlr. Cost $.33

TRANSMITTING PLUGS AND JACKS

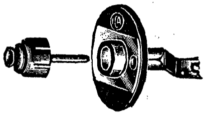


A new line of heavy duty transmitting plugs and jacks. Plug-in type with positive grip contacts. Equipped with heavy insulated threaded heads and handles for safe handling on high R.F. currents. Supplied with large hex nuts for panel mounting.

Handle 1,000 Volts at 10 Amps

No.	Dealer Cost
450—Medium Plug—RED	$ .42
451—Medium Plug—BLACK	.42
452—Medium Jack—RED	.80
453—Medium Jack—BLACK	.80
454—Giant Plug—RED	.63
455—Giant Plug—BLACK	.63
456—Giant Jack—RED	.88
457—Giant Jack—BLACK	.88

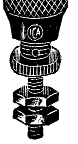
ICA PLUGS AND JACKS



Used on RCA recording units, receivers and auto sets.

No.	Dealer Cost
2383—Pin Plug	$5.00C
2385—Socket and Shield	7.00C

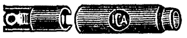
ICA INSULATED BINDING POSTS WITH JACK FOR BANANA TYPE PLUG



Length 1¼″ overall when top is up. Extends ⅝″ above panel when top is screwed down. Fitted with 8/32 screw $\frac{9}{16}$″ long, and two hex nuts.

No.	Dealer Cost
622—Red	$24.00C
623—Black	24.00C

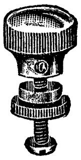
PORTABLE PHONO JACK



2-section shielded phono jack cadmium plated metal sleeve; bakelite insert for use with ICA 2383 or similar pin plug.

No. 2384 ....Dealer Cost $15.00 C

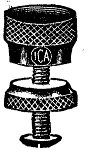
ICA ALL METAL BINDING POST



Designed for high amperage use and where low resistance connections are necessary on test equipment, etc. Nickel plated brass. Dimensions same as No. 617 below.

No.	Dealer Cost
620	$21.00C

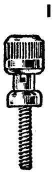
ICA BAKELITE BINDING POSTS



$\frac{9}{16}$″ Diameter Head with Brass Threaded insert. Nickel Plated Screw; Knurled nut.

No.	Dealer Cost
617—Red	$15.00C
618—Black	15.00C

ICA VISE-GRIP BINDING POST

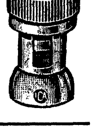


Engineered on principle of a vise. Can cause no damage to even finest wire strands. Wire hole and designating symbol always in alignment. Two styles.

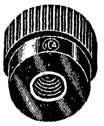
No. 630 Series—Has 8/32 Male Threaded Shank..........................Dealer Cost $ .34

No. 690 Series—Has 8/32 Female Thread........................Dealer Cost $ .40

No.	Marking	No.	Marking
630	ANT	690	ANT
631	GND	691	GND
632	A	692	A
633	G	693	G
634	+	694	+
635	—	695	—
636	Rec.	696	Rec.
637	PLAIN (No Marking)	697	PLAIN (No Marking)



BAKELITE BINDING POST HEADS

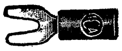


Bakelite Heads only with Brass Threaded Insert for 8/32 Screw.

No. 628—Red................Dealer Cost $10.00C

No. 629—Black..............Dealer Cost 10.00C

INSULATED SPADE LUG

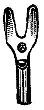


Insulated Spade Lug with banana plug receptacle on lead end.

No. 887B—Black............Dealer Cost $10.85C

No. 887R—Red..............Dealer Cost 10.85C

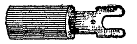
ICA SPADE LUG



Can be used on any size screw or terminal up to size 10. Receptacle fits all I.C.A. and other make Banana Plugs.

No. 879............................Dealer Cost $3.35C

HEAVY DUTY INSULATED SPADE LUGS



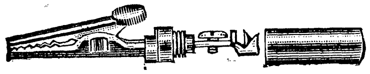
Heavy gauge nickel-plated brass spade lug which will fit on screws or binding posts up to $\frac{9}{16}$″ in diameter. Supplied with tenite sleeve—red or black—unassembled for forced fit after wiring.

No. 867R—Red................. Dealer Cost $ .21

No. 867B—Black................Dealer Cost .21

SINCE 1921 **insuline** *Corporation of America*
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ALL-INSULATED ALLIGATOR CLIP



Special plastic molding fully encases clip; molded threaded sleeve covers terminal lug and screw. Combines a strong spring-loaded contact with complete insulation. Measures: 2⅞" overall length.

No. 522-B—Black ....Dlr. Cost $0.42
No. 522-R—Red ....Dlr. Cost .42

ALL INSULATED ALLIGATOR CLIP

Fully insulated alligator clip permits cramped testing without danger of shorting or grounding; shock-proof. Firm gripping jaws; handy push-button release. Takes standard banana plugs. Overall dimensions: 2 1/16" L. x ⅜" dia.

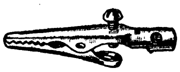
No. 524-B—Black ....Dlr. Cost $30.00 C
No. 524-R—Red ....Dlr. Cost 30.00 C

ICA ALLIGATOR CLIPS

Good firm grip. Ideal for work in tight places. Overall length 2".

No. 364............................Dealer Cost $6.00C

ICA ALLIGATOR CLIP WITH SCREW CONNECTION



Good firm bite. Convenient screw connection eliminates the necessity for soldering. Overall length 2".

No. 376............................Dealer Cost $8.35C

ICA INSULATED ALLIGATOR CLIPS

No. 884B—Black ....Dealer Cost $13.00C
No. 884R—Red ....Dealer Cost 13.00C

Display Card of 20 each above

No. D-70884B-R ....Dealer Cost $5.20

ICA INSULATED ALLIGATOR CLIP WITH PHONE TIP JACK

Has standard phone tip jack in insulated sleeve. Will accommodate phone tip or solderless plug tips.

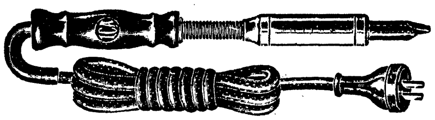
No. 525R—Red..................Dealer Cost $ .37
No. 525B—Black................Dealer Cost .37

ICA INSULATED COMBINATION JACK ALLIGATOR CLIP

An insulated alligator clip with a dual purpose Jack in catalin sleeve. Equipped with the new combination Jack which takes either solderless phone tip or Banana plug. Overall length—3¼".

No. 520R—Red..................Dealer Cost $ .42
No. 520B—Black................Dealer Cost .42

ICA SOLDERING IRONS



Into each ICA soldering iron are incorporated the most durable materials of each needed type to insure long service. Ability to give continuous usage over an exceptionally long span is a definite feature of these irons.

- Fully insulated, removing slightest possibility of grounding
- Heats to operating temperature in three minutes
- Special air chamber reduces heat losses, assuring cool grip
- Plunger type soldering tip offers proper operating heat at soldering point

60 WATT IRON
No. 1960-A—105-120 Volts....Dlr. Cost $3.33
No. 1963—220 Volts ....Dlr. Cost 3.33

85 WATT IRON
No. 1962-A—105-120 Volts....Dlr. Cost $4.33
No. 1964—220 Volts Dlr. Cost 4.33

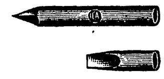
115 WATT IRON
No. 1961-A—105-120 Volts....Dlr. Cost $5.00
No. 1965—220 Volts ....Dlr. Cost 5.00

REPLACEMENT ELEMENTS FOR ICA SOLDERING IRONS

Because of the practical design of ICA Soldering Irons, burnt out elements may be easily replaced.

105-120 Volts			220 Volts		
No.	Watts	Dlr. Cost	No.	Watts	Dlr. Cost
1985	60	$2.00	1990	60	$2.00
1986	85	2.33	1991	85	2.33
1987	115	2.33	1992	115	2.33

REPLACEMENT TIPS For ICA Soldering Irons



Available in All Sizes

Made of a special copper alloy. Electrolytically pure. For replacement in ICA Soldering Irons. Can also be used in American Beauty and irons of similar construction.

No.	Watts	Tips	Dia.	Length	Dealer Cost
1970	60	Flat	⅜"	3"	$ .42
1972	85	Point	⅜"	3½"	.58
1971	115	Point	7/16"	3½"	.67

ICA RIVET AND EYELET PUNCH SET

A Universal Tool that can be used for either riveting or eyeletting. Holder is made of cast iron with hexagonal sides, thus permitting the tool to be placed in a vise without slipping.

No. 785—Complete with ample assortment of eyelets and rivets.

Dealer Cost $3.33

RIVET AND EYELET ASSORTMENT

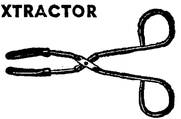
Additional eyelets and rivets can be purchased separately.

No. 5265—(Asstmt. of 100)....Dlr. Cost $.57

RIVET & EYELET SETTING TOOL

No. 786..................................Dealer Cost $.64

TUBE EXTRACTOR



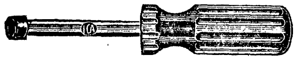
For removing all makes and sizes of tubes. Molded rubber cushion over claws offers full tube protection. Sturdy zinc-plated steel; "Iridited."

No. 1001 ....Dealer Cost $1.00

Display Card of 3 above

No. D-71001 ....Dealer Cost $3.00

ICA UNBREAKABLE "TURN-TITE" SOCKET WRENCHES

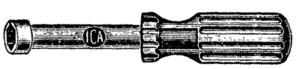


7" long. Handle is of ribbed shockproof unbreakable material.

No.	Socket	Dlr. Cost
940	3/16"	$.75
941	¼"	.75
942	5/16"	.75
943	11/32"	.75

No.	Socket	Dlr. Cost
944	⅜"	$.75
945	7/16"	.75
946	½"	.75
949	Set of 7 wrenches as above	5.25

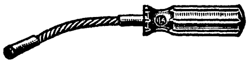
ICA UNBREAKABLE VOLUME CONTROL WRENCH



Socket is 9/16" diameter.

No. 937..............................Dealer Cost $1.38

ICA FLEXIBLE SOCKET WRENCH



Especially designed for hard-to-reach spots. Can actually be used around corners or under obstructing objects.

No. 913—¼" Hex ....Dealer Cost $1.00

Display Card of 6 above

No. D-70913 ....Dealer Cost $6.00

No. 914—5/16" Hex ....Dealer Cost $1.00

Display Card of 6 above

No. D-70914 ....Dealer Cost $6.00

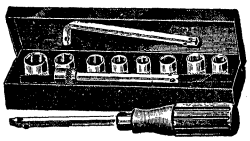
The Insuline "Mini-Kit"

A PRECISION SCREW DRIVER KIT

A handy, vest-pocket screwdriver kit designed especially for precision radio, television and electrical requirements. Contains four hardened steel blades measuring .100″; .080″; .070″ and .055″, which fit into finger grip ribbed plastic handle with firm gripping chuck. To change blades, merely loosen chuck, insert interchangeable blade and tighten chuck. The sure-lock handle has swivel top for finger-tip control. Packed in an attractive vinylite compact case with snapper closure. Measures (closed) 2″ x 3⅜″. Sold singly or in colorful display stand of 12.

No. 989............Dealer Cost $ 1.15
No. D-70989—Display of 12............Dealer Cost 13.80

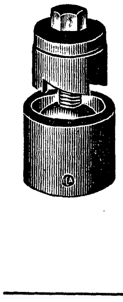
ICA LOCK SOCKET WRENCH AND SCREW DRIVER SET



The all-purpose socket wrench, packed in neat, enameled steel case. Includes sturdy 6½″ Wood Grip Screw Driver—4″ L Handle—3¾″ Extension Adaptor, ¼″, 5/16″, ⅜″, 7/16″ and ½″ Hex—⅜″ Round Knurled Socket—¼″ and 5/16″ Square Sockets.

No. 999............Dealer Cost $2.35

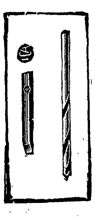
ICA SHEARING PUNCHES



Sturdy steel punch for smooth accurate holes in chassis. Offers a clean cut; no filing necessary. Simply operated, regular wrench supplies driving power.

No.	Size of Hole	Dealer Cost
723	⅝″	$2.75
725	¾″	2.75
724	1″	3.17
727	1⅛″	3.33
726	1 5/32″	3.33
728	1 3/16″	3.33
729	1¼″	3.33
730	1⅜″	3.67

REPLACEMENT DRILLS AND CUTTERS



Used as replacement on ICA No. 775 and No. 780 circle cutters as well as on other make cutters.

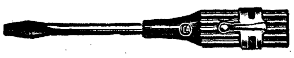
No. 776—Replacement drill for No. 775 Circle Cutter
Dealer Cost $ .50

No. 777—Replacement cutter for No. 775 Circle Cutter
Dealer Cost $ .67

No. 781—Replacement drill for No. 780 Circle Cutter
Dealer Cost $ .50

No. 782—Replacement cutter for No. 780 Circle Cutter
Dealer Cost $ .67

ICA AMBER COLORED UNBREAKABLE MIDGET SCREW DRIVER

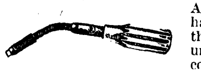


Particularly shaped to fit into set screws of knobs. No. 1013 has convenient pocket clip.

1013—4½″ length............$16.67C
Display Card of 24 above
D-71013............3.96
1017—7″ length............21.68C
Display Card of 16 above
D-71017............3.46

ICA FLEXIBLE SCREW DRIVER

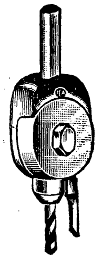
For the Hard to Reach Spots



Allows access to screws in hard to reach and out of the way places. Can go under objects or around corners.

No. 935............Dealer Cost $1.35
D'splay Card of 6 above
No. D-70935............Dealer Cost $8.10

ICA UNIVERSAL MULTI-PURPOSE CUTTING TOOL

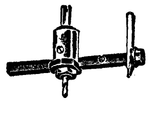


This handy tool can be used for counter-sinking, beading, drilling or cutting holes. Equipped with 3/16″ drill for holes from 7/16″ diameter up to 3″ diameter. Can be used either in drill press or hand brace. Also acts as a boring tool when used in a lathe.

No. 780............Dealer Cost $3.08

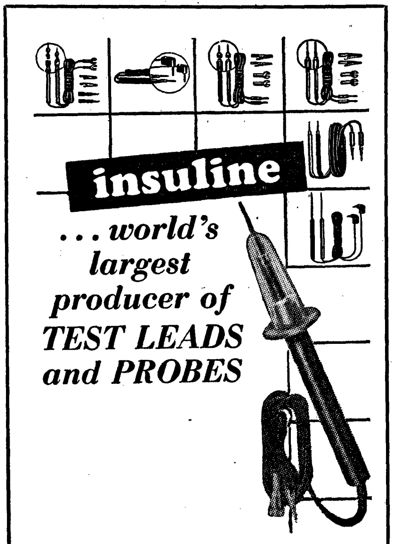
ICA IMPROVED ALL-PURPOSE CIRCLE CUTTER

Will Cut Holes from 1½ to 8 Inches



Cutting bar holder is ⅞″ in diameter and also accommodates a centering drill or any size pilot pin. Cutting bar is ⅜″ square and is arranged to hold a 3/16″ high speed cutting bit.

No. 775............Dealer Cost $3.35



insuline

. . . world's largest producer of TEST LEADS and PROBES

Insuline Corporation of America has been the leading maker of test leads and probes (standard and special types) for 32 years.

See following pages for a complete listing of Insuline's extensive line of test leads and probes. Special types made on order.

●

ANTENNAS

Television • Auto Radio

Special Design

Consult other section for Insuline's later types of television antennas — both VHF and UHF of all types. Included also are a variety of auto radio antennas, featuring the "Revo-Tenna" which may be mounted anywhere on a car.

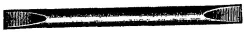
Special antennas of any type—"walkie-talkie"; ham; mobile—produced on order.

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

INSULINE ALIGNING . . . SERVICING TOOLS . . . KITS

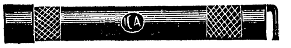
ICA BONE FIBRE SCREW DRIVER



Double Edged—No Metal—Fully Insulated
Made of ¼″ Bone Fibre Rod

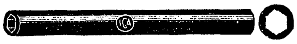
No. 1039 ....Dealer Cost $ .27
Display Card of 16 above
No. D-71039........................Dealer Cost $4.32

ICA ALIGNMENT WRENCH
For RCA, Philco, etc.



Used on all makes Air Trimmer. Made of ½″ Fenoline Rod—8½″ long—one end has hollow shaft hexagon wrench—other end has an especially shaped hook.
No. 1008 ....Dealer Cost $1.08

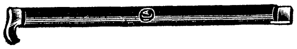
INSULATED NEUTRALIZING WRENCHES



Hexed—Full Length
For Philco, Majestic and Other Receivers
⅜″ Diameter

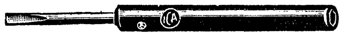
No.	Dealer Cost
985—6″ long; Hex ¼″....................	$21.68C
980—5″ long; Hex ¼″....................	20.00C
981—5″ long—$\frac{7}{16}$″ dia.; Hex $\frac{5}{16}$″......	.25

ICA Alignment Tool for Philco Receivers
For Air Trimmer Sets



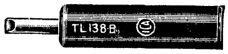
Has specially designed metal clip for air trimmers. Made of narrow fibre rod, $\frac{7}{32}$″ diam. by 6″ long.
No. 1033 ....Dealer Cost $ .45

ICA Insulated Adjustable Neutralizing Tools

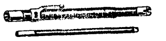


Absolutely no metal parts. Screw driver slides into inside of neutralizing wrench.
No. 990—Ext. from 6″ to 10″ **Dlr. Cost $.65**

BAKELITE NEUTRALIZING TOOL



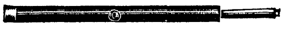
Neutralizing tool used by U. S. Army Signal Corps (U. S. Army No. TL-138B).
No. 1010 ....Dealer Cost $ .37



ICA Neutralizing Tools with Metal Nibs

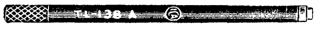
Patent No. U.S. 83,321.
Sturdy, unbreakable, will outlast all other type neutralizing tools.
No. 996 ....Dealer Cost $1.08

ICA SET TRIMMER NEUTRALIZING TOOLS
For Philco, Zenith, RCA, etc.



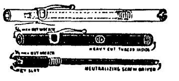
Fits the smallest size trimmer condensers. Trimmer end is $\frac{7}{32}$″ diam. to fit ¼″ hole.
No. 992—6″ long................**Dealer Cost $ .73**

ICA NEUTRALIZING AND ALIGNING TOOL



U. S. Army No. TL138A — ICA No. 1011
Used for general radio tuning and aligning. Approved by U. S. Army and Navy.
No. 1011 ....Dealer Cost $ .73

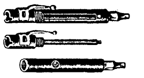
ICA 4-IN-1 NEUTRALIZING TOOLS, SCREW DRIVER AND WRENCH



Made of Fenoline
Fully Insulated

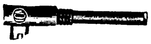
No. 1019—Complete ....**Dealer Cost $ .60**
Display Card of 12 above
No. D-71019 ....Dealer Cost $7.20

ICA 5-IN-1 NEUTRALIZING AND COMPENSATING TOOL



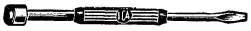
Same features as the 4-in-1 tool described above with an additional all metal screw driver.
No. 1022 ....Dealer Cost $1.00
Display Card of 12 above
No. D-71022 ....Dealer Cost $12.00

ICA BALANCING TOOL



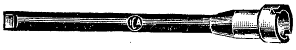
Fits into No. 1019 Neutralizing Tool.
No. 1026 ....Dealer Cost $ .37

ICA ALL PURPOSE ALIGNING TOOL



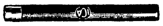
Handle is of ⅜″ Fenoline. End has Socket Screw Driver for neutralizing all iron core tuning systems.
No. 1002 ....Dealer Cost $ .55

ICA NARROW SHAFT ALIGNMENT TOOL



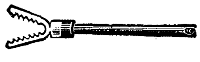
RCA—Zenith—etc. $\frac{7}{32}$″ Bakelite Shaft
No. 987 ....Dealer Cost $ .65

ICA MAGIC TUNING ALIGNMENT TOOL



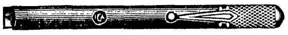
Consists of a Bakelite rod with a Brass cylinder at one end, and a special finely divided iron core at the other end.
No. 977 ....Dealer Cost $ .73

ICA FORK TYPE NEUTRALIZING WRENCH and SCREW DRIVER
For RCA and Other Sets



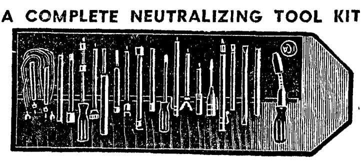
No. 1024 ....Dealer Cost $ .37

ICA Fenoline Neutralizing Screw Drivers



Made of Fenoline. Strong and sturdy, completely insulated for neutralizing and aligning coils, condensers, receivers, etc.
No. 1028 ....Dealer Cost $ .27

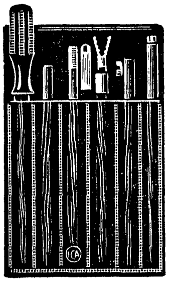
ICA COMPLETE NEUTRALIZING TOOL KIT



The kit consists of one of each of the following ICA tools, described herein:—Nos. 382, 1008, 987, 1015, 977, 996, 992, 985, 990, 1024, 1019, 1026, 1022, 1002, 1013, 1028, 1039, 1029, 1033, 935, 937.

No. 995—Kit, Complete with Carrying Case
Dealer Cost $14.50

ICA DE LUXE NEUTRALIZING AND ALIGNING TOOL KIT

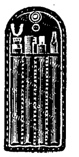


For Every Service Need

Consists of 14 tools, most of which telescope into one another, forming six assembled units in attractive leatherette pocket case.

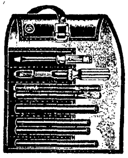
Includes the following: No. 1039 Screw Driver (double blade); No. 1026 Balancing Tool (2 tools: Screw Driver and Side Wrench); No. 1024 Fork Type Wrench and Screw Driver; No. 1022 5-in-1 neutralizing tool (thin metal nib Screw Driver—¼″ hex slotted wrench—$\frac{5}{16}$″ hex wrench—Steel Screw Driver Nib—Steel Socket Head Wrench $\frac{5}{16}$″); No. 996 Neutralizing Tool; No. 977 Aligning Tool; No. 935 Flexible Screw Driver; Fibre Wrench, $\frac{5}{16}$″ hex.
No. 994..............................Dealer Cost $5.50

ICA NEUTRALIZING AND ALIGNING TOOL KIT



The Kit consists of twelve separate and distinct parts, some of which can be employed for several operations. These units telescope into each other, forming four separate tools when assembled.
No. 998...........**Dealer Cost $4.58**
Complete with Carrying Case

ICA NEUTRALIZING AND ALIGNMENT TOOL KIT — SIGNAL CORPS No. TE45-A

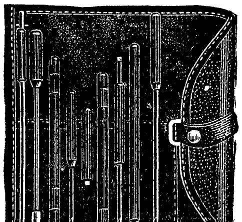


ICA Catalog No. 993
This versatile kit, designed for and used by the Signal Corps, is also strongly recommended for general service use. Compact, and contained in a handsome leatherette case, this kit consists of the following:

1—No. 935 Screw Driver	1—Bone Fibre No. 1015 Neutralizing Tool
1—4¼″ Screw Driver No. 1013	2—No. 980—Hex Tools, ¼″ I.D.
1—Insulated Screw Driver No. 1028	2—No. 981—Hex Tools, $\frac{5}{16}$″ I.D.

No. 993..............................Dealer Cost $4.90

TELEVISION HANDI-KIT



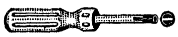
For Television servicing. Contains nine (9) latest tools especially designed for television needs. Includes Aligner for IF and RF and "K-Tran" Transformers (No. 978); slim aligning tool for cramped spaces (No. 6161); thin diameter tuning wand (No. 6163); deep nib aligner (No. 6156); narrow insulated screw driver for deep tuning (No. 6157); extra thin long (9″) aligner (No. 6162); tuning wrench (No. 6164); stackpole core aligner (No. 6170); dual aligner, narrow shaft (No. 6166).

No. 6165............................Dealer Cost $5.00

SINCE 1921 **insuline** *Corporation of America*
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

TELEVISION SERVICING . . . ALIGNING TOOLS

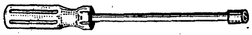
DEEP-NIB "KLEER ALIGNER"



All-insulated aligner with clear flexible low-loss rod (1/4" dia.); amber plastic handle. Metal nib for No. 6 studs entirely insulated and set within barrel end. For tuning IF and RF shielded coils and trimmers. Overall length: 4".

No. 6846 .... Dealer Cost $0.42

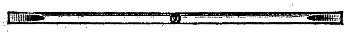
THIN ALIGNER



Has extra thin recessed blade; durable slim metal shaft for cramped probing. Amber plastic handle. Especially suitable for Admiral and similar type TV receivers. Measures 6 1/2" overall length.

No. 6849 .... Dealer Cost $0.66

DURA-DUAL FIBRE TV ALIGNER



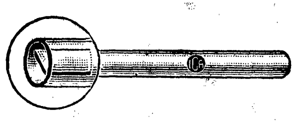
A double bladed aligning tool, measuring 7 inches in length. Made of durable fibre for complete insulation and sturdiness. Narrow shaft is 1/8" in diameter. Serves many TV servicing requirements.

No. 6158 .... Dealer Cost $24.00C

Display Card of 16 above

No. D-76158 .... Dealer Cost $3.84

DOUBLE END "KLEER ALIGNER"



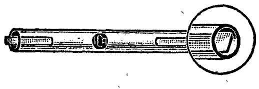
Low-loss CLEAR PLASTIC all-insulated shaft. Has two recessed blades set within rod ends, completely insulated. One blade suitable for No. 6 screw and smaller; other blade for No. 4 screw and smaller. Shaft is 7" long x 7/32" diameter.

No. 6193 .... Dealer Cost $ .60

Display Card of 12 above

No. D-76193 .... Dealer Cost $7.20

"KLEER-ALIGNER"

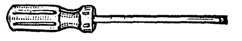


A low-loss CLEAR PLASTIC all-insulated aligning tool. Narrow shaft. Has recessed insulated blade on one end; extended blade on other end. Designed for many aligning uses. For trimmers, IF transformers, etc. Measures 7" in length x 7/32" diameter.

No. 6192 .... Dealer Cost $ .60

Display Card of 12 above

No. D-76192 .... Dealer Cost $7.20

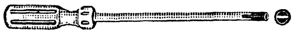


"ALIGNER-TRAN"

Aligning tool of tough fibre with insulating amber plastic handle for standard IF, RF and "K-Tran" midget transformers. Measures 6 1/2" overall length.

No. 6850 .... Dealer Cost $0.66

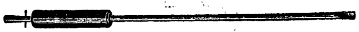
"KLEER-TUNER"



Low-loss clear plastic rod measures 7/32" in dia. Insulating amber plastic handle. Has recessed blade for No. 6 studs. All-insulated. Measures 8 1/2" overall length.

No. 6848 .... Dealer Cost $0.66

"BIG STRETCH" ALIGNER



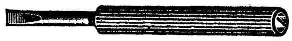
Extra thin, extra long (9"), bone fibre aligning tool, 6 1/2" blade. Specially designed for adjustment of nested iron cores of "Admiral," "Zenith" and similar make TV sets. Permits use on RCA front ends and normally inaccessible areas.

No. 6162 .... Dealer Cost $ .73

Display Card of 12 above

No. D-76162 .... Dealer Cost $8.76

TUNING WRENCH



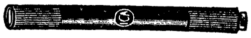
Insulated fibre tuning wrench with extra thin recessed blade. Extra thin screw driver blade on other end (4 3/4" L.). Tenite handle. Especially designed for "Zenith" TV sets, etc.

No. 6164 .... Dealer Cost $ .55

Display Card of 16 above

No. D-76164 .... Dealer Cost $8.80

DUAL ALIGNER



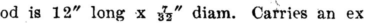
Dual purpose narrow shaft, fibre alignment tool for trimmers, IF transformers, coils, condensers, push-button tuners, etc. Recessed screw nib on one end; metal screw driver on other end. Has an extensive application in TV servicing. Used on RCA, Bendix, and other type receivers.

No. 6166 .... Dealer Cost $ .54

Display Card of 16 above

No. D-76166 .... Dealer Cost $8.64

"SUPER STRETCH KLEER ALIGNER"



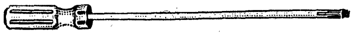
All insulated extra long TV aligner for inaccessible areas. The low-loss CLEAR PLASTIC Rod is 12" long x 7/32" diam. Carries an extended blade at one end; brass slotted insert at other end. A handy tool for those hard-to-reach spots.

No. 6194 .... Dealer Cost $ .83

Display Card of 12 above

No. D-76194 .... Dealer Cost $9.96

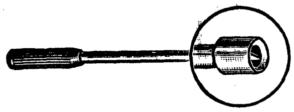
LONG-ROD "KLEER ALIGNER"



All-insulated extra length tool (measures 13" overall) for hard-to-reach trouble points. Clear plastic rod is 7/32" in diameter. Has amber plastic handle. Extended blade: 5/32" w.

No. 6847 .... Dealer Cost $1.06

SLIM-ALIGNER



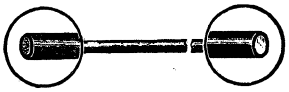
Alignment tool with extra thin recessed blade and slim metal shaft for cramped probing in television receivers. Fiber handle. Especially suitable for "Admiral" and similar make television sets.

No. 6161 .... Dealer Cost $ .73

Display Card of 12 above

No. D-76161 .... Dealer Cost $8.76

TUNING WAND



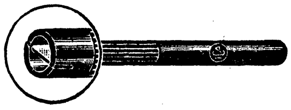
Extra thin diameter to fit small coil openings in television sets. Flexible vinylite. Brass insert in one end; molded powdered iron core in other end. Lowers or increases inductance. Suitable for "Zenith," etc. TV sets.

No. 6163 .... Dealer Cost $0.48

Display Card of 12 above

No. D-76163 .... Dealer Cost $5.76

DEEP-NIB ALIGNER



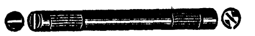
Tough fibre. Metal nib entirely insulated and set within barrel end. For tuning IF and RF shielded coils and trimmers. Small enough to fit under television tubes without removing. Length: 2 1/2" x 1/4" diameter.

No. 6156 .... Dealer Cost $ .36

Display Card of 16 above

No. D-76156 .... Dealer Cost $5.76

CORE ALIGNER



For Stewart-Warner, Belmont and other television receivers employing Stackpole adjustable cores. The 6" insulated fibre shaft has brass insert at one end for milled end cores; recessed screw driver blade at other end for standard slotted cores. Inserts are "pinned-in" and flush with shaft end for durability and ease of use.

No. 6170 .... Dealer Cost $ .55

Display Card of 16 above

No. D-76170 .... Dealer Cost $8.80

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

TELEVISION SERVICING . . . ALIGNING TOOLS

TELEVISION "CHANNEL TUNER"

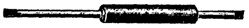
A narrow all-insulated screw driver of machined fiber. Ideal for deep, inaccessible tuning. Overall: 7" Length. ⅛" blade on 4½" shaft.

No. 6157 .... Dealer Cost $ .55

Display Card of 12 above

No. D-76157 .... Dealer Cost $6.60

TRAN-ALIGNER



Newly designed all-insulated aligning tool for standard IF and RF and "K-Tran" midget transformers. Trim fiber; milled at one end, screw driver at other end. 2½" length blade; 6" overall.

No. 978 .... Dealer Cost $ .54

Display Card of 16 above

No. D-70978 .... Dealer Cost $8.64

HEXY-SQUARE ALIGNER

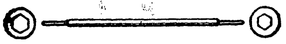
All bone fibre iron core aligning tool especially designed for Raytheon-Belmont IF transformers and similar type transformers. 6" shaft has 3/16" diam.; 3/32" hex one end; ⅛" square other end.

No. 6171 .... Dealer Cost $ .75

Display Card of 12 above

No. D-76171 .... Dealer Cost $9.00

HEX-ALIGNER



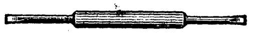
All bone fibre iron core aligning tool. Has 3/32" hex one end; ⅛" hex other end. Especially designed for Dumont, Raytheon-Belmont receivers and other sets, using similar type iron cores. Shaft 6" long; 3/16" diam.

No. 6199 .... Dealer Cost $ .83

Display Card of 12 above

No. D-76199 .... Dealer Cost $9.96

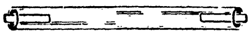
ALL-PURPOSE ALIGNER



Bone fibre screw driver ends set in red tenite handle. Overall length 6"; blade width 5/32"; tip thickness 1/64". Designed for general aligning purposes for Motorola and other popular receivers.

No. 6248 .... Dealer Cost $ .55

DUAL BLADED "KLEER" ALIGNER



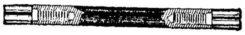
Low-loss clear plastic; 4½" handle, 7/32" diam. Two corrosion-proof extended blades (Govt. "spec" plated nibs)—one thickness .018", the other .025". Designed specifically for ARC-27 but excellent for television and general aligning purposes.

No. 6247 .... Dealer Cost $ .73

Display Card of 12 above

No. D-76247 .... Dealer Cost $8.76

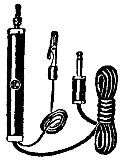
PRECISION TUNING WAND



High-grade phenolic handle (4¾" L. x ¼" D.) has precision molded powdered iron core in one end (permeability tolerance ±2%; "Q" tolerance ±10%); silver-plated brass core in other end — both securely threaded and cemented into shaft. Increases or decreases inductance. Designed specifically for ARC-27, the high-grade properties of this wand make it an excellent tool for general servicing.

No. 6249 .... Dealer Cost $ .90

RF AND SIGNAL TRACER PROBE

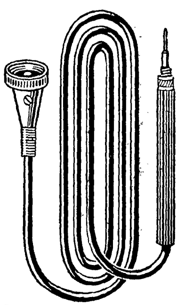


Germanium Crystal Circuit. Assures accurate analysis of circuit defects. May be used with audio amplifier for audible tracing or with V.T.V.M. for RF and AF measurements. Low input capacitance. The ideal probe for the audio section of television circuits. The sturdy bakelite barrel has sealed tenite ends with solderless phone tip and includes 48" RG59/U coaxial cable with phone plug and 18" rubber covered ground lead with alligator clip.

No. 4310 .... Dealer Cost $3.75

OHMMETER PROBE

For RCA "Voltohmyst"



Designed specifically for RCA "Voltohmyst". Offers precise resistance measurements not ordinarily provided by standard test leads. Includes 48" low-loss coaxial cable; coaxial connector. Tenite handle is 4" long; has heavy duty phone tip.

No. 317 .... Dealer Cost $2.50

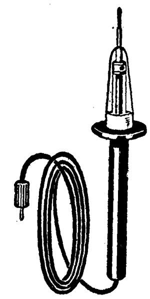
D.C. PROBE

For RCA "Voltohmyst"

Includes one megohm resistor for voltage measurements in operating circuits demanding minimum disturbance of circuit parameters. Includes 48" low-loss coaxial cable; coaxial connector. 4" long tenite handle has heavy duty phone tip.

No. 316 .... Dealer Cost $2.75

"KILOVOLTER" MULTIPLIER PROBE



Equipped with 15 K.V. range multiplier that provides full range PLUS existing meter voltage. For example, use of the ICA probe will increase the range of a 5,000 volt range voltmeter to 20,000 volts full scale.

The three (3) built-in 1% resistors (totaling 6 watts dissipation) are coaxially mounted, providing air-spacing to further assure heat dissipation and a completely insulated probe.

Highest grade components include sturdy thermo-plastic barrel with safety finger guard and sealed ends. Over-all length: 8½". Supplied with 5-ft. heavy duty lead with insulated phone tip.

No.		Dealer Cost
6167	20,000 ohms per volt (50 micro amps. meter movement)	$5.75
6168	10,000 ohms per volt (100 micro amps. meter movement)	5.75
6169	5,000 ohms per volt (200 micro amps. meter movement)	5.75

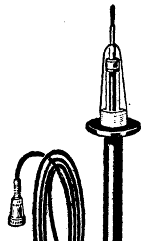
NOTE: Probe of special resistance values up to 2000 megohms are available on order to quantity users.

NEW 30-KV PROBE

Similar to the Insuline "Kilovolter" No. 6167 above, for 20,000 ohm per volt, 50 micro amp. meters only. A precision instrument . . . 600 megohms 2% high voltage multiplier

No. 6220 .... Dealer Cost $6.50

THE INSULINE "100 X" MULTIPLIER PROBE



A new 30KV to 50KV Multiplier Probe (Internal resistance 1090 megohms). For ALL 10 to 11 megohm input instruments.

This VTVM probe will multiply existing meter ranges by a factor of 100; thus, if the top range of the instrument is 300 volts, meter will read 30,000 volts with probe. If top range is 500 volts, meter with probe will read 50,000 volts.

A few of the most popular VTVM's with which this probe may be used follows:

30-KV TOP RANGE

RCA No. WV65A; WV75A; 165A Electronic Design
Heath No. V1; V2; V2A; V4 Radio City 664; Reiner 661;
Triplett 2541

50-KV TOP RANGE

RCA No. WV95A; 162A; 162B; 162C

No.		Dealer Cost
6222	With microphone type connector and ground lead	$6.50

For phone plug instruments, the Insuline No. 33 Adapter is required.

No. 33—Phone Plug Adapter .... Dealer Cost $ .30

SINCE 1921

insuline *Corporation of America*

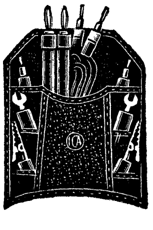
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

INSULINE TEST LEADS FOR ALL PURPOSES

ICA ALL-PURPOSE TEST LEAD KIT

Complete For Every Testing Need

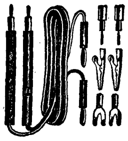
Equipped with one pair of test leads which have 48″ of red and black kinkless live rubber wire. One end has insulated removable banana-type plugs.



Included in this test kit:
- 1 pr. all-purpose test leads.
- 1 pr. insulated alligator clips—red and black No. 884.
- 1 pr. insulated spade lugs—red and black No. 887.
- 1 pr. insulated needle points—red and black No. 886.

No. 1005—Kit, complete..... **Dlr. Cost $2.67**

ICA ALL PURPOSE TEST LEADS



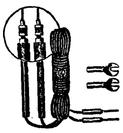
Made of sturdy Tenite Tubing. Slim handles, 6″ long. Overall length 7¼″. Rubber covered wire 48″ long.

With Interchangeable Tips

No.	Dlr. Cost
312—Complete Kit	$1.83

ICA DE LUXE EXTRA-FLEXIBLE TEST LEADS

Slim Handles and Solderless Plugs

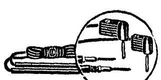


48″ Extra-Flexible Test Leads with 4″ Tenite handles. New non-kinking, rubber insulated wire.

No.	Dlr. Cost
355—With Phone Tips..	$ .73
Display Card of 6 above	
D-70355	4.38
356—With Spade Terminals	.73

ICA PENCIL TYPE TEST LEADS

Finger-Grip Molded Tips



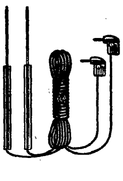
All connections are properly soldered providing low resistance connections vital in all precision tests. The Molded Finger Grip Tips are provided with rivets for easy removal of wire. Length of test leads is 48″. Handles are 5″ long.

No. 373.................... **Dealer Cost $1.35**

Display Card of 6 above

No. D-70373............... **Dealer Cost $8.10**

NEW ICA SLIM-LINE TEST LEADS

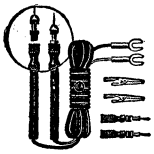


Long vinyl-insulated shaft permits probing in closely wired circuits without fear of shorting. Black and red Tenite handles. 48″ wire lead. With molded phone tip plug.

No.	Dlr. Cost
438	$1.05 pr.
Display Card of 6 above	
D-70438	$6.30

ICA HEAVY DUTY LABORATORY TEST LEADS

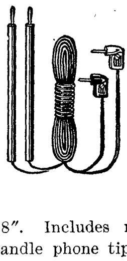
Long Slim Handles and Removable Phono Needle Chuck



Extra long slim red and black handles knurled at end for finger grip ease. Handles 6″ long. 48″ of heavy duty kinkless, flexible rubber wire.

No.	Dlr. Cost
400—With knurled grip handle. Insulated solderless plug.....	$1.20
388—With alligator clip...............	1.13
391—With spade lugs..................	1.00
392—With non insulated phone tips........	1.00

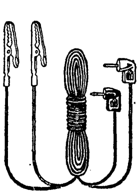
EXTRA LONG HANDLED TEST LEADS



Features special low-loss highly polished hard rubber, high di-electric properties, 8″ prod handles — with sharp pointed penetrating tips — for easier testing of less accessible points. The black and red kinkless wire leads measure 48″. Includes molded black and red gun-handle phone tip plugs.

No. 329............................ **Dealer Cost $2.50**

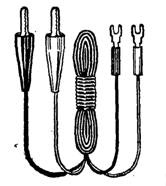
"CLIP-ON" TEST LEADS



A convenient "Clip-on" test lead that includes phone tip plugs on one end; sturdy alligator clips on other end. The red and black kinkless wire leads measure 48″. The black and red molded phone plugs are of the gun-handle type.

No. 328............................ **Dealer Cost $2.50**

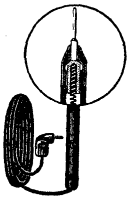
HEAVY DUTY "CLIP-ON" TEST LEADS



Heavy duty test leads of the "clip-on" type for use with binding post type instruments. Includes a heavy gauge nickel-plated brass insulated spade terminal which will fit screws or binding posts up to $\frac{3}{16}$″ in diameter. The sturdy battery-type spring clips are covered with protective sleeve for safe operation The pair consists of a 48″ red and black lead with tenite insulation.

No. 327............................ **Dealer Cost $1.20**

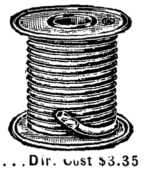
ICA SAFE-T-TESTER



A new, unique, non-shorting prod that makes contact only when pressure is applied to barrel. Ideal for cramped spaces where probing is necessary. Specially applicable to television needs.

No. 446............................ **Dealer Cost $1.00**

NON-KINK FLEXIBLE TEST LEAD WIRE



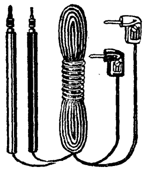
Flexible rubber covered wire that will not kink or wear down in service. Consists of very fine tinned stranded copper wire with a heavy wall of live rubber insulation.

No. 307—100 ft. spool, Black .... **Dlr. Cost** $3.35

No. 309—100 ft. spool, Red..... **Dlr. Cost** 3.35

LUCITE HANDLE TEST LEADS

With Brass Threaded Insert

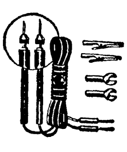


Features red and black low-loss durable Lucite handles (5″ L.) for exacting testing requirements. Includes 48″ kinkless live red and black rubber wire with molded gun-grip phone tip plugs. Handles have threaded type phono needle chucks.

No. 304.................. **Dealer Cost $1.65**

ICA PHONO-NEEDLE POINT TEST LEADS

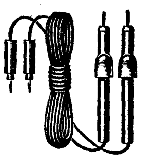
With Slim Handles and Flexible Wire



Flexible rubber-covered, kinkless wire, 48″ long. Tenite handles 4″ long.

No.	Dlr. Cost
382—With Phone Tips....	$ .73
Display Card of 6 above	
D70382	4.38
381—With Spade Terminals	.73
379—With alligator Clips..	.74

HEAVY DUTY TEST LEADS



Engineered for TV's high voltage measurements. Insulated to withstand 15,000 volts D.C. Thick-walled bakelite handles with finger guards. 48″ heavy duty cable.

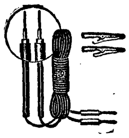
No. 4317................. Dealer Cost $3 per pair

Display Card of 3 above

No. D-74317..................... Dealer Cost $9.00

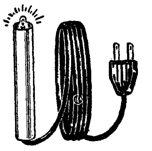
ICA SLIM HANDLE TEST LEADS

Made of sturdy Tenite Handles. 48″ of Kinkless Live Rubber wire. Handles 6″ Long — Overall Length 7″. Prods have pointed large phone tip plugs.



No.	Dlr. Cost
313—Phone Tips on end.	$ .92
315—Alligator Clips on end	1.00

ICA TEST-LITE

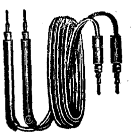


Provides a steady, bright light—without annoying flickering—for dark, narrow spaces around chassis, cabinets, etc. Plugs into any AC-DC socket, 105-125 volt.. 4½ ft. cord. Includes standard 6 volt lamp, No. 47, .15 amp., and plug complete.

No. 938............................ **Dealer Cost $1.10**

ICA UNBREAKABLE TEST LEADS

Long Metal Prod with Shock-proof Rubber Handles



One end has standard needle point Tips. Other end has Insulated Solderless Plugs. Supplied with 48″ Kinkless Rubber Wire.

No. 332—With Phone Tips Non Insulated **Dlr. Cost $.75**

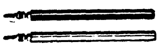
No. 331—Insulated Solderless Plug Ends... **Dlr. Cost $.84**

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

INSULINE TEST PRODS

ICA LUCITE PROD SET with BRASS THREADED INSERT



Designed for precision measurements where body is a factor. Red and black handles (measuring ⅞" x 5" L.) are made of low-loss high-dielectric strength LUCITE. Has needle chucks on ends. Set includes one black and one red prod. Overall length:

No. 302 ....Dealer Cost $0.90 Set

ICA SOLDERLESS PLUG TEST PRODS

With Solderless Plug Chuck

Slim tapped Tenite handles in black or red, threaded to take the solderless plug chuck. All brass parts are nickel plated. Available in two sizes.

No. 390R—Red, 5¼" L. ......Dlr. Cost $0.27
No. 390B—Black, 5¼" L. ....Dlr. Cost .27

ICA FENOLINE PHONO. NEEDLE POINT TEST PRODS

With Removable Chuck

Supplied in black or red Tenite tapped handles. Needle point chuck is tapped to screw into handle. Available in two sizes.

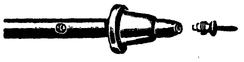
No. 389R—Red, 5" L. ....Dlr. Cost $0.27
No. 389B—Black, 5" L. ....Dlr. Cost .27

ICA HEAVY-DUTY TEST PRODS

Slim tapped Tenite handle fitted with threaded heavy-duty phone tip. Lengtn 5".

No. 387R—Red ....Dealer Cost $ .37
No. 387B—Black................Dealer Cost .37

HIGH VOLTAGE ICA HEAVY-DUTY BAKELITE TEST PROD HANDLES

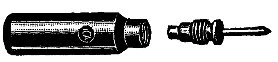


High Voltage, 10,000 Volts

Has midget threaded phone tip. Ideal for all high voltage work. Made of black bakelite with finger guard ring. Minimum amount of metal exposed. Prods are 6" long overall. Used for high voltage test purposes.

No. 480............................ Dealer Cost $ .84

HIGH VOLTAGE HEAVY-DUTY BAKELITE TEST PRODS



High Voltage, 10,000 Volts

Made of black bakelite. Fully insulated with threaded midget sharp pointed phone tips. Minimum amount of metal exposed. Measures 2" overall. Exposed metal tip is only ½" long.

No. 485..............................Dealer Cost $ .42

REPLACEMENT AND INSTRUMENT KNOBS

Insuline provides a varied line of bakelite knobs for radio, television, and instrumentation needs. All knobs fit standard ¼" shaft. Equipped with set screws.

J

M

No.	Type	Color	Size	Dlr. Cost
248	J	Black	1⅛"	$18.35C
249	J	Black	1½"	20.00C
1174	M	Black	15/16"	16.67C

A

ICA FINGER-GRIP POINTER KNOBS

Moulded of black bakelite with ¼" hole. Pointer type knobs have white indicators, flange type knobs have white indicating line.

With ¼" Brass Inserts

B

TYPE A—WITH POINTER

No. 1166—1⅛" ....Dealer Cost $.40
No. 1168—1⅝" ....Dealer Cost .55
No. 1170—2⅜" ....Dealer Cost .70

TYPE A—LESS POINTER

No. 1165—1⅛" ....Dealer Cost $.32
No. 1167—1⅝" ....Dealer Cost .38
No. 1169—2⅜" ....Dealer Cost .55

TYPE B—WITH FLANGE

No. 1171—2 1/16" ....Dealer Cost $.55
No. 1172—3" ....Dealer Cost .65

NOTE: Above Knobs also furnished with 2 set screws. Order by adding "S" to each number.

ECONOMY KNOB ASSORTMENT

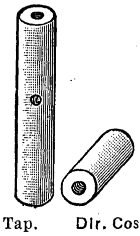
KNOB ASSORTMENT
NO 1064

An assortment containing 50 knobs packed in attractive convenient plastic bag. Includes a variety of all-purpose modern bakelite knobs equipped with set screw. Suitable for many applications.

No. 1064......Dlr. Cost $3.50

CERAMIC RODS

Made of Alsimag. Suitable for mounting insulators, condensers, coils, etc. Available in two lengths.



No.	Length	Dia.	Tap.	Dlr. Cost
2310	1¼"	½"	6-32	$18.35C

A

B

E

No.	Type	Color	Size	Dlr. Cost
1125	A	Black	1¼"	$13.33C
1127	A	Red	1¼"	16.67C
1126	B	Black	2"	16.67C
1128	B	Red	2"	18.34C
1153	E	Black	1¾"	20.00C
1154	E	Walnut	1¾"	20.00C

F

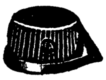
H

¼" BRASS INSERT

S

No.	Type	Color	Size	Dlr. Cost
1270	F	Black	1⅝"	$18.35C
1271	F	Black	2½"	21.66C
1088	H	Black	1"	15.00C
1274	S	Black	1¼"x⅝"	18.35C
1274-S*	S	Black	1¼"x⅝"	.25
1275	S	Black	2"x⅝"	20.00C
1275-S	S	Black	2"x⅝"	.25

*With 2 Set Screws.



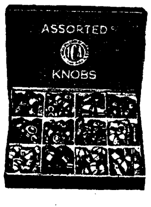
P

N

U

No.	Type	Color	Size	Dlr. Cost
1081	P	Black	⅞"	$10.00C
1082	P	Red	⅞"	10.00C
1084	P	Brown	⅞"	10.00C
1085	P	White	⅞"	10.00C
1089	N	Walnut	15/16"	13.33C
1090	N	Walnut	1⅛"	15.00C
1147	U	Black	⅞"	13.33C
1148	U	Walnut	⅞"	13.33C

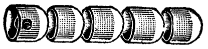
POPULAR KNOB ASSORTMENT



An assortment of 50 quality knobs of varied types for use in the radio, television, instrument field. Includes the following: Nos. 1165; 1166; 1274; 1081; 249; 1088; 1125; 1273. These knobs are pictured and described above.

No. 1059 ....Dealer Cost $9.25

CERAMIC BEAD INSULATORS



⅜" Diam.

Used for construction of short concentric link lines.

No. 2315—(100 beads)........Dealer Cost $.87

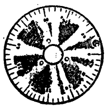
SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

INSULINE BAKELITE SOCKETS . . . "INSULEX" SOCKETS

ICA CHROME SILVER DIAL PLATES

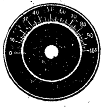
2¾" and 4" diameter. Two types, calibrated 180 degrees 0-100 and 325 degrees, 0-100.



No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2196	325	2¾"	0-100	$.85
2197	180	2¾"	0-100	.85
2194	325	4"	0-100	1.03
2195	180	4"	0-100	1.03

ICA BRASS BLACK SATIN FINISH DIAL PLATES

With Etched Silver Numerals



No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2230	325	3⅛"	0-100	$.47
2232	180	3½"	0-100	.47
2233	180	2"	100-0	.37
2234	325	2"	0-100	.37
2236	180	2"	0-100	.37

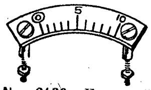
ICA CHROME SILVER DIALS

With Finger Grip Flange Knobs

Beautiful dial plates accurately Etcho-engraved with black numerals and calibrations.

No.	Size	Degrees	Calib.	Dlr. Cost
2170	2¾"	325	0-100	$1.50
2171	2¾"	180	0-100	1.50
2168	4"	325	0-100	2.00
2169	4"	180	0-100	2.00

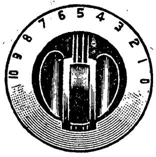
ICA VERNIER DIAL MARKER



Complete with screws, nuts, and spacers for mounting on metal, wood, bakelite or brass panels.

No. 2189—For 2¾"—325° Dials. Dealer Cost $.37
No. 2190—For 2¾"—180° Dials. Dealer Cost .37
No. 2191—For 4" —325° Dials. Dealer Cost .37
No. 2192—For 4" —180° Dials. Dealer Cost .37

ICA MINIATURE DIALS



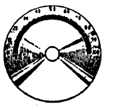
Beautiful Chrome Silver dials with black etched numerals. Finger grip black knob. Only 1⅝" diameter. Fit ¼" shafts.

No.		Dlr. Cost
2164	10-0-180	$.63
2165	10-0-270	.63

ICA CHROME SILVER DIAL PLATES

Attractive grain satin finish. Black Etcho Engraving on Chrome Silver Background Plates.

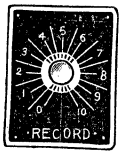
No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2294	180	2"	0-100	$.58
2295	325	2"	0-100	.58
2296	180	3½"	0-100	.92
2297	325	3½"	0-100	.92
2298	180	4"	0-100	1.00
2299	325	4"	0-100	1.00



ICA ETCHED DIAL PLATES

RECTANGULAR TYPES

Made of brass—finished in black with etched silver markings. Calibrated for 300 degree rotation. Marked 0 to 10. Will fit on ⅜" bushing. Size 2¼" x 1-11/16".



No.	Marking	Dlr. Cost
2244	Record	$21.66C
2245	Microphone	21.66C
2246	Gain	21.66C
2247	Tone	21.66C
2248	Plain (Calibrated but not worded)	$21.66C

ICA INDICATING PLATES

Made of heavy brass with black satin background. Silvered "Etcho Gravured" numerals and lettering. $\frac{7}{16}$" center mounting hole. $1\frac{9}{16}$" Diameter.

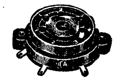
No.		Degrees	Dlr. Cost
2259	Marked 1 to 6	180	$.25
2450	Marked 1 to 5 (Volume)	325	.27
2451	Marked 1 to 5 (Tone)	325	.27
2453	Marked Off-On—with arrow	325	.27

ICA NAME PLATES

1-INCH ROUND

MICROPHONE

No. 2237—For "Microphone"
No. 2238—For "Phono"
No. 2239—For "On Off"
Dealer Cost $15.00C

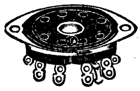


ICA BASE-MOUNTING BAKELITE SOCKETS

No.		Dealer Cost
2480	4 Prong	$ .34
2481	5 Prong	.39
2482	6 Prong	.42
2483	7 Prong comb. large and small	.45
2489	8 Prong OCTAL	.50
2490	Contact for above Sockets	$2.08C

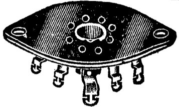
ICA MOLDED BAKELITE SNAP-ON SOCKETS

Octal—Loktal



Mounted in cadmium plated steel "Saddle." Equipped with 4 grounding lugs on saddle—Positive grip contacts.

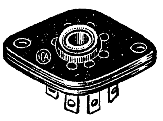
No.
2470—Octal Socket.... Dealer Cost $12.00C
Mtg Center 1½"—Chassis Hole 1⅛"
2471—Loktal Socket... Dealer Cost 15.00C
Mtg Center $1\frac{5}{16}$"—Chassis Hole 1"



ICA BAKELITE WAFER SOCKETS

No.		Dealer Cost
1118	4 Prong	$ 9.16C
1096	5 Prong	9.16C
1095	6 Prong	9.16C
1119	7 Prong, small	9.16C
1120	7 Prong, large	9.16C
1121	8 Prong OCTAL	11.66C
1123	Loktal Wafer	11.66C

BAKELITE WAFER SOCKETS



Wafer socket of punched bakelite for miniature seven pin button base tubes. Phosphor bronze contacts. Standard mounting centers.

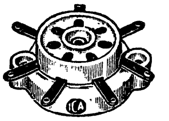
No. 1122........................Dealer Cost $10.00C

BAKELITE WAFER SOCKET

Similar to No. 1122 above but with grounding strap.

No. 1124........................Dealer Cost $10.00C

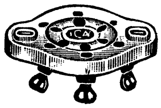
ICA "INSULEX" BASE MOUNTING SOCKETS



Especially adapted for ultra short-wave work and transmitters.

No.		Dealer Cost
290	4 Prong	$ .67
291	5 Prong	.67
292	6 Prong	.75
294	Comb. 7 Prong, large and small	.75
300	8 Prong OCTAL	.84

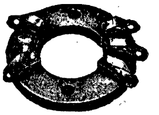
ICA "INSULEX" WAFER SOCKETS



An ideal low loss socket designed for ultra high frequency reception.

No.		Dealer Cost
2600	4 Prong	$ .30
2601	5 Prong	.30
2602	6 Prong	.34
2603	7 Prong, large	.37
2604	7 Prong, small	.37
2605	8 Prong OCTAL for new metal tubes	.38
2636	Contact for above Sockets	$3.33C

ACORN TUBE WAFER SOCKET

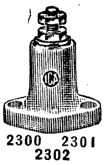


Of Navy approved ceramic with silver plated contacts. Can be easily inserted and removed and no amount of vibration will cause the tube to become loose.

No. 961............................Dealer Cost $ .60
No. 2466—Contact only....Dealer Cost 2.08C

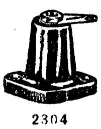
INSULEX INSULATORS

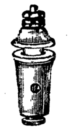
Made of white glazed Insulex . . . non-porous; low-loss.
All feed-thru types have cork washers.


2300 2301
2302

STAND OFF INSULATORS

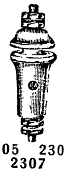
No.	Description	Height	Base Size	Dlr. Cost
2300	Little Pete	1"	½" x ⅞"	$10.00C
2301	Junior Pete	1⅜"	¾" x 1¼"	11.66C
2302	Big Pete	1⅞"	1" x 1½"	16.67C
2303	Beehive	2⅜"	2" Diam.	20.00C
2304	Jack Type	1½"	1" x 1½"	20.00C


2304


2321

FEED-THRU INSULATORS

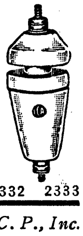
No.	Description	Ht.	Base Diam.	Mtg. Hole	Dlr. Cost
2305	Sub-Panel	1¾"	⅝"	$\frac{5}{16}$"	$15.00C
2306	Sub-Panel	2"	¾"	⅜"	20.00C
2307	Sub-Panel	2¾"	⅞"	$\frac{7}{16}$"	21.66C
2334	Large Sub-Panel	4"	1½"	⅝"	.53
2321	Jack Type	$2\frac{3}{16}$"	⅞"	$\frac{7}{16}$"	.30


2305 2306
2307

GIANT INSULEX INSULATORS

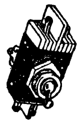
No.	Description	Ht.	Base Diam.	Mtg. Hole	Dlr. Cost
*2332	Feed thru	4"	2"	⅞"	.72
**2333	Feed thru	4"	2"	⅞"	.67

*With Wing Nuts **With Screws and Nuts


2332 2333

TOGGLE SWITCHES . . . KNIFE SWITCHES . . . SLIDER SWITCHES

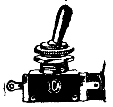
ICA TOGGLE SWITCHES



Furnished in Nickel or Antique Bronze. Capacity 1 Amp. 250 Volts. 3 Amps. 125 Volts. Mfd. by H & H for ICA.

No.	Shank Length	Description	Finish	Dlr. Cost
1230	⅜″	S.P.S.T.	Nickel	$.50
1232	⅜″	S.P.S.T.	Bronze	.50
1233	¾″	S.P.S.T.	Bronze	.60
1235	¾″	S.P.S.T.	Nickel	.60
1236	⅜″	S.P.D.T.	Nickel	.63
1237	¾″	S.P.D.T.	Nickel	.72
1238	⅜″	D.P.S.T.	Nickel	.84
1365	⅜″	D.P.D.T.	Nickel	1.00
1366	¾″	D.P.D.T.	Nickel	1.12

BAT-HANDLE TOGGLE SWITCH



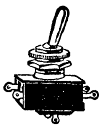
Made by H & H. Identical to toggle switches listed at left, except that handle is longer and shaped like a baseball bat.

Less on and off plate.

Nickel plated only—15/32″ shank.

No.	Description	Dealer Cost
1296	S.P.S.T.	$ .50
1297	S.P.D.T.	.63
1298	D.P.S.T.	.84
1299	D.P.D.T.	1.00

BAT HANDLE DOUBLE THROW SWITCH

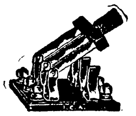


A sturdy double throw bat handle toggle switch featuring center "OFF" position. Made by H. & H. Has many uses: Television Antenna installations; for reversing motor direction; model railroads, etc.

Case Measurements: 1 13/16″ L., 11/16″ W., 1″ H., 7/16″ Shank.

No.	Dealer Cost
1386—Single Pole Double Throw	$1.08
1387—Double Pole Double Throw	1.65

ICA BAKELITE KNIFE SWITCHES

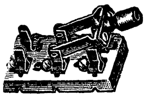


Hardware of brass, heavily nickel-plated. Mounted on highly polished bases of black BAKELITE. Firm contact assured.

No.	Description	Dlr. Cost	No.	Description	Dlr. Cost
1216	S.P.S.T.	$ .55	1220	3 P.D.T.	$1.33
1217	S.P.D.T.	.60	1221	4 P.S.T.	1.67
1218	D.P.S.T.	.75	1222	4 P.D.T.	2.00
1219	D.P.D.T.	.90	1364	5 P.D.T.	2.35
1360	3 P.S.T.	1.23			

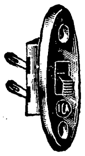
ICA PORCELAIN KNIFE SWITCHES

Moisture-proof base. Recommended for outdoor use. Hardware of brass, heavily nickel plated.



No.	Description	Base Size	Dlr. Cost
235	S.P.S.T.	1¾″x1″	$.25
236	S.P.D.T.	2⅝″x1″	.31
237	D.P.S.T.	1¾″x1⅝″	.44
238	D.P.D.T.	2⅝″x1½″	.54

ICA SLIDER SWITCHES



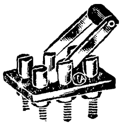
SMALL . . . COMPACT. Switch dimensions: 1½″ x ½″ x ¼″. S.P.S.T. includes chrome mounting plate.

No.	Description	Dealer Cost
1255	S.P.S.T.	$18.00C
1259	S.P.D.T.	18.00C
1260	D.P.D.T.	23.00C
1264	D.P.S.T.	22.00C

MINIATURE BAKELITE SWITCHES

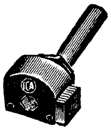
Can be mounted on panel or base. Black Bakelite base—highly nickel-plated brass parts with insulated handles.

No.	Description	Base Size	Dlr. Cost
2223	S.P.S.T.	1¼″x½″	$ .25
2224	S.P.D.T.	1¼″x½″	.42
2225	D.P.D.T.	1¼″x1″	.53
2226	D.P.S.T.	1¼″x1″	.50



ICA ROTARY SWITCHES

Rated 3 Amps. at 125 Volts. Over-all Length of shafts 1½″. Made by H & H for ICA. Underwriters Approved.

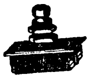


No.	Threaded Shank	Description	Dealer Cost
1228*	⅜″	S.P.S.T.	$ .67
1229*	1″	S.P.S.T.	.82
1286	⅜″	S.P.D.T.	.80
1287	1″	S.P.D.T.	.97
1288	⅜″	D.P.D.T.	1.25
1289	1″	D.P.D.T.	1.35

*Rated 3 Amps. at 250 V.

ICA HI-POWER SWITCH

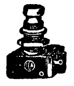
Push Button Type



Designed to break primary circuit when rack door is open. D.P.S.T. Made by H & H for ICA. Capacity 12 Amp. 125 Volt. Overall size 1¾″ long, ¾″ wide, ¾″ high, 7/16″ shank.

No. 1280........Dealer Cost $1.58

ICA PUSH-BUTTON SWITCH

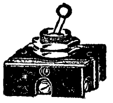


Single pole 2 circuit momentary switch. One circuit is "ON"; other normally "OFF." One Amp., 125 Volt, made by H & H for ICA. Shank ⅝″ long.

No. 1282........Dealer Cost $1.05

ICA EXTRA HEAVY DUTY SWITCH

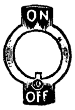
D.P.D.T. With Neutral Center



An extra large heavy duty, Double Pole, Double Throw Switch with neutral position in the center for use in heavy current circuits such as transmitters, power amplifiers, motors, etc. Contacts have fast "break" which reduces the tendency to arc. Rated at 10 Amps., 125 Volts. Size of switch case, 2⅛″ long, 1″ high, 1¼″ wide. Mounting sleeve diameter ¾″.

No. 1283 ....Dealer Cost $3.75

"ON-OFF" PLATE



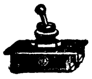
For Toggle Switch

Nickel Plated

No.	Dlr. Cost
1300	$3.35C
Antique Bronze	
1300BR	3.35C

ICA POWER SWITCH

(Toggle Type)

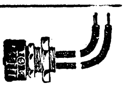


Characteristics and dimensions same as No. 1280 described above.

No. 1281

Dealer Cost $1.08

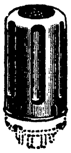
ICA ROTARY CANOPY SWITCH



Single pole switch ¼″ shank with brown bakelite knob and 6″ leads—1 ampere—250 volts.

No. 1257..................................Dealer Cost $ .42

GT AND GT/G TYPE TUBE SHIELDS



Latest type seamless, drawn shell type. Length 2¼″.

No.	Dlr. Cost
1744—Open top* For tube diam. 1.218″	$10.00C
1745—Closed top* For tube diam. 1.218″	10.00C
1746—Open Top** For tube diam. 1.165″	10.00C
1747—Closed top**† For tube diam. 1.165″	10.00C

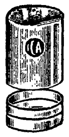
*For GT and GT/G tubes with large metal base.

**For GT tubes with small metal base.

†For Loktal tubes.

ICA COIL SHIELDS

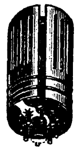
With Detachable Base



A sturdy coil shield made of aluminum with a detachable base.

No.	Dealer Cost
1539—2⅛″ x 3″ High	$ .42
1540—2½″ x 3½″ High	.47
1549—3″ x 3½″ High	.50

FORM FIT TUBE SHIELDS



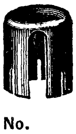
A tube shield that assures a snug, positive fit. Vertical grooves provide flexibility. Includes ground clip as illustrated. Protects tubes against excessive vibration.

No. 1727B—For GT; GT/G and Loktal tubes. Length 2½″...............**Dealer Cost $10.00C**

No. 1729B—For GT and GT/G tubes. Length 2¾″...............**Dealer Cost 10.00C**

ICA GRID CAP SHIELDS

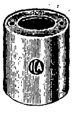
(For Metal Tubes)



Fits firmly over grid cap, affording complete shielding. Slotted cap permits passage of grid wire.

No.	Dealer Cost
1552	$10.83C
1558—With Bakelite Insert	20.00C

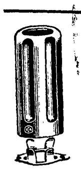
ICA 807 TUBE SHIELD



For use with Transmitter Pentodes, and Tetrodes, to prevent oscillation. Can also be used on RK 20, RK 39 and 804 tubes.

No.	Dealer Cost
1545	$ .42

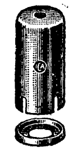
MINIATURE TUBE SHIELD AND CLIP



For miniature tubes with T5½ bulbs. Includes base clip. Length 1⅞″ Mtg. Centers (base clip) ⅞″ for standard miniature tubes.

No. 1735.........Dealer Cost $10.00C

ALUMINUM TUBE SHIELD with Detachable Base



Will fit on all standard Screen Grid Tubes. Supplied with base. Measures 2 1/16″ diameter x 3 15/16″ high.

No. 1541 ......Dealer Cost $0.33

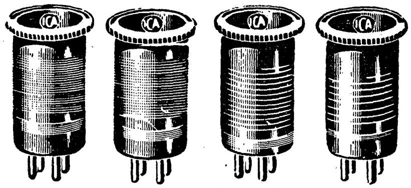
SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

INSULINE COILS . . . COIL FORMS

SHORT-WAVE AND BROADCAST PLUG-IN COILS

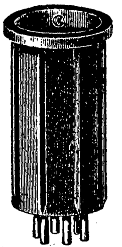


4 Prongs . . . 2 Windings

Wound on Low-Loss Bakelite Forms. Diam. 1¼"; height 2¼". Rim handle for easy changing. Uniformly spaced winding. Used with either 140 or 150 mmfd. tuning condenser.

No.		Dealer Cost
1471	Set of 4 short wave coils—from 9½ to 217 Meters	$2.50
1473	Set of 2 Broadcast coils—190 to 550 Meters	2.00

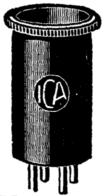
ICA LARGE LOW-LOSS "RIBBED" COIL FORMS



For use in 4, 5, and 6-prong sockets. Designed for easy grooving or threading. Size 3⅝ x 1⅝".

No.	Dealer Cost
1051—4-Prong	$ .45
1052—5-Prong	.45
1053—6-Prong	.50

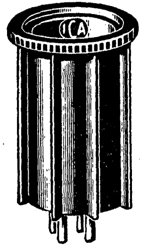
ICA SMALL BAKELITE COIL FORMS



Equipped with special rim on top making it easy to insert and pull out of socket. Black Bakelite. Ridge is grooved for color coding.

No.	Dealer Cost
1108B—4-Prong	$ .35
1113B—5-Prong	.37
1114B—6-Prong	.38

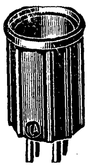
ICA TRANSMITTING COIL FORMS



Made of Low-Loss RX-47 Di-electric. Coil forms ribbed for air space winding. Knurled flange for easy handling. Supplied in standard bases, either 4, 5, or 6 prongs to fit standard sockets. Eight ¼" ribs insure low-loss winding.

No.	Dealer Cost
2670—4-Prong	$ .73
2671—5-Prong	.77

ICA SMALL RIBBED BAKELITE COIL FORMS

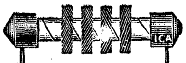


Rugged and durable, these coil forms are designed for long service. Measures 1⅜" diameter, 2¼" high with molded ribs for low-loss winding and special rim on top. There is a recess in the rim to insert the ICA Round Labels to signify wave lengths.

No.	Dealer Cost
2158—4-Prong	$ .35
2159—5-Prong	.40
2160—6-Prong	.40

INSULINE CHOKES

INSULEX R.F. CHOKE COIL

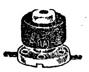


No. 277
Inductance
2.5 M.H.
D.C. Resist.
32 ohms
Current Cap.
150 ma.
Dlr. Cost $.37

HIGH FREQUENCY. Consists of four narrow sections each universally wound spaced on an Insulex form. Designed especially for high frequency receivers.

Low distributed capacity. Supplied with wire leads for mounting. May be mounted in grid leak clips.

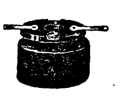
ICA INSULEX R.F. CHOKES



Can be used in any circuit or position. Designed particularly for short wave but equally effective over the broadcast band. Insulex forms are used with a special Radio Frequency Lacquer for impregnation and ample moisture proofing. Solder lugs for firm electrical and mechanical contacts.

No.	Inductance	D.C. Resis.	Current Cap.	Dealer Cost
1777	2.5	30	150	$ .45
1775	5.5	57	150	.57
1774	10	73	150	.60
1772	30	136	125	.67
1773	60	196	125	.87
1771	80	222	125	.92

IRON CORE HIGH "Q" R.F. CHOKES

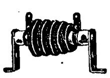


A high impedance choke coil with low distributed capacity winding on magnetic core, specially impregnated for high frequency purposes. Designed for minimum loss with smallest diameter and space requirements, and minimum D.C. resistance. Ideal for detector plate circuits and R.F. filtering systems in general.

No.	Ind. M.H.	D.C. Res. Ohms	Dealer Cost
6200	2.5	17	$1.07
6201	3.5	22	1.17
6202	5.5	28	1.17
6203	10	55	1.23
6204	30	83	1.43
6205	60	142	1.60
6206	80	168	1.70
6207	125	214	2.00

ICA TRANSMITTING R.F. CHOKES

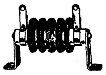
Tapered Sections



Wound on Insulex low-loss core. Has a continuous universal winding in five tapered sections. Designed for maximum impedance in amateur bands from 160 meters downward.

No.	Ind. M.H.	Cur.Ma.	Res. Ohms	Dealer Cost
266	2.8	1000	5	$2.00
267	5.3	600	12.5	1.83

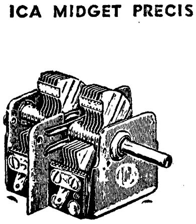
HEAVY DUTY TRANSMITTING CHOKES



Heavy duty transmitting chokes designed for durable service. Extremely low power loss and distributed capacity. Coils securely fastened.

No.	Ind. M.H.	Cur. Cap. Ma.	D.C. Res. Ohms	Dealer Cost
280	2.5	1000	5	$1.83
278	5.6	600	12	1.67

ICA MIDGET PRECISION CONDENSERS



Better mechanical design insures constancy of calibration and uniformity between units. Ball-bearings on both ends of shaft insure long life without wear or side play. Heavy brass springs make direct contact with rotor shaft, insuring a clean wiping contact at all times.

Single Gang Condenser

No.		Dealer Cost
533	135 mmfd.	$2.17

Two Gang Condenser

538	135 mmfd.	2.58
534	365 mmfd.	2.58

Three Gang Condenser

532	135 mmfd.	3.25
531	365 mmfd.	3.25

SUPERHETERODYNE TYPE

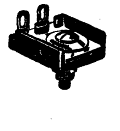
Designed for 455KC IF. RF section is 27 plates; 435 Mmfd. Oscillator Section is 19 plates; 173 Mmfd. Measurements similar to two gang condensers shown above.

Overall Width: 1 13/16"   Overall Height: 2"

Overall Length: 3 3/16"

No. 545........Dealer Cost $2.58

ICA CERAMIC PADDING CONDENSERS



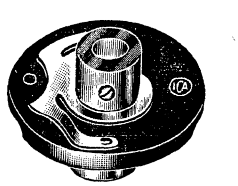
Compact, yet rugged Padding Condensers. Designed for aligning tandem condensers, short wave band switch coils, antenna trimmers, etc. Uses high grade Mica and Phosphor Bronze Spring contacts.

No.	Min. Cap.	Max Cap.	Dlr. Cost
611	4.0 mmfd.	40 mmfd.	$ .37
612	12.0 mmfd.	100 mmfd.	.37
613	70.0 mmfd.	350 mmfd.	.40
614	160.0 mmfd.	500 mmfd.	.40

Net

SINCE 1921 insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

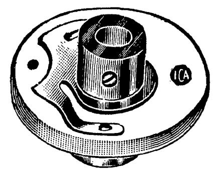


ICA BAKELITE FLEXIBLE SHAFT COUPLING

Flexible phosphor bronze spring contact mounted on a round bakelite disc. 1⅛″ diam. Has ¼″ bushing.

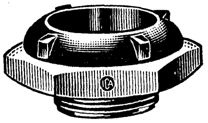
No. 2142................Dealer Cost $ .50

ICA INSULEX FLEXIBLE SHAFT COUPLING



Flexible phosphor bronze spring contact. Mounted on Insulex disc for efficient low-loss coupling. 1⅛″ diam. ¼″ bushing.

No. 2143................Dealer Cost $ .58

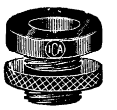


BAKELITE BUSHINGS

Molded bakelite bushings for complete insulation. Strong seamless threads. Heat resisting to 300°F., Complete with stamped lock nuts.

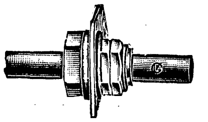
No.	Hole Size	Dealer Cost	No.	Hole Size	Dealer Cost
606	17/64″	$10.00C	609	9/16″	$11.68C
607	5/16″	10.00C	610 (Two holes)	7/32″	13.35C
608	13/32″	11.66C			

ICA INSULATED BUSHINGS



Equipped with knurled nut that can be tightened easily. Used as insulated grommet on condenser shafts, panel bearing, etc.

No.	Dealer Cost
670—Black. ⅛″ Hole, ⅜″ Diam., ⅜″ Long	$13.33C
671—Red. ⅛″ Hole, ⅜″ Diam., ⅜″ Long	13.33C
672—Black. ¼″ Hole, ½″ Diam., 7/16″ Long	16.68C
673—Red. ¼″ Hole, ½″ Diam., 7/16″ Long	16.68C

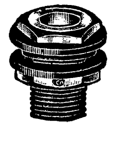


ICA PANEL BEARING ASSEMBLY

Can be used with either rigid or flexible couplings for mounting volume controls, condensers, etc., at a distance away from the panel. Will fit on panels up to 5/16″ thickness.

No. 1248—Overall length 3″..................................Dealer Cost $ .30
No. 1249—Overall length 6″..................................Dealer Cost .35

UNIVERSAL PANEL BEARING



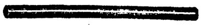
Designed to accommodate ¼″ shaft wherever a panel bushing is desired. Furnished with nut and insulating washers.

No. 1250....................................Dealer Cost $15.00C

ICA BRASS EXTENSION RODS

No.	Dealer Cost
2117—6″ L., ¼″ O.D.	$18.00C
2118—12″ L., ¼″ O.D.	$ .36

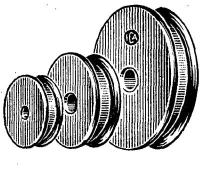
FENOLINE EXTENSION RODS



No.	Dealer Cost
2120—6″ L., ¼″ O.D.	$15.00C

ALUMINUM IDLER PULLEYS

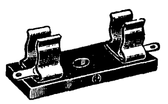
Precision made. Distortion free. Non-warping. Permits closer tolerances. Supplied in any quantity in any type — with or without shoulders. Listed here are typical sizes without shoulders, hole diam. .128″.

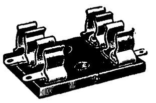


No.	O.D.	Cord Diam.	Dlr. Cost
601	⅜″	¼″	$3.35C
602	7/16″	5/16″	3.67C
603	½″	⅜″	4.00C
604	⅝″	½″	4.35C
605	¾″	⅝″	4.66C

ICA BAKELITE BASE FUSE MOUNTINGS FOR 3 AG TYPE FUSES

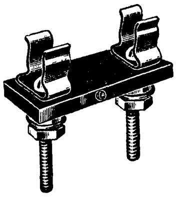
Flush Type Mounting





For radio or automotive fuses. Countersunk center hole for mounting. Equipped with soldering lugs.

No. 2340—Single Pole...Dealer Cost $13.33C
No. 7201—Double Pole...Dealer Cost 21.66C

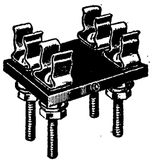


Panel Type Mounting

Equipped with 6-32 mounting screws.

No. 2341—Single Pole
Dealer Cost $16.67C

No. 7203—Double Pole
Dealer Cost $.27

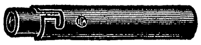


FOR 8 AG TYPE FUSES

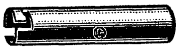
FLUSH MOUNT No.	Dealer Cost	PANEL MOUNT No.	Dealer Cost
7202—Single Pole	$11.66C	7205—Single Pole	$15.00C
7204—Double Pole	21.66C	7206—Double Pole	15.00C

STANDARD FUSE HOLDERS

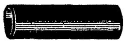
Top quality fuse holder and parts



2348



2360

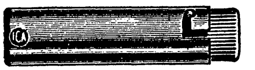


2364

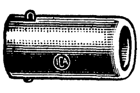
No. 2348—Standard fuse holder complete..........Dealer Cost $12.00C
No. 2360—Female sleeve only...........................Dealer Cost 3.00C
No. 2364—Fibre Insulator only..........................Dealer Cost 5.33M

JUMBO FUSE HOLDERS

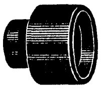
Fuse holders of various needed values



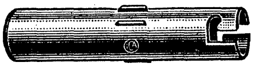
No. 2349



No. 2359

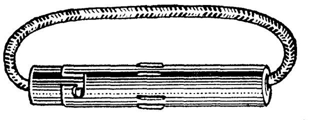


No. 2367



No. 2358

	Dealer Cost
No. 2349—SFE 30 Amperes (2⅝″ L. x ½″ d.)	$20.00C
No. 2346—SFE 20 Amperes (2½″ L. x ½″ d.)	20.00C
No. 2345—SFE 14 Amperes (2¼″ L. x ½″ d.)	20.00C
No. 2344—SFE 9 Amperes (2⅛″ L. x ½″ d.)	20.00C
No. 2359—Male sleeve only	3.75C
No. 2367—Bakelite bushing only	3.00C
No. 2358—Female sleeve only	5.00C

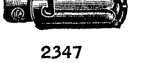


PRE-WIRED JUMBO FUSE HOLDER

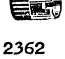
Suitable for 3 A.G. 20 amp. or SFE 14 amp. fuse. Eliminates necessity of soldering when changing fuse holder. Wire is merely severed, stripped and placed in line.

No. 2368.. Dealer Cost $ .27

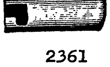
ANTENNA CONNECTOR . . . PARTS



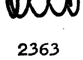
2347



2362



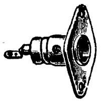
2361



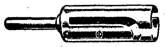
2363

No. 2347—Antenna Connector Complete..........Dealer Cost $7.50C
No. 2362—Male part only (also part for 2348). Dealer Cost 1.80C
No. 2361—Female sleeve only............................Dealer Cost 2.10C
No. 2363—Spring only for 2347 and 2348........Dealer Cost 6.00M

MOTOROLA PIN PLUG . . . SHIELDED JACK



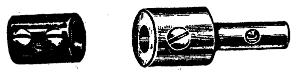
No. 2378



No. 2375

No. 2375—Motorola Pin Plug............................ Dealer Cost $ 8.33C
No. 2378—Motorola Shielded Jack..................... Dealer Cost 13.33C

SINCE 1921 **insuline** *Corporation of America*
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS



ICA SH/FT COUPLINGS AND EXTENSION RODS

To increase lengths of shafts of different diameters. In two types—Brass . . . Fenoline.

Brass Couplings and Reducers

No.	Length	Hole	O.D.	Dlr. Cost
2105	¾″	¼″ coupler	7/16″	$15.00C
2106	¾″	⅜″ coupler	9/16″	15.00C
2107	¾″	⅜″ to ¼″ coupler	9/16″	15.00C
2111	1⅛″	¼″ to ¼″ shaft	7/16″	18.00C
2112	1⅛″	¼″ to ⅜″ shaft	9/16″	18.00C
2113	1⅛″	⅜″ to ¼″ shaft	7/16″	18.00C

ICA Fenoline Couplings and Reducers

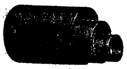
No.	Length	Hole	O.D.	Dlr. Cost
2116	¾″	¼″ coupler	7/16″	15.00C
2109	¾″	⅜″ to ¼″ coupler	9/16″	15.00C
2110	1⅛″	¼″ to ¼″ shaft	7/16″	18.00C

Long Extension Couplings

Made of Brass with extra long extension.

No.	Length	I.D.	O.D.	Dlr. Cost
2123	1¾″	¼″	7/16″	$18.00C

BAKELITE AND FENOLINE TUBING



ICA tubing is strong mechanically, has extremely low electrical absorption and is highly resistant to moisture. Absolute perfection in winding of coils is assured by the use of ICA tubing—thus affording relief from complaints or failure in performance.

Finished in Natural and Black Colors
Small sizes up to one inch in Black only.

1/16″ Wall Thickness, Full Lengths.
Approximately 30 to 48″

BAKELITE No.	BAKELITE Dlr. Cost Per Ft.	Size O.D.	FENOLINE No.	FENOLINE Dlr. Cost Per Ft.
100	$ .65	¼″	161	$ .58
101	.78	⅜″	162	.63
102	.83	7/16″	163	.70
103	.90	½″	164	.73
104	.97	⅝″	165	.77
105	1.07	¾″	166	.78
106	1.12	⅞″	167	.87
147	1.17	1″	134	.78
148	1.33	1¼″	135	.93
149	1.42	1½″	136	.95
150	1.55	1¾″	137	1.07
151	1.75	2″	138	1.17
152	1.80	2¼″	139	1.27
153	2.17	2½″	140	1.40
154	2.40	2¾″	141	1.67
155	2.75	3″	142	1.83
156	2.90	3¼″	143	1.97
157	3.10	3½″	144	2.32
158	3.10	3¾″		
159	3.80	4″		

STOCK SIZES OF BLACK AND BROWN FENOLINE TUBING

Individual lengths tubing in following diam.: 1″; 1¼″; 1½″; 1¾″; 2″; 2¼″; 2¾″; 3″; Wall thickness 1/16″.

No.	Dealer Cost
2131—3″ long—1″ O.D. to 3″ O.D.	$ .45
2132—4″ long—1″ O.D. to 3″ O.D.	.55
2133—6″ long—1″ O.D. to 3″ O.D.	.78

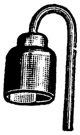
When ordering, specify exact diameter.

SPECIAL LENGTH BAKELITE TUBING

Cut to Order — Wall Thickness to 1/16″

Outside diameters range from 1″ to 4″. Prices on request. Other diameters and thicknesses quoted on request.

FENOLINE INSULATED GRID CAPS



Improved type for standard and transmitting tubes. Sturdy cadmium plated brass clip. Furnished with 12″ wire.

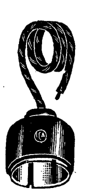
For 866 Transmitting Tubes

No. 683—Black Dealer Cost $.42

For Standard Glass Receiving Tubes with small caps

No. 680—Red ....Dealer Cost $20.00C
No. 681—Black..............Dealer Cost 20.00C

RUBBER INSULATED GRID CAPS



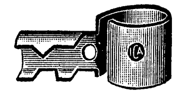
For Transmitting Tubes

New improved type. Insulation made of special soft rubber over spring bronze.

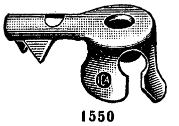
For 866 Type Tubes

No.	Dealer Cost
870—With Leads	$ .25

SPRING ACTION GRID CAPS



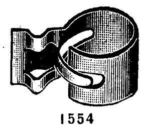
1553



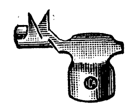
1550

For all types of tubes. Positive contact. All grid caps are hot tinned ready for soldering.

No.	Dealer Cost
1550—For standard glass receiving tubes with small caps (.360 dia.)........	$7.50M
1551—For tubes with miniature caps (.250 dia.)	7 50M
1553—For glass tubes..........................	8.35M
1554—For glass tubes..........................	8.35M

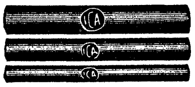


1554



1551

ICA "INSULOID" RODS



Made of phenolic material of high electrical insulating properties and great tensile strength.

No.	Color	Size	Dlr. Cost
2175	Black	12″ x ¼″	$ .30
2176	Black	24″ x ¼″	.53
2179	Black	12″ x ⅜″	.42
2180	Black	24″ x ⅜″	.85
2183	Black	12″ x ½″	.57
2184	Black	24″ x ½″	1.13

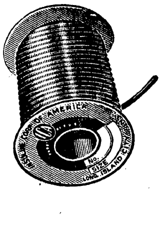
BAKELITE RODS / FENOLINE RODS

Approximate Lengths: 3 ft.

BAKELITE No.	Diam.	Dlr. Cost Per Ft.	FENOLINE No.	Diam.	Dlr. Cost Per Ft.
175	¼″	$ .87	168	¼″	$ .57
178	5/16″	1.05	169	⅜″	.77
176	⅜″	1.25	170	½″	.95
177	½″	1.65			

ICA FLEXIBLE SPAGHETTI TUBING

20 Foot Lengths



A flexible tubing in attractive colors. Will accommodate from No. 10 to No. 18 wires.

Furnished in one length—20 feet long on handy spools.

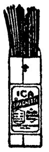
No.	Color		Dealer Cost
210	Red	Per Spool	$ .84
211	Yellow	Per Spool	.84
212	Brown	Per Spool	.84
213	Green	Per Spool	.84
214	Black	Per Spool	.84

500 Foot Spools, spaghetti tubing, same grade and colors as above. Specify color per spool.

No. 197............................Dealer Cost $19.16

ICA SPAGHETTI TUBING

For No. 10 to No. 18 gauge wire. Guaranteed not to crack. Furnished in 30″ lengths.



No. Color	Dealer Cost per length
182—Red	$10.00C
183—Yellow	10.00C
184—Brown	10.00C
185—Green	10.00C
186—Black	10.00C

SMALL SIZE SPAGHETTI TUBING

200—Red	$10.00C
201—Yellow	10.00C
202—Black	10.00C

LARGE SIZE SPAGHETTI TUBING

Supplied in 36″ lengths. Diameter 9/64″ I.D. x 3/16″ O.D.

No. 196—Supplied in black only
Dealer Cost—per length $.34

ICA GIANT SLEEVING

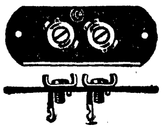
Made of high voltage insulation saturated cambric material. Inside diameter ⅜″. For Insulating Resistors, Small Condensers, Wire Cables, Leads, etc. 36″ lengths.

No. 198...............................Dealer Cost $.34

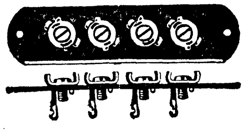
SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS



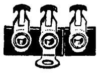
ICA TERMINAL STRIPS

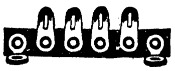


Specially suited for amplifiers, mixers, receivers, etc. Made of 3/32″ heavy black Bakelite, engraved in white. Terminals are brass cadmium plated.

No.	Terminals	Marking	Mtg. Ctrs.	Size	Dealer Cost
2420	2	Plain	1½	⅞ x 2	$13.35C
2419	2	A & G	1½		13.35C
2418	2	Output	1½		13.35C
2417	2	Input	1½		13.35C
2414	3	Plain	2	⅞ x 2½	18.33C
2415	3	1, 2, 3	2		20.00C
2413	4	Plain	2½	⅞ x 3	23.32C
2408	4	1, 2, 3, 4	2½		.25
2405	5	Plain	3	⅞ x 3½	.28
2406	5	1, 2, 3, 4, 5	3		.32
2404	6	Plain	3½	⅞ x 4	.34
2402	6	1, 2, 3, 4, 5, 6	3½		.40
2412	7	Plain	4	⅞ x 4½	.42
2411	7	1, 2, 3, 4, 5, 6, 7	4		.45
2410	8	Plain	4½	⅞ x 5	.47
2409	8	1, 2, 3, 4, 5, 6, 7, 8	4½		.52
2424	9	Plain	5	⅞ x 5½	.52
2423	9	1, 2, 3, 4, 5, 6, 7, 8, 9	5		.57
2422	10	Plain	5½	⅞ x 6	.57
2421	10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	5½		.63

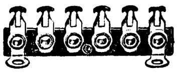
BAKELITE TERMINAL MOUNTING STRIPS





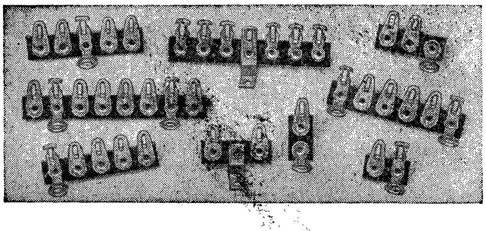
Type A

Mounting tie strips for fastening Resistors, Condensers, etc. Mounting Lug hole diameter .140″. Type A shows non-ground mounting lug. Type B shows combination grounding-mounting lug:



Type B

No.	Type	Terminals	Mtg. Centers	Mounting Lugs	Dealer Cost
2434	A	1	One Hole	1	$1.92C
2455	B	1		1	2.20C
2435	A	2		1	2.70C
2456	B	2		1	2.70C
2436	A	3	1½	2	4.75C
2457	B	3	1½	2	4.75C
2437	A	4	1⅞	2	5.75C
2458	B	4	1⅞	2	5.75C
2438	A	5	2¼	2	6.75C
2459	B	5	2¼	2	6.75C
2439	A	6	1⅞	2	8.50C
2460	B	6	1½	2	8.50C
2440	A	7	1½	2	9.25C
2461	B	7	1½	2	9.25C
2441	A	8	1⅞	2	10.50C
2462	B	8	1⅞	2	10.50C

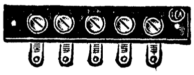


SPECIFICATION TERMINAL STRIPS

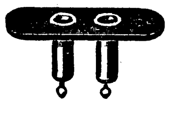
Special type terminal strips with terminals in any required position, including offset bracket type. Made to specifications. Send us your print.

BAKELITE TERMINAL STRIPS

Brown bakelite 1/16″ thick. Suitable light duty radio work, experimental purposes, etc.



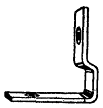
No.	Terminals	Mtg. Ctrs.	Dlr. Cost
2520	2	1 5/16	$ 9.00C
2521	3	1¾	12.00C
2522	4	2 3/16	15.00C
2523	5	2⅝	18.00C
2524	6	3 1/16	20.00C
2528 Terminal Lug & Screw only……			3.46C



TWIN JACK STRIP

With two terminals. Takes standard phone tips. Base width 1 1/8″. 1 11/16″ between Mounting holes.

No. 2443 ……………..Dealer Cost $15.00C

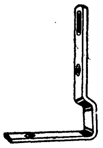


Terminal Strip Offset Mounting Bracket

For more rigid mounting of terminal strips. Mounting hole for No. 6 screw.

No. 2430….Dlr. Cost $1.67C

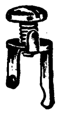
Terminal Strip Offset Mounting Bracket and Lug Combination



For sturdy mounting of terminal strips. Affords solder connection for ground. Mounting hole for No 6 screw.

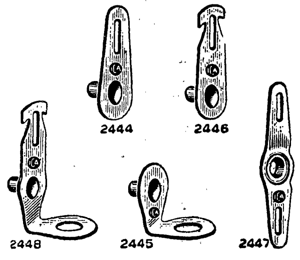
No. 2431……..Dlr. Cost. $1.67C

TERMINAL LUGS



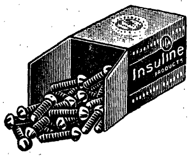
No.	Dealer Cost
2425—Lugs only (less screws) ……..	$4.03C
2426—Terminal Screws, ⅜″ L. ……………	1.07C

TERMINAL LUGS



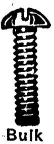
No.	Description	Dealer Cost
2444	—Terminal Lug ……………………	$5.00M
2445	—Mounting Lug— #6 hole ………………	.83C - 5.00M
2446	—Notched Terminal Lug	.67C - 5.00M
2448	—Combination Term. and Mounting Lug— #6 hole ………………	1.00C - 8.00M
2638	—Same as 2448— #8 hole ………………	1.00C - 6.66M
2447	—Double lug with center eyelet ………..	1.00C - 8.00M
2463	—Combination lug—eyelet type and bracket..	.83C - 5.00M

ELECTRONIC HARDWARE



A wide range of hardware for varied application. Especially suitable for the requirements of the radio, television, laboratory, engineering and servicing fields.

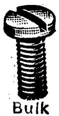
ROUND HEAD MACHINE SCREWS NICKEL-PLATED



Packed 500 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5504	2-56 x ¼″ long	$4.17M
5500	4-36 x ¼″ long	4.17M
5501	4-36 x ½″ long	4.17M
5502	4-36 x ¾″ long	4.50M
5507	6-32 x ¼″ long	4.42M
5511	6-32 x ⅜″ long	5.00M
5508	6-32 x ½″ long	5.16M
5509	6-32 x ¾″ long	5.50M
5510	6-32 x 1″ long	6.50M
5514	8-32 x ⅜″ long	5.42M
5515	8-32 x ½″ long	6.00M
5517	8 32 x 1″ long	7.50M
5521	10-32 x ½″ long	7.50M

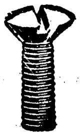
BINDING HEAD MACHINE SCREWS



Packed 100 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5546	6-32 x 3/16″ long	$9.00M
5547	6-32 x ¼″ long	9.00M
5548	6-32 x ⅜″ long	9.00M

OVAL HEAD MACHINE SCREWS NICKEL PLATED

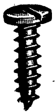


Packed 100 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5710†	10-32 x ⅝″ long	$7.50M
5554	8-32 x 5/16″ long	7.50M

†For Transmitting Racks.

PARKER-KALON SELF-TAPPING SCREWS

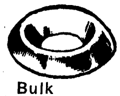


Packed 500 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
*5562	No. 3 x 3/16″ long	$1.00C-$9.16M
5555	No. 4 x ½″ long	1.17C-10.00M
5556	No. 6 x ¼″ long	1.50C-10.00M
5557	No. 6 x ⅜″ long	1.50C-13.33M
5558	No. 7 x ½″ long	1.75C-15.00M
5559	No. 10 x ¾″ long	2.00C-18.33M

*Drive Screws

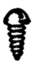
CUP WASHERS



Packed 100 to Package

Bulk Cat. No.	Description Hole Size	Bulk Dlr. Cost
5712	No. 8	$5.00M
5713	No. 10	$1.17C-$5.00M

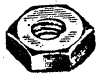
ESCUTCHEON PLATE SCREWS



Packed 500 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5677	No. 1 x ¼″ long	$11.00M

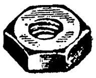
PLATED STEEL HEXAGON NUTS



Packed 500 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5572	4-36 x ¼	$5.00M
5573	4-36 x 3/16	5.00M
5577	6-32 x 5/16	5.50M
5576	6-32 x ¼	5.50M
5580	8-32 x 5/16	5.50M
5584	10-32 x ⅜	$ .85C- 6.66M
5583	¼-20 x 7/16	1.00C- 8.33M
5579	¼-32 x ⅜	8.00M
5575	⅜-32 x ½	2.50C-22.50M

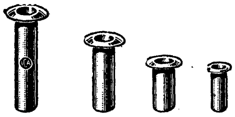
PLATED BRASS HEXAGON NUTS



Packed 100 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5564	4-36 x 3/16	$ 5.83M
5566	6-32 x ¼	8.33M
5567	6-32 x 5/16	8.35M
5570	8-32 x 5/16	10.00M
5574	⅜-32 x ½	10.83M

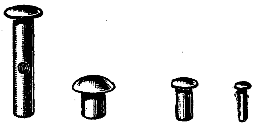
BRASS EYELETS



Packed 500 to Package

Bulk Cat. No.	Diam. Shank	Length	Bulk Dlr. Cost
5672	.115	5/16	$6.00M
5671	.125	5/16	5.70M
5670	.132	3/16	5.10M

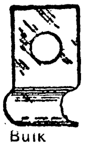
NICKEL PLATED TUBULAR STEEL RIVETS



Packed 500 to Package

Bulk Cat. No.	Diam. Shank	Length	Bulk Dlr. Cost
5730	⅛	5/32	$5.00M
5663	⅛	3/16	6.00M
5664	⅛	¼	6.00M
5665	⅛	5/16	6.30M

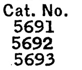
STEEL CABLE CLAMPS PLATED



Packed 500 to Package

Bulk Cat. No.	Description Length	Diam. Bend	Bulk. Dlr. Cost
5697	¾	5/16	$1.33C-$12.00M
5698	15/16	9/16	1.67C- 15.00M

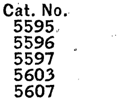
NICKEL PLATED SPRING CLIP



Packed 100 to Package

Bulk Cat. No.	Description Width	Length	Bulk Dlr. Cost
5691	3/16	11/16	$15.00M
5692	5/16	13/16	16.67M
5693	⅜	1	19.16M

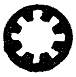
FLAT STEEL PLATED WASHERS



Packed 500 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5595	For No. 6 Screw	$2.50M
5596	For No. 8 Screw	2.50M
5597	For No. 10 Screw	2.50M
5603	For ¼″ Screw	3.75M
5607	For ⅜″ Screw	4.17M

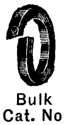
EVERLOCK LOCKWASHERS



Packed 500 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5592	For No. 6 Screw	$3.33M
5593	For No. 8 Screw	3.75M
5594	For No. 10 Screw	4.17M

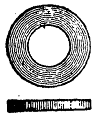
KANTLINK SPLIT TYPE LOCKWASHERS



Packed 500 to Package

Bulk Cat. No.	Description	Bulk Dlr. Cost
5589	For 6-32 Screw-1/32″ thick	$3.33M
5590	For 8-32 Screw-1/32″ thick	3.33M
5591	For 10-32 Screw-3/64″ thick	3.33M
5602	For ¼-32 Screw-1/16″ thick	4.33M

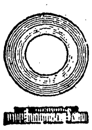
FLAT FIBRE WASHERS



Packed 500 to Package

Bulk Cat. No.	Description Diam.	Thick.	Hole	Bulk Dlr. Cost
5601	5/16	1/16	3/32	$4.17M
5612	⅜	1/16	⅛	4.83M
5609	½	1/32	5/32	5.00M
5626	⅜	1/16	5/32	5.00M
5605	⅜	1/16	7/32	5.00M
5610	½	.020	5/16	5.00M
5611	⅝	1/32	⅜	6.42M

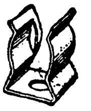
FIBRE SHOULDER WASHERS



Packed 500 to Package

Bulk Cat. No.	Description Overall Diam.	Shoulder Diam.	Overall Hgt.	Bulk Dlr. Cost
5618	5/16	3/16	3/32	$5.83M
5620	7/16	7/32	3/32	6.66M
5615	⅜	¼	5/64	5.83M
5619	7/16	5/16	⅛	6.66M
5616	½	5/16	1/16	5.83M
5624	½	⅜	3/64	6.66M
5628	⅝	½	3/32	8.35M

MIDGET FUSE CLIPS

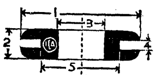


(For ¼″ Glass Fuses)

Packed 100 to Package

Bulk Cat. No.	Height	Length	Bulk Dlr. Cost
5681	7/16″	¼″	$15.00M

ICA FLEXIBLE RUBBER GROMMETS



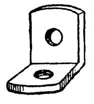
Packed 100 to Package

Bulk Cat. No.	(3) Hole Size	(1) O.D.	(2) Thickness	(4) Slot	(5) Mtg. Width	Bulk Dlr. Cost
5633	7/64	½	9/32	3/32	19/64	$2.92C
5634	⅜	21/32	¼	1/16	7/16	3.08C
5635	¼	½	5/16	5/32	11/32	3.33C
5639	7/32	7/16	3/16	1/16	11/32	2.42C
5637	¼	⅝	⅜	1/16	13/32	2.75C
5641	½	1	⅜	5/32	¾	6.25C
5642	5/16	11/16	¼	1/16	½	3.08C
5687	5/16	⅝	¼	1/16	⅜	2.75C
AN GROMMET (931-4-7)						
5684	¼	⅝	3/16	1/16	7/16	$5.90C

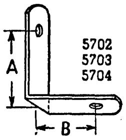
SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS



ANGLE BRACKETS



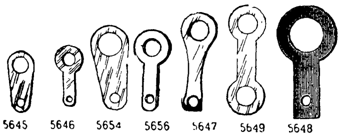
Packed 100 to Package

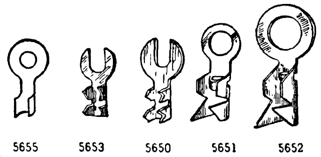
†One Hole Tapped—One Plain.
‡One Slot—One Hole.

Bulk Cat. No.	A	B	Width	Bulk Dlr. Cost
5702	9/32	9/32	5/16	$2.08C
5703	3/8	3/4	3/8	2.25C
5704	9/32	1 1/8	3/8	3.50C
5705	5/16	5/16	1/2 †	4.17C-28.85M
5706	3/8	9/16	3/8 ‡	2.08C
5707	5/8	13/16	3/8 ‡	2.67C

BRASS TINNED TERMINAL LUGS

Packed 500 to Package

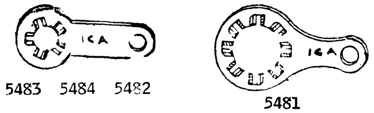


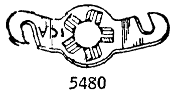


Bulk Cat. No.	Length	Hole Size	Bulk Dlr. Cost
5645	17/32	No. 8	$ .72C-$4.62M
5654	7/8	1/4	.72C- 4.62M
5646	1/2	No. 6	.67C- 5.00M
5656	11/16	No. 6	.56C- 4.01M
5647	7/8	No. 10	.72C- 4.62M
5649	15/16	No. 8	6.50M
5648	1	5/16	6.00M
5655	11/16	No. 8	.80C- 4.81M
5653	9/16	No. 6	.80C- 4.81M
5650	3/4	No. 6	.80C- 6.00M
5651	13/16	No. 10	1.04C- 7.21M
5652	1 1/16	1/4	1.44C-12.66M

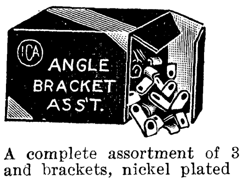
EVERLOCK TERMINAL LUGS

Packed 500 to Package





Bulk Cat. No.	Length	Hole Size	Bulk Dlr. Cost
5480	11/16	No. 6	$1.25C-11.00M
5481	13/16	1/4	1.12C- 8.08M
5482	3/4	No. 4	1.12C- 8.08M
5483	3/4	No. 6	1.12C- 8.08M
5484	7/8	No. 8	1.12C- 8.08M

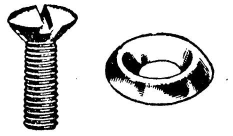


ICA ANGLE AND BRACKET ASSORTMENT

A complete assortment of 30 popular angles and brackets, nickel plated finish. This combination of angles and brackets has been carefully selected to fill a wide variety of requirements. Packed for ready availability.

No. 5800..............................Dealer Cost $.60

HANDY RACK SCREW AND WASHER ASSORTMENT



Packed in handy ICA jars. Includes 25 Oval Head Screws (10-32 x 5/8") and 25 Cup Washers (10-32).

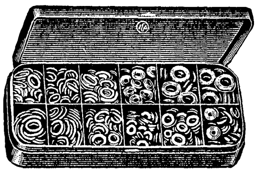
No. 5210............................Dealer Cost $ .99

ICA
INSULINE

UNIVERSAL RADIO HARDWARE ASSORTMENT

Contains 2 pounds of assorted hardware commonly used by servicemen, amateurs, experimenters, etc. Suitable for many types of radio, television, servicing, etc., jobs. Includes screws, nuts, bolts, rivets, eyelets, lugs, washers, etc.

No.	Dlr. Cost
5250	$1.50



ICA ALL-PURPOSE RADIO HARDWARE AND ESSENTIAL EQUIPMENT

Packed in a handy indestructible metal utility case.

This DeLuxe assortment includes such items as knob set screws — escutcheon screws — Parker-Kalon self-tapping screws — rubber grommets — screws — nuts, etc.

No. 5251.............................Dealer Cost $3.92

ICA RUBBER GROMMET ASSORTMENT

ICA
RUBBER
GROMMET
ASS'T.

Assortment contains popular sizes used in the Radio, Electrical and Television field. Carefully selected group to meet many requirements. Packed for ready use.

No. 5811............................Dealer Cost $1.20

Contains 60 Rubber Grommets

ICA FIBRE WASHER ASSORTMENT

ICA
FIBRE
WASHER
ASS'T.

A representative assortment of fibre washers both plain and shoulder, to fit all popular size screws and bolts. Suitable for wide range of uses. Packaged for ready use.

No. 5805..............................Dealer Cost $.60

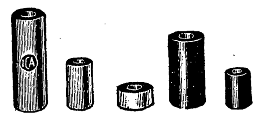
Contains 100 assorted washers

ICA UTILITY GLASS JARS

ICA
HARDWARE
5400

For use on service bench to store hardware, etc. 2½" high x 1½" deep.

No. 5400
Dealer Cost $9.00C



ICA INSULATED AND BRASS SPACERS AND BUSHINGS

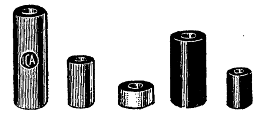
Used for raising sub panels, chassis, condensers, etc. For manufacturers, experimenters and laboratory use.

Made of High Quality Brass

No.	Diameter	Length	Dealer Cost per C
5760	1/4"	1/4"	$4.00
5761	1/4"	3/8"	4.83
5762	1/4"	1/2"	5.66
5763	1/4"	3/4"	6.58
5767	1/4"	1"	7.50
5764	3/8"	1/4"	5.83
5765	3/8"	1/2"	6.66
5766	3/8"	3/4"	7.92
5768	3/8"	1"	10.83
Made of Fenoline Insulation			
5775	1/4"	1/4"	3.50
5776	1/4"	3/8"	4.00
5777	1/4"	1/2"	4.50
5778	1/4"	3/4"	5.50
5782	1/4"	1"	6.50
5779	3/8"	1/4"	4.00
5780	3/8"	1/2"	5.00
5781	3/8"	3/4"	6.00
5783	3/8"	1"	7.50
Threaded Brass Bushings—1/4" Diameter			
5785	for 6/32 screw	1/4"	4.83
5786	"	3/8"	5.66
5787	"	1/2"	6.66
5788	"	3/4"	7.50
5794	"	1"	8.35
5790	for 8/32 screw	1/4"	5.50
5791	"	3/8"	6.50
5792	"	1/2"	7.50
5795	"	1"	9.16

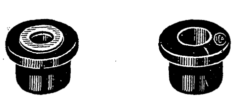
SPACER AND BUSHING ASSORTMENTS

Brass and Insulated



Assortment of 25 spacers and bushings in 1/4 & 3/8. Diameters from 1/4" to 3/4". Ideal for raising sub panels, chassis, etc.

No.	Dealer Cost
5260—Insulated Assortment	$1.50
5261—Brass Assortment	1.50
Threaded Brass Bushing Assortments	
5262—16 Assorted Brass bushings. Threaded for 6/32 from 1/4" to 3/4" lengths	1.50
5263—16 Assorted Brass bushings. Threaded for 8/32 from 1/4" to 3/4" lengths	1.50

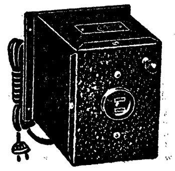


Molded Bakelite Eyelet Bushing

No.	Dealer Cost
2365—Suitable for either spacer or bushing. With brass eyelet........	$2.92C
2366—Same as above, without eyelet..	1.92C

SINCE 1921 insuline Corporation of America
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

FILTERVOLT NOISE FILTER



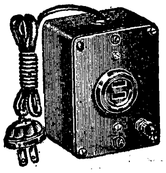
An efficient filter for disturbances caused by electrical appliances. For use with any all-wave or broadcast receiver.

Rated conservatively at 250 watts for 32, 110 and 220 volt AC or DC circuits. Can be installed either at the radio or at the source of disturbance.

Contains heavy duty R.F. chokes, large filter capacitor, and has a "PI" Filter circuit arrangement.

No. 338............................**Dealer Cost $5.00**

ICA FILTERVOLT



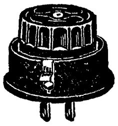
Improves extremely noisy radio reception due to interruptions in power line caused by electrical appliances, lights, etc.

No. 394

Dealer Cost $3.00

SIMPLEX FILTERVOLT

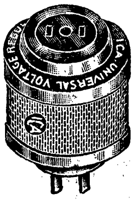
Eliminates Radio Noises Caused By—



- **Electric Shavers**
- **Refrigerators**
- **Fans** ● **Elevators**
- **Motors, etc.**

No. 90...............................**Dealer Cost $1.17**

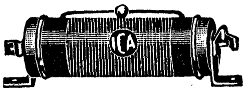
UNIVERSAL VOLTAGE REGULATOR



Voltage fluctuation often occurs not gradually but suddenly, thus bringing a tremendous strain on the tubes. This regulator protects tubes through scientific regulation of current fluctuations. Housing body and end rings are neatly constructed and of perforated japanned metal. For all Radio Sets, AC, DC.

No. 92...............................**Dealer Cost $1.17**

ICA 3-IN-1 RADIO TUNER



Functions as either an Antenna Tuner, Wave Trap, or Aerial Eliminator. Operates on any make or model radio set.

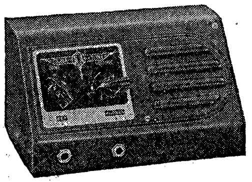
As an Antenna Tuner, it will improve the reception of a weak station. As a Wave Trap, it will separate interfering stations and improve selectivity. As an Aerial Eliminator, it makes unnecessary the outdoor aerial. Easily installed within a few minutes.

No. 93..................................**Dealer Cost $.60**

Complete with Instructions.

IMPROVED ICA DELUXE SIGNA-TONE

AUDIO OSCILLATOR — CODE PRACTICE SET — KEYING MONITOR



The ICA Signature is a perfected Audio Oscillator, having 3 different output frequencies and a continuously variable volume control. The Audio notes are similar to those of high quality commercial CW stations.

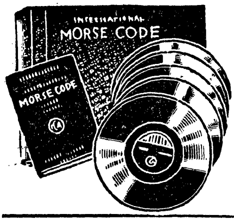
1. CODE PRACTICE SET—A number of phones and keys may be connected for intercommunication or for classroom or radio club instruction in code.
2. KEYING MONITOR—An invaluable aid in improving any ham's "fist." Will follow the "bug" at all speeds. No well-equipped station should be without this keying monitor. (A double pole keying relay is required for this function—one set of contacts for keying transmitter; other set for monitor.)
3. MODULATION SIGNAL—The steady note of the Signature is ideal for adjusting both the Modulator and modulated stages of your transmitter for 100% modulation.
4. SIGNAL TRACER—By feeding the output of the Signatone into each stage of your modulator and listening to the output of that stage, defects and "bugs" can easily be located.

Complete with 50B5 and 35W4 tubes and self-contained speaker for 110 V AC-DC.

No. 4300—Dealer Net Cost..**$15.75**

No. 4301—Classroom Model (No Speaker)—Dealer Net Cost.................................**13.50**

ICA UNBREAKABLE MORSE CODE RECORDS



Learn the International Morse Code Quickly, Easily — Uses EYE - EAR Method. The Complete Linguaphone Code Equipment consists of 5 Double-faced, electrically transcribed records in durable album. Contents: 3 Tables, 10 Lessons.

No. 1800—Complete	**Dealer Cost**	**$10.95**
No. 1800R—Record only	**Dealer Cost**	**2.03**
No. 1800B—Booklet only	**Dealer Cost**	**.98**

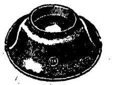
ICA EAR PHONES

Complete With Head Bands

Made of molded Bakelite and light-weight nickel-plated metal. 2000 ohms.

No. 23—Double Head Phone....**Dlr. Cost $2.71**

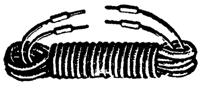
EAR CUSHIONS



Made of soft rubber. Ideal for the amateur wireless operator, etc.

No. 195........................**Dealer Cost $.84 pr.**

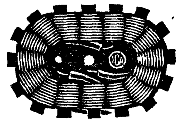
DOUBLE PHONE CORDS



No.	Dealer Cost
193—Spades on one end, tips on other	$ .64

ICA TENNA-SCOPE LOOP

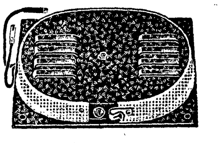
For Midgets or Portables



Eliminates necessity of outdoor or indoor antenna. Replaces the antenna coil in portable or midget sets. Easily assembled.

No. 4385...........................**Dealer Cost $ .83**

ICA TENNA-SCOPE

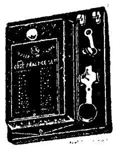


A new style built-in tuned radio antenna. Easily connected. Eliminates use of outside aerial and ground. Features: Better selectivity — Higher signal to noise ratio —Easily connected, no soldering.

No. 4380..........................**Dealer Cost $2.00**

ICA "TRIPLEX"

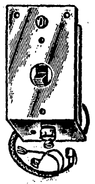
Radio & Telegraph Code Practice Set
Blinker Light
Radio Signal—Telegraph



No.	Dlr. Cost
70—Single Unit (less batteries)	$1.95
71—Double Unit (50 ft. wire)	4.12

ICA RECORD-PLAYER SWITCH

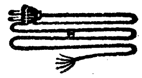
Replacement for RCA Switch 9824A



Recommended for quickly connecting Record Players, F.M. attachments, Television attachments, Microphones and similar devices into the audio amplifier of existing radio receivers.

No. 1740.............................**Dealer Cost $1.55**

RESISTOR CORDS



A series of replacement resistor cords for practically all AC-DC requirements.

No.	Resistance-Ohms	Dlr. Cost
513	135	$ .84
514	160	.84
515	190	.84
516	220	.84
517	290	.84
518	340	.84
519	540	.92

UNIVERSAL RESISTOR CORD

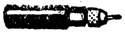
Replacement Resistor Cord for all makes receivers. From 22 to 330 ohms on one cord. Instructions with each cord.

No. 205..............................**Dealer Cost $1.25**

BUD PATENTED VISE-GRIP ASSEMBLY METHOD

No longer is it necessary to use a soldering iron or screwdriver to replace a broken or worn lead on a test prod or plug. To install a wire in this unique, patented prod, merely insert end of wire in hole, screw down handle to finger tightness and a positive contact is assured. By far the fastest, most efficient way of doing this job. This method is used on all test prods and test leads shown below.

BUD VISE-GRIP TEST PRODS WITH PLASTIC HANDLE


Needle Chuck

Phone Tip

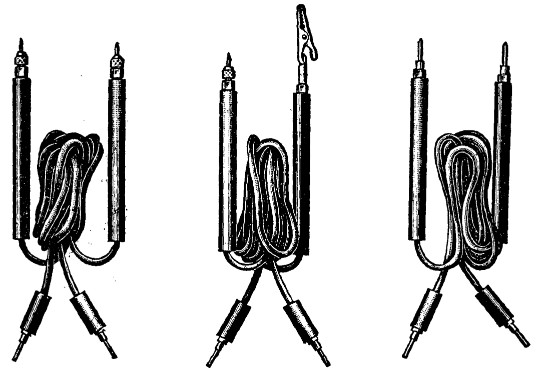
Banana Plug

Prod is made of brass rod, and is nickle plated. Plastic handle is threaded at one end and prod screws into same.

Catalog Number		Dealer Cost
TP-93	Needle Chuck 1″ plastic handle—red or black	$ .21
TP-94	Phone Tip 1″ plastic handle—red or black	.18
TP-477A	Banana Plug 1″ plastic handle—red or black	.18
TP-95	Needle Chuck 4″ plastic handle—red or black	.30
TP-96	Phone Tip 4″ plastic handle—red or black	.27
TP-97	Banana Plug 4″ plastic handle—red or black	.30

BUD SUPER TEST LEADS

All BUD Super Test Leads use BUD "Vise-Grip" Prods that screw into the highly polished 4″ or 1″ plastic handles on each end of the leads. The finest, flexible, kinkless, rubber covered wire obtainable is used on all BUD Test Leads.



No. **TL-178** is supplied with 4″ handles at one end of the wires with removable needle points and on other end 1″ handle with phone tips.
Cat No. **TL-178**........................Dealer Cost **$1.35**

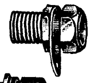
No. **TL-179**—4″ handles, one with removable needle point and the other with phone tip and removable alligator clip. 1″ handles with phone tips.
Cat. No. **TL-179**........................Dealer Cost **$1.65**

No. **TL-180** have 4″ plastic handles with phone tips on one end. Other end, 1″ handles with phone tips as illustrated above.
Cat. No. **TL-180**........................Dealer Cost **$1.29**

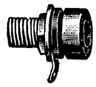
GIANT BANANA PLUGS AND JACKS FOR HEAVY DUTY APPLICATIONS

Giant banana jack, complete with nut and solder lug. For mounting, drill ⅜″ hole.
Cat. No. **PJ-963**
Dealer Cost **$ .17**

Giant plug, tapped 10-32. Positive spring action assures firm contact.
Cat. No. **PL-962**
Dealer Cost **$ .20**

PJ-963


PL-962

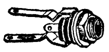
PJ-476A


PL-475A

Giant insulated banana plug jack, complete with insulating washers, solder lug and nut. To mount, drill ½″ hole.
Cat. No. **PJ-476A**
Dealer Cost **$ .33**

High voltage insulated banana plug. Over all length 2⅞″. Excellent for heavy duty applications.
Cat. No **PL-475A**
Dealer Cost **$ .45**

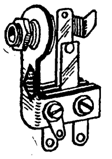
BUD SMALL JACKS



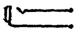
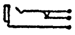
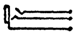
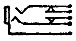
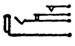
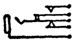
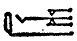
These panel mounting jacks are desirable for control panels and similar applications where space is at a premium. Parts are accurately machined, with cadmium plated finish and contacts are formed from spring brass. Each jack comes complete with insulating washers and will accommodate standard plugs. Overall length 1⅝″.

Catalog No.	Contacts	Distance Behind Panel	Dealer Cost
J-1038	2	15/16″	**$ .33**
J-1058	3	15/16″	**.55**

BUD ALL PURPOSE JACKS



Although small in size, this is one of the finest lines of jacks available. The careful design and high quality materials used in these components assure long, dependable service. Circuit opening contacts are made of pure silver and the laminated bakelite insulation prevents breakdown between springs at all ordinary voltages. Supplied with panel insulating washers. Height 1⅞″, distance behind panel ⅞″.

Catalog Number	Circuit Design	Contact Arrangement	Dealer Cost
J-1324		Open Circuit	**$ .34**
J-1325		Closed circuit	**.36**
J-1326		3-Contact open circuit	**.41**
J-1327		Break contact on tip and ring spring	**.54**
J-1328		Separate make-contact springs	**.54**
J-1329		Break contact on tip spring—separate make-contact spring	**.57**
J-1330		Break-make contact on tip spring	**.54**

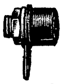
BANANA PLUGS AND JACKS
(Brass Nickel Plated)

Banana plug jack, threaded ¼ — 28, supplied with nut and solder lug.
Cat. No. **PJ-949**
Dealer Cost **$ .10**

Banana plug
Overall Length 1¼″
Shank threaded 6-32, supplied with 6-32 nut.
Cat. No. **PL-470**
Dealer Cost **$ .15**

PJ-949

PL-470

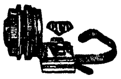
PJ-478


PL-469

Insulated banana plug jack, complete with insulating washers, solder lug and nut.
Cat. No. **PJ-478**
Dealer Cost **$ .17**

Banana plug. Shank tapped for 6-32 screws. Nickel plated.
Cat. No. **PL-469**
Dealer Cost **$ .10**

BUD MIDGET JACK



The construction of this jack allows its use in applications having limited space behind the panel. The spring brass contact assures a good connection. These jacks come with insulating washers and accommodate standard phone plugs.

Catalog No.	Type	Distance Behind Panel	Dealer Cost
J-232A	Open Circuit	13/16″	**$ .35**
J-233A	Closed Circuit	13/16″	**.40**

BUD PHONE PLUGS

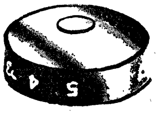
All metal parts on these excellent phone plugs are machined from brass, and are nickel plated. Unshielded plugs have handles of black bakelite; shielded types have attractive brass knurled handles bright nickel plated.

No. **FP-1946** is supplied **Without a Handle,** and is used as an adapter between a female microphone cable connector and a regular plug jack.

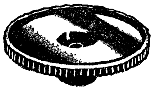
Catalog Number	Contacts	Handle	Overall Length	Bushing Diam.	Dealer Cost
FP-230	2	Bakelite	2¾″	¾″	**$ .35**
FP-282	2	Shielded	2⅞″	¾″	**.75**
FP-1057	3	Bakelite	2¾″	¾″	**.84**
FP-284	3	Shielded	2⅞″	¾″	**1.10**
FP-1946	2	None	1-7/16″	11/16″	**.24**

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

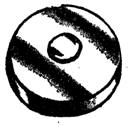
Gee-Lar RADIO AND TELEVISION KNOBS



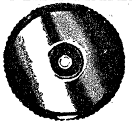
**G-L #1220
FRONT CHANNEL KNOB**
Plated gold finish inlay. 2½" dia. $\frac{25}{32}$" height. Fits .250" dia. shaft with .156" flat. Calibrated for Standard Tuner.
No. 1220 List $1.25



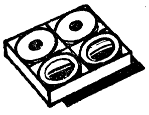
**G-L #1225 REAR KNOB
FOR #1220**
2⅝" Dia. $\frac{3}{32}$" Height. Fits ⅜" Dia. Shaft with .328" flat.
No. 1225 List $0.45



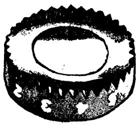
**G-L #1230 FRONT KNOB
OFF-ON, ETC.**
Plated gold finish inlay. 2½" Dia. $\frac{25}{32}$" Height. Fits .187" Dia. Shaft with .156" flat.
No. 1230 List $1.10



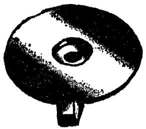
**G-L #1235 REAR KNOB
FOR #1230**
2⅝" Dia. $\frac{3}{16}$" Height. Fit .256" Dia. Shaft with .234" flat.
No. 1235 List $0.45



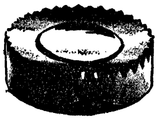
G-L #1240 TV KNOB SET
Complete set of four TV knobs at left. Boxed. Color, walnut only. For Standard Tuners.
No. 1240 List $3.00



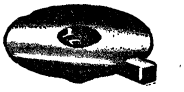
**G-L #3460
FRONT CHANNEL KNOB**
Plated gold finish inlay. 2⅜" Dia. $\frac{25}{32}$" Height. Fits .250" Dia. Shaft and .156" flat. Calibrated for Standard Tuner.
No. 3460 List $1.25



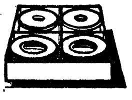
**G-L #3465 REAR KNOB
FOR #3460**
2$\frac{9}{16}$" Dia. $\frac{3}{32}$" Height. Fits ⅜" Dia. Shaft with .328" flat. Finger Tip Tuning.
No. 3465 List $0.45



**G-L #3470 FRONT KNOB
OFF-ON, ETC.**
Plated gold finish inlay. 2⅜" Dia. $\frac{25}{32}$" Height. Fits .187" Dia. Shaft with .156" flat.
No. 3470 List $1.10



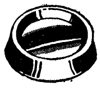
**G-L #3475 REAR KNOB
FOR #3470**
2$\frac{9}{16}$" Dia. $\frac{3}{16}$" Height. Fits .265" Dia. Shaft with .324" flat. Finger Tip Tuning.
No. 3475 List $0.45



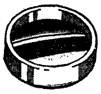
G-L #3480 KNOB SET
Complete set of four TV knobs at left. Boxed. Color, walnut only. For Standard Tuners.
No. 3480 List $3.00

GEE-LAR NEW GOLD METAL INLAY RADIO KNOBS

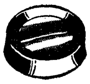
Beautiful, Modern Knobs — To Replace Knurl Type Knobs



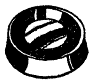
TENITE PLATED GOLD INLAY
2⅛" Dia. ½" H.
Fits ¼" Shaft.
No. 1540 List $0.50
Knurl Type
No. 1540S List $0.53
Spring Type
Walnut Only



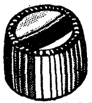
TENITE PLATED GOLD INLAY
1⅝" Dia. ½" H.
Fits ¼" Shaft
No. 1541 List $0.40
Knurl Type
No. 1541S List $0.45
Spring Type
Walnut Only



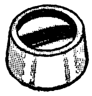
TENITE PLATED GOLD INLAY
1½" Dia. ½" H.
Fits ¼" Shaft.
No. 1542 List $0.38
Knurl Type
No. 1542S List $0.40
Spring Type
Walnut Only



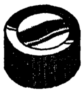
TENITE PLATED GOLD INLAY
1¼" Dia. ½" H.
Fits ¼" Shaft.
No. 1543 List $0.35
Knurl Type
No. 1543S List $0.40
Spring Type
Walnut or Ivory



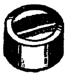
TENITE PLATED GOLD INLAY
1" Dia. ⅝" Height.
Fits ¼" Shaft.
No. 1544 List $0.30
Knurl Type
No. 1544S List $0.35
Spring Type
Walnut or Ivory



TENITE PLATED GOLD INLAY
1" Dia. ½" Height.
Fits ¼" Shaft.
No. 1545 List $0.28
Knurl Type
No. 1545S List $0.30
Spring Type
Walnut or Ivory



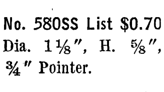
TENITE PLATED GOLD INLAY
1" Dia. ⅜" Height.
Fits ¼" Shaft.
No. 1546 List $0.28
Knurl Type
No. 1546S List $0.30
Spring Type
Walnut or Ivory



TENITE PLATED GOLD INLAY
¾" Dia. ⅜" Height.
Fits ¼" Shaft.
No. 1547 List $0.26
Knurl Type
No. 1547S List $0.30
Spring Type
Walnut or Ivory

INSTRUMENT KNOBS

All Knobs are Set Screw Type with Brass Inserts for ¼" Shafts. Black only.

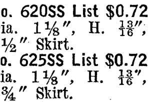


No. 580SS List $0.70
Dia. 1⅛", H. ⅝", ¾" Pointer.

No. 590SS List $0.77
Dia. 1⅜", H. $\frac{11}{16}$", 1$\frac{1}{16}$" Pointer.

No. 600SS List $0.88
Dia. 1⅝", H. ¾", 1$\frac{3}{16}$" Pointer.

No. 610SS List $1.10
Dia. 2⅜", H. ⅞", 1$\frac{9}{16}$" Pointer.



No. 620SS List $0.72
Dia. 1⅛", H. $\frac{13}{16}$", 1½" Skirt.

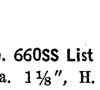
No. 625SS List $0.72
Dia. 1⅛", H. $\frac{13}{16}$", 1¾" Skirt.

No. 630SS List $0.72
Dia. 1⅜", H. ⅞", 1½" Skirt.

No. 635SS List $0.72
Dia. 1⅜", H. ⅞", 1¾" Skirt.

No. 640SS List $0.94
Dia. 1⅝", H. $\frac{29}{32}$", 2$\frac{1}{16}$" Skirt.

No. 650SS List $1.10
Dia. 2⅜", H. 1$\frac{1}{32}$", 3" Skirt.

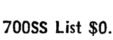


No. 660SS List $0.38
Dia. 1⅛", H. ⅝".

No. 670SS List $0.44
Dia. 1⅜", H. $\frac{11}{16}$".

No. 680SS List $0.55
Dia. 1⅝", H. ¾".

No. 690SS List $0.83
Dia. 2⅜", H. ⅞".

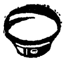


No. 700SS List $0.28
Skirt Dia. 1¾", H. ¾". Set Screw Type.

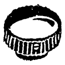
No. 710SS List $0.28
Skirt Dia. 1½", H. ¾". Set Screw Type.

Gee-Lar AUTOMOBILE RADIO KNOBS

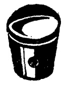
To fit ¼" Shafts; 3/16" Bushings to Accommodate 3/16" Shafts included.



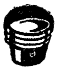
No. Tenite List
780SS $0.33
Dia. ⅞", H. $\frac{9}{16}$"
Set Screw Type



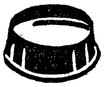
No. Tenite List
790SS $0.33
Dia. ⅞", H. $\frac{9}{16}$"
Set Screw Type



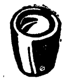
No. Tenite List
800SS $0.38
D. ⅞", H. ⅞"
Set Screw Type



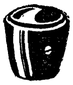
No. Tenite List
810SS $0.33
Dia. $\frac{13}{16}$", H. $\frac{11}{16}$"
Set Screw Type



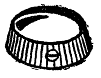
No. Tenite List
820SS $0.38
D. 1$\frac{9}{16}$", H. ½"
Set Screw Type



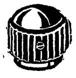
No. Tenite List
854SS $0.45
Chrome Inlay
Black Color
D. ⅞", H. $\frac{29}{32}$"
Set Screw Type



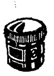
No. Tenite List
830SS $0.33
D. $\frac{13}{16}$", H. ⅞"
Set Screw Type



No. Tenite List
840SS $0.33
D. $\frac{11}{16}$", H. ⅝"
Set Screw Type

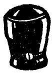


No. Tenite List
850SS $0.33
D. ¾", H. ½"
Set Screw Type

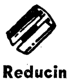


Chrome Plated Metal Knob

No. List
851SS $0.33
D. ½", H. ¾"
Set Screw Type



No. Tenite List
852SS $0.33
D. $\frac{13}{16}$", H. ⅞"
Set Screw Type



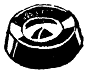
G-L Reducing Bushings
To reduce from ¼" to $\frac{3}{16}$" size shafts.
No. List
853-E $0.44
Env. 8
853-G $7.15
Box 144

All Knobs for ¼" Shafts. Distributor's Standard Package 12 Knobs of a Type to a Box.

TRADE DISCOUNT APPLIES TO *LIST PRICES* ONLY

Gee-Lar TELEVISION KNOBS

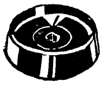
Knobs for Sets using dual controls and tuners made by Standard Coil, Sarkis-Tarzian, RCA, Leonard and others. Also TV Sets such as RCA, Leonard, Bendix, Westinghouse, Admiral, Hoffman, Packard-Bell, etc. Walnut pattern knobs with plated gold finish inlay on face of knobs.



G-L FRONT DUAL CONTROL KNOB

1$\frac{5}{16}$″ O.D. Used with rear knob No. 1205 and others.

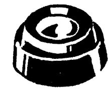
No.	List
No. 1202 Fits ¼″ Knurl Shaft	List $0.45
No. 1203 Fits ¼″ Flatted Shaft	List $0.50
No. 1204 Fits .202″ Flatted Shaft	List $0.50



G-L REAR DUAL CONTROL KNOB

1⅝″ diameter. For standard .265″ diameter rear keyway shaft. Used as mate to front dual control knobs.

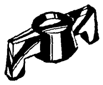
No. 1205 Rear Knob **List $0.28**



G-L COMBINATION DUAL KNOB

Dual dummy type knob. Front and rear dual knob combined into one for matching on cabinet. 1⅝″ diameter. Fits ¼″ flatted shaft.

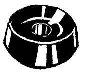
No. 1206 **List $0.75**
Combination Dummy Knob



G-L DUAL TUNER BAR KNOB

Front bar knob for use on dual controls and tuners. 2″ length. Can be used in combination with knob No. 1208 and others. Fits ¼″ diameter flat shaft.

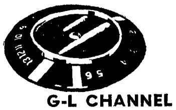
No. 1207 Bar Knob **List $0.90**



G-L REAR DUAL TUNER KNOB

For dual tuners and controls. Used with No. 1207 knob and others. 1$\frac{5}{32}$″ diameter. For standard ⅜″ diameter rear flat shaft.

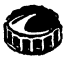
No. 1208 **List $0.28**
Rear Dual Knob



G-L CHANNEL INDICATOR PLATE

Used on sets using radio condenser TV tuner, etc. For Sparton, Farnsworth, Sonora, Meck, etc. Matches knobs listed above. Fits standard ⅜″ diameter rear flat shaft.

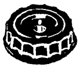
No. 1209 **List $0.75**
Channel Indicator Plate



G-L FRONT CHANNEL KNOB

Front dual control knob used on channel tuners and controls for Motorola, Hallicrafters, Stromberg-Carlson, etc., and sets using Chicago Telephone tuner. $\frac{13}{16}$″ diameter. Fits .202″ diameter flat shaft.

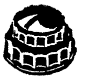
No. 1210 **List $0.22**
Front Knob



G-L REAR CHANNEL KNOB

Rear dual control knob. Walnut. Mate to No. 1210. Center hole for .265″ rear keyway shaft. 1¼″ diameter.

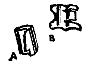
No. 1211 Rear Knob **List $0.22**



G-L COMBINATION DUAL DUMMY KNOB

A combination of knobs Nos. 1210 and 1211. Used to match cabinet design on single control. 1¼″ diameter at base. Fits on ¼″ knurled shaft.

No. 1213 **List $0.45**
Combination Knob



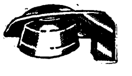
G-L TELEVISION KNOB SPRINGS

Necessary replacement springs for use on television knobs. Special sizes of springs not regularly used on older type radios.

No.		List
Type A - Fits small .202″ dia. flat shaft.		
1214-G	Gross	$5.05
1214-M	1000	30.25
Type B - Fits ⅜″ diameter flat shaft.		
1215-G	Gross	$4.10
1215-M	1000	24.75

NEW TV KNOBS TO FIT RCA SETS AND OTHERS

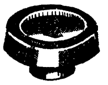
Sturdy and Substantial Knobs Combined with Beauty for Lasting Performance



G-L FRONT DUAL BAR POINTER CHANNEL KNOB

Push-on type to fit standard ¼″ shaft flatted to .156″, complete with spring. Flat adjacent to pointer.

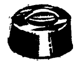
No. 3600 **List $0.50**
Bar Pointer



G-L REAR CHANNEL KNOB FOR #3600

Push-on type to fit ⅜″ shaft flatted to .327″. Complete with spring.

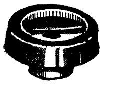
No. 3601 **List $0.45**
Rear Knob



G-L FRONT KNOB OFF-ON-VOLUME, ETC.

Push-on type to fit $\frac{3}{16}$″ shaft flatted to .156″. Complete with spring.

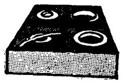
No. 3602 **List $0.25**
Front Knob



G-L REAR KNOB FOR #3602

Push-on type to fit 17/64″ shaft flatted to .237″. Complete with spring.

No. 3603 **List $0.45**
Rear Knob



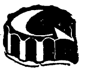
G-L #3604 TV KNOB SET

Set of 4 TV knobs at left, boxed. Color, brown only.

No. 3604 **List $1.65**
Complete Set

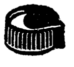
POINTER KNOBS TO FIT STANDARD ¼″ SHAFTS

Distributors' Standard Package — 12 Knobs of a Type to a Box — Set Screw Type Except Where Noted



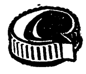
No.	Tenite	List
860	Knurl Type	$0.13
860SS		$0.17

Walnut or Ivory



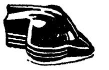
No.	Tenite	List
870	Knurl Type	$0.13
870SS		$0.15

Walnut or Ivory



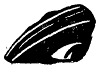
No.	Tenite	List
880	Knurl Type	$0.13
880S	Spring Type	$0.13

Walnut or Ivory



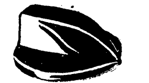
No.	Bakelite	List
890SS		$0.20

Black, Walnut, Red, Ivory



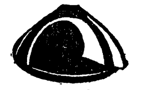
No.	Bakelite	List
900SS		$0.17

Walnut or Black



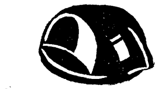
No.	Tenite	List
910SS		$0.33

Walnut, Blk., Red, White



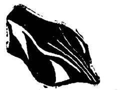
No.	Bakelite	List
920SS		$0.33

Walnut or White



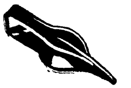
No.	Bakelite	List
930SS		$0.33

Walnut or White



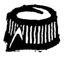
No.	Bakelite	List
940SS		$0.22

Walnut, Black, Red or Ivory



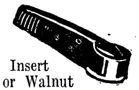
No.	Bakelite	List
950SS		$0.30

Walnut, Black, Red or Ivory



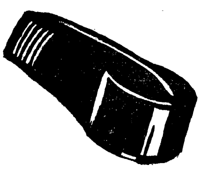
No.	Bakelite	List
960SS		$0.17

Walnut, Black, Red or Ivory



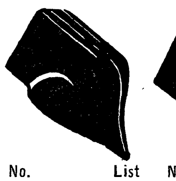
Brass Insert
Black or Walnut

No.	Bakelite	List
970SS Plain ¼″ Hole		$0.28
970ASS		$0.38



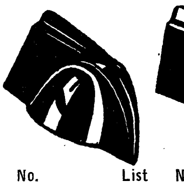
No.	Bakelite	List
980SS		$0.20

Plain ¼″ Hole
Black or Walnut



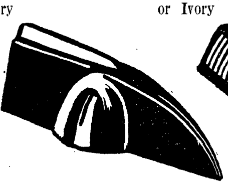
No.	List
990SS	$0.21

Bakelite
Plain ¼″ Hole
Black, Walnut, Red or Ivory



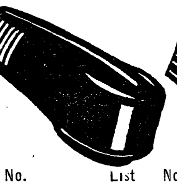
No.	List
1000SS	$0.22

Bakelite
Black, Walnut, Red or Ivory



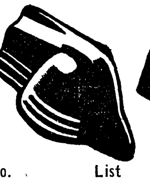
No.	Bakelite	List
1010SS	¼″ Hole	$0.33
1020SS	¼″ Hole	$0.46

Brass Insert
Black, Walnut, Red, Ivory



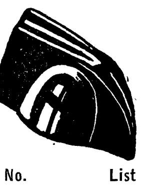
No.	List
1030SS	$0.33

Bakelite
Brass Insert
Black or Walnut



No.	List
1040SS	$0.29

Bakelite
Metal Insert
Black or Walnut



No.	List
1050SS	$0.31

Bakelite
Brass Insert
Black, Walnut, Red or Ivory

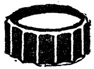
Gee-Lar RADIO KNOB KITS

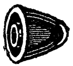
No.		List
1250	Assmt. "A" Contents: 36 Asstd. Knurled Type	$4.35
1251	Assmt. "B" Contents: 30 Asstd. Spring Type	4.35
1252	Assmt. "C" Contents: 26 Asstd. Set Screw Type	4.35
1253	Assmt. "D" Contents: 12 Asstd. Auto Radio with Brass Bushings and Reducing Bushings for $\frac{3}{16}$″ Shaft	4.35

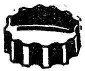
No.		List
1254	Assmt. "E" Contents: 30 Asstd. as follows: 10 Set Screw, 10 Spring Type, 10 Knurled Type	$4.35
1255	Assmt. "F" Contents: 50 Asstd. Push Buttons	4.35
1256	Assmt. "H" Contents: 24 Asstd. Pointer and Bar Set Screw Knobs	4.35

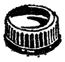
All Knobs for ¼″ Shafts — Distributors' Standard Package—12 Knobs of a Type to a Box.

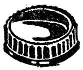
Gee-Lar RADIO AND TELEVISION KNOBS

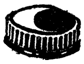

No. Tenite List
10 Knurl Type $0.13
10S Spring Type $0.15
10SS $0.17
Set Screw Type
Walnut or Ivory

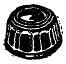

No. Tenite List
20 Knurl Type $0.13
Walnut or Ivory

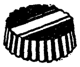

No. Tenite List
30 Knurl Type $0.13
30S Spring Type $0.13
30SS $0.17
Set Screw Type
Walnut or Ivory

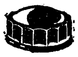

No. Tenite List
40 Knurl Type $0.13
40SS $0.15
Walnut or Ivory

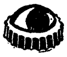

No. Tenite List
50 Knurl Type $0.13
50S Spring Type $0.13
Walnut or Ivory

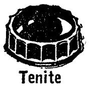

No. Tenite List
60 Knurl Type $0.13
Walnut or Ivory
½" Shank Extension

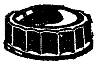

No. Tenite List
70 Knurl Type $0.13
70SS $0.15
Set Screw Type
Walnut or Ivory

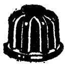

No. Tenite List
80 Knurl Type $0.13
Walnut or Ivory

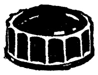

No. Tenite List
90 Knurl Type $0.13
90S Spring Type $0.13
Walnut or Ivory

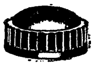

No. Tenite List
100 Knurl Type $0.13
⅛" Shank Only
Walnut or Ivory

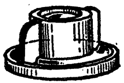

No. Tenite List
110 Knurl Type $0.13
110S Spring Type $0.15
110SS $0.17
Set Screw Type
Walnut or Ivory

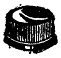

No. Tenite List
120 Knurl Type $0.13
Walnut or Ivory
¼" Shank Extension

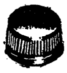

No. Tenite List
130 Knurl Type $0.13
130S Spring Type $0.15
Walnut or Ivory

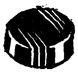

No. Tenite List
140 Knurl Type $0.15
140S Spring Type $0.17
140SS $0.20
Set Screw Type
Walnut or Ivory

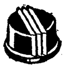

No. Tenite List
150 Knurl Type $0.15
Walnut or Ivory
½" Shank Extension

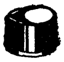

No. Tenite List
165 Knurl Type $0.13
Crystal Clear

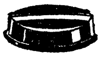

No. Bakelite List
170SS $0.17
Set Screw Type
171SS $0.23
Set Screw Type w. Arrow
Walnut, Blk., Red, Ivory

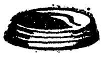

No. Bakelite List
175SS $0.22
Set Screw Type
Walnut, Black, Red
or Ivory

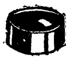

No. Bakelite List
180 Knurl Type $0.13
Walnut Only

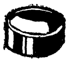

No. Tenite List
200 Knurl Type $0.13
200SS $0.15
Set Screw Type
Walnut or Ivory

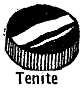

No. Bakelite List
210SS $0.15
Set Screw Type
Walnut, Black or Ivory

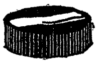

No. Tenite List
220 Knurl Type $0.13
Walnut or Ivory
¼" Shank Extension

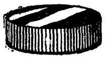

No. Tenite List
230 Knurl Type $0.13
Walnut or Ivory
¼" Shank Extension

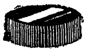

No. Tenite List
240 Knurl Type $0.13
240SS $0.15
Set Screw Type
Walnut or Ivory

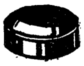

No. Tenite List
250 Knurl Type $0.13
Walnut or Ivory
½" Shank Extension

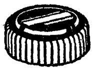

No. Tenite List
270 Knurl Type $0.13
Walnut or Ivory
½" Shank Extension

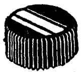

No. Tenite List
280 Knurl Type $0.13
Walnut or Ivory

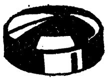

No. Tenite List
290 Knurl Type $0.13
Walnut or Ivory
¼" Shank Extension


No. Tenite List
300 Knurl Type $0.13
300S Spring Type $0.15
Walnut or Ivory


No. Tenite List
310 Knurl Type $0.13
Walnut or Ivory


No. Tenite List
320 $0.13
Knurl Type
Walnut or Ivory


No. Tenite List
330 $0.13
Knurl Type
Walnut or Ivory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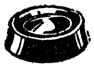
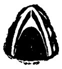
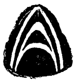
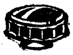
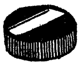
340 $0.15
Knurl Type
Walnut or Ivory

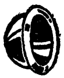

No. Tenite List
350 $0.13
Knurl Type
350S $0.15
Spring Type
Walnut or Ivory

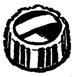

No. Bakelite List
360 $0.13
Knurl Type
360S $0.13
Spring Type
360SS $0.15
Set Screw Type
Walnut, Black
or Ivory

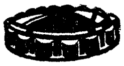

No. Bakelite List
370 $0.15
Knurl Type
370S $0.15
Spring Type
370SS $0.17
Walnut, Black
or Ivory

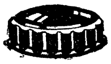

No. Bakelite List
380SS $0.17
Set Screw Type
Walnut, Black
or Ivory

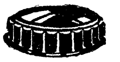

No. Tenite List
390 $0.13
Knurl Type
Walnut or Ivory

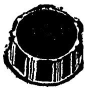

Tenite Needle Cups
No. List
400 $0.11
Per 1000 $77.00
Walnut

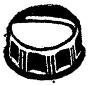

No. Bakelite List
410SS $0.33
Set Screw Type
Walnut or Ivory

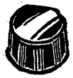

No. Bakelite List
420SS $0.33
Molded Hole
420BSS $0.46
Brass Insert
Set Screw Type
Black or Walnut

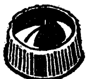

No. Bakelite List
430SS $0.33
Molded Hole
430BSS $0.38
Brass Insert
Set Screw Type
Black or Walnut

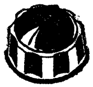

No. Bakelite List
440SS $0.28
Molded Hole
440BSS $0.38
Brass Insert
Set Screw Type
Black or Walnut

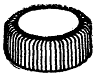

No. Bakelite List
450SS $0.2
Set Screw Type
Walnut or Ivory

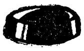

No. Bakelite List
460SS $0.20
Set Screw Type
Walnut or Ivory

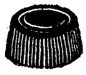

No. Bakelite List
470SS $0.18
Set Screw Type
Walnut or Ivory

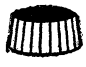

No. Bakelite List
480SS $0.20
Set Screw Type
Walnut or Ivory

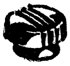

No. Bakelite List
490SS $0.20
Set Screw Type
Walnut or Ivory

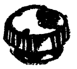

No. Tenite List
495 $0.15
Knurl Type
Ivory Only
¼" Shank Ext.

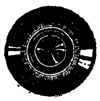

No. Tenite List
510 $0.13
Knurl Type
Walnut or Ivory

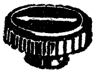

No. Tenite List
520 $0.13
Knurl Type
520S $0.15
Spring Type
Walnut or Ivory

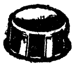

No. Tenite List
530 $0.13
Knurl Type
Walnut or Ivory

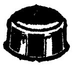

No. Bakelite List
531SS $0.20
Set Screw Type
Walnut or Ivory


No. Bakelite List
532SS $0.20
Set Screw Type
Walnut or Ivory


Tenite Dial Knob
No. Walnut List
560 $0.22
¼" Shank Extension to fit ¼"
Knurl Shaft


No. List
533SS $0.38
Set Screw Type
Black Bakelite with
molded white
arrow, brass
bushing

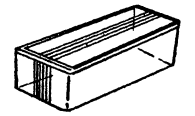

No. Bakelite List
534SS $0.20
Set Screw Type
Walnut or Ivory


No. Bakelite List
536SS $0.20
Set Screw Type
Walnut or Ivory

All Knobs for ¼" Shafts — Distributors' Standard Package 12 Knobs of a Type to a Box

Gee-Lar RADIO AND TELEVISION PRODUCTS

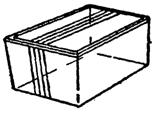
GEE-LAR PLASTIC BOXES — MADE OF CLEAR, TRANSPARENT, RIGID PLASTIC



GEE-LAR PLASTIC BOX

Handy box for all types of parts, knobs, condensers, controls, etc. Keep everything handy on the shelf. Supplied with cover. Size: 4" x 4" x 2½" deep.

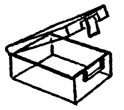
No.		List
3650	Plastic Box	$0.55



GEE-LAR STOCK BOX

Handy box for servicemen's bench, shelves. Also used for jobbers' display shelves. Ideal for displaying knobs, resistors, condensers, etc. Supplied with cover. Size: 4" x 8" x 2½" deep.

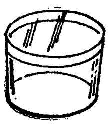
No.		List
3651	Plastic Box	$1.10



GEE-LAR MIDGET BOX

Ideal plastic box for small screws, nuts, springs, grommets and other small essential parts. Hinged cover with snap on lock. Handy to carry in your tool kit or for the work bench. Size: 2½" x 1¼" x ¾" deep.

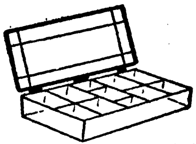
No.		List
3693	Plastic Box	$0.12



GEE-LAR BENCH BOX

Handy round container for holding small parts on the bench while working on the set. Keeps parts from getting lost. Supplied with cover. Size: 5¼" dia. x 5⅛" deep.

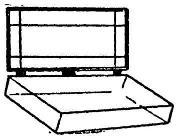
No.		List
3653	Bench Box	$1.25



GEE-LAR PARTITION BOX

Handy box with 12 sections and a hinged cover. Keeps all small parts such as screws, nuts, springs, etc. just where you can find them. Handy to carry with you. Size: 7" x 3½" x 1⅛".

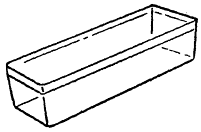
No.		List
3654	Partition Box	$1.65



GEE-LAR HINGED BOX

Handy hinged cover box for larger items, such as alignment tools, condensers, resistors, etc. Handy to carry with you. Size: 7" x 3½" x 1⅛".

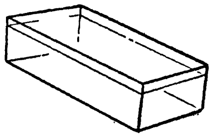
No.		List
3655	Hinged Box	$1.50



GEE-LAR HANDY BOX

Box for stocking small parts. Can be stacked on top of each other. An ideal box for storing parts. Supplied with cover. Size: 8½" x 2¾" x 2½", with cover.

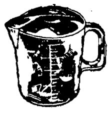
No.		List
3656	Handy Box	$1.50



GEE-LAR JR. HANDY BOX

Convenient box for small parts. Boxes can be stacked on top of each other. Supplied with cover. Size: 6⅞" x 3⅛" x 1⅝", with cover.

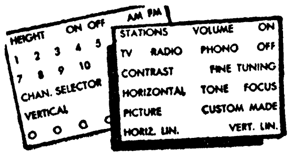
No.		List
3657	Jr. Handy Box	$0.85



GEE-LAR KNOB ASSORTMENT IN PLASTIC JAR

Contains 35 or more popular radio knurl type knobs. A good seller.

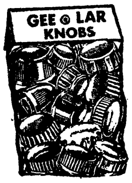
No.		List
3482	Plastic Jar Kit	$2.35



GEE-LAR DECALS

For marking TV sets and custom built jobs. Gold letterhead decals for professional touch. Also handy in replacing old worn out markings.

No.		List
3452	Envelope of Decals	$0.50
3452-D	Display of 20 packs	$10.00



ASSORTED RADIO KNOBS

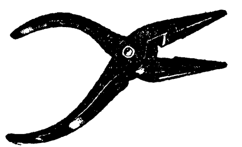
A plastic bag containing 35 assorted popular knobs, knurl, spring and set screw types.

No.		List
1200	Kit	$1.65

MARKED RADIO KNOBS

Another plastic bag kit containing 50 assorted marked radio knobs. They include volume, off, tune, etc.

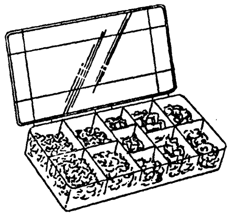
No.		List
1201	Kit	$1.65



GEE-LAR PLASTIC TELEVISION PLIERS

Made of high-impact bakelite will stand high voltage. An insulated long nose plier that is absolutely shock proof. Handy in picking up nuts and bolts or parts when set is "hot."

No.		List
3689	Plastic Pliers	$1.65
3689-D	Display of 12	19.80



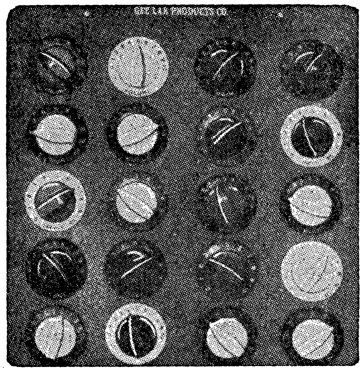
GEE-LAR TELEVISION AND RADIO KNOB SPRING KIT

Springs for New TV and Radio Knobs

The right assortment of springs for the serviceman. Over 12 different knob springs for all types of knobs. Plastic box 7" x 3½" x 1⅛", with hinge covers.

No.		List
3658	100 Springs, Plastic Box	$3.50

KNOB AND PLATE COMBINATIONS



JOBBERS' DISPLAY BOARD #905

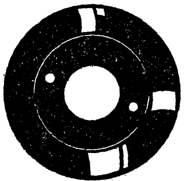
Display board is made up of modern knob and plate combinations in various colors.

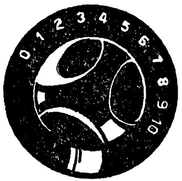
No. 905 List $16.00
Knob and Plate Display Board, Complete with Knobs

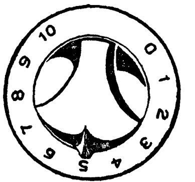
JOBBERS' KNOB AND PLATE — STOCK DEAL WITH DISPLAY BOARD — DEAL #906

A starting stock deal that gives you a display board and assorted plates and knobs in various colors. All knobs packaged in marked boxes for easy stocking.

Deal Includes:	List
125 Assorted Marked Plates — 55¢ ea.	$ 68.75
125 Assorted Color Knobs for Plates — 33¢ ea.	41.25
1 Display Board with 20 Knobs and 20 Plates	16.00
Deal No. 906	126.00







GEE-LAR PLATES ARE AVAILABLE IN THE FOLLOWING MARKINGS:

Permanently Heat-Stamped in Either 180° or 270° — Volume, Treble, Phono, Gain, Mike, Tone, Bass. Special wording available on payment of special stamping die charges.

NOT MARKED PLATE ONLY

Bakelite, Dia. 1⅞", Ht. $\frac{7}{32}$". Colors: Red, White, Black, Walnut.

No.		List
1060	Plain Plate (Specify Color)	$0.33

180° MARKED PLATE ONLY

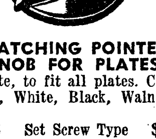
Bakelite, Dia. 1⅞", Ht. $\frac{7}{32}$". Colors: Red, White, Black, Walnut.

No.		List
1070	180° Plate (Specify Color and Marking Wanted)	$0.55

270° MARKED PLATE ONLY

Bakelite, Dia. 1⅞", Ht. $\frac{7}{32}$". Colors: Red, White, Black, Walnut.

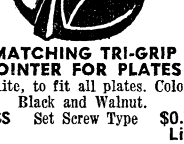
No.		List
1080	270° Plate (Specify Color and Marking Wanted)	$0.55



MATCHING POINTER KNOB FOR PLATES

Bakelite, to fit all plates. Colors: Red, White, Black, Walnut.

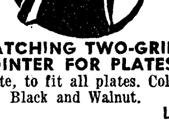
No.		List
910SS	Set Screw Type (Specify Color)	$0.33



MATCHING TRI-GRIP POINTER FOR PLATES

Bakelite, to fit all plates. Colors: Black and Walnut.

No.		List
920SS	Set Screw Type (Specify Color)	$0.33



MATCHING TWO-GRIP POINTER FOR PLATES

Bakelite, to fit all plates. Colors: Black and Walnut.

No.		List
930SS	Set Screw Type (Specify Color)	$0.33

All Knobs for ¼" Shafts — Distributors' Standard Package 12 Knobs of a Type to a Box

UNITED TECHNICAL LABORATORIES
MORRISTOWN, N. J.

KLIPZON Products
SELF HOLDING PRODS
PROBES ● ADAPTORS ● MINI-PROD CONNECTORS

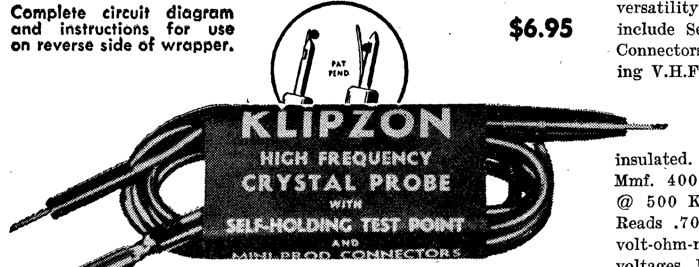
PAT PEND
KLIPZON
TEST PRODS
WITH
MINI-PROD CONNECTORS

PRICE
$1.95

Type A

KLIPZON Type A Test Prods are designed for maximum time saving, convenience and safety. Self-holding jaws slip onto wires, lugs, terminals, and grip test points until pulled off. Streamlined, modern design adds minimum capacity to circuit; makes contact with inaccessible wires and terminals easy. Points fit into pin-jacks, sockets, binding posts; grip wires from finest to #12 B&S gauge. Points are needle sharp stainless steel in Duralumin holders. Handles, red and black, 4¾″ long, of glossy Tenite. 4 ft., super-flexible rubber covered leads. With Type B Mini-prod Connectors as terminals. Solderless connection in handles.

Complete circuit diagram and instructions for use on reverse side of wrapper.



PRICE
$6.95

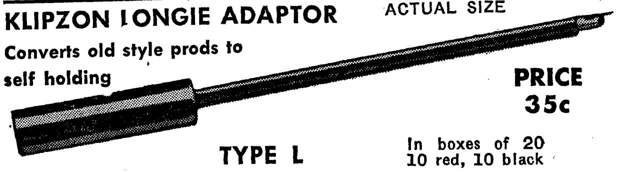
Type V (MAROON) for VTVM
Type C (BLACK) for VOM

KLIPZON Type V&C High Frequency Crystal Probes bring added versatility to laboratory and service test equipment. Both types include Self Holding KLIPZON Test Points and Type B Mini-prod Connectors as terminals. Type V provides accurate means of measuring V.H.F. voltages with a vacuum tube voltmeter. Germanium crystal in low capacity, high impedance circuit, supplies rectified voltage to DC input. Complete shielding reduces hand capacity and antenna effect to minimum. Completely insulated. Reads to 200 Mc with 10% accuracy. Input capacity 3.5 Mmf. 400 V DC rating. Input resistance (approx.) .25 Meg-ohms @ 500 Kc, 150,000 Ohms @ 10 Mc, 25,000 Ohms @ 100 Mc. Reads .707 × positive peak of sinusoidal voltage. Type C adapts volt-ohm-milliammeters for indication and comparison of V.H.F. voltages. Has Germanium crystal and suitable network of resistance and capacity for connection to DC circuit of VOM, with at least 200 Micro-amp. sensitivity.

KLIPZON LONGIE ADAPTOR

Converts old style prods to self holding

ACTUAL SIZE



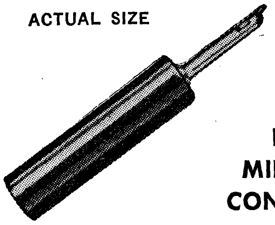
PRICE
35c

TYPE L

In boxes of 20
10 red, 10 black

The Longie Type L Adaptor is especially designed for test work in miniaturized or deep, close packed chassis. The extra long, slender point has the unique self-holding jaw and a needle sharp point for piercing insulation. The Longie fits over R.T.M.A. standard test points directly, and over phonograph needle type with special insert supplied.

ACTUAL SIZE



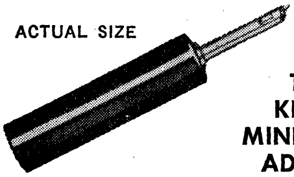
PRICE
25c each

Type B
KLIPZON
MINI-PROD
CONNECTOR

In boxes of 20
10 red, 10 black

KLIPZON Type B Mini-prod Connectors, with self-holding points are designed for laboratory or service use where quick, easy to make, temporary test connections are needed. Equipped with various lead lengths they make handy test connectors that can be easily changed without shutting off power. Insures maximum safety in testing. Wiring made easy by solderless connection inside Tenite handle. Needle sharp points for piercing insulation and protective coatings.

ACTUAL SIZE



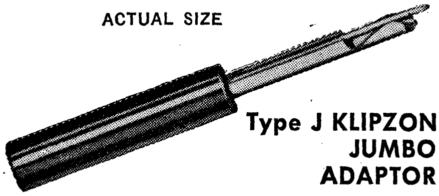
PRICE
25c each

Type M
KLIPZON
MINI-PROD
ADAPTOR

In boxes of 20
10 red, 10 black

KLIPZON Type M Mini-prod Adaptors are designed to fit over old style test points and thereby convert them to New Style Self Holding Prods. Fits over usual R.M.A. standard test point directly, or over phonograph needle type with special insert supplied. Size is same as that of KLIPZON Mini-prod Connector.

ACTUAL SIZE



PRICE
25c each

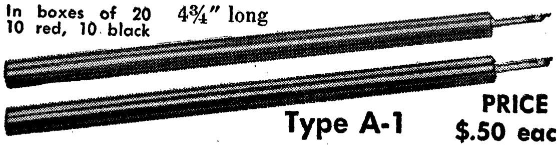
Type J KLIPZON
JUMBO
ADAPTOR

In boxes of 20
10 red, 10 black

KLIPZON Type J Jumbo Adaptors are designed to make the self-holding feature available for use on larger wires and terminals. Fits over regular KLIPZON Self Holding Point of Types A, V, or C. Will also fit over standard R.M.A. test points or phonograph needle type with special insert supplied. Suitable for wires up to #4 B&S ga., #12 machine screws and equivalent sized lugs and terminals.

In boxes of 20
10 red, 10 black

4¾″ long



PRICE
$.50 each

Type A-1

KLIPZON TEST PROD HANDLES

KLIPZON Type A1 Test Prod Handles of glossy Tenite with self-holding points and solderless connection in handles, same as supplied with Type A Test Prods. Hole in handle accommodates up to .140″ Dia. wire, 4¾″ long. Designed for those who wish to wire up their own test prods.

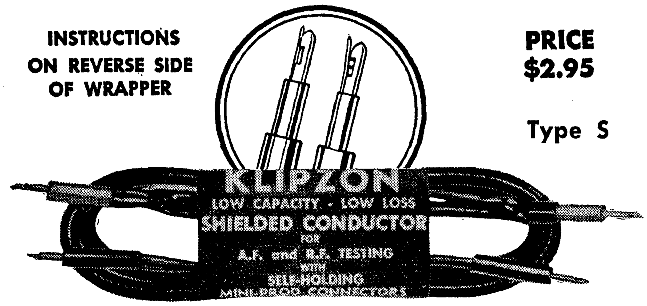
Net

UNITED TECHNICAL LABORATORIES

MORRISTOWN, N. J.

KLIPZON Products
LOW-CAPACITY LOW LOSS LEADS
JUMBO HEAVY DUTY TEST PRODS ● MINI-PROD TEST LEADS

INSTRUCTIONS ON REVERSE SIDE OF WRAPPER



PRICE $2.95

Type S

KLIPZON Type S Shielded Leads provide a reliable means of piping audio or radio frequencies in laboratory or service work. Di-electric of air and poly-ethylene is proportioned to provide unusually low capacity and loss even at U.H.F. while retaining strength, durability and flexibility of the lead. Complete shielding of leads eliminates stray pickups, feed back and other undesirable coupling effects. Lead length is 3 ft., O.D. approximately 9/32", total capacity only 25 mmf. Provided with black Mini-prod Connectors at each end of lead for complete grounding of shield and red Mini-prods for connecting to circuit or instrument.

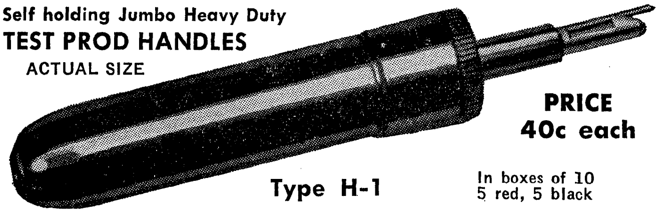
KLIPZON
SELF-HOLDING
JUMBO TEST PRODS
FOR
HEAVY DUTY TESTING

Type H

PRICE $2.50

KLIPZON Type H Jumbo Heavy Duty Test Prods and Leads are designed to make the self-holding feature available for large sized wires, lugs and terminals. The oversized self-holding points clip onto conductors up to #4 B&S Ga. and grip test point until pulled off. Points are needle sharp to pierce insulation, fungus and wrappings, and protected with insulating sleeves to prevent shorting to adjacent wires. Handles unscrew for easy renewal of leads by soldering to internal lug. Spade type terminals are provided for ease of connection to meters or other equipment. Provided with 4 ft. lacquered poly-ethylene rayon leads, equivalent to #18 B&S Ga. (16 strands #30 B&S Ga. copper wire.)

Self holding Jumbo Heavy Duty
TEST PROD HANDLES
ACTUAL SIZE

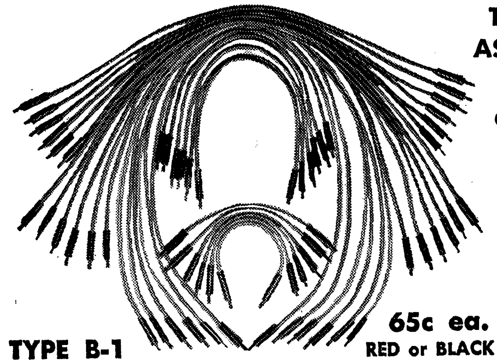


Type H-1

PRICE 40c each

In boxes of 10
5 red, 5 black

KLIPZON Type H-1 Test Prod Handles of wear resistant plastic with heavy duty self-holding points, the same as provided with Type H Jumbo Test Leads. Point unscrews from handle, for attachment of leads to internal soldering lug. Hole in handle accommodates up to .220" dia. wire. Designed for those who wish to wire up their own test prods.



TEST LEAD ASSORTMENT

MINI-PROD CONNECTORS AS TERMINALS.

LENGTHS
6"
12"
18"
24"
30"

TYPE B-1

65c ea.
RED or BLACK

Every electronics laboratory, service shop and production line needs a supply of these handy KLIPZON Type B-1 leads. Each lead is equipped with two Type B Mini-Prod Connectors, which may be used as a miniature prod or clip. Points are protected by insulating sleeves to prevent shorting to adjacent wires. Sleeves are easily removable so that point may be inserted into pin jacks, binding posts and tube sockets. Needle sharp points readily make contact with inner conductors by piercing insulation. Lead wire is super-flexible, rubber covered (41 strands, #34 B&S Ga. copper) in red or black 6, 12, 18, 24 and 30 inch lengths. Solderless connector in handle makes renewal of leads easy.

PLASTIC 707 ''Spray-On''

PLASTIK 707
The Spray-On
INSULATION
UNITED TECHNICAL LABORATORIES
MORRISTOWN, N.J.

- REDUCE CORONA
- INSULATE PARTS
- PROTECTS METALS
- PREVENTS ELECTRICAL LEAKAGE

PROTECTIVE and INSULATING COATING. USE on TV antennas and lead-in connections, on masts, guy wires, turnbuckles, to eliminate deterioration and corrosion. All high voltage components of TV receivers; high voltage terminals, rectifiers, coils, condensers, to reduce corona losses. All bright metal work to preserve polish. Stops tarnish and rust. Keeps home and automotive metalware looking brand new. All marine installations of radio and electronic gear, and metalware subject to salt air.

$1.25 per 12 oz. can

PATTERN

GENERATOR

Simple • Efficient • Accurate for a Steady Non-Shifting Vertical and Horizontal Test Pattern Modulates Signal Generator for Overall TV Alignment. Tests Video Linearity and Picture Performance Directly.

Makes horizontal and vertical linearity, width, height and centering tests. Checks relative gain of video stages; isolates defects in video amplifier. Tests performance of kinescope directly. Checks overall image reproduction when used to modulate TV signal generator. Uses sync impulse of receiver to insure steady cross bar pattern. No removal of chassis necessary; special leads connect to tube pins.

$29.50
Complete with Shielded Leads

Net

CUSTOM-BILT TERMINAL BOARDS and ASSEMBLIES

PROMPT DELIVERY USING OUR LARGE STOCKS OF STANDARD TERMINALS AND BAKELITE TO JAN SPECS.

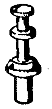
KEYSTONE
DESIGNERS
MANUFACTURERS

ALL • TOOLING • FABRICATION • MARKING • FUNGICIDING DONE ON OUR PREMISES.
PLASTIC FABRICATION • ALIGNING TOOLS • TEST LEADS
RADIO HARDWARE • STAMPINGS • SCREW MACHINE PARTS

FROM YOUR BLUEPRINT TO FINISHED ITEM!

TURRET TERMINALS

Actual Size Shown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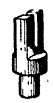
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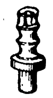
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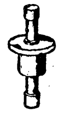
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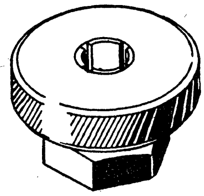
SHAFT & DIAL LOCKS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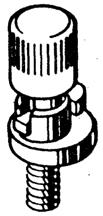
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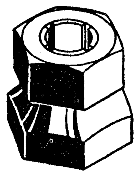
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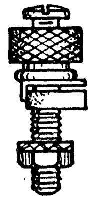
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MINIATURE TERMINAL

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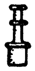
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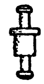
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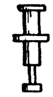
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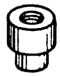
BRACKETS & BUSHINGS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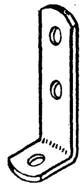
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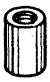
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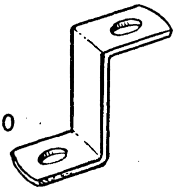
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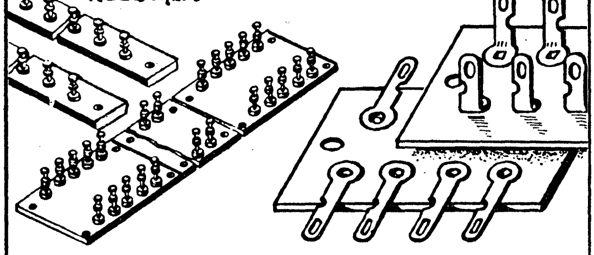
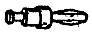
Readi-Made TERMINAL BOARDS



PLUGS & JACKS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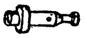
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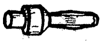
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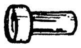
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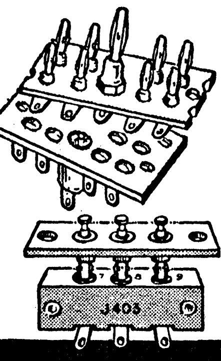

EXTRUDED TERMINALS

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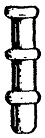
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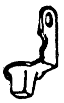
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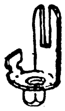
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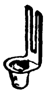
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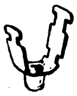
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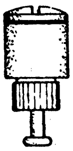
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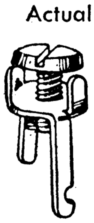
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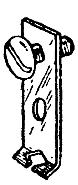
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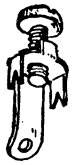
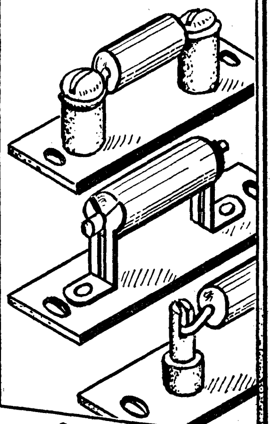

No. 1248

DIODE MOUNTS



Send FOR OUR CATALOG SHOWING OUR COMPLETE LINE OF STOCK ITEMS!

KEYSTONE

ELECTRONICS CORP.
423 BROOME ST., NEW YORK 13, N. Y.
WOrth 2-2789

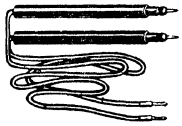
We are Leaders in the manufacture of TEST LEADS, PROBES, TOOLS and RADIO HARDWARE. Our Products are sold by the leading Radio and Electronic Jobbers throughout the United States.

VISULITE Co.
NEW YORK 13, N. Y.

We are constantly developing NEW and BETTER PRODUCTS. Our SPECIAL SERVICE DIVISION will cooperate with you on new designs relating to Miniature or Industrial Applications.

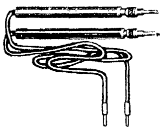
STANDARDIZED TEST LEADS

NEEDLE POINT PRODS



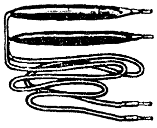
Cat. No. 2377

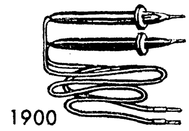
SOLDERLESS TIP PRODS



Cat. No. 2375

STREAMLINE TEST LEADS

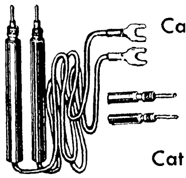




Cat. No. 1901 Streamline Test Leads
Cat. No. 1900 Streamline Guard Test Leads

INDUSTRIAL TEST LEADS

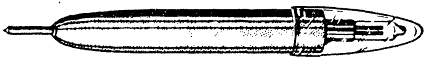
SOLDERLESS TIP PRODS



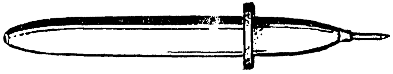
Cat. No. 2001 With Lug

Cat. No. 2002 With Insulated Solderless Ends

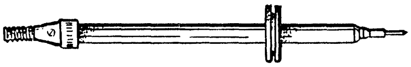
TV INDICATOR



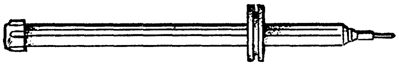
MINIATURE PROBE



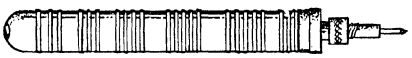
ECONOMY PROBE



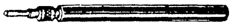
SLIM PROBE



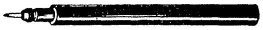
INDUSTRIAL PROBE



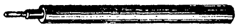
STANDARDIZED TEST PROD HANDLES



Cat. No. 1840

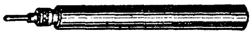


Cat. No. 1850



Cat. No. 1860

INDUSTRIAL TEST PRODS



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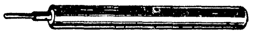
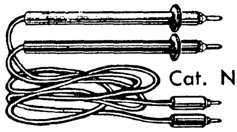


Cat. No. 1890

HY-VOLTAGE TEST LEADS

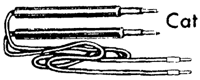
INSULATED FOR 10,000 VOLTS



Cat. No. 2480

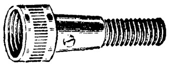
Heavi-Duty Test Leads

ECONOMY TEST LEADS



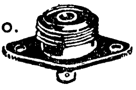
Cat. No. SP300

MICROPHONE CONNECTOR



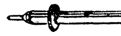
Cat. No. 509

OPEN CIRCUIT MALE CHASSIS CONNECTOR



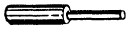
Cat. No. K507

HY-VOLTAGE TEST PRODS

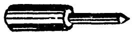


Cat. No. 1800 Red Bakelite
Cat. No. 1801 Black Bakelite

STANDARD PHONE TIPS

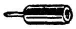


Cat. No. 1600

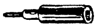


Cat. No 1601

STREAMLINE INSULATED PHONE TIPS

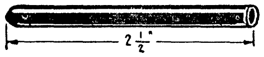


Cat. No. 1615 Jr. Streamline Red
Cat. No. 1616 Jr. Streamline Black



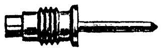
Cat. No. 1617 Sr. Streamline Red
Cat. No. 1618 Sr. Streamline Black

MIDGET ALIGNING TOOL



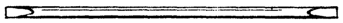
Cat. No. 3327

STREAMLINE PHONE TIPS



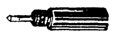
Cat.No.3020 Jr. Streamline tip, 1" lg.
Cat.No.3021 Sr. Streamline tip, 1⅜" lg
Cat.No.3022 Jr. Tip less Shoulder, 15/16 lg
Cat.No.1606 Bushing only
Cat.No.1607 Hi-Voltage 2 Piece Tip

BONE FIBER SCREW DRIVER

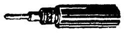


Cat. No. 3300

SOLDERLESS INSULATED PHONE TIPS

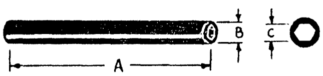


Cat. No. 1660 Jr. Solderless Red
Cat. No. 1661 Jr. Solderless Black



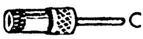
Cat. No. 1670 Sr. Solderless Red
Cat. No. 1671 Sr. Solderless Black

HEX ALIGNING DRIVER

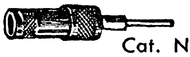


CAT. NO.	A	B	C
3341	6"	⅜"	¼"
3342	8"	⅜"	¼"
3343	5"	7/16"	5/16"

SOLDERLESS PHONE TIPS



Cat. No. 1680 Junior



Cat. No. 1690 Senior

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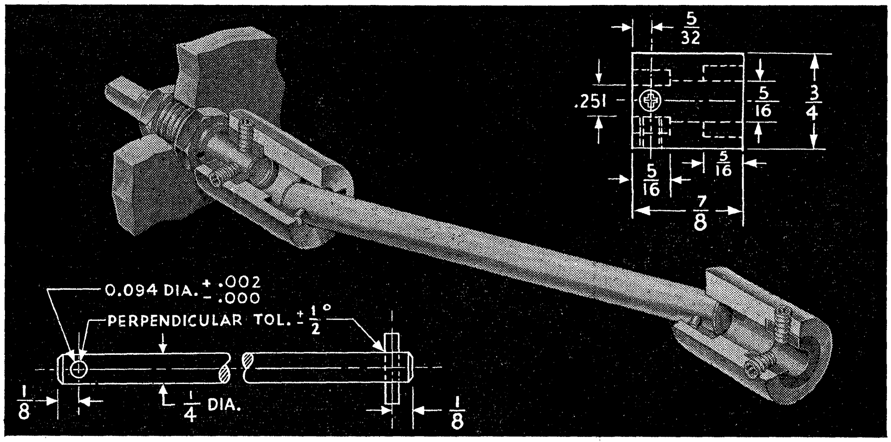
VISULITE COMPANY, 423 BROOME ST., NEW YORK 13, N. Y. WOrth 2-2790

JAN HARDWARE MANUFACTURING CO., INC.

FLUSHING 58, N. Y.

Specialists in Design and Manufacture of Electronic Hardware



JAN'S NEW DESIGN!

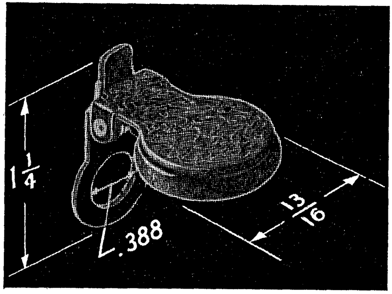
This extremely durable nylon insulated coupling is used for joining two parallel drive shafts, offset from each other.

Couplings for wide angle applications also available.

OFFSET EXTENSION SHAFT COUPLER

The **JAN** Offset Extension Shaft Coupler secures firmly to the drive shaft through a plated brass insert and two set screws. For use with 1/4" diameter coupling shaft (not supplied), of any desired length, which is keyed to the couplers by zinc plated steel pins, supplied by **JAN.** Nylon insulation withstands extremes of humidity and temperature (from —75° C. to +120° C.). Use of this *new* component eliminates backlash and costly flexible shafting, in coupling from front panel to remote control, such as potentiometer, selector switch, or other rotating device.

Cat No. AP15299 .... List Price $.69



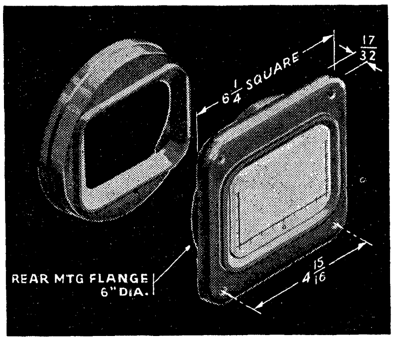
JACK COVER

These sturdy Jack Covers are made of steel and finished in black wrinkle enamel, after bonderizing for rust protection. Used to keep out dust and moisture, in addition to preventing inadvertent disturbance of control settings. Fits on jack or panel bushing of 3/8" diameter. Supplied complete with stainless steel spring-loaded cover, pin, and neoprene pad.

Cat. No. J1301 .... List Price $.48

JAN PRODUCTS MEET ALL GOVERNMENT MATERIAL AND FINISH SPECIFICATIONS.

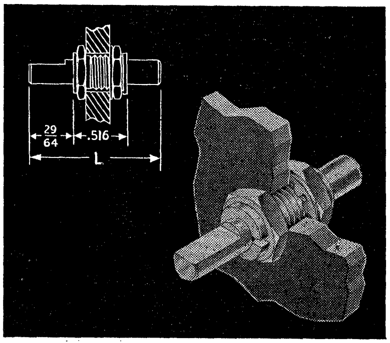
CERTIFICATION SUPPLIED.



CATHODE-RAY TUBE BEZEL FOR FLAT OR CURVED FACE CRT

- Intended for mounting in a 6" diameter panel opening, in front of any 5" cathode-ray tube.
- Cast aluminum bezel, with black paint finish over anodized surface.
- Green plastic calibrated scale, engraved horizontally and vertically.
- Buna-S black synthetic rubber gasket.
- Supplied with four flat head, steel, nickel plated screws.

Cat. No. CP13549-1, curved face CRT.
Cat. No. CP13549-2, flat face CRT.
List Price $8.35



PANEL BEARING AND SHAFT ASSEMBLY

This versatile Panel Bearing and Shaft Assembly is used for control of a remote component. *Passivated stainless steel shaft* is 1/4" diameter, with one end flatted for attaching to control knob by set screws. Supplied completely assembled with two retaining rings, jam nut with lock washer, and brass, nickel plated, panel bearing. Fits all metal panels up to 3/16" thickness; mounts in 13/32" diameter panel hole.

Cat. No. AP15350	**Panel Bearing Assembly only**	**List Price $.26**
Cat. No. AP15350-1	**1-5/16" shaft length**	**List Price $.35**
Cat. No. AP15350-2	**3" shaft length**	**List Price $.40**
Cat. No. AP15350-3	**6" shaft length**	**List Price $.48**

JAN HARDWARE MANUFACTURING CO., INC.

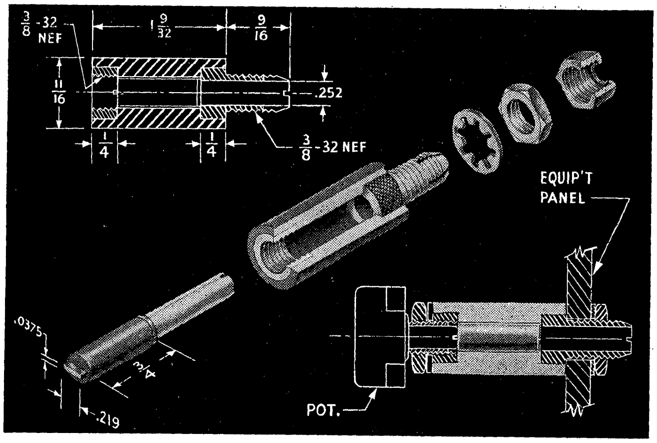
FLUSHING 58, N. Y.

Specialists in Design and Manufacture of Electronic Hardware

a *new* concept!

- *VOLTAGE BREAKDOWN GREATER THAN 15 KV.*
- *FITS STANDARD SLOTTED POTENTIOMETERS.*
- *WITHSTANDS HIGH TORQUE LOAD.*
- *RUGGED.*

Patent applied for



INSULATED COUPLING ASSEMBLY

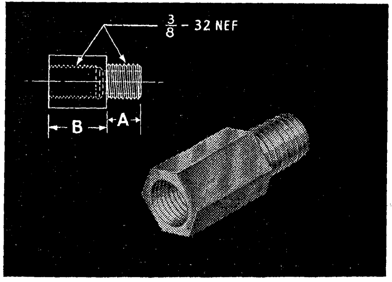
This coupling permits chassis or panel adjustment of high-voltage controls, without danger of electrical shock to operating personnel. Stainless steel shaft and tip are molded into a single unit, melamine-to-metal, completely vibration and shock-proof. Operates with ease over an ambient temperature range from —75° C. to +175° C. Supplied complete with nickel plated hardware. Shaft mates screwdriver slot of all standard potentiometers (1/8" shaft length), *without further machining.*

Cat. No. AK5079—Shaft length extension 1/8" beyond locking type mounting bushing............List Price $1.80
Cat. No. AK5164—Shaft length extension 3/8" beyond plain type mounting bushing............List Price $1.55
Other shaft lengths available!

BUSHING EXTENDER

This special Bushing Extender permits staggered mounting of components (having 1/4" diameter shafts) behind a panel. Potentiometers or other electrical parts can be located in close proximity on a panel, without interference of one case against another. Supplied in nickel plated brass, as shown in illustration to the right, in six different sizes:

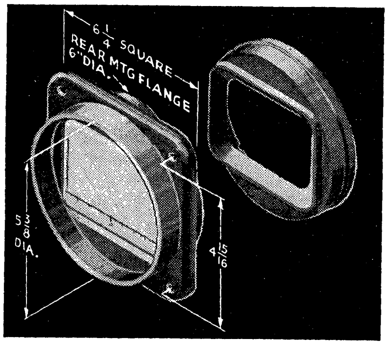
Cat. No.	Extension Behind Panel	Bushing Length	List Price
	"B"	"A"	
AK5075-1	5/8"	3/8"	$.40
AK5075-2	5/8"	1/4"	$.40
AK5075-3	5/8"	3/16"	$.40
AK5075-4	3/4"	1/4"	$.40
AK5075-5	2 1/4"	1/4"	$.65
AK5075-6	1 5/8"	1/4"	$.65



CATHODE-RAY TUBE BEZEL CAMERA MOUNT FLANGE FOR FLAT OR CURVED FACE CRT

- Intended for mounting in a 6" diameter panel opening, in front of any 5" cathode-ray tube.
- Protruding flange designed to accommodate camera and projection lens.
- Cast aluminum with black paint finish over anodized surface.
- Green plastic calibrated scale, engraved horizontally and vertically.
- Buna-S black synthetic rubber gasket.
- Supplied with four flat head, steel, nickel plated screws.

Cat. No. CP13584-1, curved face CRT.
Cat. No. CP13584-2, flat face CRT.
List Price $8.90



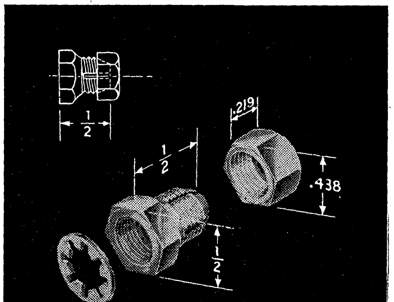
ALL JAN PRODUCTS MEET THE MOST RIGID MILITARY SPECIFICATIONS.

INDIVIDUAL SPECIALTIES ENGINEERED TO YOUR REQUIREMENTS.

SHAFT LOCK

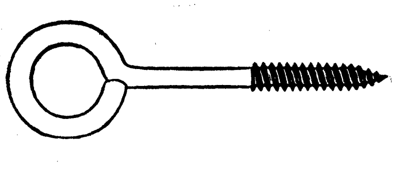
This shaft lock securely holds in position the shaft of volume controls, capacitors, switches, etc., which are 1/4" in diameter. Body and lock nut of nickel plated brass. Supplied with nickel plated steel lock washer. Body and lock nut are available in stainless steel on special order.

Cat. No. AK5100 ....List Price $.41



Quantities of Larson Wire Goods Used on Antenna Installations

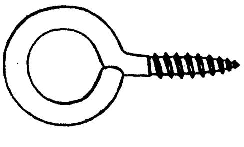
Sold Exclusively Through Jobbers



EYE BOLTS LAG SCREW THREAD No. 11—Zinc Coated

Stock No.	Wire Size and Length Overall	I.D. Eye	Length of Thread	Lbs. Per Gross
EL 1	¼" x 3¾"	½"	1¼"	8.00
EL 2	5/16" x 4"	⅝"	1¾"	18.00
EL 3	⅜" x 4½"	¾"	1½"	27.00
EL 4	7/16" x 5¼"	1"	2¼"	43.00
TEL 1	#3 x 5"	21/32"	1½"	14.25

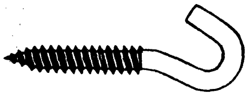
Packed 1 Dozen in Box. Order by Gross and Stock Number.



SCREW EYES—LARGE EYE—Zinc Coated

Wire Size	Length Overall	Length of Stem	I.D. Eye	Length of Thread	Lbs. Per Gross
000	3⅞"	2 1/16"	1⅛"	1⅝"	27.00
0	2⅞"	1 9/16"	13/16"	1¼"	14.50
2	2⅝"	1 5/16"	23/32"	1⅛"	9.25
4	2 3/16"	1⅛"	39/64"	15/16"	6.00
6	1 15/16"	31/32"	17/32"	¾"	3.75

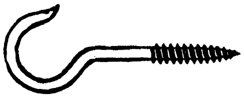
Size 000 to 4 packed ¼ Gross in Box. Size 6 packed ½ Gross in Box. Order by Gross.



PORCH SWING HOOKS No. 222—Zinc Coated

Dia. Wire	Length Overall	I.D. Hook	Length of Thread	Lbs. Per Gross
5/16"	3⅝"	½"	1¾"	14.00
⅜"	4¼"	¾"	2⅛"	23.00

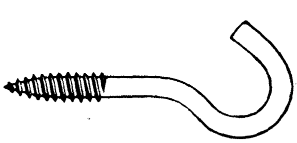
Packed 1 Dozen in Box. Order by Gross and Size.



SCREW HOOKS—CEILING—Zinc Coated

Wire Size	Length Overall	I.D. Hook	Length of Thread	Lbs. Per Gross
0	4 15/16"	1⅛"	1⅝"	21.00
2	4 7/16"	1 1/32"	1½"	14.00
3	4⅛"	31/32"	1½"	11.00
4	3⅞"	29/32"	1⅜"	8.50
6	3⅜"	13/16"	1⅛"	5.50

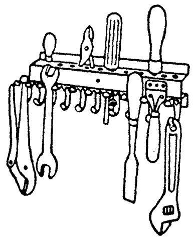
Size 0 to 5 packed ¼ Gross in Box. Size 6 packed ½ Gross in Box. Order by Gross



LARGE WROUGHT SCREW HOOKS No. 322—Zinc Coated

Wire Size	Length Overall Inches	I.D. Hook	Length of Thread	Lbs. Per Gross
¼"	4¼"	13/16"	1¼"	12.00
5/16"	4½"	⅞"	1¾"	21.00
⅜"	4⅞"	1 1/16"	1½"	31.90
7/16"	5¼"	1 1/16"	2¼"	46.00

Packed 1 Dozen in Box. Order by Gross and Size.



TOOL HOLDER—No. TH 321—Zinc Coated

Patent Pending

3 Part Set—each part 12" long—weight per set 1¾ lbs. Holds large assortment of hand tools—many in use at radio and television repair shops. Also good item for Home craftsman.

Packed One Set in Colorful Box. 12 Sets in Carton.

CHAS. O. Larson CO. - STERLING, ILL. CLEAN-CUT CAREFULLY MADE WIRE HARDWARE

CASH IN ON THE BIG TV BUYING!

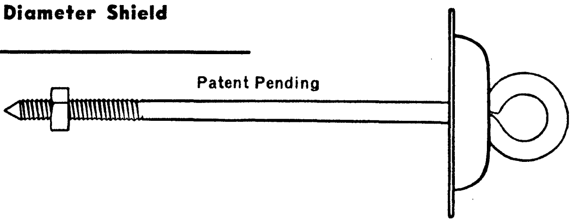
Stock the Larson Wire Goods for the Ever-Increasing Demand.
All Larson Wire Goods are Zinc Coated, Weather Proofed Finish.

Sold Exclusively Through Jobbers

TV Guy Wire Eye Bolts were especially designed for leakproof application on all roofs. Simply fill the cup with roofing compound before using.

TV GUY WIRE EYE BOLTS—Zinc Coated—With 3" Diameter Shield

Diameter Wire .268 — Machine Thread 5/16 x 18

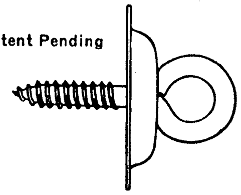


Stock No.	Diameter and O.A. Length	I.D. Eye	Length of Thread	Weight Per Gross
TE5F	5/16 x 10"	¾"	3¼"	41.50 Lbs.
TE5H	5/16 x 12"	¾"	3¼"	45.00 Lbs.

Packed 1 Dozen in Box. Order by Gross and Stock Number.

TV GUY WIRE LAG SCREW EYE BOLT—No. SEL-1111—Zinc Coated

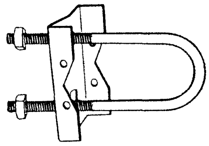
With 3" Diameter Shield — Diameter Wire .268



Weight and O.A. Length	I.D. Eye	Length of Thread	Weight Per Gross
5/16 x 3½"	¾"	1½"	28.00 Lbs.
5/16 x 5"	¾"	1½"	31.25 Lbs.

Packed 1 Dozen in Box. Order by Gross and Size.

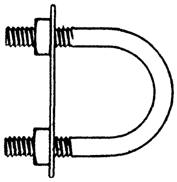
"U" BOLTS WITH CLAMPS FOR TELEVISION ANTENNA WORK—Zinc Coated



Stock No.	Pipe Size	Wire Dia.	Outside Length	Width Between Legs	Weight Per Hundred
TC3	1"	¼"	3"	1⅜"	18.75 Lbs.
TC4	1"	¼"	4"	1⅜"	21.25 Lbs.

Packed 10 in Box Assembled with Clamp. Order by Hundred and Stock Number.

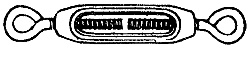
"U" BOLTS No. 103—Zinc Coated



Stock No.	Pipe Size	Wire Dia.	Outside Length	Width Between Legs	Lbs. Per Doz.
A-¼"	½-¾"	¼"	2¼"	1⅛"	1.31
TA-¼"	1"	¼"	3"	1⅜"	1.50
TV-¼"	1"	¼"	4"	1⅜"	1.78
A-5/16"	1"	5/16"	2½"	1⅜"	2.03
B-5/16"	1¼"	5/16"	3"	1¾"	2.31
C-5/16"	1½"	5/16"	3"	2"	2.37
D-5/16"	2"	5/16"	3½"	2½"	3.00
A-⅜"	1¼"	⅜"	3¼"	1¾"	3.37

Packed 1 Dozen Bolts in Box with Square Nuts and Flat Straps. Order by Dozen and Stock Number.

TURNBUCKLES—Only Zinc Coated Turnbuckles Stocked



Eye and Eye No.	Wire Size	Hook and Eye No.	Hook and Hook No.	Take Up	Length Closed	Length Open	Lbs. Per Doz.
EE 11	5/32"	HE 21	HH 31	1¼"	3½"	4¾"	.875
EE 12	3/16"	HE 22	HH 32	1⅝"	3⅞"	5½"	1.25
EE 13	7/32"	HE 23	HH 33	1⅞"	4⅜"	6¼"	1.50
EE 14	¼"	HE 24	HH 34	2⅛"	5½"	7¾"	2.00
EE 15	5/16"	HE 25	HH 35	2⅝"	6¾"	9⅜"	4.00
EE 16	⅜"	HE 26	HH 36	3"	7¾"	10½"	6.00
EE 17	⅜"	HE 27	—	6"	10¾"	16¼"	13.00

Packed 1 Dozen in Box. Order by Dozen.

"QUIETROLE"

The original, most reliable LUBRICANT CLEANER!

QUIETROLE
TRADE MARK REG. U.S. PAT. OFF.
MFD. BY
QUIETROLE COMPANY
SPARTANBURG, S. C.

Size	Cat. No.	Min. Order	Min. Re-order	Distr. Net Resale Price
2 oz.	10-2	24	24	$1.69
4 oz.	10-3	16	8	2.54
8 oz.	10-4	8	6	5.07

Save on Gross Lot Purchase — Small Size

Size	Cat. No.	Distr. Resale Net Price
2 oz.	10-2	$1.69

Your guarantee for quieting noisy television and radio controls, switches and other moving parts is QUIETROLE. . . . Here is the original, most reliable lubricant-cleaner on the market today . . . developed after years of research.

QUIETROLE COMPANY

SPARTANBURG, S. C.

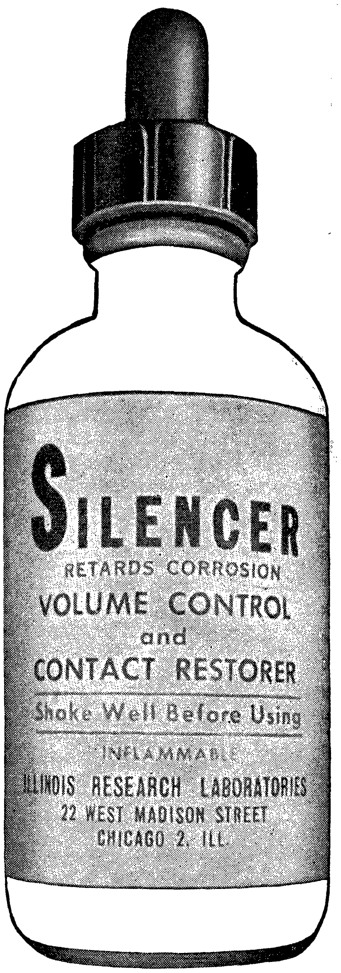
Net

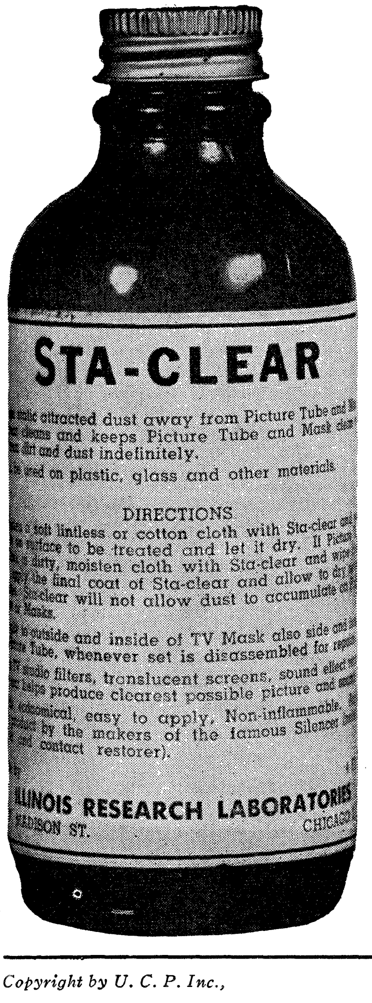
SILENCER VOLUME CONTROL *and* CONTACT RESTORER

Check These Features!

- Far superior to temporary carbon tetrachloride.
- One drop of Silencer instantly eliminates all noise indefinitely.
- Cleans, restores volume controls, band switches, push button assemblies, tuners, etc.
- Never changes capacities.
- Never harms insulation or precious metals.
- Not an oil that changes capacities and gums controls.
- Prevents corrosion and oxidation.
- Tested, approved and used exclusively by well known television manufacturers, telephone companies, thousands of repairmen — sold by hundreds of jobbers.
- Remember *Silencer is Unconditionally Guaranteed.* If you are dissatisfied, your jobber is authorized to refund your money at once.

3 FULL OZ. **$1.00** **NET including dropper**


SILENCER
RETARDS CORROSION
VOLUME CONTROL
and
CONTACT RESTORER
Shake Well Before Using
INFLAMMABLE
ILLINOIS RESEARCH LABORATORIES
22 WEST MADISON STREET
CHICAGO 2, ILL.


STA-CLEAR
DIRECTIONS
ILLINOIS RESEARCH LABORATORIES

STA-CLEAR A CLEAR PICTURE ALWAYS

Check These Features!

- Sta-Clear cleans and de-staticizes in one operation.
- Sta-Clear will not allow static-attracted dust to cloud television tubes and masks.
- Sta-Clear never discolors glass or plastic.
- Sta-Clear never evaporates.
- Sta-Clear is harmless and safe on all materials.
- Sta-Clear is non-inflammable.
- Sta-Clear gives you 150 applications.
- For filters, translucent screens, sound-effect records, phonograph records, and all plastic materials, including automobile seat covers.

All engineers are agreed that picture tubes and masks cloud up swiftly due to the ionized dust particles always floating in the air, and are drawn quickly onto the picture tube and mask because of static created by the operation of the television set.

STA-CLEAR, when wiped on picture tubes and masks, neutralizes this charge indefinitely and keeps your picture tube and mask free from dust.

SAVE TIME! SAVE MONEY! SAVE LABOR!

Safe — Harmless — Economical — Good for 150 Applications

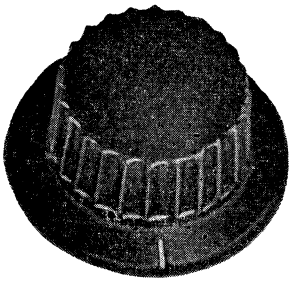
$1.00 **NET 4 Fluid Ounces**

ILLINOIS RESEARCH LABORATORIES
CHICAGO 2, ILLINOIS
(Manufactured by an organization of chemists)

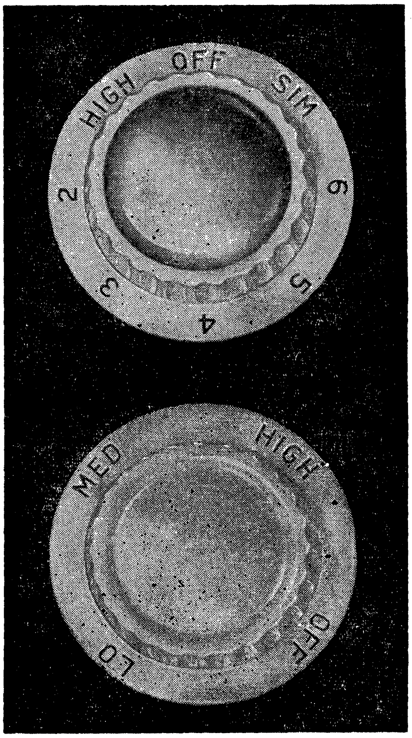
KNOBS *FROM STOCK MOLDS*

For All Types of Instruments and Apparatus . . . Low Cost . . . Immediate Delivery

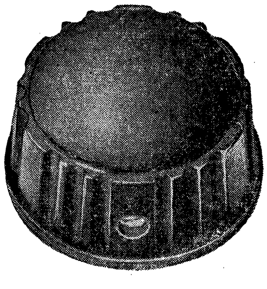
ROGAN BROTHERS • *Compression Molders and Branders of Plastics* • 8023 N. Monticello, Skokie, Ill.



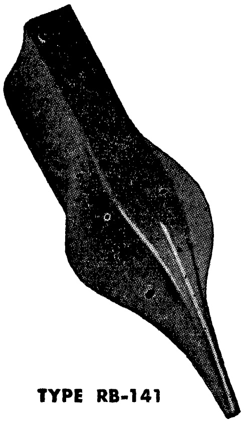
TYPE RB-51



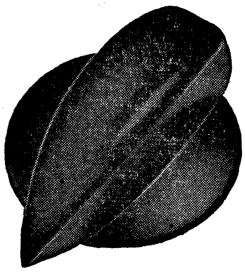
TYPES RB-85 and 80



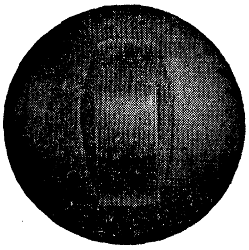
TYPE RB-211



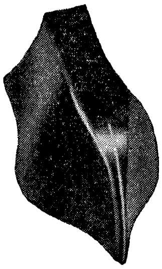
TYPE RB-141



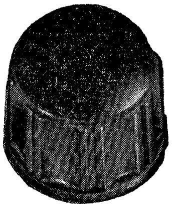
TYPE RB-131



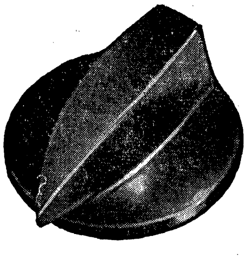
TYPE RB-171



TYPE RB-41



TYPE RB-301



TYPE RB-31

WIDE SELECTION OF SHAPES AND SIZES

Shown above, are but a few of the many Rogan plastic knobs available to you from our regular stock molds. These are supplied without tool charge, resulting in considerable savings in cost, faster delivery. Choice of a wide selection of sizes, shapes and colors. Molded of phenolic or urea thermosetting materials, which will not soften, warp, or scratch easily. Heat resisting materials can be used so knobs can withstand 350-400° F. continuous heat. Most knobs supplied with 1/4" shaft hole and set screws. Special shaft hole sizes and means of fastening can be supplied to specifications at nominal cost.

KNOBS CAN BE BRANDED, AS REQUIRED

Rogan's famous "deep relief" branding process, applied after molding, provides sharp perfect marking at low cost. Any type marking, graduations or numerals can be branded on blank knobs to fit your requirements. Rogan knobs are available in black, brown or walnut, when molded of phenolic materials; and in all light pastel colors when molded of urea materials. Whatever your knob requirements may be, Rogan is equipped to supply you faster, better, more economically. The complete line of Rogan knobs with specifications is shown in the new Rogan catalog. Write for your copy now.

KNOBS FROM STOCK MOLDS

No Tool Charge . . . No Tooling Wait . . . Wide Range of Styles, Sizes and Colors

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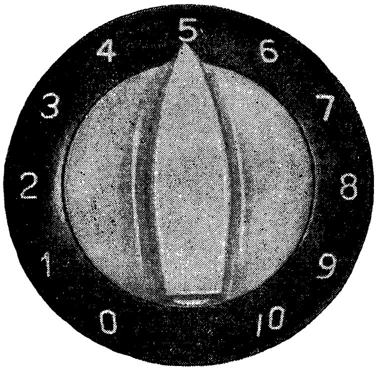
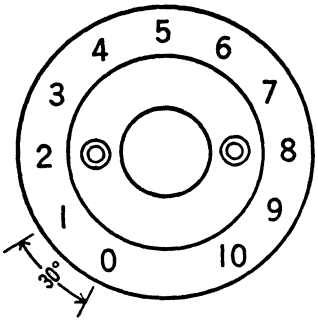


0
1
2
3
4
5
6
7
8
9
10

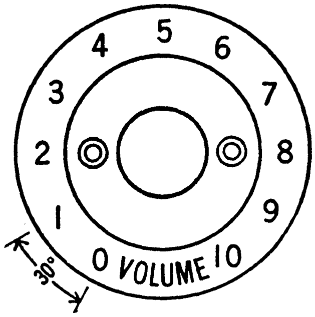
Combination Knobs Save Time, Money

Illustration at left shows RB-1000 escutcheon combined with RB-31 pointer knob, which rotates inside the RB-1000. Available from stock molds, in matching or contrasting colors. Illustrations below, show a few of the stock markings available. These marking dies are already made up, no tool charge, no tooling wait. By using Rogan combination knobs and branding them with these ready-made dies you save time and money. Special markings can also be supplied. Write for complete catalog.



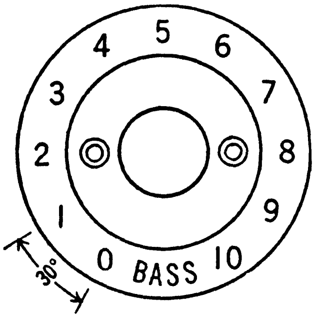
0
1
2
3
4
5
6
7
8
9
10
30°

RB-1000-1



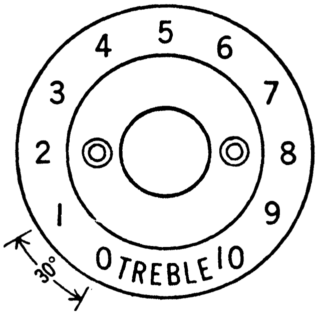
0 VOLUME 10
1
2
3
4
5
6
7
8
9
30°

RB-1000-2



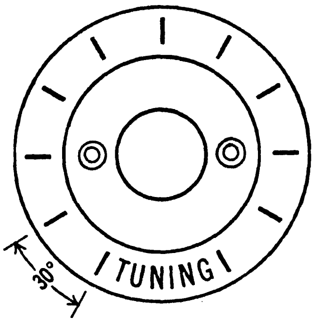
0 BASS 10
1
2
3
4
5
6
7
8
9
30°

RB-1000-3

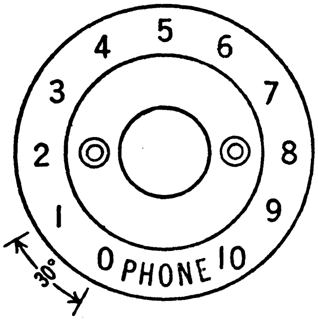


0 TREBLE 10
1
2
3
4
5
6
7
8
9
30°

RB-1000-4

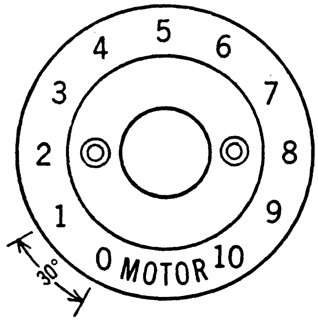


RB-1000-5



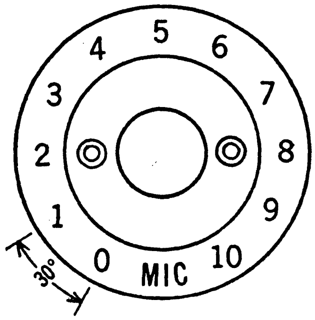
0 PHONE 10
1
2
3
4
5
6
7
8
9
30°

RB-1000-6



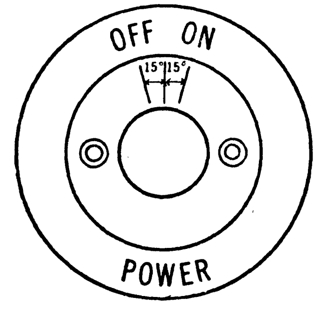
0 MOTOR 10
1
2
3
4
5
6
7
8
9
30°

RB-1000-7



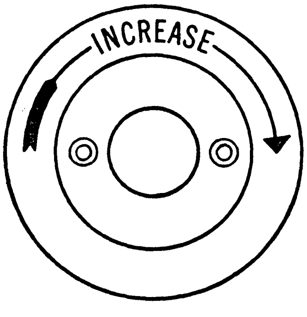
0 MIC 10
1
2
3
4
5
6
7
8
9
30°

RB-1000-8



OFF ON
15° 15°
POWER

RB-1000-9



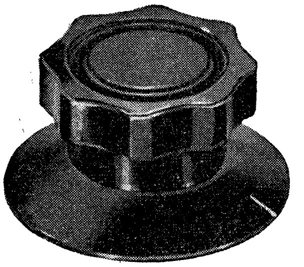
RB-1000-10

Harry Davies Molding Co.

Molders of Plastics

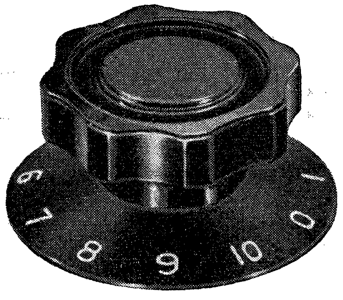
1428 NORTH WELLS STREET • CHICAGO 10, Ill.

ELECTRONIC INSTRUMENT KNOBS



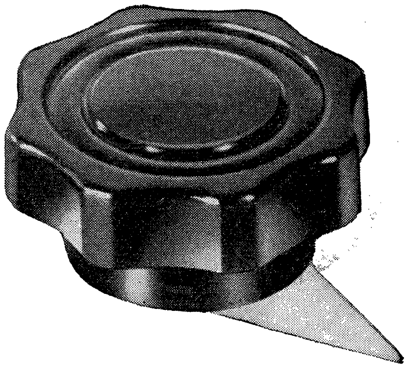
Part No.	Knob Dia.	Skirt Dia.
4104	1⅛"	1½"
4106	1⅜"	1½"
4108	1⅝"	2-1/16"
4109	2⅜"	3"

Skirts available with or without indicator line filled



Part No.	Knob. Dia.	Skirt Dia.
4104	1⅛"	1½"
4106	1⅜"	1½"
4108	1⅝"	2-1/16"
4109	2⅜"	3"

Branding stamps constructed to your specification

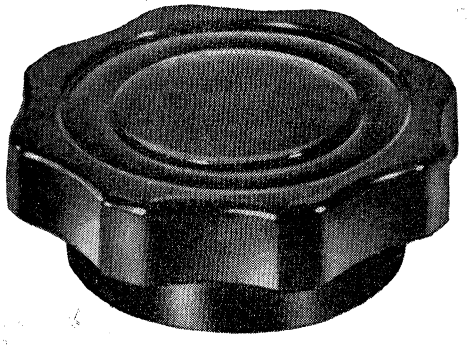


Pointers available on the four sizes shown

Pointer lengths 5/8" 1-3/16"
3/4" 1¼"
7/8" 1-9/16"
1-1/16"

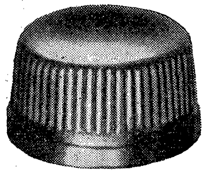
Specify pointer lengths when ordering. Furnished with white vinylite pointers only.

ACTUAL SIZE

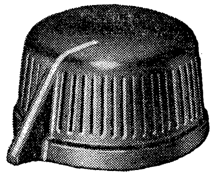


Part No.	Knob Dia.
4100	1⅛"
4101	1⅜"
4102	1⅝"
4103	2⅜"

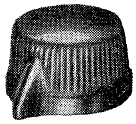
Entire 4100 Series Available with either ¼" molded hole or ¼" brass insert



No. 1475 (no pointer)
Height ½". Diameter 1"



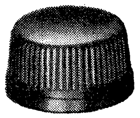
No. 1470 with pointer-indicator, lined or unlined
Height ½". Diameter 1"



No. 1400

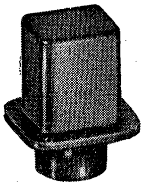
No. 1400 (with pointer)
Height 13/32"
Diameter 11/16"

No. 1450 (no pointer)

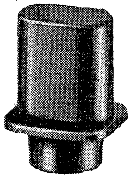


No. 1450

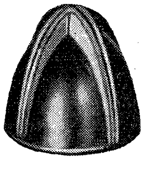
ACTUAL SIZE



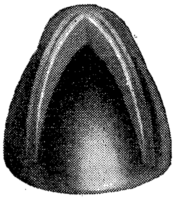
No. 5149 — Rectangular touch tuning knob. Push on, self-locating. Height 51/64"



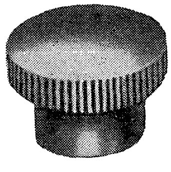
No. 5149-A—Oval touch tuning knob. Push on, self-locating. Height 13/16" — 1-1/32'.



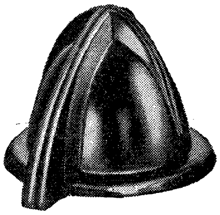
No. 2500—Height ¾". Diam. ¾". Set screw, spring, knurl-hole mounting.



No. 2600—Height ⅞". Diam. ⅞". Set screw, spring, knurl-hole mounting.



No. 2710—Height ½". Diam. ¾". Metal - faced or plain insert. Female thread available 8-32, 10-32 and 10-24.



No. 5140
Dia. 1⅛". Hgt. ⅞"
Set screw, knurl-hole mounting.

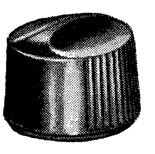
WRITE FOR COMPLETE CATALOG

HARRY DAVIES MOLDING CO.
1428 N. WELLS ST., CHICAGO 10, ILL.

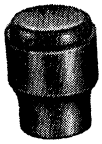
Harry Davies Molding Co.

Molders of Plastics

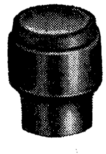
1428 NORTH WELLS STREET • CHICAGO 10, Ill.



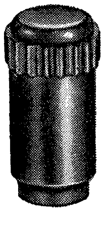
No. 1700
Ht. 19/32". Diam. 3/4" Set screw, spring or knurled hole mounting.



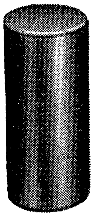
No. 1750
Touch tuning. Push on, self-locating.



No. 1770
Binding Post and Switch knob. No. 6-32 and No. 8-32 brass inserts. Also studs. Dia. 31/64". Height 1/2", 5/8", 3/4", 7/8".

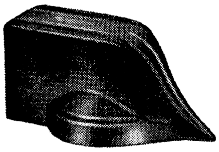


No. 1780
Touch Tuning. Dia. 1/2". Height 1", 1 1/8", 1-7/32", 1 3/8".

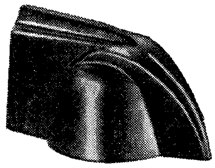


No. 1800
Plain or recessed tops. Dia. 7/16". Heights from 1" to 1 3/8". Also studs in various lengths.

ACTUAL SIZE

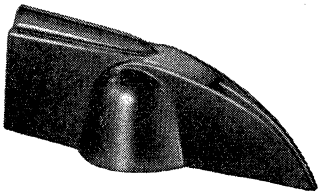


No. 2150
Streamlined bar knob. Length 1 1/4". Height 9/16".



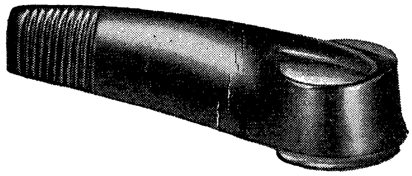
No. 2300
Zephyr bar knob. Lgth. 1 1/4". Height 5/8". Hex or D-Type set screw, metal insert, knurl-hole mounting.

Knobs shown are only part of our stock on hand. Our stock molds are interchangeable and meet most requirements with only minor tooling variations. Let us quote on your specifications.

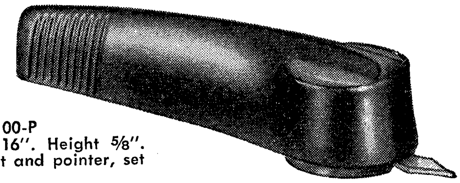


No. 2350

Zephyr bar knob
Length 2". Height 5/8". 1/4" molded hole, metal insert set screw mounting.

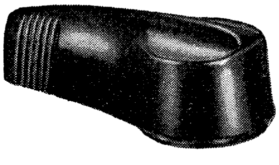


No. 2100
Length overall 2 1/2". Hght. 5/8". Dia. 3/4". Molded hole or brass insert, set screw mounting.

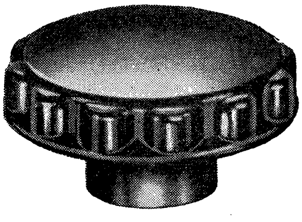


No. 2100-P
Length—overall 2-13/16". Height 5/8". Dia. 3/4". Metal insert and pointer, set screw mounting.

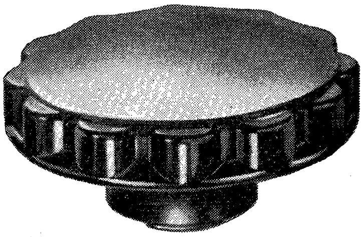
ACTUAL SIZE



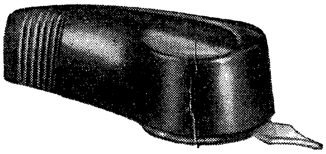
No. 2110
Lgth—overall 1 5/8". Hght. 19/32". Dia. 3/4". 1/4" molded hole, metal insert, knurled hole mounting.



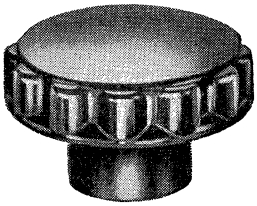
No. 3009
Dia. 1 1/2". Height 3/4". 1/4" molded hole, metal insert.



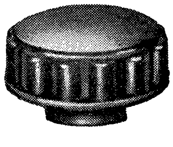
No. 3000
Dia. 1 3/4". Hght. 3/4", 1", 1 1/4" and 1 1/2'. 1/4" molded hole, metal insert.



No. 2110-P
Lgth—overall 1-15/16". Height 19/32". Dia. 3/4". Metal insert and metal pointer. 1/4" shaft hole.



No. 3008
Dia. 1 1/4". Height 3/4". 1/4" molded hole, metal insert.



No. 2965
Dia. 7/8". Height from 1/2" to 1 1/8". 1/4" molded hole, metal insert, knurl hole or spring mounting.

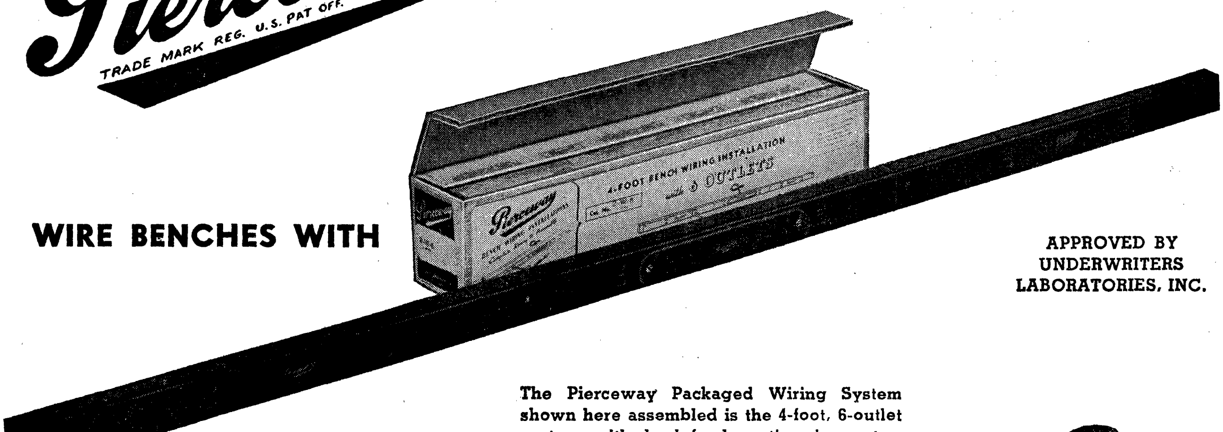
BRANCH OFFICES: Baltimore, New York, Milwaukee, Boston, Philadelphia, Fort Wayne, Buffalo, Los Angeles.
FOREIGN OFFICE: Toronto, Canada.

WRITE FOR COMPLETE CATALOG

Pierceway
TRADE MARK REG. U.S. PAT OFF.

PACKAGED WIRING SYSTEMS

WIRE BENCHES WITH

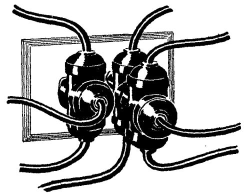


APPROVED BY
UNDERWRITERS
LABORATORIES, INC.

The Pierceway Packaged Wiring System shown here assembled is the 4-foot, 6-outlet system with back-feed section in center.

For more convenient and efficient use of portable power tools . . .

END THIS "TRAFFIC JAM"



With an outlet approximately every 8 inches, Pierceway eliminates overloads at the plug-in point.

Here is the quick, easy, economical way to get all the outlets you need for efficient use of portable power tools and appliances. With 2 outlets in each section of Pierceway plastic duct, you get an outlet approximately every 8 inches.

Pierceway Packaged Wiring Systems are complete and ready to install, with copper conductors built in as an integral part of each section. These systems are easy to assemble and install—all you need is a screwdriver.

Pierceway Packaged Wiring Systems are available in both 2-wire and 3-wire systems, with a choice of end-feed or back-feed connection. Service is brought into feed section by non-metallic cable through any standard angle or straight ½-inch coupler.

Pierceway systems are packaged in 3 lengths: 4-foot system with 6 outlets; 6-foot, 8-inch system with 10 outlets; 9-foot, 4-inch system with 14 outlets.

FOR LARGER INSTALLATIONS

With relatively few parts, Pierceway systems can be assembled into many types and any size of electrical circuit. They provide an exceptionally flexible installation—if necessary, a Pierceway system can easily and quickly be taken apart and reassembled to meet any change in electrical distribution requirements. All parts are 100% salvable.

Pierceway systems can be provided for voltages of 125 and 250; for all types of 2-wire and 3-wire circuits; for single-phase or 3-phase systems, and for A.C. and D.C. circuits. Made in bus capacities of 10, 15, 20, 30, 45 and 60 amperes. Available with outlets for 2-wire or 3-wire cord caps; with outlet capacities of 10, 15 and 20 amperes; with standard 2-wire or 3-wire polarized receptacles; with Pierceway Twist-Lock or Twist-Tite receptacles, and with adequate grounding facilities.

CLIFTON CONDUIT CO. (Tennessee) Inc.
Pierceway Division
1278 ORGILL AVENUE, MEMPHIS 6, TENN.
Representatives in Principal Cities

DUTCH BRAND PRODUCTS

VAN CLEEF BROS. INC.

DIVISION OF Johns-Manville

7800 Woodlawn Ave.. Chicago 19, Ill.

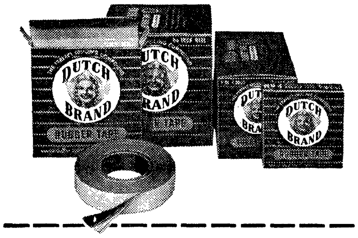
FRICTION TAPE

NARROW WIDTH FRICTION TAPE — Here is the handy size for radio and electrical appliance repair shops, electrical contractors and industrial users. The tape comes in a convenient 3/8 inch width roll, handy for small work.

SPECIAL WIDTH FRICTION TAPE — Available in special widths for special applications . . . supplied in widths 1/2, 1, 1 1/4, 1 1/2, 2, 3, 4 inches and wider.

DUTCH BRAND FRICTION TAPE— An "extra service" tape that has long life, extra strength and is easy to use. One layer resists up to 2000 volts. Combined with DUTCH BRAND Rubber Insulating Tape it produces highest dielectric resistance. Individually boxed and packed in attractive display carton. Each No. 8 roll contains 68 ft. of tape.

RUBBER TAPE



RUBBER INSULATING TAPE — For perfect insulation, it fuses instantly without heat. It has an extra high dielectric strength — resists up to 1800 volts through a single thickness. It is strong, durable and non-corrosive to electrical conductors. Assures positive insulation for high tension lines and other spots where highest dielectric resistance is needed.

PLASTIC TAPE

PLASTIC ELECTRICAL TAPE MASTER SHOP PACKAGE

This tape is thin and is used in places where space is limited. It has 150% stretch, high dielectric resistance, resists weather, water, oils, acids and corrosive chemicals. Because of its thinness and great stretch it conforms readily to irregular surfaces. Package contains 5 rolls 3/4 inch by 44 feet each.

.010 PLASTIC has the general characteristics of regular Plastic except it is heavier for heavy duty work such as winding heavy cables, heavy electrical harness and for use in tape winding machines.

PLASTIC ELECTRICAL TAPE COUNTER DISPLAY CARTON

DUTCH BRAND PLASTIC is also available in an attractive point-of-sale display carton containing two dozen consumer size rolls 1/2 inch by 150 inches. A convenient size for small repair jobs.

DUTCH BRAND PLASTIC TAPE TOOL KIT ROLLS

This is a handy and convenient size roll for the home workshop or repair trade. It has met trade favor wherever displayed. DUTCH BRAND Plastic Tape has many uses around the home and is widely used by tradesmen for professional work. Rolls are 3/4 inch by 20 feet long. It is available in attractive display that suggests many uses.

WIRE CONNECTORS

DUTCH BRAND "DB"* WIRE CONNECTORS

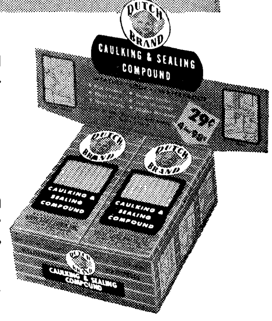
Solderless • Vibration Proof
Weather Proof • Long Skirt

"DB" Wire Connectors are now available for the convenience of the many customers who buy and use the well known DUTCH BRAND electrical tapes. Those who use wire connectors for many installations will find that "DB's" are a quality product.

They are available in four standard sizes to meet all needs. They resist pull-out and vibration... are weatherproof and are molded with the necessary length to give full insulation protection. They are U. L. listed. Add "DB" Wire Connectors to your next DUTCH BRAND tape order.

*"DB" *Stands for DUTCH BRAND.*

CAULKING & SEALING COMPOUND



DUTCH BRAND CAULKING AND SEALING COMPOUND

Here is a light colored, non-staining plastic material that will not crack or dry out. It comes in 3/16" cords, easy to press in place by hand. It is used to caulk holes or cracks . . . stopping leaks and keeping out dust and cold drafts. It molds to irregular shapes and forms and adheres to any dry surface.

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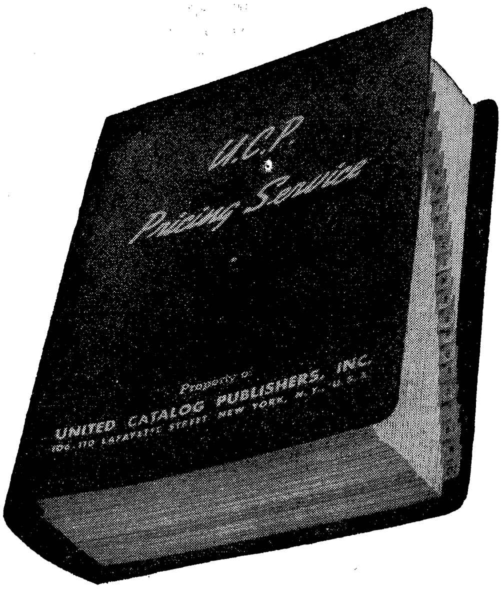
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